bitomatik
Umetnička praksa u vreme informacijske/medijske dominacije
Art practice in the time of information/media domination

kuda.read

bitomatik: sadržaj / content

bitomatik
Umetnička praksa u vreme informacijske/medijske dominacije

Pred nama se nalazi zbirka tekstova, transkripta predavanja održanih u Centru za nove medije kuda.org, u vremenu od 2001. do 2004. godine, koji opisuju modele savremene umetničke produkcije koja koristi različite medije kao sredstvo svog izražavanja. Naslanjajući se na aktivističko-umetničku praksu Novog Sada iz šezdesetih i sedamdesetih, perioda neoavangardi, Centar kuda.org je pratio upravo one fenomene koji u sebi sadrže interdisciplinarni i intermedijalni karakter.

Od samog početka, kuda.lounge je platforma za razgovor, argumentaciju, dijalog i kontekstualizaciju umetničkih praksi, u okviru kog je organizovano više od pedeset prezentacija, predavanja i radionica. Posebna pažnja se usmeravala upravo ka ovom aspektu komunikacije i razmeni ideja prvenstveno zbog činjenice da se umetnička scena u Srbiji tokom devedesetih razvijala u okviru tzv. "Umetnosti u zatvorenom društvu" koja je rezultirala sindromom samoreferentnosti umetničke produkcije. Internet i razvoj komunikacijskih tehnologija bili su elektronska kičma društvenih pokreta krajem devedesetih godina prošlog veka i početkom dvadeset prvog veka, a u isto vreme i veza jednog manjeg kruga umetnika iz Novog Sada (Asocijacija Apsolutno, Andrej Tišma, festival Videomedeja) koja ipak uspostavlja kontakt sa internacionalnom scenom, a neke članove te mreže dovodi i predstavlja u Novom Sadu. Posebnu su ulogu u toj komunikaciji igrale internacionalne mailing liste kao što su Nettime, Syndicate i Spectre.

Pozivajući značajna imena medijske umetnosti i teorije, namera kuda.org je bila da lokalnoj publici i umetničkoj sceni pruži uvid u savremenu umetničku praksu u svetu. Publika u zemlji imala je prilike da se upozna sa radom vodećih internacionalnih i domaćih umetnika, teoretičara i umetničkih grupa kao što su Ansambl kritičke umetnosti (Critical Art Ensemble), grupa Biro detud (Bureau d'Etudes), Armin Medoš (Armin Medosch), Inke Arns. Predavanja i prezentacije u okviru kuda.lounge su usmerene ka istraživanju novih medija povezanih sa društvenim aktivizmom, teorijom medija, konceptualnom umetnošću, gde se istražuju novomedijski "žanrovi" kao što su net.art, software art, interaktivna umetnost ili generativna umetnost.

Pitanje tzv. novih medija je kvalitativno identično onoj problematici kojom se bave neoavangardni umetnici šezdesetih i sedamdesetih, kada se vrše eksperimenti sa instalacijama, videom ili elektronskim zvukom, a to je pitanje odnosa medijuma i sadržaja, tj. šta je novo u novim medijima. Istraživanje medija je istorija istraživanja komunikacije i ekstrovertnosti i ono u sebi nosi istovremeno i političko tražeći kanale da se obrati masama i prenese poruku. Ova težnja avangarde da prodre u društvo, do baze, predvodeći ga u utopijskom projektu ostvarivanja pravednog društva, je čvrsto vezana za istraživanje medija, a sadržaj ove zbirke predstavlja različita istraživanja i eksperimente u novim medijima i svojevrsnu manifestaciju umetničkih avangardi na kraju XX i početkom XXI veka.

Ta dva elementa, društvo kao objekt intervencije umetničkog projekta i istraživanje medija putem koga će se intervencija sprovesti su teme ove zbirke tekstova. Ovom publikacijom zatvara se jedan ciklus u kom se integrišu debate i razgovori o savremenoj kulturnoj praksi i u vidu štampanog medija predstavljaju širokoj publici.

kuda.org, 2004.

Transfiguracija avangarde
Negativna dijalektika Interneta

Erik Klojtenberg

U svom eseju "Predstavljanje nepredstavljivog: Uzvišeno", francuski filozof Žan-Fransoa Liotar (Jean-François Lyotard) zapaža da kapitalizam, tehničke nauke i slikovna avangarda dvadesetog veka imaju zajedničku sklonost ka beskonačnosti (affinity to infinity). U trenutku kada se sve kreće ka razumnosti, ovo je sastavni deo iskustva savremenog sveta.

Liotar je poznat po kreiranju termina "postmoderno" za izvesnu dijagnozu društvenih stanja razvijenih kapitalističkih društava. Ono što fascinira u njegovom radu je veza koju pronalazi između savremene estetike, avangarde (posebno u vizuelnoj umetnosti) i njihovog odnosa prema tobože, odvojenim oblastima tehničkih nauka i razvijenog kapitalizma.

Sa druge strane, paradoksalan je stav koji on zauzima u odnosu na nove tehnologije, a posebno u odnosu na proces digitalizacije, i diskutabilan kad je u pitanju kritičko bavljenje ovim tehnologijama. On poriče mogućnost kritičkog umetničkog i kulturnog delovanja u oblasti digitalne medijacije, baš tu gde bi njegovo čitanje avangarde moglo odigrati neverovatno produktivnu ulogu: u daljem istraživanju ove sklonosti ka beskonačnom koje ne samo da utiče na avangardu, tehničke nauke i razvijen kapitalizam, već se može prepoznati u usponu onoga što sociolog Manuel Kastels (Manuel Castells) naziva umreženim društvom.

Liotarovo istraživanje počinje tvrdnjom o "nemogućnosti" slikanja i upravo odatle započeću analizu njegovih argumenata.

Beskonačnost

Za Liotara nemogućnost slikanja proističe iz pojave fotografije, zbog koje je slikanje postalo nerentabilno, dok je sama fotografija i čin stvaranja slike, sam po sebi sklon beskonačnosti kapitalističke proizvodnje / potrošačkog kruga.

On piše: nešto 'prelepo' sastavni je deo savršeno isprogramirane lepote fotografije: beskonačnost, ne neodredljivost osećanja, već beskonačna sposobnost nauke, tehnologije i kapitala da stvaraju. Sposobnost mašine da radi je, u principu, sklona zastarevanju, stoga uspesi najistaknutijih kapitalista zahtevaju stalnu preformulaciju proizvoda i stvaranje novih tržišta. Tvrdoća industrijske lepote sadrži beskonačnost tehničko-naučnih i ekonomskih razloga.

Ovo podrazumeva uništavanje iskustva koje nije jednostavno prouzrokovano uvođenjem onog što je "dobro zamišljeno" u oblast estetike. Nauka, tehnologija i kapital, uprkos svom

realističnom pristupu takođe su načini konkretizovanja beskonačnosti ideja. Znati sve, biti sposoban za sve, imati sve njihove su granice – i granice koje se šire do beskonačnosti. Instant proizvod u tehničkim naukama predstavlja potencijal za beskonačnu proizvodnju, a isto važi i za fotografiju.

Slikovna avangarda reagovala je na "nemogućnost" slikarstva pokretanjem istraživanja koje je bilo zasnovano na pitanju: "Šta je slikarstvo?" Još jedna od prethodno iznetih tvrdnji o radu slikara bila je predmet ispitivanja i diskusije. Razni umetnici avangarde fleksibilno su preispitivali neke od pretpostavki slikarstva kao što su: tonalitet, linearna perspektiva, izražavanje vrednosti, okvir, format, površina, medij, sredstvo, mesto izložbe i mnoge druge.[1]

Velika transformacija u samom činu stvaranja slike koju avangarda uvodi, prema Liotaru, nije toliko njeno insistiranje na stalnim transformacijama vizuelnog polja. Ove transformacije imaju veoma značajnu funkciju, sve one ukazuju na činjenicu da bilo koji stil stvaranja slike ne samo da predstavlja određenu mogućnost uređivanja vizuelnog polja, već istovremeno prikriva beskonačnost mogućih alternativnih načina uređivanja tog vizuelnog polja. Ova beskonačnost alternativnih vizuelnih mogućnosti je obavezno odsutna iz same slike pošto se još uvek ne može predstaviti. Ipak, na nju indirektno upućuje samo poricanje konačnog vizuelnog reda.

Liotar takođe tvrdi: "Avangardni slikar oseća ogromnu odgovornost da ispuni imperativ koje samo pitanje "Šta je slikarstvo?" podrazumeva. Ono što je u suštini ugroženo to je pokazivanje nevidljivog u vizuelnom.[2]

Ulazak u oblast negativnog znaka...

Avangardni slikari počeli su se baviti nagativnom dijalektikom slike – stalno izmišljanje vizuelnih izraza koji predstavljaju izazov i negaciju prethodnih propozicija o odgovarajućem izgledu slike. Proces negacije dominantne umetničke konvencije može biti ilustrovan nekim klasičnim primerima avangardnih intervencija:

Kubizam – rušenje objedinjene perspektive

U kubističkoj slici prikazani objekat je predstavljen posmatran iz različitih uglova čime se aludira na veštačka ograničenja dvodimenzionalne podloge platna i priznaje činjenica da oko vidi samo kad je u stalnom kretanju. Kubisti su razumeli da zbog toga vizuelna percepcija uvek počiva na kombinaciji mnoštva slika primljenih iz različitih uglova posmatranja, čak i kad je oko čvrsto fokusirano na određen predmet. Sa njihovom višedimenzionalnom perspektivom kubisti su porekli važenje linearne perspektive (programirane u fotografskom aparatu), kao "ispravnog" prikazivanja sveta kad je u pitanju vizuelno.

Istovremenost – rušenje jedinstva vremena

Ovo savšeno ilustruje prelepa slika Đakoma Bala (Giacomo Balla) "Dinamizam psa na liniji" iz 1912. Umesto da pokazuje jedan trenutak uhvaćen u vremenu, ova slika predstavlja niz trenutaka u jednoj slici – šape psa koje se brzo kreću dok pokušava da prati elegantnu damu koja šeta psa. František Kupka (Frantisek Kupka) je uveo ovaj princip istovremenosti u slikarstvo inspirisan hronofotografijom Etijena Žil Marija (Etienne Jules Marey). I naravno Dišanova (Marcel Duchamp) slavna slika "Obnaženo telo silazi stepenicama" nastavlja da urezuje ovaj vizuelni princip u svest javnosti. Ovde je prepoznata i otkrivena slobodna priroda zamrznute slike kao kontrast stalnoj promenjivosti životnih procesa. Poznato nam je iz istorijskih izvora da su eksperimenti fotografisanja pokreta životinja pokazali da je njihovo tradicionalno predstavljanje u slikarstvu i vajarstvu realizma bilo samo konvencija.

Apstrakcija – napuštanje figurativnog

Posmatrano iz savremenog ugla, ova pojava je takođe vrlo jasna. Prihvatanjem apstrakcije, slikarstvo se rešilo poslednjih veza sa iluzionističkim načinom izražavanja. Umesto da predstavlja određenu spoljašnu realnost koja se ne može naslikati, ona bi sada mogla postati obrnuti simbol za beskonačnost vizuelnog i beskonačnost ideja.

Konačno, proces negacije dominantnog vizuelnog jezika ukinuo je čak i samu sliku. Karakterističan primer je pojava crnog kvadrata kod Maljeviča (Kasimir Malevich). Ovde slika prestaje da bude slika: lišena oblika, boje, teksture ili reprezentacije, slika postaje negativan znak; obrnuti znak za odsustvo slike. Međutim, ovo odsustvo nije pokazalo nemogućnost samog stvaranja slike. Naprotiv, ono je postalo negativan znak za beskonačnost mogućih načina vizuelnog izuma koji se ne mogu predstaviti ili, kako to Liotar naziva, "beskonačnost plastičnog izuma".

Stoga Liotar zaključuje da su avangardni slikari uveli slikarstvo u oblast koja je otvorena estetikom uzvišenog. U Kantovoj formuli "Un-Form", nešto što se ne može sjediniti u jedinstvenu formu u vremenu i prostoru kao koncept beskonačnosti.

Nematerijalno/Les Immateriaux

Godine 1985. Liotar je zajedno sa Tijeri Šapi (Thierry Chaput), direktorom "Centre de Creation Industrielle", bio zaslužan za ideju i realizaciju nesvakidašnje izložbe nazvane "Les Immateriaux" – grubo prevedene kao "Nematerijalno".Ono što je izložba pokušala da učini jeste da istakne i naglasi senzibilitet vezan za stvari u našem neposrednom okruženju koje se menjaju zbog novih materijala i novih koncepcija realnosti koje proističu iz tehno-naučnog istraživanja.

Na konferenciji za štampu za izložbu "Les Immateriaux" od 8. januara 1985. on objašnjava:

"Zašto 'Nematerijalno'? Istraživanja i razvoj u tehničkim naukama, umetnosti i tehnologiji, pa čak i u politici ostavljaju utisak da realnost, gde god ona bila, postaje sve apstrakt-

nija, da se ne može direktno kontrolisati – ostavljaju utisak kompleksnosti stvari (…) Sami uređaji takođe postaju sve kompleksniji. Napredak je učinjen kada je njihova veštačka inteligencija počela da radi sa digitalnim podacima, sa podacima koji nemaju analogiju sa svojim poreklom. To je kao da je između nas i stvari postavljen filter, ekran sa brojevima. (…) Boja, zvuk, materija, bol ili zvezda vraćaju nam se kao cifre u krajnje preciznim šemama. Sistemi kodiranja i dekodiranja pokazuju nam da postoje stvarnosti koje su na svoj način nedokučive. Dobru staru materiju dobijamo tek na kraju kao nešto što se razložilo i rekonstruisalo u komplikovane formule. Stvarnost se sastoji od elemenata, organizovanih pomoću strukturalnih pravila (matrica) u jedinice vremena i prostora koje više nisu čovekove.”

Tehno-naučno istraživanje, dakle, svedoči o beskrajno savitljivom pojmu realnosti. Realnost se, prema Liotaru, pre svega, sastoji od poruka koje mi o njoj primamo. Ali ove poruke se sve više prenose sve kompleksnijim mašinama. Digitalizacija uvodi krajnji nivo apstrakcije u ovaj proces, tako što nameće konačnu šemu dekodiranja koja prevodi sve poruke u jedan univerzalan kod, digitalni kod; koji nema analogiju u odnosu na svoje poreklo.

“Model jezika zamenjuje model materije”, tvrdi Liotar, a sa njim koncept realnosti postaje fleksibilan kao sam jezik.

Kritička umetnost u vremenu totalne medijske inkorporacije

Kapitalističko tretiranje svega kao robe prisutno je u oblasti lepote, a zahvatilo je čak i one monstruozno negativne, nematerijalne elemente korišćene isključivo u kontekstu avangarde. Već dugo se ovi negativni umetnički izrazi poistovećuju sa marketinškim sredstvom za dopiranje do manje zastupljenih, specifičnih tržišta. Oni omogućavaju razlikovanje i prepoznavanje onih tržišnih segmenata koje estetika lepote nastoji isključiti. Estetika, dakle, i u svojim pozitivnim oblicima kao i u svojim negativnim manifestacijama postaje deo beskrajne potrage za novim tržištima koja je urezana u samu srž kapitalističkog načina razmišljanja.

Za Liotara digitalizacija označava krajnju fazu ugrađivanja iskustva u konačnu šemu kodiranja – digitalna matrica. Tako iskustvo ostaje zarobljeno u sistemu tehno-naučne logike i njegove beskrajne misije da transformiše koncept realnosti. U samoj tehno-naučnoj svesti, svet se prevodi u problem kao kodiranje, i kao što kaže Dona Haravej (Donna Haraway), postaje potpuno podložno funkcionalnim zahtevima naučnih ispitivanja i razvijenih oblika informacijskog kapitalizma. U sistemu digitalne medijacije, sam pokušaj da se pobegne od logike definisanja postaje nemoguć, dešava se potpuno spajanje.

Nasuprot ovakvom načinu razmišljanja, želeo bih da predložim potpuno drugačiju analizu digitalne medijacije. Sistem digitalne medijacije, posebno u oblasti umrežene digitalne komunikacije, predstavlja veoma produktivan teren za kritičke strategije i umetničke intervencije. Interesantno je da nasleđe avangarde prošlog veka, nudi neverovatno koris-

tan niz konceptualnih sredstava i referenci za razvijanje kritičkog bavljenja uslovima digitalne medijacije. Kontekst u kojem su upotrebljene ove avangardne strategije je, međutim, drastično promenjen. Korišćenje ovih strategija udaljilo se od svete oblasti umetnosti.

Negativan ekran

Ekran globalnih medija predstavlja glatku površinu; budi povezan gde god da si, vidi sve što se dešava svuda, i sve ovo u realnom vremenu. To je željena slika globalne medijacije. Industrijski mediji profilisani su do te mere da mogu ponuditi sadržaj tržištu koje je sve preciznije segmentisano. Čista, ravna površina je mitološka slika doba umreženih medija. U ideologiji učesnika ona treba ostati neprikosnovena. Mehanizmi koji usmeravaju ovo trajno legalizovanje elektronskog sveta, ostaju u senci, namerno sakriveni ispod iluzionističke površine ekrana.

Apslolutni užas profesionalnih medija je prekinut prenos. U televizijskom formatu to se ponekad manifestuje kao, pre svega, kratka pauza traumatično crnog ekrana – trenutak kada signal nestane i kada se slika pretvori u crni kvadrat, koji ironično podseća na Maljevičev znak beskonačnosti. Na radiju, očajna tišina je još strašnija od odsustva slike na televiziji. Elektronska forma Horror Silentiae ovde zamenjuje Horror Vacui. Tišina nestalog radio signala i crnilo zamrlog TV ekrana nisu samo puki pokazatelji odsustva signala. Horor koji se ovde provlači je vezan za preteću destrukciju iluzije sa glatke površine ekrana, koja zahteva stalan utisak trenutnosti i veze koja gledaocu daje ohrabrujući utisak transparentnosti medijskog ekrana.

U trenutku kada se prekine ovaj tok, kada se prekine kôd ili kada zamre zvuk i ekran se ugasi, tada se stvara mogućnost za alternativnu poruku – nov kôd. Ovo je prostor negacije. Praznina koja se ovim prekidom stvara je otvoreno polje u kojem se omogućava nova sinteza jedinstvenih formi u prostoru i vremenu. Pojava novog koda iz praznine Horror Silentiae, iznova potvrđuje vezu subjekta medija sa svetom. Ovo je trenutak ushićenja zbog savladane pretnje kraja egzistencije/veze kada može nastupiti avangarda i transformisati značenje medijskog kôda.

Strategije, konceptualna sredstva, taktika intervencije u novoj digitalnoj hiper sferi su vrlo poznati. Oni se oslanjaju na nasleđe i iskustvo avangardnih pokreta. Zaista, mnoge od intervencija koje su najbolje uspele da obuhvate nove uslove digitalne medijacije su bile umetničke intervencije. Međutim, nešto se dramatično promenilo; predmet pažnje ovih intervencija nije više estetski okvir savremene umetnosti, niti sveti koncept autora, niti umetnik genije, niti neprikosnovene konvencije umetničkog stvaralaštva. Ono što je dovedeno u pitanje je sama glatka površina umreženog medijskog spektakla i njena iluzija stabilnosti. Negativna dijalektika digitalne avangarde više ne dovodi u pitanje umetničke ideje, već one ideje koje su po prirodi vezane za simboličku, digitalnu oblast u kojoj funkcionišu i za njenu suštinsku nestabilnost.

Estetika neprimerenosti

Čisto i jednostavno ometanje medijskih signala je jedna očigledna strategija dovođenja u pitanje dominantnih medijskih kôdova, ali nije mnogo zanimljiva. Ometanje odgovarajućeg toka medijskih signala je samo početna tačka za alternativni diskurs, ništa više.

Pomeranje klasične avangardne negativne dijalektike slike u umreženi medijski ekran je vrlo paradigmatski izvršio umetnički duo jodi.org [3]. Na njihovom, sada već poznatom, web sajtu oni stvaraju nerazumljive ali vrlo poetične i slikovite vizuelne, a ponekad i auditivne procese koji, čini se, obrću hijerarhiju profesionalnog medijskog ekrana.

Bilo kakav osećaj povezanosti se gubi, razumljivost nestaje. Umesto konvencionalne forme prikazivanja štampane strane sa prosečno povezanim pseudo pokretnim motivima, koje omogućavaju veoma dugi nizovi kôdova, na jodi.org sajtu ekran je u stalnom dinamičnom menjanju sa iznenadnim periodom stagnacije. Ne postoji jasan odnos između postupka gledaoca i reakcije sistema. Ponekad strana stane, a mi ne razumemo zašto, onda se ekran opet iznenada promeni, ali mi nemamo predstavu zašto se ovo dogodilo. Kôdovi se neprekidno pojavljuju razbacani po ekranu tako da ponekad prepoznamo deliće razdvojenih html kôdova, ponekad besmislene ascii gluposti a ponekad prosto besmislene i nerazumljive kôdove.

Umetnicima je često postavljano pitanje "O čemu se ovde radi?", na koje nije stizao odgovor. Motivi i procesi koje gledalac sreće prilikom otvaranja ovog sajta su namerno "neadekvatni". Njihova dvosmislena i nerazumljiva priroda odnosi se na praktično neiscrpne kombinacije mogućih načina predstavljanja u digitalnoj hiper sferi. Jodi.org često traži greške u softveru. Pažljiva analiza novih popularnih softverskih proizvoda otkriva gde su bagovi, a ove greške, koje mogu izazvati kašnjenja, trepereći ekran, nepredvidljive pokrete ili beskonačne zatvorene petlje, odmah se transformišu u estetski materijal. Ove "greške" potom postaju, ne ometanje kôda, već suština novog kôda kojim jodi.org zamenjuje konvencionalne kôdove. Ukratko, ono što jodi.org stvara je set negativnih znakova koji ukazuju na beskonačnosti alternativnih kôdova pisanih i čitanih umreženih medija.

Impresivni projekat "Pogrešan pretraživač" (Wrong-Browser) [4] još više pojašnjava ovu ideju. Ovde imamo niz pretraživača koji učitavaju html kôd i obrađuju ga kao abstraktnu strukturu podataka, koja se pojavljuje kao vrlo šaren estetski jezik koji je programiran u softveru pretraživača. Pretraživač postaje subjektivna mašina za estetsku obradu čiji su krajnji proizvodi definisani kontraverznom logikom programskih kôdova.

Slučaj pogrešnog identiteta…

Američka umetnička grupa (r)TMark upotrebila je sasvim drugačiju taktiku, ali ona još dramatičnije otkriva ranjivost reprezentativnih web sistema. Godine 1999. tokom demonstracija protiv Svetske trgovinske organizacije (WTO) / G8 protesta u Sijetlu, rTMark pro-

izveo je web sajt koji se tada proslavio u net.art i net-culture krugovima. Sajt www.gatt.org dobio je naziv po Opštem sporazumu o porezu i trgovini (General Agreement on Tariffs and Trade), jednom od ranih dogovora o liberalizaciji globalne trgovine protiv koga su se bunili mnogi demonstranti na ulicama.

Na prvi pogled gatt.org sajt izgledao je u mnogočemu kao zvanični sajt Svetske trgovinske organizacije (http://www.wto.org). Ništa iznenađujuće pošto su rTMark jednostavno preslikali čitavu organizaciju sajta, grafike i slike sa originalnog WTO sajta na njihov, uključujući i uvodnu reč predsednika WTO-a Majka Mura (Mike Moore) i njegovu sliku. Tekst je, međutim, potpuno suprotan. Tamo gde originalni sajt veliča prednosti liberalizacije trgovine i globalne slobodne trgovine, gatt.org sajt žali za propašću demokratske politike i nedostatkom društvene i ekološke odgovornosti koja bi uticala na pregovore o trgovinskoj liberalizaciji. Deo sajta sa zvaničnim dokumentima o politici WTO-a je zamenjen kontra dokumentima mnogih društvenih i ekoloških pokreta i grupa koji su protestovali ulicama Sijetla.

Ovo bi verovatno prošlo manje-više neprimećeno da WTO nije pokušala da interveniše u objavljivanju gatt.org web sajta. Razjareni, kako je to WTO videla, ilegalnim imitiranjem njihovog poslovnog marketinga, izdali su upozorenje na svom web sajtu koje skreće pažnju javnosti na lažan i prevarantski veb sajt "koji se predstavlja kao zvanični web sajt Svetske trgovinske organizacije". Ovaj sajt "ugrozio je transparentnost WTO sajta i njihov pokušaj da javnosti približi zvanične dokumente preko svog web sajta."

Naravno, gatt.org je brzo prisvojila upozorenje tvrdeći, pak, da je WTO sajt nelegalan. Ovo je preraslo u igru mačke i miša koja je za posledicu imala objavljivanje saopštenja WTO na konferenciji za štampu koje "osuđuje napad na transparentnost svoje organizacije" od stane marginalne umetničke grupe. Ovim saopštenjem za štampu, napad na sajt postao je svetska vest i privukao milione posetilaca na gatt.org web sajt.

Priča se ipak nije ovde završila. Kada je utihnula pažnja koju je privukao protest protiv imitiranja web sajta i kada je WTO odlučila da promeni celokupan izgled svog web sajta, gatt.org nastavio je da živi kao arhivski dokument koji svedoči o neobičnom umetničkom mešanju u umreženu globalnu politiku. Međutim, nakon izvesnog vremena grupa rTMark počela je da prima e-mejlove od posetilaca gatt.org sajta koji su pokazivali da su ovi posetioci još uvek verovali da posećuju pravi WTO sajt, uprkos upadljivo različitom sadržaju poruka na ovim sajtovima. Ovi e-mejlovi obuhvatali su pozivnice zvaničnim predstavnicima Svetske trgovinske organizacije na visoke međunarodne trgovinske konferencije.

rTMark počeo je da se skriva iza jedne druge maske (Yesmen) u odgovaranju na ove pozive. Oni su prihvatili određeni broj poziva i zaista otišli na ove konferencije da drže predavanja, igrajući ulogu zvaničnih predstavnika Svetske trgovinske organizacije. Jedan od najsmešnijih nastupa vezanih za ovaj sajt je predavanje održano na međunarodnom skupu svetskih proizvođača tekstila u Tampere u Finskoj. Postupak je detaljno dokumentovan na

"theyesmen.org" sajtu [5]. Na ovom predavanju jedan od umetnika potpuno nerazumljivo objašnjava slobodnu trgovinu, a zatim otkriva zlatno odelo za menadžera budućnosti koje navodno ispoljava reakciju tela na produktivnost u tekstilnim fabrikama koje oni kontrolišu. Direktan kontakt sa radnom platformom omogućava ogroman naduvan falus opremljen monitorom, koji je bežično povezan sa fabrikom u realnom vremenu – budite povezani gde god da ste!

Njihovo delovanje prelazi iz imaginarnog (gatt.org veb sajt) u realno (skup proizvođača tekstila u Tampere) i ponovo u imaginarno (rTMark sarskastično održano predavanje/nastup). Učesnici konferencije, začuđujuće, uopšte nisu odreagovali na ovo predavanje, što samo svedoči da su oni snažno verovali da su pred njima stvarni predstavnici WTO organizacije. Očekivanje je zasnovano na prethodnom ubeđenju organizatora u verodostojnost web sajta koji su posetili i onoga što su na njemu zatekli, WTO ikonografiji, samom tonu i poznatoj priči o liberalizaciji trgovine, iako je sama suština ove priče potpuno suprotna. Pored ovog pogrešnog identiteta i duhovitosti koja je iz njega proistekla, ovaj čin otkriva neprimetan prelaz između realnog i imaginarnog u okviru spektakla umreženih medija.

Delovati, gest…

Oblast međunarodne ekonomije i politike postala je nerazdvojivo povezana sa novim konstelacijama televizijskih, radijskih i umreženih medija. Suštinski izazov umreženog društva je potpuno stapanje medija, digitalne tehnologije, ekonomije i politike. Logika digitalne mreže sada utiče na sve dominantne aspekte društva. Ova činjenica, s jedne strane, označava kraj virtuelnog, oblasti koja se potpuno prepliće sa *realnim* svetom. Istovremeno, međutim, svaka značajnija društvena interakcija može dobiti smisao u zavisnosti od toga kako je prikazana u digitalnoj oblasti.

Izvan oblasti reprezentacije, prostor digitalne mreže postao je suština ekonomske interakcije, omogućavajući trenutnost finansijskih i ekonomskih tokova preko geografskih i teritorijalnih granica. Veze između mrežnih struktura i fizičkih oblasti koje oni povezuju postali su toliko raznovrsni i međusobno zavisni da više nije svrsishodno praviti razliku između fizičke geografije kao "realnog" i mrežnih konstelacija kao "virtuelnog". U stvari, samo suprotstavljanje realnog i virtuelnog može da nas zavara. Geografija i tehnološke, društvene i ekonomske mreže zajedno stvaraju jedan sistem koji je sve više povezan i sofisticiran. Ali, ovaj sistem je vrlo problematičan pošto isključuje više nego što dozvoljava.

Nova sfera umreženih medija i komunikacija sama je po sebi ranjiva u odnosu na vrstu prethodno opisanih intervencija. Dvostruka priroda mreže je zbunjujuća u mnogočemu. S jedne strane, digitalne mreže su sredstvo potpune kontrole, ali istovremeno predstavljaju i utočište za alternativne ideje, prostor bez krajnje završne faze, uvod samo delimično pod kontrolom i u stalnom menjanju. Autoritet sistema se dovodi u pitanje kada se glatka površina medijskog interfejsa i njegove iluzije o transparentnosti prekinu i rekonstruišu u mnoštvo alternativnih tema, u pravu beskonačnost alternativnih mikro i makro političkih tema.

Saskia Sasen (Saskia Sassen) je jednom prilikom istakla i to s pravom, da se Internet sastoji od načina, prakse koja se koristi u njemu. Ali priroda intervencija u oblasti mreža prevazilazi granice konvencionalnih sistema reprezentacije. Ovde postoji određena forma performativnosti, kad simboličke intervencije na nivou socijalnog diskursa postaju paradoksalno realne. Umesto da "predstavlja" realnost, intervencija je čin, gest koji "stvara" alternativnu realnost u trenutnosti njegove digitalne medijacije.

Stvarna virtuelnost

Sociolog Manuel Kastels u svojoj poznatoj knjizi "Uspon umreženog društva" [6] opisuje uslove koji stvaraju ovu specifičnu vrstu izražavanja kao "kulturu realne virtuelnosti". Kastels postavlja pitanje šta je "(..) sistem komunikacije koji, za razliku od prethodnog istorijskog iskustva, stvara realnu virtuelnost?"

"To je sistem u kojem je sama realnost (to jest ljudsko materijalno/simboličko postojanje) u potpunosti prikazana, ona je sastavni deo scenografije, sveta mašte, u kojem izgled nije samo na ekranu preko kojeg se prenosi iskustvo, već on postaje samo iskustvo. Sve ovakve poruke postaju deo medija, zato što je medij tako sveobuhvatan, tako raznovrstan, tako prilagodljiv, da upija u taj multimedijalni tekst celokupno ljudsko iskustvo, sadašnje, prošlo i buduće, kao u jedinstvenoj tački univerzuma koju je Horhe Luis Borhes (Jorge Luis Borges) zvao Alef." [7]

Kastels dalje pokazuje da kultura realne virtuelnosti nije stanje koje je u potpunosti specifično za sistem umreženih medija i komunikacija. Specifičan međusobni uticaj realnog i imaginarnog između sebe, a i u okviru jednog te istog multimedijalnog teksta, je nešto što se počelo formirati u okviru televizijskog perioda, ali je naglašeno i istaknuto tek pojavom novih i razgranatijih, umreženih i bežičnih komunikacijskih medija.

Sam Kastels uzima svoj najvažniji primer sa američke televizije; neobično stapanje fikcije i realnosti koje se desilo tokom predsedničke kampanje za predsednika Amerike 1992. U to vreme, Džordž Buš (George Bush) i potpredsednik Den Kvejl (Dan Quayle) učestvovali su sa Klintonovim/Gorovim (Clinton/Gore) timom.

U govoru koji je prenošen na televiziji, Den Kvejl počeo je napadati izmišljen lik Marfi Braun (Murphy Brown), glavnu ulogu popularne serije istog naziva. Glavnu ulogu igrala je glumica Kendis Bergen (Candice Bergen). Marfi Braun bila je tipična nezavisna žena, koja živi u jednom od većih američkih gradova koja je neudata i koja ima potpunu kontrolu nad svojim životom. Ona u jednom trenutku odlučuje da želi da ima dete, ali bez oca, i odlučuje da preduzme sve što je neophodno ne bi li dobila dete. Upravo je ovo ono što je isprovociralo Kvejla da se umeša i da je napadne za nedostatak, po njegovom mišljenju, moralnih načela i zbog ispoljavanja ponašanja koje ne podstiče prave porodične vrednosti.

Ono što je neobično u ovoj njegovoj kritici je to što ona nije bila uperena protiv scenariste ili režisera, čak ni protiv glumice Kendis Bergen. Naprotiv, on je odlučio da uperi kritiku

direktno ka izmišljenom liku Marfi Braun, shatajući važnost ovog lika kao uzora čiji se na-
čin života kopira u realnom životu. Autori serije inteligentno su reagovali tako što su u jed-
noj od epizoda prikazali fiktivni lik Marfi Braun kako gleda i komentariše "autentični" govor
potpredsenika Dena Kvejla.

Iz ovog neobičnog dijaloga između realne i imaginarne osobe razvila se usijana politička
debata o "pravu žene da bira" koja je imala značajan uticaj na tok predsedničke kampa-
nje. Na kraju je Kvejl/Buš tim izgubio iz mnogo razloga ali najvažniji je, naravno, stapanje
realnog i imaginarnog u suštinskom društvenom i političkom procesu. Kritika realnog pot-
predsednika postala je deo serije, a taj deo serije postao je deo realne političke kampanje.
Ovo je bilo moguće samo zato što oboje funkcionišu u istom "multimedijalnom tekstu".

Kastels objašnjava da je ovo stanje potpuno neizbežno, pošto ove poruke mogu postići
sposobnost da komuniciraju samo ako se prenesu u ovu novu sferu međusobno povezanih
medija i komunikacijskih mreža. Ali čim postanu deo ovog sistema elektronske i digital-
ne medijacije one postaju ranjive za sastavne nedoslednosti sistema.

Kastels piše: "Ono što karakteriše nov sistem komunikacija, zasnovan na digitalizovanoj,
mrežnoj integraciji više komunikacijskih modela, je njegova temeljna sveobuhvatnost svih
kulturnih izraza. Zbog toga što on postoji, sve vrste poruka u novoj vrsti društva funkci-
onišu u binarnom kodu: prisustvo/odsustvo u multimedijalnom komunikacijskom sistemu.
Samo prisustvo u ovom integrisanom sistemu dozvoljava sposobnost prenošenja i socija-
lizacije ove poruke. Sve druge poruke svode se na individualnu maštu ili na sve više mar-
ginalizovane face-to-face podkulture." [8]

Delovati u kulturi realne virtuelnosti znači delovati simbolički i realno istovremeno, zato
što se oba nivoa društvene realnosti podudaraju u okviru istog "multimedijalnog teks-
ta". U ovom paradoksalnom okruženju dominantni diskursi društvene, političke i ekonom-
ske moći mogu biti dovedeni u pitanje na nivou sistema reprezentacije koje oni koriste.
Klasična avangarda je prepuna ideja, taktika i strategija koje se koriste u radikalno pro-
širenom kontekstu, ne više u kontekstu same umetnosti, već u kontekstu umreženog dru-
štva.

Negacija dominatnih načina govora, podrazumeva beskonačnost mogućih načina izraža-
vanja.

Amsterdam, 21. 12. 2001.

Ovaj tekst je proizašao iz niza predavanja u Pragu, Varšavi, Moskvi i Getenburgu. On je posledica potrebe koju
sam osetio da preformulišem, istaknem i objasnim niz ideja koje su se ranije mogle sresti u tekstu "Razbi
površinu /…". Nešto od korišćenog materijala tamo, pojavljuje se ponovo i ovde ali drastično transformisano
i sa drugačijim okvirom. Urednici švedskog kulturnog žurnala "Glaenta" zamolili su me da od predavanja
napravim esej koji je pred vama. Nadam se da će se nekima od vas svideti ovaj rad.

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(5) http://theyesmen.org/finland/

(6) Manuel Castells, The Culture of Real Virtuality, in: The Rise of the
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(8) Castells, '96, p. 374.

Internacionalna amnezija
– rana kompjuterska umetnost i pokret "Tendencije"

Darko Fric
http://www.mi2.hr/alive/

… Tehnologija napreduje. Umetnost se menja. Ona nikada ne napreduje…
Izjava kolektiva Anonima u maju 1968, katalog "Tendencije 4" (1968 – 69), Zagreb, 1970.

Istraživanje medijske arheologije o ranoj kompjuterskoj umetnosti može nam pomoći u razmišljanju o korenima umrežene (kolektivne) umetničke produkcije, same mreže umetnika, interaktivne umetnosti, umetnosti nastale posredstvom tehnologije i komunikacija i društveno aktivnoj ulozi umetnosti u informacijskom društvu. Ti termini podsećaju nas na ključne termine iz skorašnje produkcije u oblasti medijske umetnosti i o njima je bilo ozbiljnih diskusija i konkretnih umetničkih dela, a to posebno važi za (poslednje?) avangardne umetničke pokrete 60-tih. Njihova turbulentna istorija u 60-tim, podseća nas na istorijat net.arta i njegovu filtraciju i skorašnje pozicioniranje u mejnstrimu umetničkog sistema. Da li se istorija ponavlja?

U periodu od 1961. do 1973. tadašnja Galerija savremene umetnosti (danas Muzej savremene umetnosti, Zagreb), organizovala je pet međunarodnih izložbi pod imenom "Nove tendencije". Prvu, inauguracionu izložbu (1961) karakterisao je velik broj tema kojima se bavila. Slikanje je bilo tautološko i monohromatsko, usmereno ka objektima (Almir Mavignier, "Zero" /Oto Piene, Heinz Mack/ i "Azimuth" /Enrico Castellani, Piero Manzoni/). Ali i pored toga, preovlađivali su radovi koji su bili orijentisani ka sistematskom istraživanju (François Morellet, Karl Gerstner) i optičkom istraživanju strukture i površine objekata (Marc Adrian, Julio Le Parc, Günther Uecker, Ivan Picelj, Gruppo "N" – Biasi, Massironi, Chiggio, Costa, Landi).

Takođe se može prepoznati i početak programirane i kinetičke umetnosti čiji je karakterističan jezik bio označavanje novih tendencija kao pokreta koji je već započet nastupajućom izložbom (1963). Ona se ponaša kao neka vrsta "mrežnog kišobrana" za mnoge umetnike i kritičare (Franch GRAV – Groupe de Recherche d'Art Visuel, Spanish Equipo 57, Italian Gruppo N, Gruppo T, MID, Gruppo 63, Operativo R, Azimuth, Zero (Germany), Anonima (USA), Dvizenije (USSR) itd.). Zahtevi za obezbeđivanje naučne dimenzije umetnosti daće prednost eksperimentu sa vizuelnom percepcijom baziranom na Geštalt teoriji.

Već je naredna, treća izložba novih tendencija (1965), ispitivala odnose između kibernetike i umetnosti (Abraham Moles). U isto vreme, pokret "Tendencije" suočava se sa svojom unutrašnjom krizom uzrokovanom različitim pristupima društvenom angažmanu kroz umetničku praksu. Julio Le Parc iz GRAV-a, dobio je nagradu na 23. Venecijanskom bijenalu 1966, prema čemu su mnogi članovi imali veoma kritičan pristup, prigo-

varajući Le Parc-u zbog njegove individualne, a ne grupne prezentacije. Izložba "Osetlji-vo oko" koju je 1965. organizovao Muzej moderne umetnosti iz New Yorka prezento-vao je 123 rada i 28 autora od kojih su mnogi bili članovi pokreta "Tendencije". Izložba je pokrenula dramatičnu diskusiju među članovima pokreta, jer je bilo kakva društve-na dimenzija prezentovanih radova bila isključena, a fokusirala se samo na formalan vi-zuelan i efekat mrežnjače (inaugurišući tržišno orijentisan "op art").

Četvrta izložba tendencija (1968/69) obeležena je egzaktnom estetikom i daljom pene-tracijom ideje o teoriji informacije. Umetnička upotreba računara je "poslednji pokušaj" pokreta "Tendencije" da usaglasi svoje ciljeve kao "približavanje nauke i umetnosti" i "unapređenje društva" i istorijskog pokreta 1968. Izložba je prezentovala širok spektar čisto kompjuterske umetnosti, ugošćavajući učesnike iz oba bloka hladnog rata. Bile su izložene kompjuterske skulpture, koreografije, objekti i štampani materijal. Tokom 1968/69 bila su organizovana četiri internacionalna kolokvijuma koja su se bavila temom "Kompjuteri i vizuelno istraživanje". Galerija savremene umetnosti je 1968. pokrenula časopis "Bit international", kao informator pomenute orijentacije (no. 1-9/1968-1972).

Na izložbi "Tendencije 5" 1973. godine prezentovane su bile obe oblasti, i kompjuter-sko vizuelno istraživanje i kompjuterska konceptualna umetnička praksa. U isto vreme, ove dve discipline su se dosta razlikovale zbog svoje skoro dijametralno suprotne pozi-cije po pitanju bavljenja strukturama moći, i u smislu fizičkog rada i u samom pristupu "individualnosti nasuprot društvu" u svetlu posledica revolucije 1968. Šta god da je po-stojalo od tog razdora između savremenog sveta umetnosti i medijske umetnosti, ili ne, ili je taj razdor još uvek prisutan, danas nas suočava sa mogućnošću da te dve prakse uporedo postoje.

Izložba "I am Still Alive" (kustos Darko Fric; Mi2 i HDLU; Zagreb, 2000) predstavlja ranu kompjutersku umetnost i net.art. Slede delovi korespodencije između kustosa Darka Frica i net umetnika Vuka Ćosića, Veljača 2000.

Vuk Ćosić: Ugao koji me zanima kao link između New Low Tech Media i ovog projek-ta je *odluka* kustosa (i umetnika) da u današnjem vremenu izrazitog high-techa radi (ili izlaže) low-tech. Zanima me političnost takvog gesta koji – u mojoj interpretacijici – počiva na *odbijanju* odnosa prema tehnološkom razvoju kao danosti. Sve više mi se čini da je novomedijska umetnost zašla u vode kanonizovanih estetskih i metodoloških vred-nosti, te da je New Low Tech Media jedan od boljih načina da se umetnik tome suprot-stavi (a da ne postane Unabomber). Istraživanje geneze tehnologije, kao i geneze odnosa između tehnologije i umetnosti čini mi se kao neophodan prvi korak …

Darko Fric: Zanima me postaviti par vrijednosnih i vremenskih elemenata zajedno, i zapravo vidjeti na licu mjesta stupanj interakcije tih radova, što će se dogoditi … medij-ska arheologija je zanimljiva po tim bazičnim pitanjima o namjerama i sredstvima, *kako i zašto* medijska umjetnost nastaje; kako se umjetnost i tehnologija odnose spram sebe i zajedno prema društvu; strategijama u datom vremenu u proizvodnji, distribuciji i zna-

čenju medijskih radova (ovdje isključivo onih nastalih upotrebom računala). Zanimljivo mi je da je 1968-69, pod nazivom "Kompjuteri i vizualna istraživanja", u sred sride hlad-nog rata bilo moguće (u Zagrebu, tj. tadašnjoj Jugoslaviji) zajedno prezentirati i okupiti autore i teoretičare iz oba bloka (SAD, SSSR, Argentina, Zapadna i Istočna Evropa). Vje-rojatno su fileovi bili manji od 1 mb, a tada su izložene grafike, filmovi, objekti, mode-lirane 3D skulpture, glazba, koreografija… Bonačić je izveo *u stalnom postavu* veliki objekt na fasadi robne kuće u Zagrebu. Čini mi se da je danas mogućnost izbora i kreta-nja nesrazmerno veća … a zanimljivo je što su rezultati … 1968 – 72 izašlo je 9 temat-skih časopisa "Bit Inernational" o medijskoj umjetnosti.

Nažalost ili na sreću, progresivna umjetnost je uglavnom uvijek bila low budget … prije 30-tak godina su kompjuterski radovi uglavnom proizvedeni na tadašnjoj high-tech opremi u low-tech manifestaciji. High-tech oprema je uglavnom bila u posjedovanju znanstvenih institucija, jer su tada dostupni kompjuteri bili tamo (i još valjda samo u vojsci, a tek poslije u edukaciji; to je vrijeme prije PC-a). Uglavnom su, bez obzira na mjesto nasta-nka i ideologiju, nastali u okviru znanstvenog establishmenta uglavnom u njihovo slobod-no vrijeme i osobni entuzijazam.

… Na konferenciji organiziranoj od Vijeća Evrope 'A new space for culture and society, new ideas in science and art', 1996. u Pragu, Mandelbrot je pričao da je jednom, kao mladi znanstvenik, na jedvite jade službeno, jedne noći ubacio svoj program na potreb-no procesiranje na tadašnjem superkompjuteru … švercanje …

Citati iz "Bit Internattional" magazina [no. 1-9/1968-1972] i kataloga izložbe "tendencije 4" [1968/69], koje je objavila Galerija suvremene umetnosti, Zagreb.

… Prema H. Franku ukupni informacijski kapacitet svijesti iznosi 160 bit-a. Ta je vrijed-nost izvedena iz činjenice da je u svijest pristigla informacija od 16 bit-a u njoj prisut-na oko deset sekundi. Za procese učenja kao i za prenošenje estetičkih informacijskih uzoraka mjerodavna je nadalje informacijsko – teoretska spoznaja da se samo oko 0,7 bit-a može iz svijesti prevesti u pamćenje. …

Herbert W. Franke: Kibernetske osnove programirane umjetnosti
Bit international br. 2: Kompjuteri i vizualna istraživanja, Zagreb, 1968.

… i da će u budućnosti razvoj poruka i sredstava komunikacija, poruka između čovjeka i mašina, između mašina i čovjeka i između mašine i mašine, neizbježno igrati sve značaj-niju ulogu.

N. Wiener: Ljudska upotreba ljudskih bića, 1954,
uvodni citat u katalogu "tendencije 4" (1968 – 69), Zagreb, 1970.

… čista je tehnologija uvijek zanimljivija i ljepša nego umjetnost stopljena s tehnologijom.

Izjava grupe Anonima za svibanj 1968,
katalog "tendencije 4" (1968 - 69), Zagreb, 1970.

… Ali već su strojevi došli k čovjeku, brže nego li je čovjek došao k njima…

Abraham A. Moles, uvodna riječ na kolokviju Kompjuteri i vizualna istraživanja,
Zagreb, 1968, Bit International br 2, 1968.

… Međutim, dok analogni kompjutor razrađuje stalno promjenjive veličine nekog za problem analognog sistema, digitalni kompjutor samostalno izvodi račune prema zadanom programu. Upravo otkrićem digitalnog kompjutera otvara se do sada najznačajnije područje kompjuterske umjetnosti. … Objekte radi Vladimir Bonačić i to tako da isključuje slučaj prikazujući na primjer ireducibilni polinom 18. stupnja na 36 metara dugom nizu od 18 objekata koji je postavljen na fasadi trgovačke kuće Nama u Zagrebu. Konačno, ovu izložbu valja shvatiti ne kao prevlast tehnologije, već kao nastojanje da se nova tehnologija prevlada i iskoristi za nove rezultate na vizuelnom području.

Boris Kelemen: Kompjuteri i vizualna istraživanja, katalog "tendencije 4"
(1968 – 69), Zagreb, 1970.

… Dopuštamo mogućnost da će narednih dvadeset godina umjetnici možda utrošiti na istraživanje i asimiliranje potencijala postojećih kompjutera i propratne tehnike… Veliki dio kompjuterske umjetnosti nosi u sebi ograničenosti postojećih tehnika. Estetski zahtjevi nužno navode umjetnike da traže saveznike u najprogresivnijem istraživačkom radu prirodne i artificijelne inteligencije.

Gordon Hyde, Jonathan Benthall, Gustav Metzger: Zagrebački manifest, 1969,
Bit International: Dijalog sa strojem, 1971.

… budu li čak domaćinstva pomoću televizijskih ekrana povezana sa centralnim računalskim jedinicama, kao što je danas s telefonima, onda ništa neće stajati na putu mogućnosti da se kompjuterska grafika pokazuje pomoću slikovnog ekrana. Ta nam se mogućnost danas ukazuje kao utopijska …

Herbert W. Franke: Društveni aspekti kompjutorske umjetnosti, 1969,
Bit International: Dijalog sa strojem, 1971.

… prvi dobitnici nagrada na sada već godišnjem natječaju kompjuterske umjetnosti, koji organizira 'Computers and Automation' bili su članovi balističke grupe SAD. Nema sumnje da je u kompjuterskoj umjetnosti prava avangarda bila vojska. … Skulptura je primjerna postojećih snaga. To se jasno vidi u egipatskom monumentalnom kiparstvu. U projektu "Pet ekrana s kompjuterom" bavim se golemom moći koja je vezana uz najdelikatnije vršenje vlasti … trebalo bi da bude postavljena između tri velike stambene zgrade … Kompjuter koji će upravljati skulpturom može se upotrijebiti i za druge zadatke u vezi s normalnim djelatnostima u stanovima. Pomoću telefonskih veza on može služiti kao mjesna priručna biblioteka stanara …

Gustav Metzger, referat na simpoziju Kompjuteri i vizualna istraživanja, Zagreb, 1969,
Bit International: Dijalog sa strojem, 1971.

… Televiziju će zasjeniti C.V. (kompjuterovizija). Taj sistem kombinira i proširuje sadašnje karakteristike i sistema kompjutera i sistema televizije. Tako će jedno s drugim dati sistem dvosmjerne komunikacije uklanjajući barijeru nesudjelovanja publike. S povećanjem slobodnog vremena moći će se više interesa i aktivnosti posvetiti uživanju, a razvoj umjetnosti i novih tendencija treba da se kreće u tom pravcu.

Petar Milojević: xxx, Bit International: Dijalog sa strojem, 1971.

… Ne bi li se i informaciona estetika mogla poslužiti određenim tehnikama modeliranja? Informacija koju bi ona trebala modelirati je estetska informacija, kakva se pojavljuje u prirodi i umjetnosti. No modelirati bi trebalo i procesnu ovisnost estetske informacije, a pri tome opet procese shvatiti kao vremenski ovisnu informaciju.

Georg Nees: Kompjuterska grafika i vuzuelna umjetnost,
Bit International br. 2: Kompjuteri i vizualna istraživanja, Zagreb, 1968.

Pitanja & Odgovori
Predavanje:
**"I'm Still Alive": Nove tendencije – medijska i kompjuterska
umetnost šezdesetih**

Darko Fric

P: Ako govorimo u terminima kompjuterske umetnosti šezdesetih godina i delimično sedamdesetih, možemo konstatovati neku vrstu nekomunikacija između tzv. aktivista šezdesetih godina, protiv-šezdesetosmaša, levičara i neokonstruktivizma. Upotreba i pronalazak PC-ja je spojio te dve stvari, što je rezultiralo pojavom današnjeg net.arta. Da li su postojali neki primeri ljudi koji su bili deo te neokonstruktivističke, da ne kažem pro državne orijentacije koji su bili protiv kompjuterske linije? Da li su postojali ljudi koji su povezivali te dve stvari?

O: Smatram da su u šezdesetim godinama neokonstruktivisti bili istinska avangarda i kao takvi nekompromisni u društvenom pogledu. Po svojoj naglašenoj politički (novo)lijevoj orijentaciji na zapadu su bili opozicija mainstreamu, dok su poneki sretni primjeri u tadašnjoj Jugoslaviji da su isti avangardisti uspjeli sudjelovati u (ponekad visokobudžetnim) državnim projektima i ostvarivati izuzetne rezultate. Neokonstruktivistička i luminokinetička umjetnost je koristila nove tehnologije, no ne u informatičke, već robotičke ili slične svrhe za postizanje kinetičkih kvaliteta, te razne vidove serijske proizvodnje umjetničkih radova kroz upotrebu tada novih materijala. Upotreba informatičke elektronske tehnologije je zapravo spojila te dvije linije tek u punom smislu kroz rani video art. Tadašnji konceptualni umjetnici su shvatili video kao opoziciju mainstream televiziji, koja je shvaćena kao sistem represije i manipuliranja informacijama, sa čime se danas i osobno slažem. Postavili su utopijsku viziju upotrebe video tehnologije koja je ponekad ostvarena kroz lokalne (kablovske) televizije, te su tim novim sistemom produkcije i distribucije sudjelovali u decentraliziranju sistema informacija. To obećanje ranog video arta, ispunila je Internet revolucija u 90-tim godinama XX veka. U 60-tim tog istog veka to nije bilo moguće ostvariti kroz kompjuterske mreže, jer jednostavno nisu postojale, osim u začetnim fazama eksperimenata. Prisjetimo se da je Internet razvijen kao vojno hladnoratovsko oružje u slučaju atomskog rata – kao zamjena za telefonsku komunikaciju.

No, vratimo se na kulturu i umjetnost šezdesetih godina: jedna linija autora je vjerovala u progres društva kroz znanstveni i tehnološki napredak, dok je druga preferirala anar-

hizam, individualizam, povratak u prirodu, direktnu revoluciju i slično. I jedni i drugi zapravo su bili politički lijevo orjentirani, željeli su promjenu i boljitak društva, no vidjeli su postizanje cilja vrlo različitim metodama i sredstvima. Tek se u devedesetima poglavito kroz net.art događa taj crossover, zapravo fuzija političkog aktivizma kroz direktnu akciju, konceptualne umjetnosti i tehnološke osvještenosti. Primjeri su brojni, a ovdje bih izdvojio dva karakteristična rada. Prvi je rad grupe RTMark, gdje simuliraju da su zapravo oni predstavnici WTO (World Trade Organization) te kao takvi bivaju pozivani na ekonomske kongrese [http://theyesmen.org]. Drugi rad je također subverzivne prirode, "FuckU-FuckMe" Alekseja Šulgina (Alexeia Shulgina) [http://www.fu-fme.com], a sastoji se od reklamne kampanje za u stvarnosti nepostojeći proizvod – hardver koji omogućava fizički cyber sex, te je kao takav dobio 50.000 stvarnih narudžbi u godinu dana! Čak je i hrvatski "Playboy" objavio u svom članku o cyber sex-u taj njegov proizvod kao pravi proizvod! No nažalost svaka avangarda umire mlada, pa je i ta pozitivna energija net.arta 90-tih godina XX veka vremenom izgubila početni entuzijazam i utopila se u mainstream kulturnu industriju i instotucionalizirala se.

P: Da li je to problem posedovanja tog pretpostavljenog umetničkog dela?

O: Rani net.art je upravo preskočio posredovanje između komunikacije umjetničkog rada i publike, bez posrednika, i bio je po svojoj prirodi besplatan. Pitanje je što je moguće ponuditi još uvijek tradicionalno orjentiranom umjetničkom tržištu koje ipak teži objektima. U tom smislu izmišljaju se razne čudne i uglavnom nepotrebne forme i kompromisi. U medijskoj umjetnosti što se tiče novaca, izuzev par izuzetaka, stvar se uglavnom svodi na njihovo iskorištavanje od strane novopostavljenog establišmenta: rad bez honorara, te činjenice da bi umetnici trebali biti sretni što su pozvani sudjelovati u projektu, te što putuju po svijetu i što su im pokriveni za to vrijeme životni troškovi …

P: Da li, u vezi sa kompjuterskim radovima iz šezdesetih godina postoje neke naznake razmišljanja o interaktivnosti? Radovi koji su proizvedeni zasnivaju se na kompjuteru koji je korišćen kao medij, i još uvek su to dvodimenzionalne grafike.

O: Bilo je i raznih drugih formi, trodimenzionalnih skulptura, koreografija, glazba i film. U toku izlaganja prikazao sam kompjuterski film Tomislava Mikulića. Luminokinetički i neokonstruktivistički radovi iz prvog dijela pokreta "Tendencije" skoro su redom interaktivni sa gledateljem (s obzirom na tradicionalnu likovnu umjetnost) kroz promišljenu i uvjetovanu percepciju rada, bilo uz pomoć elektronskih mobilnih djelova rada, njegovim položajem u prostoru ili retinalnim efektima dvodimenzionalne površine ili reljefa. Ponekad se pozivalo gledatelja da direktno fizički mjenja strukturu izloženog rada. Korak interaktivnosti dalje vidimo u radu "Compos Hobby Box" grupe Compos (http://darkofritz.net/curator/alive/pix/m01veen.jpg) gdje su u priloženom manualu korisniku predložene kompjuterski generirane mogućnosti načina kojim možemo slagati kompoziciju od priloženih bojenih pravokutnika. Rad je nastao krajem 60-tih i koristi se informatički vokabular: user, manual, matrica, program, objekt.

U nerealiziranom projektu "Pet ekrana s kompjuterom" Gustav Metzgera iz 1969. instalacijom su preko telefona trebali upravljati stanari okolne tri velike stambene zgrade. Među citatima koje sam ovdje izvukao iz časopisa "Bit International" možete naći onaj Petra Manojlovića o C.V. (Computer vision), gdje se zapravo vrlo jasno predviđa Internet, samo se malo drugačije naziva. Zamišljeno je da se preko telefonskih/TV linija odvija dvosmijerna komunikacija – dakle, interaktivna. Tu je shvaćanje interaktivnosti pomaknuto sa odnosa jedan umjetnički objekt – jedan "korisnik" na širi informatički i društveni nivo.

U kuda.org, 16. 07. 2002.

Piratologija: U dubinama otvorenog kôda i slobodne kulture

Armin Medoš

Ideja o pisanju ovog teksta nastala je iz potrebe "uranjanja", uplitanja i angažovanja u istraživanju skrivenih dubina otvorenog koda i slobodne kulture. Potreba za tim izražena je kroz niz projekata – izložbu i onlajn projekat "Kraljevstvo piraterije" (Kingdom of Piracy – KOP) i njegove različite delove, instalaciju BURN, diskusije i DJ/VJ nastupe, CD-Rom DIVE i konačno kroz publikaciju istog naziva. Ono o čemu se ovde govori ima brojne aspekte i različita imena, ponekad različite stavove i definisana polja delovanja: programeri koji razvijaju "slobodan softver" (free software) i softver otvorenog kôda (Open Source software), pravnici koji kreiraju licence za održavanje javnog domena kao opšteg dobra, umetnici, pisci koji razvijaju kopileft (copyleft) inicijativu, aktivisti nezavisnih i slobodnih medija. Kombinacijom napora i metoda rada, oni zajedno pokušavaju da promene uslove kreiranja, inovacije i kulturne produkcije i time daju svoj doprinos ideji otvorenosti i slobode. Njihove metode se ne svode samo na kritikovanje postojećeg sveta mejnstrim institucija i njihovog mišljenja, niti pokušavaju da se legitimišu kao opozicija bilo čemu. Umesto toga, veliki broj ljudi radi na građenju zajedničkog prostora za brz i slobodan pristup informacijama, softverima, platformama, infrastrukturi. Neke od aktivnosti koje su deo ovog zajedničkog, konstruktivnog napora često su prozivane piraterijom. Činjenica je da nije u našoj moći da pokušamo da sprečimo korišćenje ovog termina, te to i ne činimo, jer bi to predstavljalo samo gubitak vremena. Ali, kako su nedavno velike korporacije pokrenule različite diskusije o intelektualnom vlasništvu, mogao bi biti koristan pokušaj rasvetljavanja ovog termina. Kako je termin "piraterija" upotrebljavan u prošlosti i kako je trenutno instrumentalizovan kao deo simboličke borbe između dobra i zla, legitimnih nosioca intelektualnog vlasništva i zlonamernih pirata?

Koreni piraterije

Piraterija ne egzistira samo zato što postoje zli ljudi koje jednostavno nije briga za pravila i zakone civilizovanog sveta. Postoji tendencija njene pojave gde god se javi hegemona moć koja sebe etablira stvarajući trgovačke monopole. Monopol po svojoj prirodi ima svojstvo uklanjanja konkurencije uništavajući postojeće principe trgovine. Ljudi bivaju isključeni iz tradicionalnih načina zarade za život, te se njihove aktivnosti automatski pretvaraju u kriminalnu radnju. Hegemona moć često koristi nasilje da bi privolela druge da joj se povinuju, sebe determiniše kao zakon, a sve ostalo kao nezakonitu pirateriju. Ovo je ukratko lekcija koju možemo naučiti kroz istorijske aspekte piraterije.

Istorijski "rat zbog piraterije"

Između 1750. i 1850. godine, Britanska imperija, šireći se od Indije ka istoku, morala je da se bori protiv pirata u Malajskom arhipelagu. Pri kraju ovog vek dugog i nikada

javno objavljenog rata, Britanci su uspeli da savladaju otpor pirata tehnološkom nadmoćnošću, jer su posedovali daleko nadmoćnije parobrode i oružje velikog dometa. Ali zašto je ovo područje uopšte bilo toliko poznato po pirateriji? Oven Rater (Owen Rutter), koji je zapisivao tokove ovih događaja, navodi da je "razlog koji ih je primorao na to bio veliki interes Evrope za Istok". [1] Piraterija velikih razmera nije postojala u ovom regionu pre osamnaestog veka. "Šta je to što je primoralo ove ljude i njihove susede da mir u kojem su živeli preobrate u pirateriju? Odgovor je: pohlepa evropske moći koja je trgovala na istočnim morima."

Po Rateru, trgovina sa stranim zemljama u regionu je oduvek bila u rukama kineskih trgovaca i imala je pozitivan uticaj na razvoj lokalnog zanatstva i poljoprivrede. Lokalna populacija i njihova vlast su profitirali zahvaljujući kineskoj trgovini sa strancima i veštini zanatlija. Tada su se pojavili kolonijalni vladari koji su "kreirali sistem monopola i sporazumom sa malajskim vladarima uspeli su da kontrolišu proizvodnju vođeni sopstvenim interesom". Kao rezultat toga, kineski trgovci su bili van posla, a vrlo važan izvor životnih sredstava za lokalnu zajednicu, "hleb i puter", je nestao. Evropski trgovinski sistem nije mogao da nadoknadi ovaj gubitak, jer su "uzeli sve i dali što su manje mogli". Ovo nije uticalo samo na trgovinu, već i na proizvodnju i transport, "tako da je hiljadama urođenika bio uskraćen uobičajen rad" (str. 27). "I dalje nezadovoljni, imperijalisti su se umešali i u unutrašnje poslove malajske vlade i izazvali neslaganja unutar nje zbog sopstvenih interesa, sve dok nisu uništili autoritet vladara i dezorganizovali komercijalnu preduzimljivost njihovog naroda." Tražeći izvor prihoda, malajski vladari su se "…okrenuli pirateriji i pljački. Ako bi neko posmatrao ovu metamorfozu iz njihove pozicije, mogao bi videti da je tokom napada evropskih brodova koji su usledili, čin osvete upućen krijumčarima sa zapada vremenom uzrokovao gerilsku borbu na moru kao uobičajen način života, korisniji i sigurno uzbudljiviji nego prethodan period mira" (str.27).

Današnji "rat zbog piraterije"

Kao što zapisi pokazuju, piraterija u ovom regionu javila se kao posledica uništenja tradicionalnih trgovačkih puteva i stvaranja evropskog monopola nad trgovinom. Vrlo je jednostavno uvideti sličnost sa današnjim "ratom protiv piraterije" u domenu intelektualnog vlasništva. Brendirana imena, patenti i kopirajt (copyright) gotovo da deluju zajedno pri kreiranju regionalnih i globalnih monopola. Kulturna hegemonija zapadnih zemalja koristi internacionalne zakone, trgovačke ugovore i pretnje trgovinskim sankcijama da bi obezbedila sopstvenu poziciju. Zemlje "trećeg sveta" su degradirane do stepena kada predstavljaju izvor jeftine radne snage pri proizvodnji brendiranih i kopirajtom zaštićenih proizvoda za zapadne zemlje, proizvode koje radnici sebi nikada ne bi mogli priuštiti.

Sekcija 301 Trgovačkog akta iz 1974. godine omogućuje Sjedinjenim američkim državama autoritet kojim formiraju trgovačke ugovore, rešavaju trgovačke nesuglasice i otvaraju strana tržišta svojim proizvodima i uslugama – što je po SAD terminima nazvano "ujednačavanje igrališta". Viteg Veng (Whiteg Weng) pokazuje kako je Sekcija 301 oštetila

tradicionalne puteve uvoza knjiga sa zapada, muzike i filmova na Tajvan. [2] Lokalni uvoznici su jednostavno zamenjeni "američkim lancima trgovine". Istovremeno, trgovina piratskim proizvodima je procvetala u Guang Hu marketu u Taipeiu, piratski raj ne samo za softver i muzičke CD-e, već takođe i za generičke kompjuterske čipove. Potreba za jeftinijim verzijama kopirajtom zaštićenih proizvoda, dovela je do stvaranja paralelnog, "sivog" tržišta u azijskim metropolama.

U centru Bangkoka na Tajlandu, veliki, moderan tržni centar pod nazivom "Pantip Plaza" je gotovo u celini posvećen softverskoj, filmskoj i muzičkoj pirateriji. On sadrži veliki broj vrlo bogato opremljenih prodavnica sa veoma širokom ponudom. U njima su izloženi samo omoti CD-a, odštampani na laserskom štampaču. Kupac zapisuje redni broj CD-a ili DVD-a koji želi da kupi i listu daje jednom od članova osoblja, plaća protivvrednost od 2 do 2,5 američkih dolara i čeka 15 do 20 minuta dok se CD-i ne dopreme iz skladišta van tržnog centra. Ceo postupak se obavlja bez bilo kakvog straha od zakonskog kažnjavanja. Američki zvaničnici iz odseka za trgovinu permanentno vrše pritisak na vladu da pojača mere protiv ovakvih aktivnosti. Ali, izgleda da niko to nije rekao mladim ljudima na Tajlandu i strancima koji mogu samo da gledaju CD omote komercijalnih softvera, kompjuterskih igrica, skupih aplikacija i profesionalnih programa za editovanje muzike. Ono što kompanije sa zapada definišu kao pirateriju, za lokalnu zajednicu je akt ekonomske odmazde koja u izvesnoj meri može objasniti blagost tajlandske vlade.

Industrija kopirajta, često nazivana kao "data lords" (gospodari podataka), nije u potpunosti zadovoljna krahom piraterije industrijskih razmera. U poslednje vreme reč "piraterija" počeli su da koriste na različite načine. Shvatajući uspeh improvizovanih, peer-to-peer mreža ljudi koji međusobno dele podatke, "data lordovi" prozivaju piratom svakog ko učestvuje u deljenju podataka putem Interneta. [3] Ono što je novina u ovom slučaju je da "piraterija" nije u direktnoj vezi sa profitom, već je termin koji objedinjuje sve sadržaje koji nisu eksplicitno sankcionisani kopirajt zakonima. Muzička industrija je sudskim putem dobila pravo koje se tiče pristupa informacijama korisnika sa posebnih ISP-a (Internet Service Provider). Ako ova presuda ne bude ponovo razmotrena, onda će ISP-i biti primorani da predaju podatke o korisnicima muzičkim kompanijama, ukoliko postoji sumnja da su njihovi korisnici bili umešani u bilo kakvo deljenje podataka. Istovremeno, priprema se i nova pravna regulativa koja će kompanijama dati moć da "provale" u kompjutere privatnih lica da bi proverili da li te osobe učestvuju u deljenju podataka. Ovo su neograničene moći za privatne kompanije, koje su čak daleko iznad policijskih ovlašćenja i koje im omogućuju poziciju koja je iznad samog zakona, jer se njihovi komercijalni interesi podudaraju sa nacionalnim interesima SAD. Kopirajt direktiva Evropske unije se u velikoj se meri, izuzev u nekim svojim delovima, zasniva na sličnom aktu američke vlade (Digital Millennium Copyright Act).

"Piraterija" je pitanje snage definicije i trenutno je u potpunosti u rukama "data lordova". Holivudski filmski studiji, softverski giganti i multinacionalne muzičke kompanije izabrale su korišćenje termina "piraterija" za sve oblike kršenja zakona o kopirajtu. Ali,

ta činjenica će se promeniti. Kao što je Bernard Ginter (Bernhard Günther) istakao [4], Holivud je producirao mnogo filmova o piratima (gusarima), gde je publika uglavnom bila na strani "humanih" pirata u odnosu na kapetane pomorskih regata. Ljudi su blagonakloni prema gubitnicima. Biranjem termina "piraterija" Holivud je čak pokazao da nije razmeo sopstvenu propagandu iz ranijeg perioda. Nije li potpuna koincidencija da je jedan od najuspešnijih softvera otvorenog kôda nazvan "Apač" (Apache), poput severno-američkog plemena urođenika koje su beli kauboji nemilosrdno i do istrebljenja ubijali?

Da li je moguće osloboditi pirateriju negativnih konotacija? Možda to ni ne treba da se desi. Nismo mi izabrali taj termin. Pripisan je aktivnostima u kojima smo ponekad i učestvovali, iako se ne osećamo kao počinioci zločina. Poput običnih ljudi obično ne pretendujemo učestvovanju u bilo čemu ilegalnom. Ne moramo da tražimo satisfakciju u romantično-utopijskim piratskim pričama. Fundamentalne promene se dešavaju upravo sada u centru produktivnih snaga koje će prikazati ovo pitanje irelevantnim.

Alternativa postoji

> "Ukrali su nam revoluciju, sada je mi krademo nazad."
> (NTK newsletter)

Esencija svake digitalne operacije je kopiranje (copy and paste) – ili otvori fajl, transformiši fajl, sačuvaj fajl (open, transform, save). Nemačka haker legenda Vau Holand (Wau Holland) nazvao je kompjutere i Internet "ogromnom mašinerijom za reprodukciju i distribuciju informacija". Ako je izvorni materijal bilo koje digitalne operacije pod kopirajtom, tada je svako "copy" i "paste", ili "open" i "save" ilegalno. Intencije kopirajt industrije su u sukobu sa logikom digitalne tehnologije. U tom smislu, namera kopirajt industrije je "izvrtanje" i menjanje tehnologije donošenjem novih mehanizama kontrole kopirajta uz pomoć snažne ruke zakona, s ciljem da se ljudi dovedu u željenu poziciju: poziciju potrošača i konzumenata proizvoda upravo tog industrijskog sistema. Još koliko dugo ove veštačke barijere mogu zadržati tehnološki i društveni napredak?

Trenutni ekonomski i tehnološki trendovi aktivno rade na redukovanju nedostataka i kreiranju izobilja. I bez nedostatka sredstava cela diskusija o pirateriji propada. Mnogi su čuli za "Murov zakon" (Moore's Law), gledište su-osnivača "Intel" kompanije, da se broj tranzistora po kvadratnom inču integrisanih kompjuterskih kola udvostruči svake godine od kada je integrisano kompjutersko kolo kreirano. [5] Procesna moć kompjuterskih čipova i digitalni kapacitet za čuvanje podataka neprestano raste, dok cena opada. Internet i drugi telekomunikacioni servisi su komunikaciju učinili jednostavnijom, bržom i jeftinijom. Prilikom ekspanzije nove ekonomije, ogromni kapaciteti protoka informacija su stvoreni postavljanjem optičkih kablova i satelita. Pošto očekivanja od zahtevnih, komercijalnih servisa nisu bila prilagođena realnosti, mnogi se od ovih kapaciteta nedovoljno koriste. Teoretski, ako tržište zaista prati zakone nevidljive ruke koja upravlja njima, protok podataka bi do sada morao biti gotovo potpuno besplatan.

Postoji mit o Internetu kao potpuno decentralizovanom i ne-kontrolisanom mediju, koji omogućuje komunikaciju od tačke do tačke bez postojanja centralne komandne i kontrolne institucije. Ovaj princip realizovan na mnogim tehnološkim i društvenim nivoima, pomaže stvaranje novih transverzalnih struktura – zajednica, pokreta, interesnih grupa, kampanja, diskusija, foruma, procesa deljenja podataka – koje ne zavise od dozvole bilo kakvog autoriteta. Ovaj društveni dinamizam, baziran na novim tipovima tehnološki potpomognute kolektivizacije, ima ozbiljne ekonomske i političke implikacije.

Kritična masa

Softver otvorenog koda (Open Source software – OS) i slobodan softver (Free Software-FS) je dugo vremena pratio glas da su od koristi jedino kompjuterskim fanaticima. Ali danas, najjednostavniju radnju na kompjuteru svaki korisnik može lako i pouzdano izvesti u OS/FS okruženju, isto kao na patentiranom softveru. Ovaj pokret je danas postao tako rasprostranjen i temeljan, da na mnoge načine izaziva patentirani softver. U ovom trenutku ne radi se samo o pojedinačnim aplikacijama za individualne korisnike, o web serverima i kolaborativnim platformama na webu za koje OS/FS obezbeđuje bolju alternativu, već se radi o fundamentalnijim aspektima programskih jezika i razvojnog okruženja, gde OS/FS takođe uspeva da ostvari prednost.

"A šta ćemo u vezi sa digitalnim jazom?", može se postaviti legitimno pitanje, "Šta ćemo sa velikim delom svetske populacije koji nema pristup telefonu, da ne pominjemo kompjutere ili sa onima koji su nepismeni, koji umiru od gladi i bolesti?" Zaista je uvek legitimno postaviti ovakva pitanja. Ako je jedino pitanje bilo kako razviti bolji softver, otvoreni kôd (Open Code – složenica koja se koristi kao skraćenica koja povezuje OS i FS zajedno bez poricanja da između njih postoji razlika) ne bi bio vredan naše pažnje. Povećanje brzine i jednostavnosti komunikacije za "info elitu" u zapadnim zemljama i njihovim antipodima iz trećeg sveta može u nekom smislu doprineti društvenom progresu, ali ne može uticati na korene problema sa kojima se suočavamo. Na kraju krajeva, otvoreni kod neće zaštititi ni jednog avganistanskog ili iračkog seljanina od bombardovanja.

Ali nije više u pitanju "samo" softver. Rad koji je započet razvojem OS/FS doneo je inovacije i na mnogim drugim poljima: pokret slobodnog umrežavanja (free networking movement) omogućuje ljudima kontrolu nad sopstvenom tehnološki uslovljenom komunikacijom; inicijative slobodnih i nezavisnih medija poput mreže Indimedija (Indymedia); društvene mreže poput meta-mreže koju je nedavno kreirao Svetski socijalni forum (World Social Forum) i koja pokušava da poveže različite političke aktiviste na globalnom nivou; projekat "Creative Commons" koji omogućava različite modele licenci za kreativan rad; umetnici, pisci i istraživači koji svesno postavljaju svoj rad u javni domen; grupe koje vrše pritisak na vlade svojih zemalja tražeći slobodu informacija, transparentnost i odgovornost vlade.

Veliki broj ljudi je uključen u aktivnosti pod imenom "commons-based peer production", naime, proizvodnja roba i usluga baziranih na pravilima javnog domena i "jednakih"

(peer). Ovakav oblik proizvodnje je stvorio kritičnu masu. Ceo proces se ne dešava van političkog i ekonomskog mejnstrima poput samoproklamovanih avangardnih pokreta u prošlosti, već se dešava u samom centru zapadnih društava, u najrazvijenijim produkcionim granama [6]. Većina učesnika ovog pokreta se ne izjašnjava za neku posebnu ideologiju, već pre čini nepokolebljiv izbor u doprinosu ekonomiji baziranoj na ideji jednakog učestvovanja i deljenja, pre nego u proizvodnji intelektualne udobnosti. Pravljenjem ovog izbora, oni pokazuju da ne žele konzumiranje kapitalističke filozofije vlasništva i nedostatka resursa. Odbijanje da neko bude plaćen za ono najbolje što ume da uradi je jaka politička izjava. Neoliberalizam ima nameru da nas svede na uverenja društvenih darvinista. Mi smo bili prisiljeni da verujemo da je jedina opcija služenje otuđenim svakodnevnim poslovima. Ljudi su odlučili da žele da primaju manje novca zbog privilegije samostalnog odlučivanja i definisanja sopstvenog posla. Na intuitivnom nivou, ljudi su izrazili želju da budu kooperativni pre nego takmičarski raspoloženi, ili preciznije, odlučili su da je zajedničko dobro iznad individualnog blagostanja. Ovaj akt iskrenosti je danas delo ne samo nekoliko umetnika i hakerske elite, već miliona ljudi. Bez obaveznog formulisanja sebe kao suprotnog, ovaj neopisiv pokret pokreta polako ali neizbežno menja društvo iz njegovih osnova.

Šta umetnost ima s tim?

U izvesnom smislu umetnost i kultura (ovde upotrebljeni u uskom smislu, kao u "polje kulturne produkcije") su oduvek bili "otvorenog kôda" (Open Source). Umetnici su negovali i održavali kulturno nasleđe živim, prepričavali i adaptirali postojeću naraciju. Bez otvorenog pristupa dostignućima prošlosti, kultura ne bi postojala. [7] U ovakvoj situaciji je pomalo iritirajuće videti brojne zajednice programera Open Source-a – posebno ukoliko neko smatra da neke od zvezda OS zajednice nisu imune na verovanje u kult sopstvene slave i da ne pokazuju snažnu volju za društvenim promenama. Ipak, ovo ne bi trebalo da nas odvrati od prepoznavanja potencijalnih saveznika. Kako god bilo pogrešno smatrati Open Code ultimativnim i jedinim pozitivnim primerom, bilo bi podjednako pogrešno razdvajati umetnike, programere i ostale koji se bave produkcijom.

Mali, ali ipak značajan broj umetnika nije više zainteresovan za proizvodnju slike ili za samo-ekspresiju. Dok fotografija, zvuk i video mogu imati nekog udela u njihovom radu, umetnici ih upotrebljavaju na funkcionalan način u većim projektima. Ovi umetnici su ujedinili svoje snage sa programerima i počeli su zajedno da rade na kreiranju alatki, interfejsa i platformi. Ovi umetnici/programeri su trenutno u centru kulturne borbe, ne zbog toga što je proizvod njihovog rada umetnost, već zato što je kôd koji proizvode ekspresija kulture u pravom smislu. Oni prenose kulturnu politiku kôda, podržavajući njene temelje radi očuvanja i preporoda kulture. Kreirajući digitalne alatke koje se mogu slobodno koristiti, menjati, redistribuirati i proslediti svakome besplatno, umetnici/programeri oslobađaju kulturu stega kulturne industrije. Oni stvaraju platformu za društvene eksperimente proširujući polje slobode – slobode (te najvarljivije reči) ne u kapitalističkom smislu, jer ona podrazumeva slobodu elite da ugnjetava druge, već slobode koja otvara niz mogućnosti za veći broj ljudi.

Bez namere za kategorizacijom može se reći da se neki od ovih radova i dalje smatraju umetničkim, jer se ne zasnivaju na funkcionalnosti samog koda i takođe na gestovnoj simboličkoj politici. Umetnici dovode karakteristike digitalne tehnologije do logičnog zaključka jasno i efikasno – na primer, grupa 0100101110101101.org kopiranjem digitalnih radova drugih umetnika na hard disk svog kompjutera; Vuk Ćosić kopiranjem celokupne web stranice documente x, najveće svetske umetničke izložbe. Oba rada izazivaju originalnost digitalnog umetničkog rada, kult autorstva i legitimišuću moć institucija. U drugom eksperimentu pod nazivom "life-sharing" (deljenja života), 0100101110101101.org su otvorili svoj kompjuter i sve svoje fajlove učinili dostupnim svakome ko koristi Internet tokom prethodne tri godine. "Privatnost je glupa" je njihov slogan koji podriva stanovište da svi mi treba da šifrujemo svoje fajlove i komunikaciju da bi sačuvali privatnost svog digitalnog života. Sve je tamo sve vreme, pitanje je samo: Ko bi želeo da zna? Važno je razumeti kako ovaj jednostavni gest minira ambicije prismotre državne moći u ime "total information awareness" (totalna informacijska svesnost).

Dovodeći do zaključka inherentnu logiku digitalne tehnologije umetnici pomeraju granice digitalne slobode. Korisnik ovakvog umetničkog rada nije samo pasivni "primalac", već postaje deo akcije koja može prekoračiti granice zakona. Neki umetnici političku kampanju smatraju prirodnim načinom delovanja i to ih je primoralo da razviju ofanzivniji način rada i pronađu podesan kôd koji to može da podrži. Tokom poslednje decenije Electronic Disturbance Theatre (EDT) je razvio tehniku elektronske građanske neposlušnosti. EDT je uspostavio "rastuću" moć umreženih aktivista nasuprot monolitnoj moći države. Njihov proizvod "FloodNet" omogućava onima koji protestuju na Internetu, da zajedničkim korišćenjem privremeno ugase web servere ciljanih institucija. Ovaj istem je korišćen protiv meksičke vlade zbog akcija vojske protiv revolta Zapatista u provinciji Čijapas (Chiapas), i protiv WTO (World Trade Organization) tokom protesta u Sijetlu. Tehnički, takav napad na web servere se zove "distribuirano-odbijanje-poslušnosti" (distributed-denial-of-service). Može ga izvesti uz maksimalnu efikasnost jedna osoba ili mali broj ljudi koji deluju prikriveno. Ali, tu leži razlika u akcijama EDT-a. Oni pozivaju korisnike da otvoreno izraze svoju podršku i volju da preuzmu rizik da bi ustali u odbranu onoga u šta veruju. To stvara javni "teatar akcije", suprotan prikrivenom digitalnom nasilju.

Web sajt – parodija Yes Men-a [8], medijske akcije Übermorgen-a [9] i uspešna Toywar kampanja su dalji primeri akcije umetnika koji ponekad pribegavaju merama koje okupiraju "sive" zone između legalnog i ilegalnog. Legalne mere ne mogu predvideti sve mogućnosti koje unapređuju nove tehnologije i kreativno mišljenje. U demokratiji koja zaslužuje svoje ime, sve što nije striktno dopušteno je legalno, a u totalitarnim državama sve je ilegalno ukoliko nije striktno odobreno. Ono što ove akcije imaju zajedničko je dobit koju stvaraju distribuirane peer-to-peer moći mreže i volja velikog broja ljudi da učestvuju i bore se za svoje ciljeve. Ono što je najbitnije je da ove umetničke akcije-kampanje stvaraju sliku o Internetu kao javnom prostoru. One ukazuju da mogu biti upotrebljene kao arena za masovne političke proteste, kao i na trgu ili na ulici. Privatizaciji i zatvaranju koje potencira neo-liberalna agenda umrežavanja je suprotstavljena kolektivizacija elektronske komunikacijske sfere.

Nedavno, umetničke inicijative su dovele ovu "javnu" agendu na nivo fizičke mreže koriste-ći spektar frekvencije 2.4 gigaherca i 802.11 Wi-Fi tehnologiju. Postojanje široke i neza-visne koalicije internacionalnih pokreta slobodnih mreža ohrabruje ljude da stvaraju sop-stvene modele umrežavanja, sa ili bez žica, i da ih povezuju primenom "peering" dogovora (dogovora o jednakosti), baza podataka koje je moguće koristiti i dogovorenih pravila o for-matu fajlova i tehničkih standarda mreže. Ultimativni cilj je kreiranje sveprisutne mreže koja zaobilazi komercijalne, stvarajući sopstvenu infrastrukturu i oslanjajući se na dobru volju i inicijativu brojnih individualnih učesnika koji dele deo protoka informacija čiji su legalni vlasnici.

Zajednički prostor na Internetu koji čine međusobno povezane male jedinice omoguću-jući slobodan protok podataka, razvija se dalje na nivou aplikacija projektima kao što je Last.fm, Frequency Clock and Nine[9]. U pitanju su softverske aplikacije za servere koje prikupljaju moć kolektivne akcije na Internetu radi klasifikovanja audio sadržaja uživo, interakcije između "peer" grupa i mapiranja društvenih relacija. Ova tri projekta su samo vrh ledenog brega sve aktuelnijeg trenda net umetnosti, koja se povezuje sa pokretima slobodnog softvera i slobodnih mreža. Veštačko kreiranje nedostatka, restriktivni zakoni i privatizovane mreže nisu direktno napadnuti, već su njihove irelevantnosti preispita-ne postojanjem održivih alternativa. Ovo nije piraterija, kao što industrijske asocijacije žele da verujemo, već je stvaranje otvorenih prostora na mnogo različitih načina; oni obezbeđuju slobodu izražavanja, kolektivnu akciju u kreativnom i političkom izražava-nju i javni interes u umreženim komunikacijama.

Beleške

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Read_me, run_me, execute_me: beleške o softver umetnosti

Inke Arns
http://www.v2.nl/~arns

"Softver je kontrola uma. Dođi i posluži se."[1]

Umetnici danas ne koriste "polu-gotov" kompjuterski softver (software) samo kako bi stva-rali, već se na zabavan, inventivan i kritički način bave i programiranjem i samim softve-rom. Termin "softver umetnost", u najširem smislu, obuhvata aktivnosti koje koriste soft-ver ili kôd kao umetnički materijal. Prvo bih želela da usmerim vašu pažnju na pitanje zašto su uopšte softver ili kôd interesantni materijali u umetničkoj produkciji, zatim ću pokušati da definišem termin "softver umetnost" i konačno, govoriću o performativnom karakteru ovog termina.

1. Softver kao umetnički materijal

Softver je postao sveprisutan, što znači da ga čak i neznajući to, danas više ne možete izbeći. Softver se danas može naći ne samo u računarima, već u svemu, počev od napra-va za komunikaciju, telefona, u svim vrstama medijskih aparata, čak i u mašinama za pra-nje veša i ostalim kućnim aparatima. Sveprisutnost u ovom slučaju ne znači samo to da je softver svuda oko nas, da je sve prožeto njime, već to isto tako znači da on najčešće ostaje nevidljiv. Ova opšta nevidljivost softvera se može posmatrati u dva nivoa. Prvo, u većini slučajeva tzv. sirov izvorni kôd (source code) je zamaskiran blještavim površinskim slojem i vi u radu u stvari ne manipulišete samim kôdom, već radite preko grafičkog koris-ničkog interfejsa (interface). Drugi stepen nevidljivosti softvera se odnosi na sam interfejs. To je ono što naučnici zovu "transparentnost interfejsa". U svakodnevnom govoru transpa-rentnost obično znači vidljivost, jasnoću, ili mogućnost jednostavne kontrole zbog same vidljivosti. Međutim, transparentnost se u slučaju računarskih nauka odnosi na prikriva-nje podataka, što u stvari znači da krajnji korisnik i ne primećuje sam softver koji radi u pozadini.

Čak i ako informacija koja se krije u samom dizajnu intrfejsa može biti korisna, može se reći da ona u isto vreme, korisniku ili posmatraču sugeriše direktan, pa čak i prirodan pri-stup ili pregled podataka. Naravno, ne radi se o ovome, kako i Lev Manovič (Lev Mano-vich) beleži u svojoj knjizi *The Language of New Media.* Kratak citat: "Daleko od toga da je interfejs transparentan prozor u podatke unutar računara, on sam po sebi nosi snažnu poruku."[2] Danas, u vremenu kada naše okruženje postaje sve više medijatizovano i di-gitalizovano, odnosno sve više i više bazirano na softveru, postaje izuzetno važno biti svestan toga da kôd ili softver direktno utiču na virtuelne i stvarne prostore kojima se kre-ćemo, u kojima komuniciramo i živimo. Softver ima sposobnost da direktno mobiliše ili imobiliše svoje korisnike.

Zbog toga Lorens Lesig (Lawrence Lessig) u svojoj knjizi *Code and other laws of cyberspace* [3] tvrdi da programski kôd sve više teži da postane zakon. Danas se kontrolne funkcije ugrađuju direktno u samu arhitekturu mreže, što znači u njen kôd. Uzimajući kao primer servis Amerika onlajn (America Online, AOL), Lesig zajedljivo razjašnjava kako kôd direktno omogućava ili onemogućava slobodu kretanja, govora i ponašanja. Kôd, čak i ako ostane većim delom nevidljiv, ne treba prihvatiti kao nešto prirodno ili kao datost. Treba ga posmatrati kao nešto što su ljudi pisali/stvorili, a samim tim se može menjati ili osmisliti drugačije.

Softver umetnost se bavi kodiranim strukturama koje stvaraju i pružaju potporu vidljivim slojevima softvera. Usmerava našu pažnju na sveobuhvatni programski kôd na kojem je naše radno i životno okruženje zasnovano, koje iz dana u dan postaje sve više digitalizovano i koristi kôd ili softver kao sopstveni umetnički materijal.

2. Softver art

"Softver art" označava umetničku aktivnost koja kroz medijum (ili još bolje rečeno: materijal) softvera i dopušta kritički osvrt na sam softver (i njegov uticaj na kulturu). Softver umetnost se ne odnosi prema softveru samo kao prema nečemu pragmatičnom – nevidljivom alatu koji generiše izvesne vidljive rezultate – već nasuprot tome, fokusira se na sam programski kôd – čak i ako taj kôd nije eksplicitno otvoren ili postavljen u prvi plan. Po Florijanu Krameru (Florian Cramer), softver umetnost čini vidljivim estetiku i politički podtekst naizgled neutralnih tehničkih komandi. Čineći to, softver umetnost se dešava na različitim nivoima: može biti smešten na nivo izvornog kôda (source code), na nivo apstraktnih algoritama ili na nivo rezultata dobijenih izvesnim programskim kôdom. [4] Stoga i nije iznenađujuće što postoji širok spektar umetničkih radova u oblasti softver umetnosti, u rasponu od tzv. "Codeworks" – radovi bazirani na samom kôdu, koji se uglavnom sastoje od ASCII-kôda (koji nije *izvršni*), do eksperimentalnih web pretraživača (npr. "WebStalker", 1997) i izvršnih programa (npr. Antoan Šmitov/Antoine Schmitt "Vexation 1" [5], 2000, ili Adrian Vordov/Adrian Ward "Auto-Illustrator" [6], 2000). Softver umetnost *može* imati elemente generativne umetnosti, ali sam ne mora biti generativan u najužem tehničkom smislu (pogledaj "Codeworks"). Termini softver umetnost i generativna umetnost se stoga ne smeju koristiti kao sinonimi. Ova dva pojma funkcionišu u *različitim registrima*, što će se videti iz sledećih primera.

Moj prvi primer je projekat "insert_coin" [7] Dragana Espenšida i Alvara Frojda (Dragan Espenschied i Alvar Freude). U sklopu diplomskog rada koji su realizovali pod motom "dvoje kontroliše 250 ljudi" 2000/2001, dva studenta umetnosti medija su u tajnosti instalirali Web proxy server na Merc (Merz) akademiji u Štutgartu, Nemačka, koji su putem "perl" skripta manipulisali celokupnim mrežnim saobraćajem studenata i profesora u okviru akademske računarske mreže. Cilj ovog projekta, po Espenšidu i Frojdu, bila je kritička procena "kompetentnosti i sposobnosti kritičkog promišljanja korisnika, kada je reč o svakodnevnoj upotrebi Internet medijuma" [8]. Manipulisan proxy server je preusmeravao unete URL-ove (Internet adrese) na druge adrese, modifikovao je html kod, transformisao je sadržaj najnovijih vesti na web stranicama putem jednostavne *traži-i-zameni* operacije, npr. menjao je imena političara, kao i (ovo je bilo posebno uznemirujuće) sadržaj privatnih email poruka koje su se čitale putem web interfejsa kao što je Hotmail ili Yahoo. Tokom četiri nedelje ovaj projekat je manipulisao pristup cele akademije Internetu, a vrhunac svega je to što je ostao neprimećen. Kad su Espenšid i Frojd javno predstavili projekat, skoro da niko nije bio zainteresovan. Čak su i izdali knjigu uputstava, jednostavnu za upotrebu, koja bi bilo kome omogućila da samostalno isključi filter koji je manipulisao web sadržajem. Ali samo mali deo korisnika se potrudio da izdvoji vreme i napravi male promene kako bi povratili pristup neizmenjenim informacijama. Čak i nekoliko meseci nakon završetka eksperimenta, pristup Internetu većine računara je ostao filtriran.

Moj drugi primer, "walser.php" [9] autora rada textz.com/Project Gnutenberg Sebastijana Litgerta (Sebastian Lütgert) okarakterisan je kao "politički" odnosno "literarni" [10] softver. Mi ga možemo nazvati i anti-kopirajt/aktivistički softver koji je napisan kao odgovor na jedan od najvećih literarnih skandala u Nemačkoj nakon II svetskog rata. Ime dokumenta "walser.php" nije samo ironična aluzija na dokument "walser.pdf", digitalnu verziju kontroverznog romana Martina Valsera (Martin Walser) koji je prvobitno distribuiran putem "Suhrkamp" izdavačke kuće u vidu dodatka elektronskoj poruci, a kasnije, zbog nepovoljnih okolnosti, bio opozvan od strane izdavača (zanimljiv pokušaj – opozvati digitalni dokument). Baš "walser.php" (ili radije "walser.pl") sa sajta textz.com je (bio) perl skript koji preko odgovarajućeg konvertora/tumača može generisati ljudima čitku ASCII verziju teksta Walserovog romana *Smrt kritičara (Death of a Critic)* iz 10.000 redova izvornog kôda [11]. Izvorni kôd pisan u perl skriptu sadrži sam roman unutar "nevidljivog", mašinski čitljivog obrasca i stoga može biti distribuiran i modifikovan kao free softver pod GNU licencom (GNU – General Public License, anikopirajt licenca), ali može biti *aktiviran* samo uz pismenu dozvolu "Suhrkamp" izdavačke kuće. [12]

Dok Espenšidovo i Frojdovo eksperimentisanje sa filtriranjem i cenzurom sadržaja na Internetu ukazuje na relativno neograničen potencijal za kontrolu sadržan u samom softveru, "walser.php" nudi praktična rešenja za borbu protiv komercijalnih restrikcija koje ugrožavaju slobodu informacija na Internetu u vidu "Sistema za upravljanje digitalnim pravima" (Digital Rights Management Systems). Dok "insert_coin" privremeno stvara distopijski scenario u vidu manipulativnog softvera, textz.com svojim "walser.php" projektom razvija jedinstvene utopijske "protiv-mere u vidu softvera". [13]

Oba projekta su *generativna* u najboljem smislu reči. Međutim, ni "insert_coin" ni "walser.php" ne odgovaraju u potpunosti definiciji "generativne umetnosti" koja je trenutno više prisutna u oblasti dizajna. Na primer, za Filipa Galantera (Philip Galanter) termin "generativna umetnost" se odnosi na "bilo kakvu umetničku praksu, gde umetnik koristi sistem, kao što su niz prirodnih jezičkih pravila, računarski program, mašina ili neki drugi proceduralni pronalazak, koji se pokreće sa izvesnom dozom autonomnosti, doprinoseći ili rezultirajući gotovim umetničkim delom." [14] Slično, Selestino Sodu (Celestino Soddu), direktor Labora-

torije za generativni dizajn na Politehničkom univerzitetu u Milanu (Polytechnical University of Milano) i organizatoru konferencije "Generativna umetnost"[15], definiše "generativnu umetnost" kao alat za procesovanje koji omogućuje umetniku ili dizajneru da "sintetiše (…) večito promenljiv i nepredvidiv sled događaja, slika, industrijskih objekata, arhitekture, muzičkih dela, okruženja i komunikacija (…)."[16]

Ono što postaje očigledno u ovim citatima jeste činjenica da "generativnu umetnost" uglavnom interesuju *rezultati* nastali generativnim procesima. Softver se u ovom kontekstu vidi i koristi kao praktičan-generativni alat, odnosno naprava za kreiranje, tj. dobijanje određenih rezultata – bez preispitivanja samog softvera. Generativni procesi pokrenuti softverom ovde prvenstveno služe izbegavanju namere i produkovanju neočekivane, proizvoljne i neiscrpne raznolikosti forme. Na radove "n_Gen Design Machine", grupe "Move Design", koji je priložen na *Read_Me* festivalu 2003. u Helsinkiju i rad Kornelije Solfranks (Cornelia Sollfranks) "net.art Generator"[17] (1999) koji jednostavnim pritiskom na dugme generiše Internet umetnost, trebalo bi se gledati kao na ironične komentare "generativog dizajna" (ne-)shvaćenog na taj način.[18]

Projekti "insert_coin" i "walser.php" odlaze još dalje od definicija koje ih svrstavaju u "generativnu umetnost" ili "dizajn" tako što se više fokusiraju na *kôdirane procese* pomoću kojih se generišu određeni rezultati ili površine. Ovo interesovanje za kodirane procese, ili da budemo još precizniji, interesovanje za važnost samog softvera, prateći pojava softvera i kôdiranih struktura ih jasno razdvaja ne samo od generativne umetnosti nego i od mnogih interaktivnih instalacija devedesetih koje su pokazivale svoju nezainteresovanost za softver, sakrivajući programski kôd u *crnu kutiju*. Nasuprot tome, projekti kao "insert_coin" i "walser.php" su usmereni na preispitivanje softvera i kôda kao kulture i na preispitivanje kulture implementirane u samom softveru. Zbog toga se razvija "eksperimentalni softver" (u "insert_coin" projektu proxy server, a u "walser.php" perl skript), koji ne samo da generiše proizvoljne površine već i kritički istražuje tehnološki, kulturni ili društveni uticaj samog softvera. Štaviše, pisanje "eksperimentalnog softvera" se bavi više *umetničkim subjektivitetom*, što se može videti kroz korišćenje različitih privatnih jezika, a manje pružanjem dokaza o kreativnosti same mašine (šta god to bilo): "Kôd mogu biti dnevnici, poetični, mračni, ironični ili prodorni, mrtvi ili nemogući, mogu simulirati i maskirati, kod može biti rečit i stilizovan, može biti stav."[19], definicija Florijana Kramera i Urlike Gabrijel (Florian Cramer, Ulrike Gabriel), članova žirija na festivalu *transmediale* software art 2001.

Pokušala sam da postavim donekle polemičko poređenje između generativne umetnosti i softver umetnosti:

Generativna umetnost	Softver umetnost
Fokusirana na površinu ("phenotext") nastalu generativnim procesima ("problem crne kutije")	Fokusirana na generativne procese (pokreće je "genotext") koji mogu generisati površine ili neke druge rezultate
Softver kao pragmatičan/neutralan alat koji služi za dobijanje određenog rezultata; sam alat se ne preispituje	Softver kao kultura koja se preispituje; interesovanje za estetski i politički podtekst; softver može biti "eksperimentalan" i "ne-pragmatičan"
Softver kao pragmatičan-generativan alat	Softver ili kôd, kao rad sam po sebi (poželjno eksperimentalan)
Efikasan kôd ("lepi algoritmi"*)	Kôd kao višak, kôd kao ekstravagancija, ne nužno i efikasan
Upošljavanje generativnih procesa kako bi se negirala namera	"Čini se da softver umetnici (…) zamišljaju generativne sisteme ne kao negaciju namere, već kao balansiranje između nasumičnosti i kontrole. (…) Daleko od toga da je to samo umetnost za mašine, softver art se intenzivno bavi umetničkim subjektivitetom i njegovom refleksijom na generativne sisteme i širenjem u njih."** (Cramer/Gabriel)
Fascinacija generativnim	Interes za "performativnost" kôda

* Cf. Donald Knuth, *The Art Of Computer Programming: Vol. 1, Fundamental Algorithms*, Reading, Mass. 1997.

** Florian Cramer / Ulrike Gabriel, quoted after Andreas Broeckmann, "On Software as Art", in: *Sarai Reader 2003: Shaping Technologies*, New Delhi 2003, pp. 215-218, here: p. 216.

Pojam "software art" (ili: umetnički softver) je konstruisan i prvi put predstavljen kao takmičarska kategorija na Berlinskom festivalu umetnosti novih medija *transmediale 2001*.[20, 21] Softver umetnost, kojeg drugi autori nazivaju "eksperimentalan"[22] ili "spekulativan softver"[23] kao i "ne-pragmatičan" i "ne-racionalan"[24] softver, obuhvata projekte (ako ćemo slediti definiciju datu na *transmediale* festivalu) čiji je esencijalan umetnički materijal programski kôd ili projekte koji se kritički bave kulturološkim shvatanjem softvera. Programski kôd se ne posmatra kao praktičan alat koji pokreće umetničke radove, već kao generativni materijal mašinskih i društvenih procesa. Na ovaj način, softver umetnost može biti rezultat autonomne i formalne kreativne prakse, a može se i kritički odnositi prema postojećem softveru i tehnološkom, kulturnom i društvenom uticaju softvera.[25]

Interesantno je da razlika između softver umetnosti i generativne umetnosti podseća na jednu od razlika između savremenih oblika softver umetnosti i rane kompjuterske umetno-

sti 60-tih (ovde mislim na "Experimental Software" Tilmana Baumgartela/Tilman Baumgär-
tel iz 2001). Razlika se može opisati na sledeći način: Radovi u oblasti softver umetno-
sti ili eksperimentalnog softvera "nisu umetnost nastala *uz pomoć računara*, već umet-
nost koja *nastaje u računaru*; softver nije programiran od strane umetnika kako bi pro-
izveo *nezavisna umetnička dela*, već je sam *softver umetničko delo*. Ono što je od najve-
će važnosti ovde nije rezultat nego sam proces pokrenut u računaru uz pomoć program-
skog kôda." (26) Iako je kompjuterska umetnost 60-tih bliska konceptualnoj umetnosti
po načinu na koji privileguje koncept nasuprot same realizacije, kompjuterska umetnost ne
privodi ovu ideju kraju dosledno: finalizacijom radova na papiru, pomoću plotera i tačkastih
štampača ona daje značaj krajnjem proizvodu, a ne programu ili procesu koji generiše samo
delo. (27) U sadašnjoj softver umetnosti ova relacija je obrnuta: tu se "isključivo radi o pro-
cesu generisanom ovim programima. Dok kompjuterska umetnost 60-tih i 70-tih vred-
nuje procese u računaru samo kao metod za dobijanje vidljivih rezultata, a ne kao rad sam
za sebe, a kompjuter tretira kao svojevrsnu crnu kutiju, sakrivajući operacije i procedu-
re koje se dešavaju unutar nje, današnji softver projekti se žele precizno usmeriti na ove
procese, učiniti ih vidljivim, izneti ih kao predmet diskusije." (28)

3. Performativnost kôda nasuprot fascinaciji generativnog

Trenutno interesovanje za softver, koliko vidim, utemeljeno je ne samo u fascinaciji nje-
govim generativnim aspektom, tj. sposobnosti da stvara i uzrokuje u čisto tehničkom smis-
lu. Ono što zanima autore ovih projekata je mnogo više od toga, nešto što bih nazvala
performativnost kôda. Pod *performativnošću kôda* podrazumevam njegovu sposobnost
da radi i da se ponaša saglasno teoriji o govornim činovima.

Ovde mislim na seriju predavanja koja je održao Džon Longšo Ostin (John Langshaw Au-
stin) 1955. na Harvard univerzitetu (Harvard University). Na ovim predavanjima, nazva-
nim *Kako činiti stvari rečima (How to Do Things With Words)*, Ostin je formulisao ideju
da jezik nema samo deskriptivnu, odnosnu i konstatacionu funkciju, nego poseduje i
performativnu dimenziju. Ostin razlikuje tri različita govorna čina: lokucioni (29), ilokuci-
oni (30) i perlokucioni (31) čin. Samo ilokucioni govorni činovi su performativni – tj, stva-
raju ili rade ono što i opisuju, ukoliko su postavljeni unutar matriksa koji je istovremeno
društveni i semiotički. Ovo usmerava pažnju na važnost *konteksta* performativnog govo-
ra. Ilokucioni ili performativni govor, u zavisnosti od toga da li je postavljen u odgovara-
jući kontekst ili ne, može postići uspeh ili ne.

U skladu sa tim, ako govorim o performativnosti kôda, tvrdim da se performativnost ne
treba shvatati kao čisto tehnička performativnost, tj. ona se ne događa samo u kontekstu
zatvorenog tehničkog sistema, već ima uticaj na domene estetskog, političkog i druš-
tvenog. Programski kôd karakteriše činjenica da ovde "govoriti" koincidira sa "raditi". Kôd,
kao efektivan govorni akt, nije samo opis ili prezentacija nečega, već nasuprot, direkt-
no utiče i bukvalno pokreće – ili čak "ubija" proces. (32) Ova "kodirana performativnosť" (33)
ima neposredne, a takođe i političke posledice na stvarne i virtuelne prostore (između

ostalih i Internet), u kojima se sve više krećemo i živimo: to znači, konačno, da ova kodira-
na performativnost *mobiliše ili imobiliše* svoje korisnike. Kôd stoga postaje zakon, ili,
kako je Lorens Lesig (Lawrence Lessig) 1999. rekao, "Kôd je (već) Zakon" (34). Ovo je raz-
log zbog kojeg je softver umetnost više usmerena na "performans" nego na "merodavnost"
(termine konstruisao Noam Čomski/Noam Chomsky), više na *reč* nego na *jezik* (35)
*(*čuvena suprotnost koju je konstruisao Ferdinand de Sosur/Ferdinand de Saussure). U
našem kontekstu, *izvedba* i *reč* znače odgovarajuću aktualizaciju i konkretnu realizaciju i
posledice koje izvesni programski kôd ostavlja na, recimo, društvene sisteme, a ne samo
na to šta radi ili generiše u kontekstu apstraktnih tehničkih sistema. U projektima "in-
sert_coin" i "walser.php" generativno je izrazito političko. To je zbog toga što je tajna
transformacije postojećeg teksta (u slučaju insert_coin) i ekstrakcija teksta, zaštićenog
kopirajtom, iz perl skripta (u slučaju walser.php) pod znakom pitanja i kritička *ne* u kon-
tekstu *tehničkog* sistema, *nego* u kontekstu *društvenih i političkih sistema* koji se sve
više oslanjaju na tehničke strukture.

Jedno od "najradikalnijih shvatanja kompjuterskog kôda kao umetničkog materijala" (36)
način na koji ga umetnici koriste može se naći u tzv. "Codeworks" (37). "Codeworks" se
skoro isključivo sastoji od tekstova koji se šalju na mejling liste, (npr. Nettime ili 7-11),
i to u vidu elektronske pošte (e-mail). "Codeworks" koristi formalan ASCII kôd i njegovu
estetiku – ne oslanjajući se na vidljive površine i grafički korisnički interfejs koji je inače
sastavni deo ovog kôda. Radovi grupe "Jodi" i "Netochka Nezvanova" koji je poznat i pod
imenom antiorp i mez (38), opominju na postojanje skrivene, "nevidljive senke sveta pro-
cesa" (39), kako je to Grejem Hatvud (Graham Harwood) nazvao. Tehnički govoreći, "Co-
deworks" radovi su smešteni na suprotnoj strani imaginarnog spektra generativnosti.
Međutim, status ovih jezika ili ovih jeziku sličnih parčića i komadića ostaje ambivalentan:
pri njihovoj percepciji oni kod primaoca osciliraju između njihove pretpostavljene izvrši-
vosti, stoga i funkcionalnosti i ne-izvršivosti, tj. nefunkcionalnosti kôda ili ukratko: između
važne informacije i beznačajnog šuma. Ovaj fenomen se jasno može videti u jodi.org radu
"walkmonster_start ()", što je u stvari e-mail koji je poslat na Nettime mejling listu 22.
oktobra 2001. Tekst sadržan u ovoj poruci koji liči na izvršni programski kôd, za neupu-
ćenog čitaoca ostaje potpuno otvoren, dok na nekom drugom mestu u računaru, ovaj tekst
može biti kompajliran, i samim tim pretvoren u mašinski čitljive algoritme, a samim tim
i konačno biti izvršen.

Ono što igra važnu ulogu i što je bitnije od same tehničke izvršivosti kôda je razumeva-
nje činjenice da fragmenti kôda korišćeni u "Codeworks" mogu *potencijalno* biti izvršeni
i samim tim postati performativni. Međutim, u knjizi "The Aesthetics of Generative Code"
(Geoff Cox, Alex McLean, Adrian Ward) autori tvrde da "estetska vrednost kôda leži u
njegovoj izvršivosti, ne samo u njegovoj pisanoj formi". (40) Sa ovom tvrdnjom se mogu
složiti kada je reč projektima kao "insert coin" i "walser.php" – jer njihov kritički (možda
čak i poetičan) momenat leži upravo u njihovoj tehničkoj izvršivosti – ali bi ona morala
biti proširena kada se uzme u obzir struktura "Codeworks". Estetska i poetska vred-
nost "Codeworks" se sastoji ne samo u njihovoj tekstualnoj formi, već u činjenici i saz-

nanjima da *potencijalno* mogu biti izvršni. Htela bih da proširim pojam generativnog u smislu da kôd nije izvršan samo u tehničkom okruženju, već može postati izuzetno produktivan kao "imaginaran softver".

Nasuprot generativnoj umetnosti, softver umetnost usmerava našu pažnju na činjenicu da se naše (medijsko) okruženje sve više oslanja na programirane strukture. Čineći to, "Code-works" koriste "siromašan" medijum teksta koji je u isto vreme i performativan/izvršan u kontekstu komandne linije. Precizno koristeći ovu ambivalentnost ili ovo oscilovanje između jednostavnosti i celovitosti egzekucije, codeworks, i uopštenije govoreći, softver art kao celina, ukazuju na potencijalno totalitarnu dimenziju algoritamskog programskog kôda – "invisible shadow world of process".

U kuda.org, 09. 04. 2004.

Beleške:

(1) Slogan za "Web Stalker" (1997) Londonske umetničke grupe I/O/D, http://www.backspace.org/iod

(2) Lev Manovich, *The Language of New Media*, Cambridge, MA., 2001, p. 65.

(3) Lawrence Lessig, *Code and other Laws of Cyberspace*, New York 1999, http://www.code-is-law.org/

(4) "Da li je na nivou izvornog koda? Ako jeste, onda je to vrsta tipografskog oblikovanja ili iluminacija. Da li je na nivou apstraktnih algoritama? Ako jeste onda je to vrsta konceptualne umetnosti ili arhitekture. Da li je na nivou rezutata rada programa? Ako je tako, onda je to vrsta pripremne skice." Rob Myers, "Re: 'Code as Art' izbor (sa PD-List) ", u: *(eu-gene)*, 4. jan 2004.

(5) http://www.gratin.org/as/

(6) http://www.signwave.co.uk

(7) http://www.odem.org/insert_coin/ , engleski: http://www.consorship.odem.org/content.html

(8) Cf. Espenschied/Freudeov tekst za Internationaler Medienkunstpreis 2001, http://www.online-demonstration.org/insert_coin/imkp2001.html

(9) http://textz.com/trash

(10) Florian Cramer, "walser.php", iz: Olga Goriunova, Alexei Shulgin (Hg.), *Read_Me 2.3. Reader*, Helsinki 2003, pp. 76–78, here: S. 76.

(11) http://textz.com/trash/walser.pl.txt

(12) Cf. textz.com, "Suhrkamp povlači walser.pdf, textz.com objavljuje walser.php", o. J., http://textz.com/trash/readme.txt ; Michael Thomas, "Tod einer Kritik. Walsers umstrittenes Buch als Perl-Script im Internet", in: *Telepolis*, 27.6.2002, http://www.heise.de/tp/deutsch/inhalt/on/12807/1.html . Projekat "pngreader" (http://runme.org/project/+pngreader/) funkcioniše slično, jedina razlika je ta što su ovde tekstovi kodirani u PNG slike i stoga se mogu slobodno distribuirati.

(13) Cramer, "walser.php", p. 77.

(14) Philip Galanter, "What is Generative Art? Complexity Theory as a Context for Art Theory", in: *Generative Art Proceedings*, Milano 2003, p. 4, http://www.philipgalanter.com/pages/acad/media/ga2003%20proceedings%20paper.pdf

(15) Cf. http://www.generativeart.com/

(16) Celestino Soddu, "Generative Art and Architecture", abstract, no year given, http://www.nyu.edu/studio/generative.html

(17) Cornelia Sollfrank, "net.art generator" (1999), http://www.obn.org/generator

(18) Cf. Olga Goriunova / Alexei Shulgin, "n_Gen Design Machine", in: Olga Goriunova / Alexei Shulgin (eds.), *Read_Me 2.3. Reader*, Helsinki 2003, pp. 66–67, here: p. 66.

(19) Florian Cramer / Ulrike Gabriel, "Software Art", in: Broeckmann, Andreas / Jaschko, Susanne (eds.), *DIY Media – Kunst und digitale Medien: Software – Partizipation – Distribution. Transmediale.01*, Berlin 2001, pp. 29–33, here p. 33.

(20) Ostala bitna dešavanja: "Kontrollfelder" (Dortmund 2001, kuratori Andreas Broeckmann i Matthias Weiß, http://www.hartware-projekte.de/programm/inhalt/kontroll.htm); "Read_Me" Festival, osmislili Olga Goriunova i Alexei Shulgin (Moskau 2002, Helsinki 2003, http://www.m-cult.org/read_me/) i izložbe "Generator" (GB 2002, kustos Geoff Cox, http://www.generative.net/generator.html), "CODeDOC" (New York, Sept. 2002, kustos Christiane Paul, http://artport.whitney.org/commissions/codedoc/), "I love you – computer_viren_hacker_kultur" (Frankfurt/Main, Jan. 31-Feb. 5, 2003, http://www.digitalcraft.org/index.php?artikel_id=269) i softver art skladište "Runme", postavljeno u januaru 2003. (http://runme.org). Dalji primeri softver umetnosti se mogu naći na ovim web stranicama. Istorijski najbitnija godina, kada je reč o softver umetnosti, je 1970, tokom koje su se desile tri stvari važne za softver umetnost: Jack Burnhamova izložba "Software – Information Technology: Its New Meaning for Art", koja je održana u Jevrejskom muzeju u New Yorku (Jewish Museum); izložba u MoMA u New Yorku, nazvana "Information" čiji je kustos Kynaston McShine; i osnivanje časopisa "Radical Software" od strane Beryl Korot, Phyllis Gerhuny i Ira Schneidera (http://www.radicalsoftware.org/)

(21) Za rani, programski koncept softver umetnosti i programiranja, pogledati Geoff Cox / Alex McLean / Adrian Ward, "The Aesthetics of Generative Code" (2000), http://generative.net/papers/aesthetics/ . Pokušaj da se formalno definiše i istraži arheološka istorija softver umetnosti. Korisni literarni i umetnički primeri se mogu naći u Florian Cramerovoj knjizi, "Concepts. Notations. Software. Art", Mar. 23, 2002, http://userpage.fu-berlin.de/~cantsin/homepage/writings/software_art/concept_notations/concepts_notations_software_art.html

(22) Tilman Baumgärtel, "Experimentelle Software. Zu einigen neueren Computerprogrammen von Künstlern", in: *Telepolis*, Oct 28, 2001, http://www.heise.de/tp/deutsch/inhalt/sa/9908/1.html

(23) Matthew Fuller pravi razliku između "kritičkog", "društvenog" i "spekulativnog softvera". Cf. Matthew Fuller, "Behind the Blip: Software as Culture", u: *Nettime*, Jan 7, 2002, http://amsterdam.nettime.org/Lists-Archives/nettime-l-0201/msg00025.html

(24) Olga Goriunova i Alexei Shulgin definišu "umetnički softver" kao "ne-pragmatičan" i "ne-racionalan": "(Ako) konvencionalni programi jesu instrument koji služi samo u pragmatične svrhe, rezultat rada umetničkih programa se često nalazi van pragmatičnog i racionalnog." (Olga Goriunova / Alexei Shulgin, "Artistic Software for Dummies and, by the way, Thoughts About the New World Order", u: *Nettime*, May 26, 2002, http://amsterdam.nettime.org/Lists-Archives/nettime-l-0205/msg00169.html

(25) Cf. http://www.transmediale.de/04/pdf/tm04clubtm04_formular_ausschreibung.pdf. O softver artu cf. panel diskusija na transmediale.03 (Künstlerhaus Bethanien, Berlin, Feb 4, 2003), http://www.softwareart.net/ , kao i Olga Goriunova / Alexei Shulgin (eds.), *Read_Me 2.3 Reader – o softver artu*, Helsinki 2003, http://www.m-cult.org/read_me

(26) Baumgärtel, "Experimentelle Software" (naglašavam).

(27) Tipični radovi u ovom kontekstu su umetnički radovi takozvanih "Algorists", koje je osnovao Roman Verostko. Cf. Roman Verostko, "Epigenetic Painting: Software As Genotype, A New Dimension of Art" (1988), http://www.verostko.com/epigenet.html ; Roman Verostko, "Epigenetic Art Revisited: Software as Genotype", u: Christine Schöpf / Gerfried Stocker (eds.), *Ars Electronica 2003: Code – The Language of Our Time*, Ostfildern 2003, pp. 156–167. Ovde se mogu naći formulacije kao "suština svakog završenog rada je izvedena iz ›procedure generisanja oblika‹ ili ›algoritma‹ koji ima ulogu genotipa. Zbog ovoga se može reći da je gotov rad bogojavljenje ili prikaz svog tvorca – *kôda*. Po meni svaki rad slavi svoj kôd (…)."

(28) Baumgärtel, "Experimentelle Software".

(29) Lokucioni: govorni čin kao značajno izražavanje.

(30) Perlokucioni: značajno izražavanje sa izvesnom konvencionalnom – performativnom – snagom.

(31) Ilokucioni: značajno izražavanje sa izvesnom konvencionalnom snagom stvarajući željeni efekat na nekonvencionalan način.

(32) Cf. Inke Arns, "Texte, die (sich) bewegen: zur Performativität von Programmiercodes in Netzkunst und Software Art", in: Inke Arns / Mirjam Goller / Susanne Strätling / Georg Witte (eds.), *Kinetographien*, Bielefeld 2004 (forthcoming).

(33) Reinhold Grether, "The Performing Arts in a New Era", in: *Rohrpost*, July 26, 2001.

(34) Lawrence Lessig, *Code and other Laws of Cyberspace*, New York 1999.

(35) Razlika između merodavnosti i izvedbe se pripisuje generativnoj transformacijskoj gramatike Noama Čomskog (pogledati Noam Chomsky, *Aspekti teorije sintakse/Aspects of the Theory of Syntax*, Cambridge, MA., 1965); razlika između jezika i reči (*langue/ parole*) pripisana Ferdinandu de Soseru (pogledati Ferdinand de Saussure, *Cours de linguistique générale*, Paris 1967 [1916]).

(36) Florian Cramer, "Exe.cut(up)able statements: Das Drängen des Codes an die Nutzeroberflächen", in: Christine Schöpf / Gerfried Stocker (eds.), *Ars Electronica 2003:Code – The Language of Our Time*, Ostfildern 2003.

(37) Cf. o ovome Alan Sondheim, "Codework", u: *American Book Review*, Vol. 22, Issue 6 (September/October 2001), http://www.litline.org/ABR/PDF/Volume22/sondheim.pdf

(38) Cf. for more examples Florian Cramers "<nettime> unstable digest" at http://www.nettime.org/archives.php

(39) Graham Harwood, "Speculative Software", u: Andreas Broeckmann / Susanne Jaschko (eds.), *DIY Media – Kunst und digitale Medien: Software – Partizipation – Distribution. Transmediale.01*, Berlin 2001, pp. 47–49, here p. 47.

(40) Geoff Cox / Alex McLean / Adrian Ward, "The Aesthetics of Generative Code" (2000), http://generative.net/papers/aesthetics/

Molekularna invazija i drugi projekti

Beatriz de Kosta i Stiv Kurc, Ansambl kritičke umetnosti

Ideja o taktičkim medijima i ono što pod tim podrazumevamo je naša tema od kako smo počeli da radimo. Bitno je reći da nas je prilično iritirala ideja o "spomenicima" kulture u smislu raznih vidova produkcije iz sfere kulture. Tu se radilo o nečemu što umetnik pravi – veliko delo koje umnogome utiče na tokove istorije umetnosti, pravi prostor za pojedinca i gradi bunker značenja koja ostaju trajna. Ansambl kritičke umetnosti nisu baš zanimale takve stvari. Nas je zanimalo ono što je neposredno i prolazno. Možda će smisao koji stvaramo vremenom izbledeti. Ne stvaramo dela da bi trajala, niti da bi predstavljala univerzalne tvrdnje. To smo odbacili i umesto toga rekli: "Ono što nas zanima tiče se konkretnih mesta u konkretno vreme, a zanima nas i kako i da li nas publika razume. Izokrećući tradicionalni umetnički model, po kom vas neki umetnik inspiriše, vi izražavate tu inspiraciju, zatim je iznosite u javnost, tako da ljudi mogu da je vide." Mi smo išli obrnuto pitajući se šta se nalazi u spoljašnjem svetu i kako mi na to reagujemo u društvenom kontekstu.

Šta su taktički mediji?

Predstavićemo neke projekte da bismo ilustrovali šta podrazumevamo pod "taktičkim", nasuprot monumentalnom idealu strateškog. Prvi projekat koji ćemo predstaviti, a koji nosi naziv "Davanje novog imena" (Renaming Project), izveden je u Australiji na Viktorijinom trgu u Adelaidi. Situacija koju smo tamo zatekli bila je sledeća: Aboridžini, lokalno stanovništvo tog kraja, imali su velike teškoće u pokušaju da prodru u javnu sferu. Središnje mesto u projektu bio je Centralni park u gradu, koji je za njih predstavljao tajnu zemlju, jer tu za njih nije bilo mesta. U parku se nalazi trg čiji je naziv bio Viktorijin trg, na kom se nalazi ogromni spomenik kraljici Viktoriji, najvećoj kolonizatorki sveta. Nema potrebe da posebno ističemo koliko je to bilo iritantno. Postojalo je osećanje da na istom mestu treba ispričati i drugu verziju istorije. To je bio čudan susret aboridžinske i zapadne kulture, jer je naše shvatanje aktivizma podrazumevalo direktno i brzo delovanje, a njihovo shvatanje prodiranja na javni plan je podrazumevalo sporo delovanje. Tu se radilo o dva kulturološki potpuno različita shvatanja vremena. Lokalno stanovništvo je od gradskog veća tražilo da trg nosi dvojni naziv. Drugi naziv bi bio aboridžinski "Tamdanyunnga", što znači "Tamo gde sanjaju crveni kenguri". Veće je ni odbilo, a ni pristalo na taj predlog. Potreseni ovakvom situacijom, plemenske starešine, lokalni aktivisti i mnoštvo zainteresovanih stranaka odlučili su da preduzmu konkretnu akciju u cilju davanja naziva trgu. U saradnji sa kompanijom koja je pravila natpise sa nazivom grada Adelaide, izrađeni su natpisi sa nazivom trga – "Tamdanyunnga". Tada je oformljena Umetnička koalicija za javnu umetnost (PAAC). Grupa je zamenila 10 od ukupno 20 natpisa sa nazivom Viktorijin trg, i na taj način trgu dala dvojni naziv. To je bio način da se pokaže delatnost kojom ljudi mogu da utiču na materijalne uslove u kojima žive. Nisu morali više da ži-

ve sa osećanjem da je pasivni otpor jedino rešenje. To je potrajalo svega nekoliko dana. Međutim, interesantno je da je šest nedelja nakon toga gradsko veće popustilo i sada trg ima dvojni naziv. To je bila konkretna intervencija sa kojom se izašlo u javnost i koja je promenila dotadašnje stanje – strukturu koja je do tada vekovima bila prisutna. To je vrlo blisko suštini taktičkih medija. Pod tim ne podrazumevamo obavezno stvaranje nekog materijalnog objekta, nego procesa u situaciji gde mogu da se realizuju novi načini poimanja i nove ideje. Na taj način, i druge mogućnosti postaju ostvarljive.

Projekat "Radio biciklovi" (Radio Bikes) realizovali smo u saradnji sa lezbijskom grupom iz Graca koja je bila veoma zabrinuta zbog austrijskog socijalnog programa koji je u osnovi svodio ulogu žene na crkvu, kuhinju i decu. Naprednije žene nisu baš bile zadovoljne ovim korakom unazad u pogledu rodne uloge i učešća žena u društveno-ekonomskoj sferi. Saradnju sa njima započeli smo za vreme trajanja festivala "Steiricher Herbst" – jednog monstruoznog, turističkog, uglavnom mejnstrim festivala, koji ne bismo baš preporučili. Gradske vlasti su započele sa renoviranjem čitavog grada zbog festivala. Razrovarili su sve puteve, popunjavali rupe i ponovo ih asfaltirali. To je izazvalo ogromne zastoje u saobraćaju. Ljudi su sedeli zarobljeni u kolima i jedino što su u takvoj situaciji mogli da rade, bilo je da slušaju radio. Mi smo tada napravili brzoprenosnu (*broadband*) piratsku radio stanicu, koja je bila slatka i mala i u koju smo mogli da se maskiramo, tako što smo je prikačili za ram bicikla, koji je služio kao antena, i emitovali smo program. Žene su napravile posebne sadržaje koje su emitovale u znak protesta protiv ponovnog uvođenja pomenutog programa. Vrteli smo te sadržaje u nedogled u stilu ORF radija koji smo kopirali, čije smo džinglove i slogane skinuli, puštali i začinili, tako da je sve zvučalo kao zvanični informativni program.

Bitno je istaći da radimo sa vrlo jednostavnom tehničkom opremom i da nam mediji nisu toliko bitni. Ne smatramo se ni digitalnim, ni analognim umetnicima, ni slikarima, ni vajarima, ni umetnicima novih medija. Pokušavamo da ignorišemo te kategorizacije i da koristimo sva sredstva, jer su sva korisna i moguće ih je iskoristiti, samo je potrebno iznaći odgovarajuću situaciju.

Ono što mene prilično iritira je kada neko kaže:" Ovaj medij je mrtav – on više nema nikakvu svrhu." Uvek može da se pronađe situacija u kojoj će se ponovo naći svrha za njega, u kojoj će ponovo oživeti i prenositi poruku bolje nego neki drugi medij. To tako funkcioniše i to je deo taktičnosti kojom se bavimo. Ništa nikada ne umire. Samo je potreban odgovarajući kontekst da bi se nešto vratilo u život. Ja, na primer, nikada ništa nisam naslikao, ali sam siguran da ću i to jednom uraditi.

Još jedan projekat koji smo realizovali nosi naziv "Deca kao publika" (Child as Audience). Izveli smo ga 2001. godine u saradnji sa *Carbon Defense League*, grupom softverskih i hardverskih hakera. Njime smo pokušali da se obratimo dečacima uzrasta između 12 i 17 godina i to na temu kulture kompjuterskih igara koja je veoma široko rasprostranjena u SAD. Na taj način imali smo na raspolaganju čitavu mrežu, mogli smo da funkcionišemo kao virus, iako je bilo teško predvideti na šta će tinejdžeri reagovati. Snimili smo CD sa dve vrste sadržaja. Jedno je bilo uputstvo za hakerisanje "Game boy", male igre koju možete držati u šaci, a takođe i uputstvo za pravljenje sopstvene igre. Napravili smo uzorak koji je u ovom slučaju nosio naziv "Super Kid Fighter". U osnovi ove igre bilo je da se izbegne disciplinski gradski aparat i da se uspostavi komunikacija sa kriminalnim gradskim aparatom. Cilj je bio da se izbegnu zvanična lica i policija. Na prvom mestu bilo jeda se pobegne od dosade u školi. Što više stvari uspete da izbegnete, više poena dobijate. Sarađivali smo i sa hardkor metal bendom koji se zove *Creation is Crucifixion*. Sa njima smo snimili CD na temu eksploatacije dečjeg rada. Taj CD se distribuirao na turneji ovog benda po Evropi i Severnoj Americi. Tamo je došao u ruke drugačije publike.

Mnogi od ovih projekata usmereni su na izvođački aspekt u kom su i otelotvoreni. Dokle god nas zanima virtualni svet, ono što on predstavlja i, naročito, kako se suprotstavlja raznim strukturama moći koje su i same virtualizovane, nastavićemo da radimo na tome. Ta komunikacija licem u lice u kvalitativnom smislu za nas je još uvek od izuzetne važnosti. O tome mnogo razmišljamo dok radimo na raznim projektima. Pitanje je koje modele koristimo u rešavanju problema. Ne delimo flajere, niti bilo šta slično, već stvaramo infrastrukturu koja omogućuje slobodan pristup. Vrsta rada koji poštujemo i kom naginjemo jeste postavljanje modela koji može da se kopira i koji može da omogući verodostojnost i održivost ovih situacija.

Taktički hardver

Rad sa mašinama, bavljenje robotikom i mikroelektronikom je van okvira naše delatnosti. Međutim, oduvek smo osećali da nešto od toga može da se prilagodi i iskoristi. To je slično biotehnološkim projektima koji su oduvek bili jedno od naših glavnih interesovanja. Što se tiče rada sa hardverom, organizovali smo nekoliko radionica na raznim mestima, sa raznim ljudima koje smo pitali koja ih tematika zanima, koje su pojedinosti karakteristične za njihovo društveno okruženje, a zatim napravili mali projekat u vezi sa tim. Bilo je i onih koji su dali svoj doprinos. To nije bila samo taktička radionica, nego i taktička "gizmologija" ("gizmo" je engleska reč koja obično označava igračku koja funkcioniše uz pomoć jednostavne elektronske tehnologije – ono što se prodaje u prodavnicama za igračke – ali se odnosi i na pojedinačne elektronske komponente). Sami smo konstruisali nekoliko gizmoa. Jedan od njih bio je "digitalni natpis". Ideja je bila da se naprave table, da ponesemo komponente sa sobom da bi ljudi mogli da ih vide, da im održimo kratku lekciju o tome kako da urade nešto, da utipkaju sopstvene poruke na digitalni displej i da te igračke koriste kao sredstvo za intervenciju po gradu ili na bilo kom drugom mestu za koje su zainteresovani. Sam dizajn gizmoa podrazumevao je jeftinu izradu i laku upotrebu. Tako je osoba imala pristup tekstu, a za to je bio potreban bilo koji model PC-ija i kabel. Jednostavno ste mogli da utipkate šta hoćete, daunloudujete i upotrebljavate ga. U suštini, ta mala sprava, koju možete kupiti po ceni od pet dolara, namenjena je ljudima koji tako nešto nisu nikada koristili, jer nikada nisu bili upoznati sa mogućnostima koje pruža jednostavna tehnologija.

Biotehnološki projekti

Ansambl kritičke umetnosti je razvio nekoliko biotehnoloških projekata. U jednom od njih pokušali smo da stvorimo situaciju u kojoj ljudi mogu da se suoče sa strahovima od nauke, u nadi da će razviti jedan oblik razumevanja o tome koji bi mogli biti potencijalni rizici pozitivne upotrebe genetski modifikovanih organizama. Putem kataloga, tekstova i objašnjenja, glavna stvar prikazana je kao vrsta genetski modifikovanog organizma. U ovom slučaju to je bila bakterija. Ona je stvorena tako da joj je izvor hrane nafta, što znači da je to bila bakterija koja jede i vari naftu. Ali, lepota toga je da kod ovih bakterija ne postoji rizik da će se mešati sa svojim nemodifikovanim rođacima tj. drugim bakterijama koje se nalaze oko njih. Ljudi nisu morali da se plaše da će se bakterije množiti i transportovati u vidu gena, koji je implantiran u njih, i time oteti kontroli i početi da se mešaju sa svim vrstama drugih bakterija. BT je bakterija koja prirodno živi u zemljištu širom sveta. Jedinstvena odlika ove bakterije je njena proizvodnja proteina koji nalikuju kristalu i koji selektivno ubijaju određene vrste insekata. BT kukuruz je proizveden da stvara toksin, pesticid koji je toksičan za insekte koji štete kukuruzu. Dobra stvar je što možete da upotrebljavate manje pesticida. Negativna strana leži u tome što BT kukuruz proizvodi toksine koji su ne samo štetni za insekte koji uništavaju kukuruz već i za druge. Nije selektivan u pogledu ciljne grupe. Drugi problem je u tome što otrov kojeg proizvodi BT kukuruz odlazi u zemlju, tako da postoji izvesna doza zagađivanja zemljišta. Nivo toksičnosti zemljišta se smanjuje, ali je vrlo sporno koliko se brzo to dešava. Treća stavka se tiče polena BT kukuruza koji leti poljima koja ne sadrže modifikovanu hranu i počinje da ih oprašuje. Često zagađuje polja farmera organske hrane koji zaista ne žele da na njivama imaju kukuruz proizveden bioinženjerstvom. To se dosta puta desilo u Severnoj Americi i Kanadi. Povrh svega, ne samo da se njihove njive zagađuju, već ih i tuže zbog toga što na njima imaju BT kukuruz. Da biste mogli da gajite BT kukuruz potrebna vam je dozvola, jer u protivnom biotehnološka kompanija tuži sve uzgajivače organske hrane za korišćenje njihovog proizvoda bez dozvole. To je stvarno bila groteskna situacija. To je bio razlog zašto smo razvili "GenTerra" projekat. "GenTerra" je izmišljena kompanija tj. biotehnološka kompanija neškodljiva po životnu sredinu. Organizovali smo nekoliko kompjuterskih stanica koje su imale web sajt "GenTerra". Ljudi bi nam obično prilazili i mi bismo se upuštali u razgovor sa njima uglavnom o tome šta su genetski modifikovani organizmi, čemu služe, koji bi mogli biti potencijalni rizici i šta oni misle o svemu tome. Veliki deo ovih predstava bili su dijalozi, a zatim i aktivnosti sa ljudima. Svi smo se izdavali za tehnička lica i nosili smo bele mantile i oznake sa imenima. Niko se nije pretvarao da je naučnik, jer to naprosto nismo ni bili. Ono što smo uradili sa "GenTerra" je to da smo razvili našu sopstvenu genetski modifikovanu bakteriju. Vrsta bakterije koju smo koristili je *Escherichia coli*. Postoji mnogo različitih vrsta bakterije *Escherichia coli*, ali one koje smo mi koristili imamo svi u svom digestivnom traktu i potrebne su nam da preživimo. Napravili smo mašinu koja je izbacivala male posude u kojima su se nalazile kulture bakterije. U kontaktu sa tom mašinom, osoba može da pogodi određeno mesto i ručno da zaustavi jednu od posuda. Znači, osoba bi sišla, otvorila posudu, popela se i ponovo je zatvorila. To je bila vrsta ruleta genetski

modifikovane bakterije. Za nemodifikovane bakterije dobijali su zeleno svetlo, a za modifikovane crveno svetlo. Nakon što smo razgovarali sa ljudima i pokrenuli diskusiju na mnoge od ovih tema, ljudi su postali voljni da "rizikuju" i izbace bakteriju za koju su znali da je bezbedna u svoju životnu sredinu. Ljudi su bili upoznati da je bakterija sasvim bezbedna. Mi smo ih sa time upoznali sa pozicije laboratorijskih tehničara, a sa autoritetom belih mantila. Oko 60-70 % ljudi bilo je spremno da učestvuje u igri. Sledeći korak bio je da ljude podstaknemo da iznesu iz laboratorije petri posude u kojima nije bilo bakterije, već samo hrane za njih. Ljudi su dakle mogli da uzgajaju sopstvenu kulturu bakterije, da je stave u posudu, zatvore, ponesu kući i gledaju kako raste. Nakon što su se zainteresovali da izbace bakterije u svoju životnu sredinu, sledeći korak bio je da ih pitamo da li su voljni da ih odnesu svojoj kući i da li su spremni da žive u njihovoj blizini neko vreme. Na taj korak bilo je spremno oko 40-50% ljudi.

Jedna stvar koja povezuje taktičku gizmologiju i ovaj projekat je to što smo zaista želeli da demistifikujemo, čak i na ovako jednostavnom nivou, ono što se zapravo dešava u naučnoj laboratoriji. Uglavnom su biotehnološke i bilo koje druge biološke laboratorije zatvorene za javnost i ljudi nemaju ni pristup niti najmanju ideju o tome šta se tamo u stvari dešava. Ovaj eksperiment veoma je jednostavan u pogledu izdvajanja ove bakterije za svakog studenta biologije ili nekog ko je proveo vreme u laboratoriji, tako da taj deo nije bio uopšte uzbudljiv. Za mnoge ljude koji to nikada nisu videli i koji nemaju nikakvu ideju o tome, učenje ovog jednostavnog koraka, nalik na korišćenje nekog alata, bio je jedan od načina da se uključe u priču i da se zainteresuju za različite perspektive ili shvatanje biotehnologije.

Mnoge od ovih naučnih inicijativa toliko su otuđene da niko zapravo nema nikakve koristi, a ni bliskosti sa njima. Iz tog razloga želimo ih približiti ljudima. To smo takođe želeli da probamo i putem praktičnih modela. To je bio momenat kada smo započeli osporavajuću biološku inicijativu o tome kako bi metodologije, oprema i baze podataka u naučnom svetu mogle da budu iskorišćene da odgovore na politički obojena pitanja koja se tiču predstavljanja i proizvoda koji se prave. Pitanje koje smo sebi postavili bilo je sledeće: "Ako je sakupljen kukuruz proizvod broj 1 koji se danas prodaje kao genetski modifikovan organizam, a to je u okviru lanca ishrane, da li postoji nešto što bismo mogli da uradimo kako bi intervenisali na biološkom nivou, umesto da ga sačekamo kao gotov proizvod i da nam jedino ostane standardizovana politička procedura?" i "Šta možemo kao amateri da uradimo u ovoj situaciji, a da nije samo mešanje u vladinu politiku ili kreiranje politike na neki način?" Počeli smo da razmišljamo o ovom pitanju koje nam nije bilo jednostavno. Zapravo nas je najviše mučilo, još od naših ranih projekata, to šta će se desiti kada transnacionalne korporacije počnu da kontolišu proizvodnju hrane od molekularnog nivoa pa sve do momenta kada je pojedemo. Drugim rečima, šta se dešava ako one vode čitavu stvar i ako mogu da iskoriste taj usev kao sredstvo kojim će izazvati zavisnost naročito u zemljama "trećeg sveta" ili zemljama u razvoju. Posebno SAD i Britanija kao saveznici imaju od toga velike koristi i čine sve što je moguće da vrše pritisak na druge zemlje da prihvate te proizvode. Ne bavimo se toliko pitanjem zdravlja

u svemu ovome, već politikom koja time rukovodi. Jer, ako možete da izazovete zavisnost o hrani, nema jačeg sredstva za dominaciju nad nekom zemljom ili kulturom.

Postoji mnogo opiranja u Africi, Indiji, Srednjoj i Južnoj Americi uvođenju ove vrste organizama. Iz vrlo opravdanog razloga! Oni brinu o tome kako će proći žetva i veoma su zabrinuti da ponovo ne postanu vrsta kolonije.

Sve dok se ne postigne veća demokratija u pogledu mogućnosti pristupanja informacijama, učenje o biotehnologiji neće puno pomoći, jer morate imati informaciju dostupnu na Internetu da bi ste mogli intervenisati. To je naš jedini izvor, ukoliko ne poznajete naučnike koji će vas lično uputiti. Zbog toga smo otišli jedan korak unazad. Kakva će budućnost biti ovde, siguran sam da transnacionalne kompanije ovo gledaju i trljaju ruke. Ništa im ne bi bilo draže nego da stvore zavisnost od njihovih izvora hrane u zemljama kao što je Srbija. Po njihovom mišljenju to će doprineti stabilizovanju određenog područja ili uspostavljanju anglo-američke hegemonije. Mi očekujemo da će se to i desiti.

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Novi Sad, 16. 04. 2003.
Transkripcija predavanja nije autorizovana.

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Mapiranje savremenog kapitalizma

Grupa "Biro detud"

Aktivnost grupe Biro detud (Bureau d'Etudes) svodi se na osmišljavanje i produkciju različitih mapa, koje predstavljaju vizuelizaciju relacija u okviru savremenih društvenih procesa. U svojim istraživanjima, grupa sarađuje sa osobama i grupama iz različitih zemalja, koje se bave sličnim vidom prikupljanja informacija. Najpre ćemo objasniti kako izrađujemo mape, zatim kako funkcionišu, i najzad, kako ih distribuiramo i na kojim mestima.

U procesu istraživanja oslanjamo se na činjenice koje obeležavaju svojinu jedne kompanije, odnosno njeno vlasništvo. Takvi podaci predstavljaju vrstu obimne arhitekturalne strukture, u okviru koje svaka kompanija biva posedovana od strane neke veće, odnosno poseduje neku manju. Kao izvor podataka često koristimo Internet i novinske članke, koji definišu odnose između kompanija u jednoj zemlji, a zatim i odnose između kompanija u drugim zemljama. U svojim istraživanjima koristimo činjenice koje nalazimo u nekim vrstama "imenika" velikih organizacija, najčešće banaka u kojima možete naći sve podatke o njihovom radu izražene u procentima. Ti podaci objašnjavaju kako i na kojim osnovama funkcioniše kapitalizam u svetu danas. U okviru mapa postoje posebni piktogrami koji objašnjavaju one grupe koje vrše velika ulaganja i velika finansiranja. Uglavnom su to banke i slične organizacije koje su povezane sa centrima političke moći.

Zatim, govorimo i o industrijskim lobijima i organizacijama koje imaju uticaja na izradu zakona, odnosno na delovanje u svim sferama – na tajna društva, državu i pojedince, koji su ili samo pojedinci ili članovi neke uticajne porodice. Kada govorimo o organizacijama, rukovodimo se činjenicama koje konkretno govore o broju zaposlenih, o ukupnom kapitalu, odnosno prihodu koji ta kompanija donosi. Postoji više različitih vrsta veza između različitih organizacija. Vrlo je bitan podatak koji govori da je osoba koja poseduje jednu od prvih postojećih medijskih organizacija u svetu, istovremeno član intelektualne elite koja utiče na kreiranje zakona. Postoje i lične veze, brakovi između dve osobe koje su istaknute u svojim sferama. Kreiranjem mapa pokušavamo da objasnimo kako se vlada svetom. Počev od individualnih međusobnih veza među ljudima i veza koje se ostvaruju među intelektualnim elitama, pokušavamo da objasnimo kako se ti odnosi reflektuju na svetsku politiku. Kontrola finansijskog domena može da utiče čak i na političke i religijske odnose u jednoj državi. Centralno mesto na mapama zauzimaju zemlje koje pripadaju organizacijama kao što je G-8 ili zemlje koje su po broju stanovništva vrlo uticajne. Tu su i organizacije koje raspolažu velikom količinom novca, imaju svoju distribuciju u svetu, Evropi, Americi i pripadaju samom "srcu finansiranja". Postavlja se pitanje kakve vrste veza postoje između "velikih igrača". U principu, kompanije koje poseduju ogromne finansijske uloge u različitim zemljama u stvari su čisto političke organizacije međusobno dobro povezane. Počev od sedamdesetih godina, razvoja informacijske industrije i komunikacijskih mreža, u tim kompanijama je primećen razvoj "ličnih prava", "ličnih

zakona" koji funkcionišu samo za njih. Generalno govoreći, pomenuta intelektualna elita radi za njih i za ostvarenje njihovih interesa. Kreiraju se zakoni koji u potpunosti odgovaraju potrebama uticajnih kompanija. Uglavnom su to zakoni koji se kasnije apliciraju u svim mogućim domenima, čak i u javnim i državnim strukturama. Time državne institucije vrše neku vrstu vrednovanja normi i standarda, koji su u načelu bili rezultat ostvarenja interesa pomenutih kompanija. Kada govorimo o lobiranju, intelektualne elite najpre daju direktive kako treba razmišljati. Na primer, ako kažu da zatvore treba privatizovati, znači da je to pošlo od njihovog interesa da učestvuju u tom procesu, što se na kraju ispostavilo da je u nekim zemljama i urađeno, kao što je slučaj sa Amerikom. Konkretnim primerom privatizacije zatvora, intelektualne elite direktno utiču na promenu zakona, koji u velikoj meri određuje kriminalizaciju celokupnog društva. U Americi je u jednom trenutku stopa kriminala stagnirala, da bi primenom zakona o privatizaciji zakona počela enormno da raste. U pitanju je struktura kapitalizma po japanskom principu, gde su društva na različit način povezana. Takav princip postoji već više vekova. Posle II svetskog rata odnos između Amerike i Japana promenio se regulacijom sporazuma između njih što se ispoljilo u njihovom današnjem političkom angažovanju. U pitanju su grupe koje pripadaju porodicama i vodećim kompanijama u svetu, koje sprovode aktivnosti vezane za osiguranja banaka u svetu i za kapitalna ulaganja.

Kada govorimo o upravljanju svetom, odnosno o "svetskoj vladi", postoje različite vrste mreža koje mogu objasniti načine njenog funkcionisanja. Činjenica je da je ceo svet određen jednom informacijom koja se koristi na različite načine. Ono što se nalazi u osnovi svih mreža jeste da su to vojne mreže, usredsređene na vojne organizacije i interese. Kada govorimo o Internetu, treba da budemo svesni toga da je on vojni proizvod, da je cela ideja o novom obliku razmene informacija potekla od strane vojske. Sa jedne strane, postoje internacionalne organizacije koje određuju norme, standarde i utiču na pravne regulative, i sa druge strane, lobiji koji sa njima sarađuju. Građansko društvo i finansije su u isto vreme povezani sa vojskom, tajnim službama, ali i sa velikim svetskim korporacijama. Deo bivših šefova CIA-e se danas nalaze na čelu velikih internacionalnih kompanija koje raspolažu ogromnom količinom novca za finansiranje. Pored SAD, sličnu situaciju danas nalazimo i u Francuskoj i u Rusiji. Izradili smo mapu koja konkretno predstavlja institucije koje trenutno postoje u Evropi kao i vrstu hijerarhije koja postoji između njih. Kada govorimo o ovim institucijama, treba uvek napomenuti da postoji "srce", centar moći koji finansira, od koga polazi sve i koji će, u smislu zakona, dati buduće direktive u ponašanju velikog broja institucija u ostalim zemljama. U centru mape je Evropska komisija, a u okruženju se nalaze različite direktive centralne Evropske komisije. Dakle, ovde se radi o normama i programima kojima se upravlja iz centra Evropske komisije. Norme i direktive se nalaze pod uticajem velikih evropskih i međunarodnih lobija i imaju veliki uticaj na nacionalne politike, na politike određenih zemalja i načine investiranja i raspolaganja novcem. Mape su vrlo dobar način prikazivanja kako ovakvi odnosi funkcionišu u svetu. Ideja u povoju je da se prikupljanjem ovakvih informacija i izradom mapa kreira baza podataka, koja bi bila dostupna svima i kojom bi svi mogli da se koriste. Na osnovu tih činjenica moguće je vizuelno predstaviti geografsku raspodelu

moći i interesne veze koje postoje između pojedinaca, političkih struktura i kompanija. To su vrlo kompleksne vizuelne reprezentacije koje prikazuju kompleksne strukture i veze između navedenih entiteta. U jednoj državi postoji jedno društvo povezano sa nekim drugim, međutim one imaju različite vrste odnosa sa društvima slične vrste iz ostalih zemalja. Na osnovu svega toga moguće je napraviti ovakve hijererhijske, geografske mape, u smislu postavljanja odnosa moći, odnosno sile u svetu. Mapa govori o difuziji, odnosno međusobnoj saradnji između organizacija koje se bave sličnim aktivnostima. U širem smislu, mape predstavljaju sredstvo identifikacije i čitanja u savremenom društvu, koje bi trebale da nam objasne u kakvom svetu danas živimo.

U septembru 2002. godine u Firenci je organizovan Evropski socijalni forum, koji je pokrenuo različite vrste diskusija. Ono što je taj forum pokazao, trebalo bi da na pravi način predstavi šta je to zapravo Evropa danas. Na forumu su bile prisustne nezavisne medijske inicijative, koje su o događajima na forumu izveštavali na svoj način. Jedan način informisanja društva bio je i distribucija besplatnih primeraka mapa. Mapa distribuirana na forumu u Firenci proizvod je saradnje grupa i pojedinaca koji potiču iz različitih zemalja – Engleske, Francuske i Italije. Oni su zajedno učestvovali u njenoj izradi, ali i finansiranju proizvodnje. To postoji kao jedna vrsta mreže kojom cirkuliše informacija i koja se potom, kao u slučaju socijalnog foruma u Firenci, distribuira, što predstavlja način informisanja svetske javnosti. Sledeća mapa je napravljena za događaj u Strazburu u julu 2002. godine, gde se okupio veliki broj medijskih aktivista. Strazbur predstavlja centar baze podataka policijske institucije za imigrante, za sve ljude koji menjaju svoje mesto stanovanja i služi svim zemljama Evrope da bi što brže mogli da lociraju kretanja imigranata. U pitanju je baza podataka za zemlje Šengenskog (Schengen) sporazuma i viznog režima koji on podrazumeva. Zahvaljujući takvom brzom načinu informisanja kao što je Internet, te baze podataka naglo rastu i idu do najvećih pojedinosti kao što su medicinski podaci. Naravno, ovakve vrste organizacije podataka se najviše koriste zbog krađa i potencijalnih nelegalnih dela. Policija koristi ove podatke, odnosno činjenice kada traži prekršioca, ali istovremeno do detalja raspolaže informacijama o imigrantima. Povodom toga 2002. godine je u Strazburu organizovano okupljanje aktivističkih grupa, gde su bile organizovane debate, diskusije, čak i manifestacije na ulicama Strazbura, u smislu kritičkog pristupa ovakvoj vrsti preraspodele i korišćenja informacija. Mapa izrađena za tu priliku govori o centrima u kojima su zadržavani imigranti i tajnim organizacijama kojima upravlja država. Pretpostavlja se da postoji veliki broj kampova za imigrante, koje finansiraju, održavaju i kontrolišu državne institucije i internacionalne kompanije. U decembru 2003. godine u Ženevi je održan Svetski samit o informacijskom društvu (World Sumit on the Information Society), povodom čega je opet organizovan, pored zvaničnog i nezavisni skup aktivističkih grupa. Ovog puta, mapa koja je nastala bila je drugačija od prethodnih. Ako su prethodne bile više globalne i globalno objašnjavale svetski poredak, ova mapa se koncentrisala samo na aktivnosti vezane za Ženevu. Na samitu je glavna tema bila informacijsko društvo, kako se koristi informacija i na koji način prevazići "digitalni jaz". Konkretno, istraživanja su pokazala da informacijom mogu da se koriste razvijena društva da bi finansirala različite projekte u svojim interesnim područjima,

najčešće manje razvijenim zemljama. Zatim, govori se o društvima koja su specijalizovana u manipulaciji medijima. I uvek se govori o "duplim standardima" međunarodnih politika, u smislu da uvek postoji korektan govor koji je okrenut ka javnosti, a malo se pažnje poklanja drugoj strani, odnosno politici koja se zapravo sprovodi u društvu.

Na web sajtu (http://utangente.free.fr), koji je zapravo jedna vrsta difuzne mreže za distribuciju informacija, mogu se pronaći i sve mape grupe Biro detud. "Universite Tangente" je platforma za međusobnu saradnju različitih aktivističkih grupa gde se na jednom mestu mogu pronaći sve informacije o njihovim aktivnostima, njihovi tekstovi, linkovi, itd. Ovde se radi o različitim centrima istraživanja, o autonomnom znanju, besplatnom pristupu informacijama i o međusobnoj saradnji. Ovakav oblik samoorganizovanja postoji kao suprotnost zvaničnom sistemu informisanja u samoj Francuskoj koji se zasniva na radu centra za informisanje, bivše vojne organizacije i najvećeg proizvođača oružja u Francuskoj.

Pitanja & Odgovori

P: Koji su načini finansiranja ovakvog oblika aktivizma? Siguran sam da vlada ne finansira štampanje ovih mapa ili izradu sajta. Da li je u pitanju rad na dobrovoljnoj osnovi?

O: Različiti su sistemi finansiranja za različite projekte i za izradu različitih mapa. Recimo, za socijalni forum u Ženevi ovaj oblik delovanja bio je finansiran sa različitih strana, iz zaista razlicitih grupa svih mogućih država. U Italiji postoji veliki broj grupa i društvenih centara koji rade i doprinose finansiranju nezavisnih projekata. U Engleskoj izlazi časopis zahvaljujući ličnim sredstvima i ličnim prihodima. U principu, postoji veliki broj aktivističkih grupa i nije teško skupiti novac na dobrovoljnoj osnovi. U realizaciji određenih programa, država obezbeđuje izvesnu količinu novca za neko delovanje koje je u skladu sa zakonskim odredbama. Sa druge strane, pri izradi ovih karata, država je obezbedila novac, ali je kasnije imala problema sa izvesnim političkim strankama.

P: Koje oblike delovanja želite da izazovete koristeći znanje proizvedeno ovakvim edukativnim mapama?

O: Zavisi od mape: gde, kako i zašto je nastala? Ako se radi o Ženevi, u pitanju je bio Samit o informacijskom društvu gde građansko društvo nije imalo pristupa. Zašto ne? Šta je to neko savremeno informacijsko društvo kome građanin sam po sebi nema pristupa? U principu, mape su napravljene da bi običnom čoveku, običnom građaninu pružile informacije, neke repere i odrednice u celom sistemu. Postavlja se pitanje na koji način funkcioniše informacijsko društvo, ako je građanski sektor izopšten iz celokupnog procesa. Njihovo prisustvo se potpuno marginalizuje. Sa druge strane, građani se mogu smatrati i žrtvama celokupnog sistema ukoliko znamo kako funkcionišu velike kompanije, da danas robne marke upravljaju svetom i koja radna snaga se koristi pri tome. Zatim, u

Francuskoj postoji lanac hotela koji su jako popularni po svojim cenama. Istovremeno treba znati da isti hoteli zapošljavaju imigrante i useljenike bez papira, kada postoji potreba za radnom snagom i učestvuju u isterivanju istih, kada se za to pojavi potreba. Politika je uvek dvojaka. U principu, potrebno je formirati pogled iz naše perspektive i potom delovati što je konkretnije moguće.

P: Kako tehnički izvodite istraživanje i na koji način dolazite do informacija? Nije lako doći do esencijalnih informacija. Interesuje me ko istražuje i prikuplja neophodne podatke?

O: Prikupljanje informacija je vrlo zahtevan posao koji podrazumeva neograničeno vreme delovanja. Kao izvor se najčešće koristi Internet, ali sve više i štampani mediji. Međutim, izvori su dosta ograničeni u jezičkom smislu. Ukoliko želite neku informaciju iz Japana ili nekog drugog govornog područja, to često predstavlja teškoću. To je jedan zahtevan posao čija zahtevnost često zavisi od teme koja nas interesuje. Ako je to odnos između velikih preduzeća u svetu, onda ćemo krenuti da crpimo informacije iz svih sektora do kojih možemo da dođemo, na čemu radi veliki broj ljudi. Takođe, postoje male grupe i inicijative koje raspolažu lokalnim informacijama, i njihovim udruživanjem i razmenom podataka može se doći do informacija koje zatim predstavljaju relevantne tačke pri izradi mapa. U principu, manje grupe koriste zajedničku alatku delovanja i formiraju vrstu baze podataka, čime se generalno upotreba Interneta racionalizuje. Kasnije, svaka grupa može da koristi tu bazu podataka i pronađe informaciju koja joj je potrebna. Na početku, taj rad nije bio sinhronizovan i određen, ali radom i sticanjem iskustva kroz izradu mapa, sve je dobilo širi smisao.

P: Kada ste počeli da radite i iz kog polja dolazite?

O: Osnovna ideja koja nas je pokrenula je pokušaj da shvatimo kapitalizam i način na koji funkcioniše. Pre nego što je napravljena prva mapa, protekao je niz od nekoliko godina istraživanja i definisanja ideje. Počeli smo kao umetnici koji su pravili umetničke instalacije. Takođe, pišemo tekstove, u neku ruku filozofske tekstove. Na primer, pisali smo o odnosu između nezaposlenog čoveka i umetnika o tome koja je razlika i kakve vrste odnosa postoje između njih. Krenuli smo od toga da smo i sami bili umetnici, ali, konkretno u Francuskoj postoji čitava mašinerija iskorišćavanja umetničkog rada, pri čemu je sve besplatno, a na kraju uvek dođe do valorizacije rada u korist nekih drugih ljudi. To nas je navelo na razmišljanje o isplativosti umetničkog rada. Da li uopšte umetnički rad ima konkretnu umetničku vrednost i kako ceo umetnički sistem funkcioniše?

U kuda.org, 18. 12. 2003.

Ne samo još jedna bežična utopija
(ili razvijajući društvene protokole slobodnog umrežavanja)

Armin Medoš

Pronalazak radio talasa pre više od 100 godina i mogućnost njihove upotrebe u komunikaciji izazvao je čitavu poplavu konkurentnih verzija bežične utopije: komercijalno podržavane verzije koje drže svetski monopol, lažni piramidalni berzanski izveštaji/sheme i gomila spekulacija u štampi (zasnovanih na lošim informacijama) i obećanja lične slobode u komunikaciji, ideja da komunikacija podstiče demokratiju i stoga vodi boljem i pravednijem svetu (liberalna, socijal-demokratska i socijalistička verzija); zatim ideje o sličnom, ali više utopijskom modelu, kao što je Teslin san da obezbedi besplatnu (bežičnu) električnu energiju (utopija inžinjera); futurističke vizije pesnika i umetnika kao što su Klebnikov i Marineti (Klebhnikov, Marinetti) koji su mislili da radio talasi imaju psihotropske osobine i da se mogu koristiti i direktno uticati na um (umetnička utopija).

Većina futurističkih snova umetnika sa početka XX veka se razbilo o totalitaran sistem sa kojim su ti umetnici bili u vezi. Umetniku, kao članu elite, od strane države odobren je pristup i korišćenje radio frekvencija kako bi doprli do svih građana istovremeno. [1] Samo mali broj mislilaca je videlo pravac "od jednog ka mnoštvu" ovakvog komunikacionog modela kao problem. Nemački pozorišni pisac i komunista Bertold Breht (Bertold Brecht) je radio smatrao dvosmernim komunikacionim medijumom. Volter Bendžamin (Walter Benjamin) u knjizi "The Author As Producer" insistira na tome da bi upravo pisci trebalo da budu ti koji će pomagati kreiranje mehanizama putem kojih bi i drugi postajali pisci.

Teško je zanemariti to kako 100 godina kasnije bežična tehnologija ponovo inspiriše divlji utopizam u komercijalnom domenu. Industrija informacionih i komunikacionih tehnologija posmatra pojavu veoma brze mobilne, široko-pojasne (broadband – velika propusna moć/opseg) komunikacije (3G ili UMTS) u ulozi potencijalnog spasitelja, nakon što je taj sektor pretrpeo slom zbog kraha nove ekonomije. Izazov ovim komercijalnim snovima predstavlja pojam '"slobodnih mreža/Free Networks" – nezavisne bežične zajednice koje su izgradili i održavaju ih sami korisnici. Slobodne mreže su utopija inžinjera pomešana sa idejama koje bi mogle biti opisane kao Internet jednakost – egalitarizam (komplet vrednosti i ideala izvedenih iz ranijih verzija predprivatizacijske Internet arkadije) i informacijska etika (bazirana na "hakerskoj etici" gde reč "haker" ima pozitivnu konotaciju i označava nekog ko se aktivno bavi digitalnom tehnologijom na bazi "uradi sam" filozofije). Umetnici otkrivaju elektromagnetne talase kao novi materijal i medijum u umetnosti i sve više se prebacuju na modus operandi koji je Bendžamin predložio. Umesto potrage za ekspresijom svoje subjektivnosti, oni pokušavaju da stvore komunikacione sisteme i platforme za saradnju. [2]

Svet se između dve "bežične euforije" (radio i bežični Internet), međusobno udaljene sto godina, pomirio sa pojavom radija, televizije, a kako je vek odmicao mirio se i sa sve

nemilosrdnijim tokovima u inovaciji tehnologija procesovanja i prenosa informacija. (3) Ovde suština nije u tvrdnji da su te dve euforije identične, već u tome da je potrebno uočiti zajedničke obrasce u njihovom razvoju, shvatiti ovaj proces i način na koji nove tehnologije utiču na društvo i kako se one same menjaju pod uticajem društva. Jedna od premisa ovog članka jeste i naglašavanje potrebe da se krene dalje od teorije spekulativnih medija i da se uspostavi jasniji jezik analize i deskripcije, baziran na materijalnim i strukturalnim karakteristikama "medija" o kojima govorimo.

Jedan od kamena temeljaca ovakvog tipa kritičkog delokruga je i stalna analiza "topologije" mreže. Ovim terminom se može opisati i sam fizički izgled mreže (način povezivanja njenih čvorišta i krajeva) i društveni model njenog organizovanja (način prenosa poruka u društvenom sistemu, koje su strukture moći, komandni, kontrolni i mehanizmi povratne informacije). Sam fizički materijal i tehnološke karakteristike komunikacijskih medija su drugi važan faktor koji treba podrobnije proučiti. Ovo obuhvata zakone fizike (elektromagnetni talasi) i informatike (protokoli koji upravljaju komunikacijama u digitalnim/elektronskim sistemima). Na ovom nivou ima smisla slediti pristup koji su inžinjeri primenili kada su kreirali ove mreže i posmatrati ih kao hrpu protokola koja se sastoji iz različitih slojeva (TCP/IP, OSI referentni model). Svaki sloj u toj hrpi protokola vrši različite funkcije – uspostavlja vezu, prenosi bitove, formira poruku od bitova, sakuplja i kanališe poruke po tipu "sadržaja" i "medija" – a upleten je i u različite kontekste političke ekonomije i društva.

Neki tokovi u teoriji medija, studijama medija i kritici medijske umetnosti su pokazali tendenciju da mešaju slojeve o kojima govore, remeteći odnos između medijuma i poruke, fokusirajući se na sloj koji nosi sadržaj i njegove simboličke implikacije i prenaglašavajući društveni uticaj ili "pravo značenje" medija. Pošto nisu uspeli da razviju jasan opisni jezik i trezvene analitičke i terminološke osnove, ovim oblastima medijske teorije i umetnosti preti opasnost da plate visoku cenu, jer moraju da sustignu najnovije tehnologije, dok se osnova pod njima samima menja. One jednostavno mogu biti proglašene nebitnim, jer snagu na delu – u polu-šali je možemo zvati tehno-ekonomska podsvest – nisu ni pokušali da shvate. Stoga se ovaj "tip" umetnika koji se bavi "novim medijima", zajedno sa svojim nesrećnim kritičarima, nalazi zarobljen između gladne mašinerije festivala koja vapi za najnovijim i najpopularnijim diskursom (koji se neprestano menja), industrije koja ih iskorištava kao jeftine zamorčiće nove tehnologije i dikursa kreativne industrije koja samo što nije velikim točkovima tehnologijom vođenog "progresa" zdrobila poslednje pokušaje polu-autonomne prakse.

Da bi se izbegle greške iz prošlosti, trebalo bi napraviti jasniju analizu interakcije produkcionih snaga koje su upletene u igru, imajući u vidu pitanja kao što su vlasništvo i zakonska regulativa ili samoorganizovanje, sa slojem mrežne komunikacije na koji se odnose. Na fizičkom sloju mrežne komunikacije ovo bi se odnosilo na vlasništvo ili pristup hardveru i prenosnim medijumima; na logičkom nivou (opušteno govoreći, ne samo OSI) na prava intelektualne svojine programa i standarda koji omogućavaju komunikaciju; na

nivou aplikacija i sadržaja na kontrolu ili vlasništvo kanala i uslova koji okružuju produkciju i rasprostranjivanje aplikacija i sadržaja. Na svaki od ovih slojeva takođe utiče i regulaciona moć, koja se generiše bilo interno (samoregulacija) bilo eksterno (telekomunikacioni zakoni i regulative, kontrola spektra). Jednom kada shvatimo ove slojeve i način na koji se oni međusobno povezuju, kompleksniji društveni slojevi kao što su sposobnosti ili znanje, društvena previranja i ideološki vođeni interesi određenih grupa skoro automatski obuzimaju našu pažnju i mi pokušavamo da, vođeni intelektualnim okvirom u kojem su i discipline kao istorija ideja ili filozofija nauke, razmišljamo o široj slici na, nadam se, smisleniji način. Ovo nam može pomoći da shvatimo kako mrežne tehnologije nisu jednostavno pale sa neba, nego su rezultat već postojećih koncepata koje smo, aktivno ili pasivno, mi kao društvo kreirali.

Naivnost u shvatanju prve bežične euforije oko 1910. je, kako se istorija razvijala, ubrzo kažnjena. Relativna lakoća sa kojom se mogla dobiti dozvola za emitovanje u SAD-u je dovela do rata frekvencijama nakon I svetskog rata, kada je komercijalan radio postao samoodrživ. Radio stanice su pokušavale da ometaju signal konkurentskih radio stanica podizanjem većih i jačih predajnika i emitovanjem jačeg signala preko frekvencija susednih stanica. Ovo je ubrzo primoralo državu da reaguje i stvori sistem državnih regulativa radijskog spektra.

(4) Totalitarni preokret u bežičnom utopizmu 1920/30-tih je nastupio kada su nacisti osvojili vlast u Nemačkoj i prigrlili radio kao omiljeni propagandni medijum, kao "narodni prijemnik" (Der Volksempfänger). Nakon II svetskog rata, totalitarizam sa jedne strane i bežično slobodno tržište sa druge, oblikovali su posleratni konsenzus o regulaciji bežične komunikacije, koji je bio važeći godinama sve do početka liberalizacije/deregularizacije.

Konsenzus se sastojao u tome da bi korišćenje prenosnog medija, elektromagnetnih talasa, trebalo da reguliše država u interesu javnosti. Delovi spektra su dati na raspolaganje državnim organima (hitnim službama, vojsci) ili drugim privilegovanim vlasnicima licenci (državni mediji, radio i TV, kontrola vazdušnog saobraćaja). Deo spektra koji je prenosio sadržaj je takođe regulisan prateći model sponzorisan od države. Većina zemalja je kreirala polu-nezavisni TV i radio kanal (National Broadcaster) – dovoljno nezavisan da se odupre direktnoj manipulaciji aktuelne vlade, ali je kao javni kanal za informisanje bio vođen pravilima koje piše parlament i komisija za dodelu frekvencija. Lične telekomunikacije (koje su dugo bile sinonim za telefon) bile su u domenu državnih monopolističkih kompanija, koje su bile pod obavezom pružanja "opštih usluga".

Evropski posleratni konsenzus je počeo da se raspada nakon šoka zbog porasta cena nafte sedamdesetih godina, kada je neoliberalna politika "deregulacije" stupila na snagu. Privatnim radio i TV kompanijama odobren je pristup vazdušnim talasima, a državne monopolističke telefonske kompanije su postepeno privatizovane. Novonastajući monopoli (ili duopoli) države i privatizovanih komercijalnih medija bili su meta levičarskih napada pokreta slobodnih medija, koji je nastao tokom prvog protesta protiv rata u Vijetnamu

i studentskih protesta šezdesetih godina. Kada je Internet postao otvoren za javnu upotrebu, ranih 90-tih, činilo se da se ti putevi sastaju na trenutak. Na Internet je gledano i kao na Meku nekomercijalnog, političkog aktivizma i umetničke intervencije i kao na vrhunac ideologije slobodnog tržišta. Slom nove ekonomije trebalo je da uništi mnoge mitove i legende koji su okruživali Internet, ali je sledeća generacija mobilnih telefona pokrenula preporod komercijalnog utopizma zamenjujući "e" (elektronski) sa "m" (mobilan) – od e-trgovine do m-trgovine.

Početkom devedesetih činilo se da je bežična telefonija na dohvat ruke, ali se to nije desilo. Tebalo je da dođu kasne devedesete da bi mobilni telefon postao najobožavanija ikona potrošačkog kapitalizma. Unapređenje mobilne telefonije sa GSM-a preko GPRS sve do G3 je u stvari okidač nove bežične revolucije, novi teoretski balon euforije rasta na koji je čekala industrija nakon što je većina industrije imala mali ili nikakav rast posle 2001. Taj teoretski rast nije baziran samo na ekonomiji već i na očekivanju da prebacivanje na GPRS i 3G označava nešto značajnije, preokret ka mobilnoj mrežnoj paradigmi. Za mobilne naprave rečeno je da će uskoro postati naš osnovni način pristupanja elektronskim komunikacionim mrežama. Ovo podrazumeva otklon od Internet paradigme i njegove ideje jednakosti i sudelovanja ka uže kontrolisanoj mobilnoj paradigmi, koja je bazirana na kontroli vlasništva decentralizovane mrežne topologije. Pošto se pristup Internetu putem žica takođe nadogradio do veza velike propusne moći (broadband), promene u strukturi vlasništva i lepezi provajdera znače da je sloboda koju je Internet nekada obećavao, i na neki način, još uvek zagovara, ugrožena. Ništa ne znači to što bi "sloboda", jedan od najzloupotrebljavanijih koncepata, u ovom kontekstu trebalo da bude shvaćena ne kao metafizički koncept, čak ne ni na nivou političke filozofije, već na veoma praktičnom nivou – kao hakerska vrsta slobode – sloboda da se pristupa i koriste komunikacione mreže uz minimalne zabrane, jačajući individue i zajednice kako bi na što bolji način iskoristili te mreže. Radikalni liberalizam ovog pristupa može biti ograničen u svojoj vrednosti kao politička ideologija, ali još uvek jasno odvaja ovu ideju od dva dominantna modela – pada modela državnog vlasništva i rastućeg modela privatne korporacijske "izgradnje carstva" koji je još uvek u usponu. [5]

Tokom nekoliko prošlih godina, slabo povezane grupe širom sveta počele su da grade slobodne mreže (Free Networks), koje su posedovali i održavali sami korisnici i koje su u najvećoj meri bile oslobođene državnog i korporativnog uticaja. Ovaj mlad pokret slobodnih mreža nije jedna koherentna grupa, kampanja ili strategija, već još jedno od mnoštva slobodnih udruženja individualaca koji imaju zajednički cilj, dosta entuzijazma i rade zajedno pod istim kišobranom sastavljenom od nekoliko principa. Slobodne mreže pokušavaju da izgrade velike mreže prateći princip osnivanja počinjući "od nule", koristeći "uradi sam" tehnologiju (antene iz kućne radinosti, polovan hardver, slobodan (free) softver) i predlažući decentralizovanu samoorganizaciju kao model organizovanja. Ne postoji ni jedan samostalan entitet koji planira i gradi mrežu. Umesto toga, grupe promovišu predlog podele propusnog opsega mreže i organski razvijaju mrežu (bežičnim) povezivanjem lokalnih čvorišta.

Ovo se može dostići velikim brojem tehnologija, ali je odnedavno pao izbor na tehnologiju 802.11 iz porodice bežičnih Ethernet standarda (način povezivanja kompjutera u mrežu) koje je razvio IEEE (Institute of Electrical and Electronics Engineers), a koji je ugrađen u mnoge mrežne proizvode za masovno tržište, kao što su WLAN (Wireless Local Area Network) mrežne kartice i čipovi. Cene hardvera su dramatično pale tokom prošlih godina zahvaljujući komercijalnom proboju bežičnih tehnologija (što su, između ostalih, podržali Apple Airport i Intel Centrino). Radio umrežavanje spaja dve moćne tehnologije: inovativne bežične tehnologije prenosa podataka kao što je tehnologija širokog spektra i kompjuterske tehnologije za umrežavanje. Tehnologija 802.11 je bazirana na otvorenim standardima što je važna prednost za pokret slobodnih mreža. To znači da će slobodan softver raditi na većini zaštićenih hardverskih platformi sve dok je protokol adekvatno primenjen. Takođe, on radi i sa ugrađenim Linux čipovima i na nekim starijim računarima pod nekim verzijama Unix-a. Umrežavanje preko različitih platformi, ali bazirano na otvorenim stadardima, bila je uspešna formula za Internet – to je priča koja se ponavlja i sa 802.11.

Tehnologija 802.11 je prvenstveno smatrana zamenom za lokalne mreže u domovima i na poslu koje su bazirane na kablovima. Bežične tačke pristupa kreiraju mrežu lokalnog područja (Local Area Network – LAN) kojima se može pristupiti bilo kojom napravom čiji je opseg do 802.11, radijskom karticom ili čipom; tačka pristupa obično obezbeđuje pristup ili je povezana sa prolazom (gateway) ka Internetu. Ovaj tip čvorišta (tačka pristupa plus prolaz) nalazi se u središtu zvezdane topologije; ona je gospodar svih komunikacija na lokalnoj mreži, dok se povezivanjem na sledeći viši nivo na Internet vrši npr. putem ADSL veze. Ovakva postavka se zove "vruća" tačka u komercijalnom svetu.

Vizija slobodnih mreža, kako je predstavlja jedna od ideološki najuticajnijih grupa, Consume [6] iz Londona, je da se primeni princip povezivanja računara iste važnosti u okviru jedne mreže (peer-to-peer) – sistem poznat iz mreža razmene podataka (file sharing networks) – do samog fizičkog materijala na kojoj se zasniva mrežna komunikacija. Consume je 2000. predložio da se izgrade bežična "umrežena čvorišta", što je u stvari veoma raširena mreža u kojoj je svaki čvor povezan sa mnogo drugih čvorišta, a nijedan nije centralan ili privilegovan na bilo koji način. Vlasnici čvorišta su legalno nezavisni jedan od drugoga i čine saobraćaj podataka širom mreže sledeći minimalne zahteve "Pico Peering" dogovora (Pico Peering Agreement) – regulacioni okvir namenjen vlasnicima čvorišta kako bi se uspostavile veze i formulisala osnovna načela umrežavanja.

WLAN standard 802.11b ima dva modaliteta, infrastrukturni mod (za tačke pristupa) i ad-hoc mod (ili peer-to-peer tj. kompjuter-kompjuter mod, u zavisnosti od prodavca hardvera/softvera). Kada je bežična mreža postavljena na malopre opisan način, svako čvorište se može povezati sa drugim čvorištem sve dok se nalaze u dometu svojih radio signala. Pošto ne postoji privilegovano mesto u okviru mreže, svako čvorište izvršava funkcije preusmeravanja paketa podataka, ponašajući se kao i ruter i kao prolaz ka Internetu. Pošto je ovo zajedničko za sva čvorišta, preklapajuće ivice površina svih čvorišta

koju pokriva radio signal stvaraju jedan bežični oblak. Kompjuteri locirani u blizini ovog oblaka mogu komunicirati uz velike brzine protoka podataka, dok je oblak povezan na svojim krajevima brojnim mestima sa Internetom. "Odžičujući" ivice komercijalnog Interneta, vlasnici/korisnici u oblaku slobodne mreže zahtevaju vraćanje svog prava da sami definišu način na koji će koristiti svoje telekomunikacije.

Ideja grupe Consume o velikom oblaku podataka nad Londonom nije uspela (još). Trenutno, ono što imamo su stotine bežičnih mrežnih zajednica u Velikoj Britaniji i još hiljade širom sveta. Većina funkcioniše na lokalnom nivou, formirajući male bežične grozdove, gde ljudi mogu vršiti razmenu podataka, igrati igrice ili gledati video zapise bez ičijeg spoljnog mešanja. Praktična strana je to da ovakve mreže omogućavaju efikasnu podelu troškova propusnog opsega među većim brojem korisnika. Sa vizionarske strane, ovo bi trebalo da bude tek početak. Mala ostrva slobodnih mreža bi trebalo da srastaju i "odžiče" stalno rastuće delove grada, regije, zemlje, sveta. Postajući veće, mrežne zajednice mogu imati uticaj u pregovorima sa komercijalnim provajderima opsega i mogu dobiti jeftiniji pristup globalnim mrežama. Na duže staze, propusni opseg može postati besplatan ili relativno jeftin. I što je još važnije, slobodno umrežavanje može potpuno promeniti način pružanja telekomunikacionih usluga.

Umrežavanje čvorišta (Meshed networking) – ali ne kao opis topologije mreže već kao određena tehnologija (7) – stvorilo je neku vrstu štreberskih glasina oko "mobilnog ad-hoc umrežavanja". Na mobilne ad-hoc mrežne protokole difuznih ivica gleda se kao na ključ započinjanja bežične utopije "od nule". Ako se ad-hoc mrežna tehnologija implementira u npr. mobilne naprave za masovno tržište, svako ko bi nosio takvu napravu postao bi hodajući telekom. Dinamičan, samo-reprodukujući softver i kompjuterski kontrolisan radio će uvek moći da nađu najbližu tačku koja je u dometu, koja radi i moguće ju je iskoristiti za prenos informacija. Ako ovaj pristup dobije dovoljnu podršku, na kraju može doći do stvaranja sveta bez telekomunikacionih provajdera, a sami ljudi će zaista postati mreža. (8) Paradigma slobodne mreže i mobilna paradigma opsega, kako je predlažu mobilne telekomunikacione kompanije, nalaze se na suprotnim krajevima spektra u odnosu na sve glavne faktore – topologija mreže, politička ekonomija, njihovo regulisanje i društveni kontekst – i ne mogu biti različitiji nego što jesu. Na primer, slobodne mreže ne "mere" mrežni saobraćaj. Obično ne mere količinu razmenjenih podataka jer je mreža izgrađena na bazi obostranog dogovora dopuštajući "slobodan protok". Mobilne telefonske mreže mere skoro sve: količinu podataka, vreme provedeno na mreži, lokaciju, primljene i upućene pozive, itd. Mobilne telefonske mreže imaju klasičnu zvezdastu topologiju nasleđenu iz doba monopola telekoma. Stanice koje vrše prekopčavanje u centrima veze imaju kompletnu kontrolu nad svim aspektima mreže. Stari način razmišljanja u PTT-u je takav da kredo vlasnika mobilnih mreža svodi korisnika mreže na potrošača. Postoji mreža koja je njihova, jer je oni poseduju i održavaju, a korisnicima se prodaje pristup ovakvoj mreži. Verovatno duboko u sebi oni misle da su neobično darežljivi, pošto dozvoljavaju bilo kome da koristi njihovu mrežu. Korisnik se smatra listom na tankom kraju drvolike strukture mreže, neko ko hoće samo da skida podatke sa Interneta.

U slobodnim mrežama, priča je sasvim drugačija. Korisnik se ne smatra slepom ulicom i nije samo neko ko zauzima nečiji prolaz ka mreži, već se na njega gleda kao na čvor koji je potpuno integrisan u samu mrežu i doprinosi vrednosti same mreže i kao sadržaju i kao veličini propusnog opsega. Svaka veza je dvosmerna i simetrična, što znači da su jedinične vrednosti za slanje i primanje podataka jednake. Pokret slobodnih mreža kaže da ako radimo stvari na pravi način, možemo stvoriti obilje – maksimalnu moguću širinu propusnog opsega (bandwidth) po minimalnoj ceni; oskudica propusnog opsega je po nekim aktivistima (9), izmišljotina koju industrija podržava kako bi sprečila slom svog tržišta.

Jedan od glavnih razloga zbog kojeg slobodne mreže mogu biti toliko uspešne jeste taj što one funkcionišu u oblasti frekvencija spektra koje su oslobođene licence u većini industrijalizovanih zemalja. To znači da izvesne frekvencije mogu biti korišćene bez prethodnog odobrenja nadležnih. Uspeh deregulacije spektra frekvencija korišćenih tehnologijom 802.11 je inspirisao pokret "otvorenog spektra" koji zahteva da više delova spektra bude oslobođeno licence. Po njima, nova softverski kontrolisana radijska tehnologija (rašireni spektar, ultra-široki opseg) omogućiće mikro-regulaciju na lokalnom nivou bez kontrole vlade. (10) Problem uplitanja vlasti koji je zaobišao radio dvadesetih godina prošlog veka sada se može izbeći pomoću nekoliko novih tehnika i stoga bismo morali ispočetka promisliti na koji način je spektar uređen.

Industrija mobilne telefonije osakaćena je visokom cenom licenci koju su kompanije morale da plaćaju kada je spektar bio stavljen na aukcijsku prodaju u vrhuncu eksplozije nove ekonomije. Aukcijska prodaja spektra označila je događaj koji se po svemu razlikovao od bliske prošlosti. Prvi put spektar je prodat kao roba onome ko je dao više. Lansiranje 3G-a (protokol treće generacije u mobilnoj telefoniji) je u većini evropskih zemalja već odloženo, a komercijalni pritisak na kompanije samo raste. Ime ove igre je "maksimizovanje prosečnog prihoda po korisniku". Mobilan biznis je granica gde se kapitalizam naginje unazad kako bi se do detalja usaglasio sa svim potrošačkim bubicama. Veliki broj različitih modela, usluga i planiranja cena pogađa različite ukuse ljudi, prioritete, karakteristike, stil života, prihode. U ovoj trci za povećanjem prosečnog prihoda po korisniku, telefoni postaju načičkani raznoraznim mogućnostima. Telefonima se može reprodukovati "prirodan zvuk", na njemu se može čuvati i slušati muzika, fotografisati i snimati video. Rezultat dela ove kampanje usmerene ka novčaniku korisnika je da mobilni telekomi počinju da veruju u to da oni moraju postati jedini "provajderi sadržaja" i nuditi video i audio podatke za skidanje kao i vesti, sport i laku pornografiju. Ovakav pristup gde se telefonske kompanije istovremeno ponašaju kao provajderi sadržaja nije uspeo ni pre sto godina, a skoro je sigurno da neće uspeti ni danas.

Zbir svih ovih dešavanja jeste to da je pristup Internetu preko mobilnog telefona verovatno najskuplji način, po sistemu jedan bit – jedna para. Iza sjajnih brošura i obećanja potrošačima nazire se nova hrabra bežična realnost. Centralizovani model kontrole i upravljanja preti ideji o slobodi komunikacije. Nadogradnja mogućnosti telefona uskoro će pružiti još više mogućnosti za kontrolu društva. Sa novom generacijom telefona, sa mo-

gućnošću fotografisanja, čitav (povezan) svet će postati svevideći, svet stalnih posmatrača i stalno posmatranih, gde se od sada privatno i javno, intimni društveni prostor i globalna mreža stalno prepliću. Mobilno inkorporira sve više funkcija, npr. preuzima ulogu novčanika, a u kontekstu novonastajućih tehnologija – recimo biometrije koja bi mogla postati omiljeni način potvrđivanja nečijeg identiteta – ulogu i novčanika i pasoša, sve u jednom, čime bi upravljala multinacionalna kompanija po vašem izboru.

Još jedan zabrinjavajući faktor u pogledu ovoga je to što mobilni telefoni imaju zaštićen sistem arhitekture. Operativni sitemi PC-a (Personal Computer) su oslobođeni Linuxom i drugim besplatnim verzijama Unixa. Po ceni da imaju malo više posla od prosečnog korisnika Windows ili Apple okruženja, korisnici Linuxa uživaju u slobodi da konfigurišu svoje mašine baš kako oni sami žele. Sa mobilnim telefonima vraćamo se na zatvoreni svet operativnih sistema, tajnost korporativnih laboratorija za istraživanje i razvoj i sve prisutne sporazume o neotkrivanju (Non-Disclosure Agreements – NDAs). Mnoge slobode u kojima smo tek počeli da uživamo u kombinaciji sa Internetom i slobodno programabilnim personalnim računarima ugrožene su ovim prebacivanjem na mobilne mreže. Mobilno pod hitno treba da dobije otvoren kôd.

Internet potpomaže ekonomiju poklona (gift economy) gde su milioni uključenih u razmenu i komunikaciju bez ikakve finansijske nadoknade. Od ličnih web prezentacija do komunikacije preko mejling lista i web-foruma; ljudi širom sveta prihvatili su ovakvu priliku za komunikaciju na načine koji su otvoreni, nisu orijentisani direktnoj dobiti i ne služe određenoj svrsi. Kada svaki komunikativni akt postane predmet merenja i naplate, ekonomiji poklona postaje teško da se održi. Ono što nas je fasciniralo kod Interneta kada se pojavio bila je njegova nelociranost, neprostornost. Nije bilo važno gde se nalazite, sve dok imate pristup Internetu. Sada sve postaje obrnuto. Kod mobilnih telefona kao i kod raznih drugih aparata kojima je lokacija bitna, informacijska sfera postaje povezana sa geografskim prostorom. Svaki korisnik može biti lociran geografski što otvara bogatstvo mogućnosti za nadgledanje i nametljive poslovne predloge (location based spam). [11]

Kao što Majerson (Myerson) primećuje u knjizi "Heidegger, Habermas and the mobile phone" [12] naš koncept "komunikacije" se već promenio i podleže daljim promenama. Sada prihvatamo i to da je čin komunikacije i kada se dva kompjutera povežu. Naša lična motivacija za korišćenje ovih veza jeste zadovoljenje potreba i "htenja", u najmanju ruku to je ono što industrija prodaje: ličnu slobodu da dobijemo ono što želimo. Pri mnogim od tih "komunikacija" gde imamo pristup informacijama ili uzimamo podatke, ne postoji drugo ljudsko biće. Ovo nije ona "veličanstvena konverzacija" koju je zamislio neoliberalni guru Barlou (JP Barlow). Takođe je veoma različita od Habermarsove ideje o "javnom domenu". Ali ovde moramo biti oprezni. Mnoge priče o novim medijima govore o gubitku, padu, itd. (elektronska pošta kvari našu gramatiku i pravopis, a tako napisani tekstovi poslednja su rupa na svirali pisanog jezika, sudeći po gledištu konzervativnih pesimista u kulturi). [13] Možemo bezbedno ignorisati brigu grupa kulturnih konzervativaca koji vide apokalipsu visoke evropske kulture iza svakog ugla. Ali ono o čemu je ov-

de stvarno reč, i ako dobro razumem, ono što zaista brine Majersona je kreiranje budućih tehnologija kroz našu zajedničku društvenu imaginaciju.

Kada govorimo o novim medijima ili komunikacionim tehnologijama ono što je bitno nije samo tehnologija – njena hladna, ogoljena efikasnost – već to kako je ona otelotvorena u društvu. Predlog slobodnih mreža je da se ponovo razmisli o našoj vezi sa tehnologijom i da se rekonceptualizuju tehnološki sistemi bazirani na tome što su utemeljeni u zajednicama koje su aktivno uplentene u njihovo oblikovanje. Tehnologije budućnosti razvijaju se sada u našoj zajedničkoj društvenoj imaginaciji; a tehnologije kojima sada raspolažemo bile su oblikovane imaginarnim budućnostima prošlosti [14]. U slučaju mobilnih telekoma, obećano nam je potrošačko obilje zasnovano na hladnoratovskoj strukturi kontrole i komandovanja. Njihove mreže su tehnološki izraz šizofrenije i paranoje. Predlog slobodnih mreža je da se generišu alternativne buduće tehnologije bazirane na idejama osnovnog pokreta ili "mnoštva". Utopija (ako uopšte moramo da koristimo ovu reč) nalazi se na planu imanentnosti, gde je kontrola predata arhitekturi raširenoj "od mnogih ka mnogima". Oblikovanje budućih tehnologija postaje posao u koji svako može i treba da bude umešan.

U samo nekoliko godina bežična zajednica i ideja slobodnih mreža mnogo je postigla. Priznato je da postoji suštinska veza između slobodnih mreža, slobodnog softvera i slobodnog hardvera [15]. Oni međusobno zavise jedni od drugih u garanciji svog opstanka na duže vreme. Obezbeđujući oslobođenu infrastrukturu za komunikaciju ovi pokreti štite slobodu govora i druga komunikaciona prava. Ova međusobna zavisnost je nedavno bila opisana terminom "mrežno dobro" (Network Commons). Mrežna dobra ne obuhvataju samo fizičku mrežu nego i protokole koji je pokreću i sadržaj koji se prenosi. Ona redefinišu naše shvatanje javnog domena (public domain) u elektronskoj komunikaciji.

Ono što još uvek nedostaje je društveni ujedinitelj koji sve to povezuje, društveni protokol održive mreže – samo-staranje i samoorganizovanje. Postoje pokušaji u okviru "Pico Peering" dogovora da se obezbedi takav društveni ujedinitelj između vlasnika mreža. Programeri koji razvijaju softver otvorenog kôda (open source) rade sa FOAF (Friend of a Friend), RDF (Resource Description Framework) i drugim tehnikama društvenog umrežavanja koje mogu pomoći okupljanju ljudi koji slično razmišljaju. Do sada, svi ti napori u okupljanju masovne podrške su propali. Pokret slobodnih mreža održan je zahvaljujući zaluđeničkom entuzijazmu. Da bi se izraslo iz tih izolovanih ostrva slobodnih mreža izgrađene šačicom zaluđenika i izgradilo održivo opšte i mrežno dobro, više ljudi različitih interesovanja i znanja treba da se ujedini i zajedno razvije društvene protokole umrežavanja. Ovo podrazumeva da ćemo konačno nadvladati totalitarizam nasledan u bežičnoj utopiji nekad i sad. Slobodne mreže su (nadam se) ne samo još jedna bežična utopija, već praktičan predlog za lagano menjanje sveta postavljanjem drugačijeg odnosa uz pomoć tehničkih sredstava komunikacije.

(Ovaj tekst je verzija teksta koji je prvobitno napisan i objavljen u knjizi "THE FUTURE OF COMPUTER ARTS / PRIHODNOST RACUNALNISKE UMETNOSTI" čiji je urednik Marina Gržinič, a izdavač MKC, Maribor i Maska, Ljubljana – Teorija, istorija, diskursivnost i (h)aktivizam. Desetogodišnjica međunarodnog fes-

tivala kompjuterske umetnosti. Maribor 1995-2004. Originalna ideja za ovaj tekst je zasnovana na seriji predavanja pod nazivom "Bežična utopija" održanih u Novom Sadu, Zagrebu, Bazelu, Berlinu, Plimutu, Rigi i Salcburgu tokom zime 2003. i proleća 2004)

Beleške:

(1) O pojmu totalitarizma u bežičnom futurizmu pogledati npr. Gregory Whitehead:
Out of the Dark: Notes on the Nobodies of RadioArt,
http://www.somewhere.org/NAR/writings/critical/whitehead/main.htm

(2) Ova rečenica se odnosi na drugi deo članka koji još uvek nije bio napisan i koji se bavi radom bežičnih umetnika i aktivista kao što su Marko Peljhan i Shu Lea Cheang. Publikacija "dive" koju izdaje <Kingdom of Piracy> daje uvod u copyleft kulturu i stvaranje zajedničkih platformi, http://kop.fact.co.uk

(3) U suštini, ceo eloktromagnetni spektar se može koristiti za komunikaciju, od veoma niskih do veoma visokih frekvencija. Naše shvatanje spektruma je često nejasno i to zbog jezika. "Radio" je samo jedna aplikacija koju nalazimo korisnom. On funkcioniše u donjem delu spektra. Dok su toplota i vidljiva svetlost jedini delovi spektra koje možemo percepirati svojim čulima, napredak nauke nam je omogućio da iskoristimo onaj deo spektra za koji pre sto godina nismo znali ni da postoji. Sada možemo "posmatrati" stvari koje su jako male i jako daleko , što u stvari znači da gledamo u prošlost. Pogledati npr. "Hubble's deep view into the cosmos",
http://news.bbc.co.uk/1/hi/sci/tech/3546803.stm

(4) Način na koji je spektar podeljen može se najbolje shvatiti posmatranjem alokacionih frekvencijskih mapa, kao što je ova:http://www.ntia.doc.gov/osmhome/allochrt.pdf

(5) Za koherentnije objašnjenje reči "slobodno" u slobodnim mrežama pogledati u moje beleške sa pre davanja na konferenciji Open Culture, u Beču juna 2003,
http://twenteenthcentury.com/uo/index.php/OpenCultures

(6) Consume http://consume.net

(7) Tehnologija umrežavanja čvorišta prvobitno je razvijena u vojnom kontekstu, a unapredila ju je posebna radna grupa na IETF, mobilna ad-hoc grupa koja se bavi umrežavanjem (MANET); specifikacije protokola objavljene su kao RFC, a implementacija je objavljena kao open source.

(8) U vreme pisanja teksta, "mesh" umrežavanje je bilo uspešno u eksperimentima malog opsega (kada do 30 leptop kompjutera radi na "mesh" protokolu), ali nije testirano u većim opsezima.

(9) Malcolm Matson, suosnivač kampanje Access To Broadband i insajder u telekomunikacijama već 20 godina, tvrdi da kada bi tržište zaista bilo slobodno opseg (bandwidth) bi danas bio besplatan.

(10) Veoma koristan izveštaj o pitanjima spektra: Open Spectrum, New America Foundation,
http://www.newamerica.net/index.cfm?pg=article&pubID=1002

(11) Grupa programera, pisaca i umetnika pokušava da predstavi produktivniju tačku gledišta na "usluge" zasnovane na lokaciji njihovim preimenovanjem u "lokacijski mediji" (locative media), http://locative.net/

(12) Myerson, George, "Heidegger, Habermas and the Mobile Phone", 2001.

(13) Možda zaista postoji pad u u standardima korišćenja jezika, možda više ne možemo održati vrednosti iz klasične epohe knjige. Pa i da to jeste slučaj, postoji dijalektička trgovina koja ide sa tim, a koju je Benjamin već opisao dvadesetih godina prošlog veka, a to je da ćemo mi sami sve više videti korist proširivanja učešća: sklonite se Joyce i Musil, napravite mesta za sve. Internet, kojeg kulturni konzervativci redovno okrivljuju za to što se po njima on sastoji od 99% smeća, stimulisao je ogromnu količinu tekstualne produkcije. Na primer, sa javnim dnevnicima koji štite od "bloggers" ili "web-loggers", amatersko izdavaštvo je doživelo uspeh kao nikad ranije.

(14) Barbrook, Richard, "Imaginary Futures", Chapter One, 2004 (forthcoming).

(15) Eben Moglen at Open Cultures, Vienna 2003, http://opencultures.t0.or.at/oc/participants/moglen

Koncizni leksikon digitalnih dobara
RAQS MEDIA COLLECTIVE

ACCESS = PRISTUP

Mogućnost priključenja, pristupa prostoru ili mreži gde se ljudi i razmišljanja okupljaju. Biti prisutan, imati mogućnost, ključ, dešifrovati signal, otvoriti vrata, biti u mogućnosti preuzimanja/predavanja (download/upload) u okviru bilo kog sistema znakova ili signala – Internet, knjige, umetnički radovi ili večera. Ne postoji suvišnost pristupa (excess of access).

BANDWIDTH = ŠIRINA PROPUSNOG OPSEGA

Opisuje dimenzije koje su neophodne da bi protok poruka, signala i komunikacije bio moguć. Što je veća širina opsega sistema, veći je broj poruka i količina informacija koje može da propusti u bilo kom vremenskom periodu. Proizilazi da je pristup (access) funkcija širine opsega (bandwidth). Više ljudi može međusobno komunicirati kada postoji prostorija u kojoj mogu pričati i slušati druge. Širina opsega, bandwith prevodi protok videa, audio signala i tekstova u sadržajno bogate informacije, koje plove jedne drugima u susret. Istovremeno ih i u trenu prevodi u novac. U novac i kontrolu koja proizilazi iz prodavanja slika, zvukova i brojeva sve većem broju ljudi.

CODE = KÔD

Ono što nosi u sebe utisnut znak. Kôd je uvek način da se kaže nešto što znači nešto drugo od onoga što je samo rečeno. Kôd može biti "otvoren", u smislu da mu se može pristupiti i u njega ući, nasuprot "provaliti" ga. Kultura otvorenog, slobodnog pistupa komunikaciji "otkriva izvor" svojih kôdova. Kultura zatvorene komunikacije blokira pristup svojim kôdovima. "Slobodan, otvoren kôd" je kôd koji je otvoren za promene. "Slobodan, otvoren kôd" se mora podeliti sa svima da bi se razvijao. Kôd označava zajednicu, zajednicu "kôdera, dekôdera i onih koji dele kôd". Kao I jaje, kôd je nekada najbolji kada se od njega napravi kajgana.

DATA = PODACI

Informacija: može značiti sve, od brojeva i slika, od belog šuma do šuma i zvuka. Vremenska prognoza, portret, senka u snimku nadzora, izjava o zaradi, statistike rađanja i smrtnosti, prebrojavanje prisutnih pri okupljanju prijatelja, privatna elektronska pošta, signali ultra visoke frekvencije, transakcije prodaje i kupovine i putanje koje prave pešaci krećući se gradom – sve ovo može biti podatak. Podatak, kao ugalj, uranijum i drugi minerali neophodni za vođenje svetske ekonomije je iskopan, obrađen, pročišćen i prodat po visokoj ceni. Bojna polja, lični, međusobni odnosi ranog dvadeset prvog veka i novčane berze su poznati kao izuzetno osetljivi na saobraćaj podataka. "Iskopavanje" podataka je industrija u razvoju u Delhiju. "Rudari" provode veoma mirne dane i duge noći kodirajući u zonama niskih temperatura pod nazivom "Centri za proizvodnju podataka" (Data Outsourcing Centres). Nasuprot tome, reč Data (dãtã) na Sanskritu znači "onaj koji daje", što ukazuje na to da osoba uvek mora biti velikodušna kada su informacije u pitanju i da je poželjno da kôd, sliku i ideju deli kao poklon. Biti oskudan u deljenju podataka je kršenje tajnih

i svetih dogovora homofonih reči iz različitih kulturno/prostornih orbita (data na San-skritu i "data" na engleskom jeziku) kada se sreću u jedva osetnoj zoni između jezika, u mnoštvu zvukova svakodnevnih omaški jezika. Greške u transmisiji i razumevanju, ta-kođe sadrže poklone i podatke.

ENSEMBLE = ANSAMBL = GRUPA

Poimanje ili zadovoljstvo u zajedništvu u svetu koji postaje sve više otuđen i podeljen. Igrati se ili raditi zajedno da bi se stvarali završeni ili nezavršeni radovi. Kamerni muzi-čari, kriminalci, hakeri kôda i dokumentaristi mogu činiti ansambl. Umetnici takođe po-kušavaju. Efektivni ansambli su grupe širokog opsega, koji u sopstvenu arhitekturu ugra-đuju portale da bi mogli imati nasumični pristup sebi samima. Kada su u svom najboljem izdanju, oni su otvoreni sistemi koji postavljaju premiju na deljene informacije prema sa-mima sebi. Oni mogu da održavaju visok nivo tajnovitosti, dok se predstavljaju kao tran-sparentni. Ovde je poverljivost pokazatelj prakse u začetku. Pronađeni podatak se, pone-kad, vraća u prirodno stanje informacijske entropije u ansamblima prevrtljivih podataka, koji postoje da bi najbolje radili noću u medijskim laboratorijama. Raks Medija Kolektiv (Raqs Media Collective) je jedan ansambl i sve što radi predstavlja jedan skup postoje-ćih ili očekivanih praksi.

FRACTAL = FRAKTAL

Samo-organizujuća struktura ponavljanja, struktura koja se replicira, često se može pro-naći u snežnim pahuljama, u strukturi grananja drveta, strukturi molekula i slobodnog, otvorenog kôda. Svaki deo obrasca fraktala nosi u sebi pečat strukture celokupnog frak-tala. Jedno ponavljanje u fraktalu u sebi sadrži suštinu, jezgro (kernel) svih ostalih iste vrste. Svaki fraktal je rescenzija/prepričavanje svakog drugog fraktala koji je nastao iz njega. Na isti način na koji slobodan kôd ili slobodan kôd kulture sadrži bezbroj moguć-nosti sopstvene reprodukcije i rasprostiranja na deljeni simbolički i informacijski prostor. Fraktali najbolje opisuju geometriju matrica, koje su nastale deljenjem podataka, a ne samo pronalaženjem i dostavljanjem podataka u zajednici ili među kôderima. Fraktali su poput voćki nesvesnog dizajniranja uma.

GIFT = DAR

Nešto što se daje i uzima bez naplate, poput slobodnog kôda. Oni koji dobijaju dar i oni koji ga daju su obavezani mrežama nasumičnog i pre-posredovanog akta simbolične raz-mene. Kôd proizvodi dar kao formu sopstvenog preživljavanja tokom vremena. Na ovaj način, dar je tihi meme (životni oblik ideje). Reciprocitet proizilazi iz reciprociteta. Princip dara zahteva da su stvari koje se daruju neprocenjive, drugim rečima tako vredne da bi bilo nemoguće izmeriti ih u smislu mogućnosti apstraktne generalizacije razmene. Istovre-meno, dar mora biti jednostavan za podneti i zadržati, jednostavan za upotrebu i ne sme postojati griža savesti kada dođe do njegove destrukcije ili rasprostiranja, kada se njego-va upotrebna vrednost menja ili zahteva redistribuciju da bi bio efektivniji. Darovi otvara-ju vrata našim sopstvenim mogućnostima velikodušnosti. Na ovaj način oni omogući-ju pristup stvarima za koje čak nismo znali da postoje. I, postoji i takva stvar kao što je besplatan ručak, iako zahteva potragu za specijalanim receptom.

HETEROGENOUS = HETEROGEN = RAZNORODAN

Onaj koji počinje u mnogim mestima, kao čovekova životna priča. Različit, disperzivan, rasprostranjen, kao u autorstvu kulture i u putanjama ljudi koji dolaze na određeno mesto (site). Interpretacije i ideje obuhvataju veću slobodu samo kada sadrže hetero-genost, raznorodnost. U ovome, oni su kao većina intimnosti i neka vrsta voćnog kolača. Što su bogatiji, imaju više slojeva.

ITERATION = PONAVLJANJE

Ponavljanje je artikulacija koja je viđena kao događaj. Govori, šaputanja, manifesti, grafiti, priče, glasine i delovi poezije koja se može pronaći na ulici – svaki od navedenih predstavlja ponavljanje. Organizovana predaja elastičnosti kôda je takođe ponavlja-nje. Ponavljanje podrazumeva volju da se kaže nešto, pristup značenju izgovaranja toga i vreme u okviru koga to može biti rečeno. Svako ponavljanje odzvanja kroz orbitiraju-ći meme, koji je postavljen na svoj smer govornim činom.Ponavljanje je suština rescen-cije. Mora biti izgovoreno, i onda izgovoreno ponovo.

JOURNAL = DNEVNIK

Beleške dana. Anali različitih i svakodnevnih stvari. Podaci iz dana u dan u dan. Na kra-jevima i komadićima bilo kog materijala koji može nositi duh vremena. Materijal može va-rirati od dnevne štampe, videa i zvuka do binarnog kôda, ili kombinacije istih, a dnevnik može potpuno izmeniti svoju poziciju svedoka u položaj učesnika u onome što je zabe-leženo. Obim i skala "učestvovanja" zavisi od učestalosti unosa u dnevnik i od broja uče-snika koje može okupiti. Što je veća učestalost unosa ili broja korespondenata, veći je inten-zitet zapisivanja vremena u dnevniku. Gusto ispisan dnevnik je obično onaj koji je ima otvoren pristup, u smislu pisanja, čitanja i objavljivanja. Zbog čega bi inače neki stranac želeo da piše za njega? Otvoreni dnevnik očekuje da bude objavljen bilo gde. Otvoreni žurnal aktivno praktikuje ksenofiliju ili privlačnost ka strancima. Kada dnevnik postane više od atlasa trenutka, postaje istorija. Tada počinje da dobija svest o sebi, kao što poseduje svest o kratkom vremenskom trenutku. I obrnuto, svaka istorija počinje život kao dnevnik.

KERNEL = JEZGRO

Suština rada ili ideje. Centralno prepričavanje priče, kôda, seta znakova ili bilo koje dru-ge structure koja poziva na modifikaciju, istraživanje i interpretaciju sopstvenim posto-janjem. Ovde, termin suštine ne sme biti pomešan sa terminom "korena" ili bilo kojim drugim atributom postojanja, koje bi značilo malo prema sistemu otvorenog pristupa. Skoro je nemoguće odrediti korene kôda, jer što dublje idemo u konstitutivne elemente kôda, sve se više grana na seriju jedinica ka i van zadatog sistema znakova. Ima mnogo više smisla govoriti o "tutorstvu", nego o "korenima" bilo kog sistema znakova. Jezgro je često tutor linije ideja koji predstavlja trenutnu jedinstvenu konfiguraciju. Jezgro otelotvoruje materi-jale u stanje intenzivne koncentracije. To je zato što ono mora da obuhvati mnogo infor-macija, ili svoju hranu, ili materijale koji grade structure, u okviru vrlo ograničenih dimen-zija. Gustina informacija u jezgru je ključ sopstvenog proširenja. Što je niz koegzistent-niji, manje je ranjiv. Jezgra su po svojoj ograničenosti i kompaktnosti prenosiva, a ne predstavljaju teret. Kao u jezgru nekog voća, mogu biti teška za slomiti, ali kada se jed-

nom otvore, ona pružaju divne i hranljive stvari. Jezgra su pogodna za laku reprodukciju, ali su osetljiva i često im je potrebna zaštita. Ova zaštita može biti u formi spoljašnjeg sloja interpretacije, koji izražava svrhu i prirodu jezgra, tako da nije preodređena da otvoreno odgovara na svako osnovno pitanje o sebi.

LIMINAL = JEDVA OSETNO (koje se odnosi na prag nadražaja)

Intersticijalno, vestibularno i periferno. Udaljeno od centra, blizu granici. Zona, istovremeno između i bez većih struktura. Liminalni prostori i trenuci su oni u koje procuri animirani podatak o velikim, stabilnim strukturama i svetu. Stvari se dešavaju u liminalnim zonama. Grad sa sobom nosi kontradiktornost liminalnih zona lociranih u njegovom centru, jer su središnji delovi grada njegova najudaljenija granična područja. Liminalne ivice su često najpovoljnija okruženja za kulturu memova (životnih oblika ideje). To je zato što se izgnane slike, ideje i značenja iz različitih stabilnih struktura, mešaju u koridorima između njih. Ovde, lišeni identiteta i drugih izvesnosti, slobodni su da budu različiti i reproduktivni. Oni utiču jedni na druge rekombinirajućim svojstvima misli i slike. Istovremeno, perspektiva liminalnosti donosi intimnost, koja utiče na izuzimanje. Biti liminalan znači biti blizu, ali ipak van mesta granice bilo kog stabilnog sistema znakova, gde je značenje iskidano nagriženim ivicama. Ništa ne može poznavati centar bolje nego pogled sa strane na periferne vizije. Liminalnost se može steći produženim izlaganjem vazduhu u foajeu za odlaske na aerodrumu, prekuvanom čaju na internacionalnim autobuskim terminalima u Delhiju, ili pod-liminalnom poigravanju kursora u jednoj e-mail poruci.

MEME

Životni oblik ideja. Loša ideja je mrtav meme. Prolaznost, kao i širenje ideja se može objasniti činjenicom da se oni umnožavaju, reprodukuju i šire velikom brzinom. Ideja, u svom "zaraznom" stanju je meme. Meme može biti povezan sa slikama, mislima i načinima bavljenja i razumevanja stvari, koji sebe priključi, poput virusa, događajima, uspomenama i iskustvima, da često njegov domaćin nije potpuno svestan činjenice da obezbeđuje lokaciju i transport za meme. Ideje koje mogu da prežive i da budu plodne na najsurovijem terenu su sklone tome, jer su spremne da dozvole svoje replike, ili da dopuste frekventne i dalekosežne pozajmice svojih elemenata u kombinaciji sa materijalom uzetim od drugih memova. Ako dovoljno novih memova uđe u sistem znakova, oni mogu radikalno izmeniti ono što je označavano. Gradovi su istovremeno plodno tlo i granični kvart za meme. Biti meme je stanje da svaki rad sa slikama i zvukom može stremiti nadalje, ukoliko želi da bude "zarazan", i putovati. Rasprostiranje i uticajnost su ključ preživljavanja bilo koje ideje. Rad sa slikama, zvukom i tekstom mora biti prenosiv i osvojiv, a ne statičan i imun, da bi bio živ. Mora se lako analizirati i sastaviti, i mora se lako prevesti, ali teško parafrazirati, i lako darivati. Mrtav meme je loša ideja.

NODES = ČVORIŠTA

Svaka struktura koja je sačinjena od koncentrisanih masa i ponaša se kao tačka susreta za širenje rastegljivih delova celog sistema, može biti opisana kao čvorišna. Koncentracije i tačke susreta su čvorišta. Čvorišna struktura je rizomatska struktura, koja polaže koren (koji se širi bočno) dok se kreće. Ovde, čvorišta mogu takođe biti povezana sa

tačkama intersekcije fraktalnih sistema, sa preciznim lokacijama gde se javljaju nova fraktalna ponavljanja iz postojećeg obrasca. Rad čija je unutrašnjost sastavljena od memova je prirodno čvornovat. Svaki meme je tačka susreta ili čvorište za bočno širenje van putanje jedne ideje. U radu sačinjenom od međusobno povezanih čvorišta, konačna struktura koja se pojavljuje je struktura mreže, u kojoj svaki vektor bar jednom prođe kroz svako čvorište u svojoj orbiti kojom se kreće kroz strukturu rada. U takvoj strukturi, postaje nemoguće potisnuti ili ubiti ideju kada se jednom pokrene, jer joj njeni vektori omogućavaju brzo putovanje kroz čvorišta do drugih lokacija unutar sistema, lančano pokrećući jeku pri svakom čvorištu koje detektuje povratni put ka suštini ideje. Ovi odjeci su rescenzije, a svaki čvor je konačno direktna rescenzija najmanje jednog čvora u sistemu i indirektna rescenzija svake raskrsnice unutar celog mnoštva ostalih čvorova. Čvorište, napisano, možda pogrešno kao 'no-des' umesto 'node' čine intrigantan hibrid englesko/istočno-Hindi neologizma, pratioca starih reči – des i par-des. Des (u nekim istočnim dijalektima Hindija, koji govore mnogi migranti u Delhiju) je jednostavno domovina ili rodno mesto; par-des označava egzil ili stranu zemlju. 'No-des' je vid postojanja, u des ili u par-des, gde teritorija i strepnja o pripadnosti ne idu jedno s drugim. Čvorišta (nodes) su u digitalnom domenu 'No-des'.

ORBIT = PUTANJA

Put koji opisuje konstantno kretanje bilo čega unutar strukture. Zbog toga što je kretanje neprestano, putanju je takođe nemoguće definisati u smislu početka ili destinacije. Ono što je moguće odrediti u bilo kom trenutku je pravac putanje. Kada meme orbitira u strukturi znakova, ono se niti kreće od svog početka, niti putuje prema nekoj destinaciji. Zbog toga je u sistemu otvorenog pristupa koji sačinjavaju memovi, besmisleno govoriti o autorima i publici, već se pre može govoriti o čvorištu, mestu gde se dobija ideja i o tački gde ona izlazi, da bi možda ušla u putanju drugog orbitirajućeg mema. Neka dela interpretacije, kao što su izvesne komete ili drugi kosmički objekti, mogu imati ekscentričnu putanju. Ovo znači da uvek postoji verovatnoća da grupa znakova i slika iz daleka, uklanja prošle objekte sa svoje putanje, ulazeći u orbite drugih konstelacija, kada se to najmanje očekuje. Nebo značenja je puno zvezda padalica.

PORTABILITY = PRENOSIVOST

Svojstvo sistema ili dela koje najbolje opisuje njegovu sposobnost da se kreće brzo kroz različite prostore i medije. Znak ili meme koji se može dobro kretati između slika, zvukova i tekstova je prenosiv. Delo koje, dok se govori o jednom mestu je razumljivo na drugom, je prenosivo. Delo koje opisuje brojne lokacije na kursu svoje interpretirajuće orbite, je takođe prenosivo. Prenosivo delo je bogato memovima, koji se ponašaju kao pogon njegovog kretanja i opskrbljeno je kompaktnim jezgrima, tako da se može dobro kretati bez opasnosti otvorenog kraha. Tašne, jezici, razglednice, švajcarski nožići, kompjuteri, šale, priče i cipele su prenosivi. Dar, jer uvek prelazi iz ruke u ruku, uvek mora biti prenosiv. Spomenici to nikada ne mogu biti. Životne priče nekih (lutajućih) pojedinaca i (nomadskih) zajednica čine se bliskim stanju prenosivosti.

QUOTIDIAN = SVAKIDAŠNJI

Obično, ali ne beznačajno. Nezaboravna priroda svakidašnjice. Memorija koje ide ulicom i skreće iza ugla. Memorija koja bruji u hard disku. Sveprisutna, prljavština mesta, magla u liminalnoj zoni koja je zgusnuta ponavljanjem. Mleko, kompjuteri, luk, kompjuteri, pižame, kompjuteri, sindrom oslabljenih nerava, kompjuteri, saobraćajne nesreće, kompjuteri, seks, kompjuteri, hleb, kompjuteri, noć, kompjuteri, razred, kompjuteri, koža, kompjuteri, ljubav, kompjuteri, novac, kompjuteri, glavobolje, kompjuteri, policija, kompjuteri, autobusi, kompjuteri, biciklovi, kompjuteri, radio, kompjuteri, horoskop, kompjuteri, venčanja, kompjuteri, sahrane, kompjuteri, keksi, kompjuteri, razgovori, kompjuteri, tišine, kompjuteri. Svakidašnje je ono što čini da dnevnik vremenom prelazi u istoriju, jer izaziva potragu za obrascima i značenjima u inače komplikovanoj masi vremena, u memovima koji se ponavljaju preko razumnih ganica. Rutina, i dalje slučajna, svakidašnja priroda bilo čega zahteva brze momente lucidnog angažmana sa stvarnim svetom, koji je sada podrazumeva svet koji se stvori svaki put kada prsti naprave svoj ples po tastaturi. Svakidašnje je mera svih stvari, retkih i beznačajnih.

RESCENSION

Ponovno pripovedanje, reč uzeta da označi istovremeno postojanje različitih verzija usmene priče, i od sada ubuduće, digitalnih kultura. Tako da neko može pričati o "južnim" ili "severnim" rescenzijama mita, ili o "ženskoj" ili "muškoj" rescenziji priče, ili o mogućnosti (započinjanja) Delhi/Berlin/Teheran rescenzije digitalnog rada. Koncept rescenzije je suprotan značenju hijerarhije. Rescenzija ne može biti poboljšanje, niti može značiti umanjenje vrednosti. Rescenzija je ona verzija koja se ne ponaša kao zamena bilo koje druge konfiguracije ili konstitutivnog materijala. Postojanje više rescenzija je garancija sveprisutnosti ideje ili rada. Ovo uverava da je konstelacija priče, znaka ili slike koje rad otelotvoruje prisutna, i da čeka na pojavljivanje na više od jednog mesta u bilo kom vremenu. Rescenzije su prenosive i u prostoru se mogu kretati po orbitirajućim jezgrima. Rescenzije zajedno konstituišu ansamble koji mogu formirati međusobno povezanu mrežu ideja, slika i znakova.

SITE = MESTO, PREDEO

Lokacija, i kao stanje boravka negde, i kao odgovor na pitanje "gde" je to "negde". Zatim, situacija. U sistemu znakova, mesto (site) – u značenju jezgra situacije – nije obavezno mesto, iako je situacija uvek mesto. Mesto može biti situacija između i kroz lokacije. Web site je adresa na Internetu koja uvek nagoveštava odnos želje između domaćina i posetilaca. Drugim rečima, ono ne znači ništa kao mesto (virtuelno), ukoliko ostane neposećeno. Na ovaj način, mesto može biti dvojako i locirano i liminalno. Stvarno, kao i potencijalno. Sistem znakova (delo) koje sadrži markirana mesta na mapi, može biti postavljen u istom odnosu koji mapa ima prema svetu. Može biti situiran između mape i sveta. Ova situacija može biti posebna karakteristika prenosivosti dela, iako se mobilno delo uvek obraća odnosu između mesta koja padaju na putanju. Na ovaj način, markiranje mesta kao adrese poziva na crtanje relacija između lokacije i sveta. Mesto je lokacija gde se nalazi adresa. Mesto je lokacija kojoj delo pripada. Situacija između ove dve lokacije (gde delo jeste i gde pripada) je mesto gde delo orbitira. Mesto je takođe lokacija gde ljudi moraju da nose šlemove da bi se zaštitili od slučajnog padanja tela koja putuju ekcentričnim putanjama.

TOOLS = ALATI

Stvari koje pomažu da se naprave stvari. Ideje, instrumenti, koncepti, načini na koje se rade stvari i načini postojanja ili zajedničkog delovanja koje je korisno za kreativan rad. U kontekstu Internet okruženja, zajednica ili ansambl ljudi je podjednako alat, instrument kao što je to softverska aplikacija. Obrnuto, alat nastaje kada grupa ljudi otkrije metod koji im pomaže da rade zajedno na kreiranju nečega. Opet, delo koje se ponaša kao pomoć pri navigaciji, pregledač (browser) ili interfejs u mreži memova je takođe alat kojim se otvaraju i traže drugi alati.

UBIQUITY = SVEPRISUTNOST

Biti svugde. Sposobnost da se bude prisutan na više od jednog mesta. Jednostavna činjenica raznorodne, heterogene situacije, prikaz načina na koje grupa memova, paketi podataka, orbitiraju i ostaju živi u nekoliko čvorišnih tački u sistemu. Sklonost mema prema sveprisutnosti raste svakim ponavljanjem, i uvek već postoji ponovo i bilo gde. Počinje da postoji i da bude aktivan (čak i ako je uspavan) u osobi kojoj se govori, ali i u osobi koja govori. Priče i suštine, jezgra ideja se kreću na ovaj način. Zona u kojoj se ukrštaju dve putanje je obično mesto aktivne razmene i prenosa značenja. Svaka rescenzija nosi u sopstvenoj putanji memove svog druga. Na ovaj način, kroz susret rescenzija, ideje se šire, kreću se i teže sveprisutnosti. Ono što se nalazi svuda je teško cenzurisati, onome što se nalazi svuda ne nedostaju saveznici. Biti sveprisutan znači biti prisutan i rasprostranjen u čvorištima. Ponekad, sveprisutnost je jedini efektan odgovor cenzuri i izolaciji.

VECTOR = PRAVAC

Pravac po kom se objekat kreće, na koji utiče brzina njegovog kretanja. Ideja koja se brzo okreće i ubrzava u isto vreme. Intenzitet njegovog kretanja je atribut sklonosti da se poveže sa i dodirne druge ideje. Ovo daje veći značaj funkciji pravca. Pravac memova je uvek prema drugim memovima, drugačije rečeno, tendencija pravaca kretanja podataka je da budu sveprisutni u što većoj meri. To znači da slika, kôd ili ideja mora privući druge da uđu u odnos koji obezbeđuje njegovu prenosivost i brz transfer kroz različita mesta i zone. Pravci različitih memova, posmatrani zajedno, formiraju mobilne mreže kôdova.

WEB = MREŽA

Otvorena struktura tkana vlaknima i čvorovima u obično regularnim, ali isto tako moguće neregularnim intervalima. Isprepletanjem strukturirana, dostupna i obskrbljena kompleksom mreža kôdiranih poruka. Svetom rasprostranjena mreža (world wide web) je zona u kojoj digitaln a konstelacija memova može naći putanju. Mreža kôdova služi da se prikupe značenja, kao što mreža od konca služi da se upeca riba.

XENOPHILLY = KSENOFILIJA

Druželjubivost i gostoljubivost prema drugima, ljudski kvalitet koji najbolje opisuje moralnu ekonomiju idealnog digitalnog domena. Potraga za povezivanjem, i želja da se kreće duž pravaca bilo gde. Značenje veze koja transformiše "čvorišta" u pozitivne vrednosti.

YARN = NIT

Tkanine i priče su sačinjene od niti. Nit je sčepana stvarnost koja putuje rečima. Ili se prenosi sa dosta html (Hypertext Markup Language) tovara. Kaže se da svaki deo kôda sadrži glasine ili nit priče o kreatoru tog kôda. Delovi priče sakupljeni u podrumu sajber kafea, na sedištima bioskopa, u govornicama i iza tamnih površina zidova apartmana čija je adresa Error 404, koji može biti bilo gde i svugde u isto vreme. Na ovim mestima, sakupljači delova priča povezuju različite elastične delove niti kôda, da bi napravili setove podataka, koje zatim rastavljaju hakeri i distribuiraju ih u različite orbite. Niti mogu podesiti količinu informacija koje nose u odnosu na širinu propusnog opsega. Zbog toga su niti dobra jezgra.

ZONE = ZONA

Mesto, lokacija ili delo koje zahteva istančanu svest zbog poroznosti linija koje razgraničavaju njegovo postojanje. Zona se razlikuje od mreže koja ograničava mesto, jer su njene granice fluidne i dostupne, ili zato što prisustvuju gustom saobraćaju. Teško je razlikovati centar od liminalne periferije zone. Svest o tome gde se stoji je preduslov za ulazak u bilo koju zonu. Zona takođe može biti opisana kao preklapanje orbita, gde memovi prenose materijal od jedne do druge orbite, gde logika voli da nestaje. Zona dela se proširuje van kruga orbite njene ideje. Zone su mesta gde sudbina može biti beznačajna, i beznačajno sudbonosno. U njih je najbolje ući i izaći u sumraku gde napuštene pruge povezuju razlišite stanice podataka. Vreme sumraka može varirati i zavisi od geografske dužine, ali sumrak traje duže u zoni mreže.

Nju Delhi, 2001.

Index autora

Erik Klojtenberg (NL)

Erik Klojtenberg je teoretičar, pisac, i organizator dešavanja iz polja kulture i tehnologije, trenutno zaposlen u De Balie – Centru za kulturu i politiku u Amsterdamu. Predavao je na kursevima o kulturi i novim medijima na univerzitetu u Amsterdamu, i na postdiplomskim studijama Akademije Minerva u Groningenu (Holandija), i bio član naučnog tima Akademije za medijsku umetnost u Kelnu. Drži predavanja i intenzivno objavljuje radove o kulturi, novim medijima i kulturnoj politici u zemlji i inostranstvu. Od 1988. bavi se organizovanjem važnih medijskih i kulturnih događaja u Evropi.

http://www.debalie.nl

Darko Fric (HR)

Darko Fric (1966) je medijski umetnik, kurator i grafički dizajner. Živi i radi u Amsterdamu i Zagrebu. Studirao je arhitekturu na univerzitetu u Zagrebu i medijsku umetnost na Kraljevskoj akademiji u Amsterdamu. Radi sa medijima i tehnologijom u umetničkom i kulturološkom kontekstu. Bavi se videom od 1988, kompjuterski generisanim okruženjem od 1988, digitalnom fotografijom od 1990, a prvi pokušaj webcastinga je imao 1994. Član je umetničkih grupa Cathedral (1988), The Imitation of Life Studio (1987 – 1990), Mladi hrvatski elektronski filmovi (1991) i The Future State of Balkania (1998). Uključen je u Syndicate i Spectre mrežu. Bio je kurator izložbi "Culture of Graphic Design in The Netherlands" (1999), "I Am Still Alive" (Internet i kompjuterska umetnost šezdesetih, 2000), "Club.nl" (umetnost i umetničke mreže u Holandiji, 2000) i "Svetla iz Zagreba" (interaktivna svetlosna instalacija, 2001). Izlagao je na mnogobrojnim grupnim i samostalnim izložbama u Evropi i svetu.

http://www.mi2.hr/alive/

Armin Medoš (AT/UK)

Armin Medoš je pisac, kurator i umetnik. Su-osnivač je onlajn magazina "Telepolis", magazina za Internet kulturu, koji je i uređivao od 1996. do 2002. godine. Za rad na Telepolisu, Medosch je dobio nagradu evropskog onlajn novinarstva i "Grimme" nagradu za onlajn novinarstvo. Zajedno sa Jankom Rotgersom, uredio je "Netzpiraten", kolekciju tekstova koji govore o podzemlju Interneta. Uređivao je onlajn izložbu "Shopping Windows" (2001) i organizovao panel o slobodnim mrežama pod nazivom "Berlon" (2002). 2001/02. godine bio je ko-kurator onlajn izložbe "Kingdom of Piracy". Među njegovim poslednjim projektima su knjiga i CD ROM "DIVE". Trenutno piše knjigu o slobodnim mrežama (Free Networks).

http://kop.fact.co.uk/
http://residence.aec.at/kop/DIVE/cd/dive/intro.html

Inke Arns (DE)

Inke Arns (rođena 1968.) je nezavisni kurator umetnosti novih medija. Magistrirala je na Free University u Berlinu, 1996. godine na tezi "Neue Slowenische Kunst" i doktorirala na Humboldt univerzitetu na istorijskim avangardama istočne Evrope 1980. i 1990. godina. Njena aktivnost podrazumeva rad na izložbama, festivalima i internacionalnim konferencijama medijske umetnosti i kulture, kao što OSTranenie 93 u Bauhaus, Desau; Minima Media: Medienbiennale Leipzig 1994, Lajpcig; discord. sabotage of realities, Hamburg 1996/97; body of the message, Berlin 1998; and update 2.0, ZKM Karlsrue za Goethe-Institute, 2000. Ona je jedan od osnivača trans lokalne mreže "Syndicate" (1996-2001), asocijacije "mikro" u Berlinu (1998) i SPECTRE, mejling liste za medijsku kulturu u "dubokoj" Evropi (2001). Objavljuje tekstove o umetnosti i kulturi novih medija u internacionalnim časopisima i knjigama, između ostalih Leonardo Electronic Almanach (USA), Kunstforum International (D), ArtIndia (IN) i Convergence: Journal of Research into New Technologies (UK). Autor je dve knjige, "Neue Slowenische Kunst" i "Net Cultures".

Ansambl kritičke umetnosti (SAD)

Ansambl kritičke umetnosti (Critical Art Ensemble – CAE) je kolektiv koji čine pet osoba različitih specijalizacija uključujući kompjutersku grafiku, web dizajn, film/video, fotografiju, umetnički tekst, umetničku knjigu i performans. Nastao 1987. godine, fokus grupe je istraživanje intersekcije između umetnosti, kritičke teorije, tehnologije i političkog aktivizma. Kolektiv je producirao i izveo brojne projekte za internacionalnu publiku i objavio je pet knjiga: "The Electronic Disturbance" i dodatni tekst "Electronic Civil Disobedience and Other Unpopular Ideas", "Flesh Machine: Cyborgs, Designer Babies, and New Eugenic Consciousness", "Digital Resistance: Explorations in Tactical Media". Njihova poslednja knjiga je "The Molecular Invasion" (Autonomedia, 2002).

http://www.critical-art.net

Stiv Kurc (SAD)

Stiv Kurc je profesor na odseku za umetnost univerziteta u Bafalu, SAD. Kurtz ima doktorat iz interdisciplinarne humanistike, i pre nego što je došao da predaje na UB, bio je professor na Karnegi Melon univerzitetu (Carnegie Mellon University). On je jedan od osnivača i članova internacionalne umetničke i teorijske grupe Critical Art Ensemble (CAE). CAE je kolektiv koji čine pet osoba različitih specijalizacija koji istražuju taktičke medije i intersekciju između umetnosti, kritičke teorije, tehnologije i političkog aktivizma. Kolektiv je producirao i izveo brojne projekte za internacionalnu publiku na raznim lokacijama, počev od ulice, muzeja, do Interneta. Critical Art Ensemble je objavio pet knjiga. Njihova poslednja knjiga je "The Molecular Invasion" (Autonomedia, 2002).

http://www.critical-art.net

Biro detud (FR)

Biro detud iz Pariza je grupa umetnika koji se bave novim medijima i osnovana je 1998. godine. Njihov rad se bazira na mapiranju različitih oblika vlasti i moći, i deo je organizacije iz Strazbura pod nazivom "Université Tangente" koja istražuje "autonomno znanje". Svojim radom, Biro detud razvija piktografske instalacije koje se bave temama poput mreže sistema za prikupljanje podataka, bio-ratova i globalnih pokreta otpora. Oni vizualizuju distribuciju moći u svojim različitim oblicima: političkim, kulturnim i finansijskim, prikazujući povezanost različitih aktera globalne scene.

www.universite-tangente.fr.st

Sarai / Raqs Media Collective (Indija)

Novomedijska inicijativa Sarai je program Centra za studije društva u razvoju, u Nju Delhiju, u Indiji. Sarai je alternativni, ne-profitni prostor za kreativnu rekonstituciju urbane, javne kulture, nove/stare medijske prakse, istraživanja i kritičkih intervencija u kulturi. Okvir Sarai-a podrazumeva analizu i kreativan rad u domenu filma & videa, kompjutera, telefona, kulture štampe, radija, multimedije i Interneta. Inicijator Sarai-a je grupa ljudi iz Centra za studije društva u razvoju i Raqs Media Collective.

http://www.sarai.net

kuda.org – društvene implikacije novih medija

Centar za nove medije kuda.org je organizacija koja okuplja umetnike, teoretičare, medijske aktiviste, istraživače i široku publiku na polju informacijskih i komunikacijskih tehnologija (ICT – Information and Communication Technologies). U tom smislu, kuda.org je posvećen istraživanju novih kulturnih odnosa, savremene umetničke prakse i socijalnih tema.

Aktivnost rada kuda.org je posvećena pitanjima uticaja elektronskih medija na društvo, na kreativnu upotrebu novih komunikacijskih tehnologija i na savremenu kulturnu i društvenu politiku. Neke od glavnih tema su interpretacije i analize istorije i značaja informacijskog društva, potencijala same informacije i rasprostranjenosti njenog uticaja na političke, ekonomske i kulturne odnose u savremenom društvu.

Razvoj novih komunikacijskih tehnologija je uslovio brojne promene u savremenom društvu, dotičući se njegovog političkog, društvenog i kulturnog aspekta. Internet, procesi primene novih tehnologija i novih modela komunikacije kroz proces "umrežavanja" i razvoj kritičkog mišljenja prema navedenim, postaju i naša svakodnevnica. Čitav niz istraživača, teoretičara, programera, kritičara i medijskih aktivista, svoj rad posvećuje istraživanju i objašnjenju globalnih fenomena današnjice i njihovih posledica.

Centar za nove medije kuda.org otvara prostor za kulturu dijaloga, alternativne metode obrazovanja i istraživanja. Društvena pitanja, medijska kultura, nove tehnologije umetnost, princip Open Source i Free Software su oblasti kojima se kuda.org bavi.

Programi kuda.org:
kuda.info / infocentar

pruža informacije iz oblasti kulture novih medija, savremene umetnosti i društvenih fenomena; omogućava istraživanja i edukaciju preko biblioteke, medijateke i arhive iz ove oblasti; obaveštava o kulturnim dešavanjima, seminarima i sličnim organizacijama u zemlji i inostranstvu i njihovim programima.

kuda.lounge / prezentacije i predavanja

sastoji se od predavanja, razgovora, javnih prezentacija umetnika, medijskih aktivista, teoretičara umetnosti, naučnika, istraživača i inžinjera; (izložbe, prezentacije, tribine, simpozijumi, predavanja su mesto aktivnog dijaloga i interakcije, koja doprinosi stvaranju novog kvalitetnog jezgra na obe strane: kod publike i predavača)

kuda.production / produkcija i izdavaštvo

obezbeđuje uslove za neprofitno umetničko stvaralaštvo na polju novih medija i tehnologija; kuda.org kao producent, koproducent pruža uslove za interdisciplinarna istraživanja i eksperiment.

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bitomatik
Art practice in the time of information/media domination

Before us is a collection of texts, transcripts of lectures held at the New Media Center kuda.org between 2001 and 2004. The texts describe models of comtemporary artistic production which use different media as a means of expression. Drawing on the activist-artistic practice of Novi Sad in the sixties and seventies, a period of the neo-avant garde, the kuda.org Center has examined those phenomena containing an interdisciplinary and cross-media character.

From the very outset, kuda.lounge has been a platform for discussion, argumentation, dialog and the contextualization of artistic practice, in the framework of which more than fifty presentations, lectures and workshops have been organized. Particular attention has been paid to communication and the exchange of ideas, primarily owing to the fact that the arts' scene in Serbia during the nineties developed within a context of what is often called 'Art in a Closed Society', which resulted in a syndrome of self-referential artistic production. The Internet and the development of communication technologies formed the electronic backbone of social movements in the late nineties and the early part of this new century, and at the same time connected a smaller circle of Novi Sad artists (the Absolutely Association, Andrej Tišma, the Videomedia festival) which in spite of the odds established contact with the international scene, and brought members of this network to present their work in Novi Sad. International mailing lists such as Nettime, Syndicate and Spectre played a central role in this communication.

In inviting key names in media art and theory, kuda.org has attempted to offer the local public an insight into international contemporary artistic practise. The local population has had a chance to familiarize themselves with the work of leading international and local artists, theoreticians and arts' groups such as Critical Art Ensemble, Bureau d'Etudes, Armin Medosch, and Inke Arns. Lectures and presentations within the framework of kuda.lounge are orientated towards researching new media related to social activism, media theory, and conceptual art, new-media 'genres' such as net.art, software art, interactive art and generative art are explored .

The question of the so-called new media is quantitively identical to problems dealt with by the neo-avant-garde of the sixties and seventies, which conducted experiments with installations and video and electronic sound. These problems deal with the question of the relationship between medium and content, i.e. what's new in new media. Media research is the history of researching communcation and extroversion and in itself simultaneously bears the political, seeking channels to address the masses and send a message. The avant-garde's aspiration to penetrate society, to reach ground zero, and lead it in the utopian project of creating a fair society is closely connected to media research. The contents of this collection present different research and experiments in new media and a kind of manifestation of the artistic avant-garde at the close of the 20th century and the dawn of the 21st century.

These two elements; society as an object of intervention by an artistic project, and media research via which this intervention is to be carried out, are the basis of this collection of texts. This publication brings a cycle integrating debates and discussions on contemporary artistic practice to a close, and in a print medium presents them to a wider public.

Transfiguration of the Avant-Garde
The Negative Dialectics of the Net

Eric Kluitenberg

In his essay "Presenting the Unpresentable: The Sublime", the French philosopher Jean-François Lyotard observes that Capitalism, the Techno-Sciences and the Pictorial Avant-Garde of the twentieth century share an 'affinity to infinity'. All three point towards a sensibility that is constitutive for the experience of the modern world.

Lyotard is well known for having coined the term 'postmodern' for a certain diagnosis of the social conditions of the advanced capitalist societies. His work fascinates because of the intersection it creates between contemporary aesthetics, the avant-garde (especially in the visual arts), and their relationship to the seemingly separate areas of the technosciences and advanced capitalism.

Paradoxically, however, the position he takes vis-à-vis the new technologies, and especially the process of digitalisation, is stifling for a debate about a critical engagement with these technologies. His position denies the possibility of critical artistic and cultural activity in the realm of digital mediation, exactly at a point where his reading of the avant-garde could play a tremendously productive role: in a further exploration of this affinity to infinity that not only informs the avant-garde, the techno sciences and advanced capitalism, but that can also be recognised in the rise of what sociologist Manuel Castells has called the network society

Lyotard's exploration starts with the assertion of the "impossibility" of painting. So this is where I will start to consider his argument.

Infinity

For Lyotard painting's impossibility results from the arrival of photography, which makes painting economically unsustainable, whilst photography itself, and the act of image making falls prone to the infinity of the capitalist production / consumption cycle.

He writes: Something "too beautiful" is inherent in the perfectly programmed beauty of the photograph: an infinity; not the indeterminacy of feeling, but the infinite ability of science, of technology, of capital to realise. The ability of machines to function is, by principle, subject to obsolescence, because the accomplishments of the most esteemed capitalists demand the perpetual reformulation of merchandise and the creation of new markets. The hardness of industrial beauty contains the infinity of techno-scientific and economic reasons.

The destruction of experience that this implies is not simply due to the introduction of that which is "well-conceived" into the field of aesthetics. Science, technology, and capital, in spite of their matter-of-fact approach, are also modes of making concrete the infinity of ideas. Knowing all, being capable of all, having all, are their horizons – and horizons extend to infinity. The ready-made in the techno-sciences presents itself as a potential for infinite production, and so does the photograph.

The pictorial avant-garde responded to painting's "impossibility" by engaging in research centred around the question, "What is painting?" One after another previous assumptions about the painter's practice were put on trial and debated. Tonality, linear perspective, the rendering of values, the frame, the format, the supports, surface, medium, instrument, place of exhibition, and many other presuppositions were questioned plastically by the various avant-gardes." [1]

The great transformation in the act of image making that the avant-gardes introduce according to Lyotard is not so much their insistence on constant transformation of the visual field. These transformations perform a highly specific function, they all point towards the fact that any convention of image making not only presents a specific possibility of giving order to the visual field, but that it simultaneously conceals the infinity of possible alternative modes of ordering that visual field. This infinity of alternate visual modes is necessarily absent from the image as it remains unrepresentable. It is, however, referred to indirectly by the denial of a definite visual order of things.

And Lyotard asserts: "The avant-garde painter feels an overriding responsibility to the fulfilment of the imperative implied by the question, "What is painting?". Essentially what is at stake is the demonstration of the invisible in the visual." [2]

Entering the realm of the negative sign...

The avant-garde painters engaged in a negative dialectic of the image – a continuous invention of visual modes that challenge and negate previous propositions of what an appropriate image looks like. This process of the negation of dominant artistic conventions can be illustrated with some classic examples of avant-garde interventions:

– Cubism; breaking up the unified perspective

In the cubist painting the object represented is shown from different viewing angles simultaneously, thus alluding consciously to the artificial constraints of the two-dimensional surface of the canvas, and acknowledging the fact that the eye only perceives when it is in constant motion. The cubists understood that therefore visual perception always rests on the combination of a multitude of images received from different viewing angles, even when the eye is firmly fixed on a certain object. With their multidimensional perspective the cubists denied the validity of linear perspective (as it is programmed in the photographic machine), as the 'correct' representation of the world in visual terms.

– Simultaneity; breaking the unity of time.

The beautiful image of Giacomo Balla "Dynamism of a dog on the line" of 1912 perfectly illustrates the point. Rather than showing only one moment frozen in time, the image represents a series of moments in one image – the paws of the dog moving swiftly as he tries to keep track with the elegant lady walking the dog. Frantisek Kupka had started introducing this principle of simultaneity to painting, inspired by the chronophotography of Etienne Jules Marey. And of course Duchamp's famous "Nude descending a staircase" further imprinted this visual principle upon the public consciousness. Here the arbitrary nature of the frozen image, as opposed to the constant flux of life processes, is acknowledged and revealed. We know from historical sources that the experiments with photographing animal motion revealed that their traditional representation in 'realist' painting and sculpture was but a convention.

– Abstraction; breaking away from figuration

This case is all too obvious, looking back from a contemporary point of view. With the acceptance of abstraction, painting shed its last ties to an illusionist mode of representation. Rather than representing a specific outside reality beyond the painting itself, it could now become an inverted symbol for the infinity of the visual and the infinity of ideas.

In the end the process of negation of dominant visual languages even abolished the image itself. Emblematically, in the case of the black square of Malevich. Here the image has become a non-image: Devoid of shape, colour, texture or representation the painting had become a negative sign; an inverted sign for the absence of the image. But this absence did not point towards the impossibility of image production as such. Rather it had become a negative sign for the unrepresentable infinity of possible modes of visual invention, or what Lyotard describes as "the infinity of plastic invention".

Thus Lyotard concludes that the avant-garde painters introduced painting into the field opened by the aesthetic of the sublime. In the Kantian formula an "Un-Form", something that cannot be synthesised into a unique form in space and time, as (by no coincidence), the concept of infinity.

The immaterials / Les Immatériaux

In 1985 Lyotard was responsible, together with Thierry Chaput director of the Centre de Creation Industrielle for the concept and realisation of a ground breaking exhibit called Les Immatériaux – roughly translated as "The Immaterials". What Les Immatériaux tried to do was to highlight and intensify a sensibility about the things in our immediate surroundings that are changing because of the fact of the new materials and new conceptions of reality that derive from technoscientific enquiry.

In the press-release for "Les Immaterieux" of January 8, 1985 he states:

"Why 'Immaterials'? Research and development in the techno-sciences, art and technology, yes even in politics, give the impression that reality, whatever it may be, becomes increasingly intangible, that it can never be controlled directly – they give the impression of a complexity of things. (…) The devices themselves are also becoming more complex. One step was set as their artificial brains started to work with digital data; with data that have no analogy to their origin. It is as if a filter has been placed between us and the things, a screen of numbers. (…) A colour, a sound, a substance, a pain, or a star return to us as digits in schemes of utmost precision. With the encoding and decoding-systems we learn that there are realities that are in a new way intangible. The good old matter itself comes to us in the end as something which has been dissolved and reconstructed into complex formulas. Reality consists of elements, organised by structural rules (matrixes) in no longer human measures of space and time."

Technoscientifc enquiry thus testifies to the infinite malleability of the concept of reality. Reality according to Lyotard first of all consists of the messages that we receive about it. But these messages increasingly are mediated by ever more complex machines. Digitalisation introduces a final level of abstraction into this process, by imposing a finite scheme of encoding that translates all messages into one abstract universal code, the digital code; a code without an analogy to its origin.

"The model of Language replaces the model of matter", Lyotard asserts, and with it the concept of reality becomes as malleable as language itself.

Critical Arts in the Age of Total Media Incorporation

The capitalist commodification of everything includes the domain of beauty, and even that of those monstrous negative non-entities that used to be the exclusive terrain of the avant-garde. Long since have these negative modes of representation been identified as marketing tools to provide access to fringe and niche markets. They have become a capacity of distinction and a possibility for identification for those market segments that the aesthetics of beauty tends to exclude. Aesthetics, both in its positive forms as well as its negative manifestations, thus has become part of the infinite quest for new markets that is ingrained in the very heart of the capitalist logic.

For Lyotard digitalisation marks the final incorporation of experience in a finite scheme of coding – the digital matrix. With it experience is trapped in the system of technoscientific logic and its infinite quest to transform the concept of reality. Within technoscientific logic, the world is translated into a problem as coding, as Donna Haraway puts it, and made entirely subject to the functional demands of scientific enquiry and the advanced forms of informational capitalism. Within the system of digital mediation escape from this defining logic is no longer possible, incorporation is complete.

Against this view I would like to propose a completely opposite analysis of digital mediation. The system of digital mediation, and in particular the sphere of networked digital communication, presents itself as a highly productive domain for critical strategies and artistic intervention. Interestingly, it is the legacy of the avant-gardes of the last century that provides an enormously useful set of conceptual tools and references to develop a critical engagement with the conditions of digital mediation. The context these avantgarde strategies are played out in is, however, radically transformed. It takes these strategies far beyond the sanctified realm of the arts.

The Negative Screen

The screen of global media presents itself as a seamless surface; be connected wherever you go, see whatever happens anywhere, and all this in real-time. It is the dreamed image of global mediation. The industrial media is diversified to fine-tune the media offerings to ever more precise market segmentations. The clean and seamless surface is the mythological image of the networked media age. In the ideology of its protagonists it should remain unchallenged, inviolable. The mechanisms directing this permanent electronic enactment of the world remain well out of sight, deliberately hidden beneath the illusionary surface of the screen.

The absolute horror of the media professional is the interrupted broadcast. In the TV format it is sometimes witnessed in an ultimately brief interval as a traumatic black screen – the moment when the signal drops away, when the spectacle suddenly turns into a black square, ironically reminiscent of Malevich's sign of the infinite. In radio the despair of silence is even greater than the absence of the image on TV. Horror Vacui is replaced here by an electronic form of Horror Silentiae. The silence of the faded radio signal and the blackness of the imploded TV screen do not merely mark the absence of a signal. The horror implied is the immanent destruction of the illusion of the seamless media surface, which requires the continuous suggestion of immediacy and connection that gives the viewer the reassuring impression of the transparency of the media screen.

It is the moment when this flow is interrupted, when the code is broken, or when the sound has collapsed and the screen has extinguished, that the possibility for an alternative message, a new code is created. This is the space of negation: The void created by the rupture is the open field in which a new synthesis of unique forms in space and time becomes possible. The emergence of the new code out of the void of the Horror Silentiae reconfirms the connection of the media subject to the world. It is in this moment of delight over the conquered threat of the end of existence / connection that the avant-gardes can come into play and transform the meaning of the media codes.

The strategies, the conceptual tools, the tactics of intervention in the new digital hypersphere are highly familiar. They draw on the legacy and experience of the avant-garde

movements. Indeed many of the interventions that have been most successful in engaging the new conditions of digital mediation have been artistic interventions. But something has dramatically changed; the object these interventions engage is no longer the aesthetic framework of contemporary art, not the holy concept of the author, nor the artist genius, or the canonised conventions of artistic creation. What is challenged is the seamless surface of the networked media spectacle itself, and its illusion of stability. The negative dialectics of the digital avant-garde no longer challenge the notions of art, but those of the by nature symbolical digital realm it operates in, and its inherent instability.

The Aesthetics of Impropriety

The pure and simple disruption of media signals is an obvious strategy of challenging the dominant media codes, but it is not a very interesting one. The disruption of the appropriate flow of media signals is only the entry-point for an alternative discourse, nothing more.

The transference of the classical avant-garde's negative dialectics of the image to the networked media screen has been executed most paradigmatically by the artists duo jodi.org [3]. In their now famous web site they have been creating incomprehensible, yet highly poetic and evocative visual and sometimes auditory processes that seem to reverse the hierarchy of the professional media screen.

All sense of connection is lost, intelligibility is gone. Instead of conventional presentation of printed page type lay-outs with a mediocre amalgamation of pseudo-moving imagery, supported by lengthy invisible sets of code, at jodi.org the screen is in constant flux and sometimes sudden stasis. There is no clear relationship between action of the viewer and response by the system. Sometimes the page halts, but we don't understand why, then again the screen suddenly changes but we are left clueless why this happened, and why at this particular moment. Continuously the screen is strewn with codes that can sometimes be recognised as fragments of disjunct html coding, sometimes as meaningless ascii garbage and sometimes just sheer incomprehensible and meaningless codes.

The artists often received the question, "what is this all about??", to which there is no answer. The imagery and processes the viewer witnesses upon entering the site are deliberately "inappropriate". Their ambiguous and incomprehensible nature refers to the virtually inexhaustible array of possible modes of representation in the digital hypersphere. Jodi.org often seeks out the mistakes in the software. A careful analysis of new mainstream software products reveals where the bugs are, and these mistakes, that may cause delay, flimmering screens, erratic movement or infinite repeat-loops, are immediately transformed into aesthetic material. These "mistakes" then become not the disruption of a code, but the essence of the new code that jodi.org replaces the conven-

tional ones for. In short what Jodi.org creates is a set of negative signs that point towards the infinity of alternative codes of writing and reading networked media.

The impressive Wrong-Browser project [4] makes this point even clearer. Here we are presented with a set of browsers that read html code and process them as abstract data-structures, represented in a highly colourful aesthetic language which is programmed in the browser-software. The browser becomes a subjective machine for aesthetic processing, the outcomes of which are defined by the contestational logic of its program codes.

A Case of Mistaken Indentity...

The US-based art collective (r)TMark employed quite a different strategy, but one that reveals the vulnerability of the web based representational systems more dramatically. In 1999 during the anti-WTO / G8 protests in Seattle rTMark produced a web site which has since become well known in net.art and net-culture circles. The site www.gatt.org was named after the General Agreement on Tariffs and Trade, one of the early global trade liberalisation treaties that many of the protestors on the street were contesting.

At first glance the gatt.org site looked very much like the official web site of the World Trade Organisation (http://www.wto.org). No surprise since rTMark had simply copied the entire lay-out, graphics and pictures from the original WTO site for its own, including the welcoming word of the WTO director Mike Moore and his picture. The text is however entirely reversed. Where the original WTO site sings the benefits of trade liberalisation and global free trade, the gatt.org site laments the destruction of democratic politics and the lack of social and environmental responsibility that informs the trade liberalisation negotiations. The section with policy documents of the WTO site is meanwhile replaced with counter documents of many of the social and ecological movements and groups protesting at the time in the streets of Seattle.

This would have probably gone more or less unnoticed, had the WTO not attempted to intervene in the publication of the gatt.org web site. Infuriated by this case of, in the WTO's view, illegitimate appropriation of their corporate image, they issued a warning on their site warning the public about a fake and misleading web site "purporting to be the official web site of the World Trade Organisation". The site "compromised transparency" of the WTO and its efforts to make policy documents publicly available via their web site.

Of course the warning was quickly adopted in the gatt.org site, now claiming the WTO site to be illegitimate. This continued in a cat and mouse game that resulted in the WTO issuing an official press release denouncing the attack on the "organisation's transparency" by a fringe art group. With this press release the site hack became world news and attracted millions of visitors to the gatt.org web site.

Strangely, the story did not end there. After the attention for the struggle about the appro-priated site died down, and the WTO decided to change the entire lay-out of its web site, the gatt.org seemed to lead a quite life as an archived document of a curious artistic inter-vention in networked global politics. However, after some time the rTMark collective started receiving e-mails from visitors to the gatt.org site that indicated that these visitors were still under the impression of visiting the WTO site, despite the notably different con-tent of the messages on the site. These e-mails included invitations to high-level inter-national trade conferences as official representatives of the World Trade Organisation.

rTMark adopted an alternate guise ("The Yesmen") to respond to these friendly invita-tions, and accepted a limited number of invitations by actually going to these confe-rences to lecture, posing as an official representative of the World Trade Organisation. One of the most hilarious of these site-specific performances is the lecture given at an international textile producers conference in Tampere, Finland. The action is exten-sively documented on the "theyesmen.org" site. [5] In this lecture one of the artists first gives a totally implausible account of free-trade, and then reveals a golden suit that sup-posedly provides the manager of the future with bodily feedback about productivity in the sweatshops they are controlling. Immediate contact with the work-floor is provid-ed by a gigantic inflatable phallus fitted with a videoscreen that has a wireless connect-ion to the sweatshop in real-time – be connected wherever you go!

Seamlessly this performance crosses over from the imaginary (the gatt.org web site) to the real (the textile trade conference in Tampere), and back to the imaginary (rTMark's sarcastic staged lecture / performance). Amazingly the lecture remained totally unchal-lenged by conference participants, testifying to the strong belief they put in the fact that they were presented with an actual representative of the WTO. This expectation was built on the initial belief of the organisers in the representational system of the web site they visited, its WTO iconography, its tone of voice and familiar narratives for trade liberalisation, even if, as in the gatt.org site, the message carried by these narratives was entirely reversed. Beyond this mistaken identity and its hilarious results, the action reveals the seamless transition between the real and the imaginary within the networked media spectacles.

To act; the geste…

The sphere of international economics and politics has become inseparably linked with the new constellations of broadcast and networked media. The principal challenge of the network society is the complete fusion of media, digital technology, economics and politics. The logic of the digital network now informs all dominant aspects of soci-ety. This fact on the one hand marks the end of the virtual, a sphere that has become completely intertwined with the *real* world. At the same time, however, every signif-icant social interaction can only become meaningful by virtue of how it is mapped in the digital domain.

Beyond representation, the space of digital networks has become the backbone of economic interaction, enabling the immediacy of financial and economic flows across the geographical and territorial divides. The connections between the networked struc-tures and the physical domains they hook up with each other, have become so diver-sified and interdependent that it is no longer useful to distinguish the physical geogra-phy as "real", from the networked constellations as "virtual". In fact the very opposition of the real and the virtual has become misleading. Geography and technological, social and economic networks together create one system that becomes increasingly integrat-ed and sophisticated. But this system is highly problematic because it excludes more than it allows.

The new sphere of networked media and communications is intrinsically vulnerable to the type of interventions described above. This double sided nature of the net is puzzling in many respects. On the one hand digital networks appear as the ultimate control appara-tus, but simultaneously they remain a refuge for alternative views, a space without final closure, always only partially under control, and in permanent transformation. The authority of the system is challenged when the seamless surface of the media-interface and its illusion of transparency are broken and reconstructed in a multitude of alterna-tive agenda's, indeed an infinity of alternative micro – and macro-political agenda's.

Saskia Sassen once pointed out, and quite rightfully so, that the Internet is constituted by the practices employed in it. But the nature of interventions in this space of networks transcends the limits of conventional representational systems. There is a specific form of performativity here, where the symbolic interventions on the level of social discourse become paradoxically real. Rather than "representing" reality, the intervention is an act, a geste, that 'creates' an alternative reality in the immediacy of its digital mediation.

Real-Virtuality

The conditions that create this specific form of performativity are what sociologist Manuel Castells has described as the "Culture of Real Virtuality", in his famous book "The Rise of the Network Society" [6]. Castells asks the question what is "(..) a communica-tion system that, in contrast to earlier historical experience, generates real virtuality?"

"It is a system in which reality itself (that is people's material/symbolic existence) is entirely captured, fully immersed in a virtual image setting, in the world of make believe, in which appearances are not just on the screen through which experience is commu-nicated, but they become the experience. All messages of all kinds become enclosed in the medium, because the medium has become so comprehensive, so diversified, so malleable, that it absorbs in the same multimedia text the whole of human experi-ence, past, present, and future, as in the unique point of the Universe that Jorge Luis Borges called Aleph." [7]

Castells goes on to show that the culture of real virtuality is not a condition that is entirely specific to the system of networked media and communications. The specific superimposition of the real and the imaginary onto each other and within one and the same multimedia text, is something that already began to form within the television age, but it is heightened and intensified with the emergence of new and ever more diversified networked and wireless communication media.

Castells himself takes his prime example from American television; a strange blending of fiction and reality that happened during the election campaign for the US presidency in 1992. At the time George Bush snr. and vice-president Dan Quayle were competing with the Clinton/Gore team.

In a televised election speech Dan Quayle started to attack the fictional persona Murphy Brown, the main character of a popular TV series by the same name. The main character was played by the actress Candice Bergen. Murphy Brown was a typical independent woman, living in one of the major cities of the US, unmarried and well in control of her life. She (MB) decides at some point that she wants to have a child, but without a father, and she decides to arrange the necessary steps to have that child. And it is exactly at this point that Quayle intervenes and attacks her for a lack of, in his view, moral standards, and for exhibiting a behaviour that is not conducive to proper family values.

What is really strange about his intervention is that it was not aimed at the script writers and director of the series, nor at the actress Candice Bergen. Instead he chose to point his criticism directly at the fictional character Murphy Brown, acknowledging the importance of this character as a role model for real-life social arrangements. The creators of the series responded intelligently by letting the fictional character Murphy Brown, in the fictional setting of the TV series, watch and comment the "real-life" speech of vice president Dan Quayle.

Out of this curious dialogue between a real and imaginary person, a heady political discussion evolved about "a woman's right to choose" that had a significant impact on the course of the election campaign. Ultimately the Quayle / Bush snr. team lost, for a host of reasons, but the important point is of course the blending of the real and the imaginary in a crucial social and political process. The criticism of the real vice president Quayle became part of the fictional narrative of the series and the narrative of the series became part of the real presidential campaign. This was only possible because both operated in the same "multimedia text".

Castells explains that this condition is truly inescapable, because these messages can only achieve communicability by being mapped in this new sphere of interconnected media and communication networks. But once part of this system of electronic and digital mediation they become vulnerable to the inherent inconsistencies of this system.

Castells writes:

"What characterizes the new system of communication, based in the digitized, networked integration of multiple communication modes, is its inclusiveness and comprehensiveness of all cultural expressions. Because of its existence, all kinds of messages in the new type of society work in a binary mode: presence/absence in the multimedia communication system. Only presence in this integrated system permits communicability and socialization of the message. All other messages are reduced to individual imagination or to increasingly marginalized face-to-face subcultures." [8]

To act in the culture of real-virtuality means to act both symbolically and real at the same time, because both levels of social reality coincide within the same 'multimedia text'. In this paradoxical environment dominant discourses of social, political and economic power can be challenged at the level of the representational systems they employ. The classical avant-gardes provide a repository of ideas, tactics and strategies that are now played out in a radically enlarged context; no longer the context of art itself, but that of the network society.

The negation of a dominant mode of speech, implies the infinity of possible modes of speaking.

Amsterdam, December 21, 2001

Notes:

(1) Jean François Lyotard, Presenting the Unpresentable: The Sublime, in:
    Art Forum, New York, March 1982, pp. 64-69.

(2) ibid.

(3) http://www.jodi.org

(4) http://www.wrongbrowser.com

(5) http://theyesmen.org/finland/

(6) Manuel Castells, The Culture of Real Virtuality, in:
    The Rise of the Network Society, Blackwell, Malden/Oxford, 1996, pp. 355-406

(7) Castells, '96, p. 373

(8) Castells, '96, p. 374

**Amnesia International
– early computer art and the Tendencies movement**

Darko Fritz
http://www.mi2.hr/alive/

... Technology progresses. Art changes. It never progresses. ...
Statement of the collective Anonima in May 1968,
catalogue 'Tendencies 4' (1968 - 69), Zagreb, 1970.

Media archaeology research on early computer art can help us to reflect upon the roots of networked (collective) produced art, art networks itself, interactive art, technology and communication mediated art and socially active role of the art in information society. Those subjects remind us of keywords in recent media art production and media culture and were both discussed in depth and made in art practice in particular (last?) avantgarde art movements in the 1960's. Its turbulent history in the 1960's reminds us of the history of net.art and its filtraton and recent position in mainstream art system. Does history repeat?

In the 1961-1973 period, the then Contemporary Art Gallery (today's Museum of Contemporary Art, Zagreb), organized five international exhibitions under the name of "New Tendencies". The first, inauguratory exhibition (1961) was characterized by a wide variety of the topics treated. The painting was tautological and monochromatic, or oriented towards objects (Almir Mavignier, 'Zero' /Oto Piene, Heinz Mack/ and the 'Azimuth' /Enrico Castellani, Piero Manzoni/). Nevertheless, the works prevailed that were oriented towards systematical research (François Morellet, Karl Gerstner), and optical research of the object structure and surface (Marc Adrian, Julio Le Parc, Günther Uecker, Ivan Picelj, Gruppo "N" – Biasi, Massironi, Chiggio, Costa, Landi).

One might also recognize the beginnings of programmed and kinetic art, whose characteristic language would be marking New Tendencies as a movement already starting from the following exhibition (1963). It acts as kind of 'umbrella network' for many artists and critics and as well (Franch GRAV – Groupe de Recherche d'Art Visuel, Spanish Equipo 57, Italian Gruppo N, Gruppo T, MID, Gruppo 63, Operativo R, Azimuth, Zero (Germany), Anonima (USA), Dvizenije (USSR) etc). Requirements for providing a scientific dimension of art shall give preference to experiments on visual perception based on Gestalt theory.

Already the following, third exhibition of New Tendencies (1965) examined relations between cybernetics and art (Abraham Moles). At the same time, the Tendencies movement faced its inside crisis caused by different approaches to social angagement througout art practice. Julio Le Parc from the GRAV, won the award at the 23rd Vennice Biennale

in 1966 to which many Tendencies members had a highly critical approach critisizing Le Parc because of his individual but not group presentation as well. The Responsive Eye exhibition organized by the Museum of Modern Art, New York, in 1965 presented 123 works by 28 authors with many of the Tendencies authors taking part. The exhibition triggered dramatic discussions alongside Tendencies members because this exhibition excluded any social dimension of the represented works and focused on formal visual and retinal effects only (inaugurating market oriented 'op art').

The fourth Tendencies exhibition (1968/69) was marked by a further penetration of the idea of a theory of information and exact aesthetics. The artistic use of computers was a 'last try' of the Tendencies movement to synchronize its goals as the 'scientification of art' and 'bettering the society' and historical movement of 1968. The exhibition presented a broad spectrum of computer art only, hosting the participants from both cold war blocks. Computer sculptures, choreographies, objects and prints were exhibited. Four international colloquia were organized in 1968 and 1969, treating the topic of "Computers & Visual Research". In 1968 the Contemporary Art Gallery launched the "Bit international" magazine, as a bulletin of the said orientation (no. 1-9/1968-1972).

At the Tendencies 5 exhibition in 1973 were presented both sections of computer visual research and the conceptual art practice. At the time, those two art disciplines differed a lot especially because of their almost diagonal opposition in dealing with power stuctures in both terms of physical work production and approaches to the 'individuality vs. society' in the light of the 1968 revolution after-effects. Wathever of that gap between the contemporary art world and media art is, or is not, still existing, at least we are facing today the possibility of those two practices going hand in hand with each other.

Exhibition *I am Still Alive* (curator Darko Fritz; Mi2 and HDLU; Zagreb, 2000) presented early computer art and net.art next to each other. Here are excerpts from the correspondence of curator Darko Fritz and net artist Vuk Cosic, February 2000.

Vuk Cosic: The aspect I'm interested in regarding the bind between the New Low Tech Media and this project is the curator's (and artist's) *decision*, in the age of high tech, to deal with (and exhibit) low tech. I'm interested in the politics behind such a gesture that – in my little interpretation – grounds on the *refusal* to take the technological progress for a given. Increasingly I receive the impression that the new media art is moving in the backwash of the canonical aesthetic and methodological values, and that the New Low Tech Media is one of better ways to confront this (and still not to become a Unabomber). Research in the genesis of technology, and the genesis of the rapport between technology and art seems to me as the ineluctable first step …

Darko Fritz: I'm interested in juxtaposing several valuational and temporal elements, and actually in seeing on the spot the degree of interaction of these works, what will happened … the media archaeology is interesting because of these principal questions

of goals and means, *how and why* does the media art come about; how do art and technology relate to each other and, taken together, to society; question of strategies employed in a given period in the production, distribution and meaning of media art works (here exclusively those created using a computer). It seems interesting to me that in the years 1968-69, amidst the Cold war, it was possible to bring together, under the title "Computers and Visual Research", the authors and theoreticians from both blocks (USA, USSR, Argentina, West and East Europe). Back then files probably did not occupy more than 1Mb, yet graphics, films, objects, sculptures modelled in 3D, music, choreography were present… Bonacic placed a large object *on permanent display* on the frontispiece of a department store in Zagreb. It seems to me that nowadays the possibility of choice and movement is incomparably greater … yet it is interesting to see the results … in the period 1968-72 nine thematic issues of the media art publication 'bit international' were published.

Unfortunately, or rather fortunately, progressive art has always been predominantly a low budget enterprise … 30 years ago computer art pieces were mostly created on a then high tech equipment in a low tech manifestation. The high tech equipment was mostly owned by scientific institutions, because at that time it was there that computers could be found (presumably in the army as well, and still later in the education, since there were no PCs back then). They were mostly created, regardless of the production location and the ideology, within the scientific establishment, prevailingly in spare time and due to individual enthusiasm.

… at the conference "A new space for culture and society, new ideas in science and art", organised by the Council of Europe in 1996 in Prague, Mandelbrot recounted that once, as a young scientist, he was able only in an almost unofficial manner, at night, to upload his program for necessary processing on a then supercomputer … smuggling …

Excerpts from the Bit Internattional magazine [no. 1-9/1968-1972] and Tendencies 4 exhibiton catalogue [1968/69], both published in Zagreb by Gallery of Contemporary Art, Zagreb.

… According to H.W. Franke the total informational capacity of the consciousness is 160 bits. This value is deduced from the fact that an information that has entered the consciousness has 16 bits and remains in it for ten seconds. An information theory finding decisive for the learning processes, as well as for the transfer of the aesthetic information patterns, is that only around 0,7 bit can be converted from consciousness into memory. …

Herbert W. Franke: Cybernetic foundations of programmed art, Bit international no. 2: Computers and visual research, Zagreb, 1968.

… and that in future the development of messages and means of communication, messages between human and machines, between machines and human, between machines and machines, is going to play an increasingly important role.

N. Wiener: Human use of human beings, 1954.; an introductory quote in the catalogue 'tendencije 4' (1968/69), Zagreb, 1970.

… pure technology is always more interesting and more beautiful than the art amalgamated with technology. …

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Statement by the collective Anonima in May 1968,
catalogue 'tendencije 4' (1968/69), Zagreb, 1970.
</div>

… But the machines already approached the man, faster than the man approached the machines. …

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Abraham A. Moles, introductory speech at the conference Computers and Visual Research, Zagreb, 1968. Bit International no. 2, 1968.
</div>

… However, while the analogous computer works on the constantly variable values of a system analogous to the problem, a digital computer autonomously computes in accordance with the set program. It is the discovery of digital computer that unfolds the most significant field of computer art to date. … Objects created by Vladimir Bonacic exclude the chance by means of a pseudo-random polynomial exhibited on a 36 meter long series of 18 objects placed on the facade of the NAMA department store in Zagreb. Finally, this exhibition should not be understood as a domination of technology, but rather as an effort to overcome the new technology and use it to achieve new results in the field of visual.

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Boris Kelemen: Computer and visual research, catalogue 'tendencije 4' (1968 – 69), Zagreb, 1970.
</div>

… We concede that the next twenty years could be spent by artists in exploring and assimilating the potential of existing computers and their peripherals. … A great deal of computer art embodies the limitation of existing techniques. The aesthetic demands of artists necessarily lead them to seek an alliance with the most advanced research in natural and artificial intelligence.

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Gordon Hyde, Jonathan Benthall, Gustav Metzger: Zagreb Manifesto, 1969,
Bit International: Dijalog sa strojem, 1971.
</div>

… if the households are going to be connected through the television screens with the central computer units, as it is nowadays the case with the phones, then nothing will stand in the way of the possibility to present computer graphics by means of a screen. That possibility seems today utopian.

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Herbert W. Franke: Drustveni aspekti kompjutorske umjetnosti
[Social aspects of computer art], 1969, Bit International: Dalogue with the machine, 1971.
</div>

… the first award winners in the now annual computer art contest organised by the 'Computers and Automation' were the member of the U.S ballistic team. There is no doubt that in the computer art the real avant-garde was army. … Sculpture is the utilization of existing forces. That is clearly seen in Egyptian monument sculpture. In the project 'Five Screens with Computer' I am concerned with tremendous power allied to the most delicate control; this, you will agree, is a distinguishing mark of much of today's techniques. ... The sculpture should be sited as a central concourse between three very large blocks of flats ... The sculpture is to be regarded as a focal point of the community. From

the windows of the flats, people will get views of the screens, and their elements in flight. ... The computer used to run the sculpture can also be used for various tasks connected with functioning of the flats. By means of telephone connections, it can be used as the local reference library by the inhabitants of the flats. …

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Gustav Metzger, exposition at the conference
Computers and Visual Research, Zagreb, 1969,
Bit International: Dijalog sa strojem, 1971.
</div>

… T.V. will be overshadowed by a C.V. (Computer vision) system combining and extending the present features of both computer and television systems removing the barrier of non-participation by the public. With increased free time, greater interest and activity we will be able to enjoy, and development of the arts and new tendencies should be in that direction.

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Petar Milojevc: xxx, Bit International: Dalogue with the machine, 1971.
</div>

… Shouldn't the information aesthetics be able to use certain modelling techniques? The information it should model is the aesthetic information, such as it appears in nature and art. However, the dependency of aesthetic information on processes should be modelled as well, while conceiving the processes themselves as temporarily dependent information. …

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Georg Nees: Computer graphics and visual art,
Bit International no. 2: Computers and Visual Research, Zagreb, 1968.
</div>

Q & A

Lecture:
"I'm Still Alive": New Tendencies – Media and Computer Art of the Sixties

Darko Fritz

Q: If we speak using the terms of computer art of the sixties and early seventies, we can ascertain a kind of noncommunication between so-called sixties activists, anti-sixty-eighters, leftists, and neo-constructivism. The use and invention of the PC connected these two schools of thought, which resulted in the appearance of today's net.art. Were there any key people who were a part of this neo-constructivist, practically pro-state orientation, against the computer stream, and were there people who linked the two?

A: I think that in the sixties the neo-constructivists were the true avant-garde and as such, from the social point of view, were uncompromised. In the West their committed (new) leftist political orientation set them in opposition to the mainstream, while several positive examples in the former Yugoslavia, also avant-gardists, managed to participate in (sometimes high-budget) state-financed projects, achieving exceptional results. Neo-constructivist and lumino-kinetic art used new technologies, not for informatical, but rather

for robotic or similar purposes to achieve kinetic qualities, employing various forms of serially produced art works and the use of then new materials. The use of informatical electronic technology united these two streams in the fullest sense through early video art. Conceptual artists of the day saw video as an opposition to mainstream television which was seen as a system of repression and manipulation of information, with which I agree, particularly today. They conceived a utopian vision of the use of video technology which on occasion was realized via local (cable) television, and with this new system of production and distribution participated in decentralizing the system of information. The promise of early video art was fulfilled by the Internet revolution of the nineties. In the sixties it wasn't possible to do this using computer networks, for the simple reason that they didn't exist, apart from in the embryonic phases of experiments. We must remember that the Internet was developed as a cold-war era military weapon to be used in place of telephone communication in the case of atomic war.

However, to return to the culture and art of the sixties, one school of thought believed in social progress via scientific and technological advancement, while the other favoured anarchism, individualism, a return to nature, direct revolution, and so on. In reality both were leftwing in their political orientation, they wanted change and the betterment of society, but looked to achieve these goals using vastly different methods and means. Only in the nineties did this crossover occur, chiefly via net.art, a fusion of political activism which employed direct action, conceptual art, and technological consciousness. There are numerous examples, and here I would isolate two characteristic works. The first is the work of the RTMark group, where they pass themselves off as being representatives of the WTO (World Trade Organization) and in doing so are invited to economic congresses (http://theyesmen.org). The second work is also of a subversive nature, Alexei Shulgin's 'FuckU-FuckMe' (http://www.fu-fme.com) is made up of an advertising campaign for a product than doesn't actually exist – hardware which enables physical cyber sex. The site received 50,000 orders within a year! Even Croatian Playboy wrote about his product in an article about cyber sex believing it was a real product. Unfortunately every avant-garde dies young, and thus the positive energy of nineties net.art in time lost its initial enthusiasm and sunk into the mainstream cultural industry, becoming institutionalized.

Q: Is this the problem of possessing a presumed work of art?

A: Early net.art actually skipped mediation between communication of the work of art and the public, without an intermediary, and by its nature was free. The question is what can be offered to the still traditionally-orientated art market, a market which gravitates towards objects. To this effect, they devised various strange and largely unnecessary forms and compromises. In media art, as far as money is concerned, baring a few exceptions, things usually boil down to them being used by the newly-appointed establishment: working for nothing, and artists having to be happy with being asked to participate in a project, that they're traveling the world and that for this time their living expenses are covered.

Q: Talking about computer works from the sixties, were there any indications of interactiveness? Works produced were based on the computer used as a medium, and had two-dimensional graphics.

A: There were also various other forms, three-dimensional sculptures, choreography, music and film. During the lecture I showed a computer film by Tomislav Mikulić. Almost all lumino-kinetic and neo-constructivist works from the first part of the New Tendencies movement involved interaction with the viewer (in contrast to traditional fine arts) via a well-conceived and conditioned perception of the work, whether with the help of electronic mobile parts of the work, its position in space, or the retinal effects of a two-dimensional surface or relief. Sometimes viewers were directly invited to physically change the structure of the exhibited work. A good degree of interactiveness can be observed in the work 'Compos Hobby Box' by the 'Compos' group [http://darkofritz.net/curator/alive/pix/m01veen.jpg], where there is a users' manual suggesting computer generated possibilities of ways in which we can create a composition of given coloured rectangles. The work emerged in the late sixties and used informatical vocabulary: user, manual, matrix, program, and object.

In Gustav Metzger's unrealized 1969 project 'Five screens with computer', residents of three large neighbouring residential blocks were to operate an installation via telephone. Among the quotations I have taken from Bit International magazine you can find one from Petar Manojlović about C.V. (Computer vision), where he very clearly foresees the Internet, only under a slightly different name. It was suggested that two-way communication would be developed via telephone/TV cables – meaning, interactive communication. In this way the understanding of interactiveness was transferred from the one artistic object to one 'user' relationship, to a broader informatical and social level.

In kuda.org, 16. 07. 2002.

Piratology: The Deep Seas of Open Code and Free Culture

Armin Medosch

What we propose with the exhibition and online project Kingdom of Piracy (KOP) and its different parts and elements – the installation and web interface BURN, the talks and live DJ/VJ sessions, the DIVE CD-Rom and finally this booklet – is that you dive into – immerse yourself in, familiarise yourself with and further explore – the deep seas of open code and free culture. What we are talking about does not have one name but many, which all cover different aspects, slightly different attitudes, distinguished areas of activity: the programmers who develop free software and Open Source software, lawyers who create licences for a creative commons, artists, writers working on copy-left initiatives, free media activists, free networkers. With their combined efforts they change the conditions for creation, innovation and cultural production, contributing to openness and freedom. They don't do so by criticising the existing world or mainstream institutions and opinions and they do not draw their energy or their legitimation from any kind of opposition. Instead a growing number of people work constructively on an expanding shared space of freely available information, tools, platforms, infrastructures. Some of the activities that are part of this collective effort are sometimes falsely condemned as piracy. It is not within our powers to stop such name-calling, and trying to stop it would probably be a waste of time. But since the industry-led discussion about intellectual property and fair use rights has become so dominant lately it might be useful to give it some consideration. How has this term "piracy" been used in the past and how is it presently instrumentalised to cast in antagonistic lights a battle of good against evil, of legitimate copyright holders and malicious pirates?

The Roots of Piracy

Piracy does not simply exist because there are bloody-minded people who don't care for the rules and laws of the civilised world. It tends to emerge whenever there is a hegemonic power that asserts itself by establishing a trade monopoly. A monopoly, by its very nature, cuts out competition by other traders and destroys existing means of trade. People deprived of their traditional way of making a living resort to criminal activity. The hegemonic power, itself not averse to using violence to force others into submission, considers itself to be the law and defines others' activity as piracy. This is, in short, the lesson we can learn from historic accounts of piracy.

A Historic "War on Piracy"

Between 1750 and 1850 the British Empire, expanding eastwards from India, had to fight the pirates in the Malayan archipelago. It was only towards the end of this century-long undeclared war, when Britain had gained technological supremacy, namely

steamships with metal-clad hulls and powerful long-range guns, that the pirates were indeed defeated. But why had this region become so notorious for piracy in the first place? According to Owen Rutter, who wrote a semi-scholarly account of those battles, "it was largely European intercourse with the East that made them so".[1] Large-scale piracy did not exist in the region before the eighteenth century. "What was it then that caused these people and their neighbours to revert from peace to piracy? The answer is: the greed of the European powers who traded in the Eastern seas."

According to Rutter, foreign trade in the region had always been in the hands of Chinese traders who also had a positive impact on local craft and agriculture. The local population and their rulers profited from Chinese trade and skilled craftsmen. Then came the colonial powers of that time, who "created a system of monopolies, and by treaties with Malay rulers were able to command the produce at their own rates". As a result, the Chinese traders were driven out of business and important sources of income for the local population, the "bread and butter line", fell away. European trade could not compensate for this loss, because "they took all and gave as little as they could". Not only trade was affected, but also manufacturing and transport, "so that thousands of natives were bereft their normal occupations" (p.27). "Not content with this they poked their fingers into the internal affairs of the Malay governments and fomented dissensions for their own ends, until they destroyed the authority of the rulers and disorganised the commercial enterprise of their people." Looking for new sources of income, the Malayan rulers "turned their ways to piracy and plunder. If one may regard that metamorphosis through their eyes, one may see, in the attacks on European ships that followed, acts of retaliation against those interlopers from the West, until in course of time this guerrilla warfare by sea developed for many into an habitual mode of life, more lucrative and certainly more exciting than their former ways of peace" (p.27).

The Current "War on Piracy"

As this narration shows, piracy in this region was the product of the destruction of traditional trade routes and of the creation of European monopolies of trade. It is easy to see how analogies can be made with today's "war on piracy" in the area of intellectual commodities. Brand names, patents and copyright work together to create regional and global monopolies. Western cultural hegemony uses international law, trade agreements and the threat of sanctions to assert itself. Third World countries are reduced to being sources of cheap labour to produce copyrighted and branded goods for the West, goods the workers themselves can never afford.

Section 301 of the Trade Act of 1974 provides the United States with the authority to enforce trade agreements, resolve trade disputes and open foreign markets to US goods and services – what is, on US terms, called to "levelling the playing field". Whiteg Weng shows how the use of Section 301 has eroded traditional import routes for Western books, music and movies in Taiwan.[2] Local importers have been replaced by American chains. At the same time, trade in pirated goods thrives in Taipei's Guang Hu market, a pirate haven not only for software and music CDs but also for generic computer chips. The need for cheaper versions of copyrighted goods has led to the creation of grey markets in Asian metropolitan areas.

In downtown Bangkok, Thailand, a big modern department store called Pantip Plaza is almost entirely dedicated to software, film and music piracy. The multi-storey building is filled with many small shops and stalls that offer large selections of goods. On display are only the CD covers in laser or bubble-jet print-outs. The customer writes down the numbers of the CDs or DVDs she wants, gives the list to a staff member, pays the equivalent of US$2 or $2.50 and waits 15 or 20 minutes until the CDs are brought in from storage outside the building. The whole affair is conducted entirely in the open, and, it seems, no one is afraid of any official crackdown. American officials from the Department of Trade call at regular intervals for stronger government measures to clamp down on this sort of activity. But nobody seems to have told that to the young Thai people and foreigners who gloat over CD covers of commercial software, games, expensive modelling applications and professional music editing suites. What Western companies define as piracy might from a local point of view be an act of economic retaliation, which may explain in part the leniency of the Thai government.

The copyright industries, sometimes also called the "data lords", are no longer satisfied with a crackdown on industrial-scale piracy. Recently they have begun to use the word "piracy" differently. Alarmed by the success of peer-to-peer file-sharing networks, they now brand every individual who participates in file sharing via the internet a pirate.[3] What is new here is that "piracy" is no longer connected to a profit motive, but is used as a catch-all term for all uses of content that are not explicitly sanctioned by the copyright holder. The phonographic industry has won a court case about access to user information from a particular ISP. If this verdict remains unchallenged then ISPs will have to hand over user information to record companies on the mere suspicion of one of their customers being involved in file sharing. In a parallel development, new legislation has been prepared in the US that would give companies the power to break into individuals' computers to check whether they are participating in file sharing. These are unprecedented powers for private companies, which go even beyond police powers and make the companies appear to be somehow above the law, because their commercial interest coincides with the national interest of the USA. The European Union Copyright Directive parrots the US Digital Millennium Copyright Act except for a few sub-sections.

"Piracy" is a question of the power of definition, which currently clearly lies with the data lords. Hollywood film studios, software giants and multi-national record companies have chosen to use the term "piracy" to cover all kinds of copyright infringement. This might turn out to backfire. As Bernhard Günther points out[4], Hollywood has produced numerous pirate movies where audience sympathies were usually with the somehow more "human" pirates, rather than with the captains of the navy frigates. People on the street

tend to favour the underdog. By chosing the term "piracy", Hollywood has maybe failed to understand its own propaganda of an earlier age. Is it pure coincidence that one of the most successful Open Source softwares is called "Apache", an indigenous North American tribe that was mercilessly slaughtered almost to extinction by white settler cowboys?

Can the negativity associated with piracy be turned around? Maybe it does not need to be. It was not us who chose the term. It was ascribed to activities that we sometimes might be involved in; even so, we don't feel that we are committing a crime, and as ordinary people are usually not inclined to get involved with something illegal. We don't need to find consolation in tales of romantic pirate utopias. A fundamental change is happening right now at the centre of relations of productive forces that will render the question irrelevant.

There is an alternative

> "They have stolen our revolution, now we are stealing it back."
> NTK newsletter

The essence of any digital operation is copy and paste – or open file, transform file, save file. German hacker legend Wau Holland has called computers and the Internet "a giant information reproduction and dissemination machine". If the source material of any such digital operation is copyrighted then any act of copy and paste or open and save is illegal. The intentions of the copyright industry are opposed to the inherent logic of digital technology. They have to bend and twist the technology – with inventions of new copy control mechanisms and the strong arm of the law – in order to get people into the position where they want to have them: as customers, end users of a product resulting from an industrial process. How long can those artificial barriers hold out against technological and social progress?

There are economic and technological trends at work that conspire to reduce scarcity and create abundance. And without scarcity of resources the whole piracy discussion falls flat. Many people have heard of Moore's Law, an observation made by the co-founder of Intel that the number of transistors per square inch on integrated circuits had doubled every year since the integrated circuit was invented. [5] The processing power of computer chips and digital storage space continue to grow while prices go down. The Internet and other telecommunications services make it ever easier, faster and cheaper to communicate. During the New Economy boom huge bandwidth capacities have been created by fibre-optic cable and satellite. Since expectations of soaring demand for commercial broadband services have not been met in reality, many of these capacities are now underused. In theory, if markets really followed the laws of the invisible hands, bandwidth would now have to be almost free.

While it is a myth that the Internet is absolutely decentralised and non-controllable, it nevertheless allows point-to-point communication without a central command and con-

trol institution. This principle, realised on many different technological and social levels, aids the creation of new transversal structures – communities, movements, interest groups, campaigns, discussion boards, file-sharing communities – which do not depend on the permission of any authority to group, disperse, regroup, bifurcate. This social dynamism, based on new types of technologically supported collectivisations, has serious economic and political implications.

Critical Mass

Open Source software (OS) and free software (FS) suffered for a long time from the myth that they were of use only for serious computer geeks. Now most common tasks that everyday users would want to perform on computers can be done as easily and reliably in an OS/FS environment as with any proprietary software. This movement has now become so broad and deep that it is challenging proprietary software in many ways. At this point in time it is not only stand-alone applications for individual users, web servers and collaborative platforms on the web for which OS/FS provide better alternatives, it is also on the much more fundamental level of programming languages and development environments, the toolkits of innovation, where OS/FS are about to gain an advantage.

"But what about the digital divide?", someone could legitimately ask, "what about that large part of the world population that does not have access to a telephone, not to mention computers? Who are illiterate, starving, dying of disease?" Indeed, it is always legitimate to ask those questions. And if the only question addressed was one of how to develop better software, then Open Code (a neologism used by some as a shorthand to link OS and FS together without denying that there are differences) would not be worth our attention. An increase in ease and speed of communication for an info elite in the West and their Third World counterparts may contribute in some ways to social progress but cannot address the root of the problems that we face. After all, Open Code won't protect any Afghan or Iraqi villager from cluster bombs.

But this is no longer "only" about software. The work done by Open Code developers is complemented in a number of other areas: the fledgling free networking movement that puts people in control of their own technologically mediated communications; free media initiatives such as the grassroots network Indymedia; networks about networks such as the recently created meta-network by the World Social Forum, which tries to bring various political activists together on a global scale; the project Creative Commons, which provides different licence models for creative work; artists and writers who deliberately put their work in the public domain; pressure groups for freedom of information, transparency and accountability in government.

Huge numbers of people are involved in what has been called "commons-based peer production", i.e. the production of goods and services based on resources that are held in a commons and organised by peers. This type of production has reached critical mass.

It is not happening outside the political and economic mainstream, like certain self-proclaimed underground and avant-garde movements of the past, but right in the centre of Western societies, within the most advanced areas of production[6]. While most participants would not knowingly subscribe to any one particular ideology, they are making an implicit choice in joining a hybrid of gift-based and service economy rather than producing intellectual commodities. By making this choice they show that they no longer buy into the capitalist philosophy of ownership and scarcity of resources. The refusal to be paid for the best that one has to give is a strong political statement. Neoliberalism wants to reduce us to a Social Darwinist world view. We are made to believe that the only option is to slave away in alienating day-jobs. People decide that they prefer to receive less money for the privilege of being able to define their work themselves. On an intuitive level, people express their desire to be cooperative rather than competitive or, more explicitly, put the common good above individual wealth. This work of love is now done not just by a few from the ranks of art and hacker elites but by millions. Without explicitly formulating itself as oppositional, this nondescript movement of movements slowly but inevitably changes society from within.

What's art got to do with it?

In a certain sense art and culture (here used in a narrow sense, as in "the area of cultural production") have always been "Open Source". Artists nurtured and kept alive cultural heritage by retelling and adapting existing narrations. Without open access to the achievements of the past there would be no culture at all.[7] In this light it is a bit irritating to see the number of Open Source programmer communities – especially if one considers that some of the stars of the OS community are not immune from believing in the cult of their own celebrity and do not show strong signs of being agents of societal change. Yet this should not deter us from recognising potential allies. As wrong as it would be to see Open Code as the ultimate and only positive example, it would be equally wrong to construct separations between artists, coders and other producers.

A small but nevertheless significant number of artists are no longer concerned with image production or self-expression. While images, audio and video might still play some part in their work, they do so in a functional way within a larger project. These artists have joined forces with coders, either by starting to programme themselves or by working closely with programmers to create tools, interfaces, platforms. These artist/coders are now at the heart of a cultural struggle, not because the product of their labour is art but because the code they produce is an expression of culture in the deepest sense. They carry forward the cultural politics of code by supporting the foundations for the preservation and renewal of culture. By creating digital tools that can be used, changed, redistributed and appropriated by everyone for free, the artist/coders liberate culture from the grip of the culture industries. They create platforms for social experimentation by increasing freedom – freedom (that most tricky word) not in a capitalist sense, which is the freedom of elites to trample on the rights of others, but another sort of freedom that increases opportunities for all, that makes another range and set of possibilities available for a greater number of people.

Without trying to categorize, it can be said that some of this work is still clearly distinguishable as art because it does not rely on the functionality of code alone but also on gestural symbolic politics. With clarity and simple efficiency artists bring the characteristics of digital technology to their logical conclusion – for example, the group 0100101110101101.org by copying other digital artists' work onto their hard disk; Vuk Cosic by copying the entire web page of documenta x, the world's biggest art show. Both works are challenging the originality of digital artwork, the cult of authorship and the legitimizing power of institutions. In another experiment called "life-sharing", 0100101110101101.org have opened up their computer and made all their files accessible to everyone with a web browser over the last three years. "Privacy is stupid" is their slogan, undermining the perception that we all have to encrypt our files and communications to keep our digital life private. Everything is there all the time, the question just is: who might want to know? It is critical to understand how this simple gesture undermines the surveillance ambitions of state powers for "total information awareness".

By taking the inherent logic of digital technology to its conclusion, artists are pushing the boundaries of digital freedom. The user of such an artwork is not just a passive "recipient", but becomes complicit in action that might overstep the boundaries of the law. Some artists have found political campaigning to be their natural habitat and this has forced them to develop a more offensive working style and the appropriate type of code to support this. Over the last decade the Electronic Disturbance Theatre has developed techniques of electronic civil disobedience. Against the monolithic power of the state the EDT sets the "swarming" power of networked activists. Its tool FloodNet allows protestors on the net, by collective use, to temporarily shut down the web servers of target institutions. It was used against the Mexican government because of the actions of its military against the Zapatistas' revolt in the province of Chiapas, and against the WTO during the Seattle protest. Technically, such an attack on a web server is called distributed-denial-of-service. It can be carried out with maximum efficiency by one person or a small number of people acting in a clandestine manner. But here lies the difference of the actions of the EDT. It invites users to openly declare their support and their willingness to take into account legal risks in order to stand up for what they believe in. It creates a "theatre of action" in a very public way as opposed to clandestine digital violence.

The parody websites of the Yes Men[8], the media hacks by Übermorgen[9], and the successful Toywar campaign are further examples of actions by artists who sometimes resort to measures that occupy the grey area between the legal and the illegal. Legal provisions cannot foresee all the possibilities facilitated by new technologies and creative thinking. In a democracy worth its name, everything that is not strictly permitted is legal, in a totalitarian state everything is illegal that is not strictly allowed. What these

actions have in common is the use they make of the distributed peer-to-peer power of the net and of the willingness of large numbers of people to participate in and stand up for a cause. Most importantly, these actions by artists-as-campaigners "produce" the notion of the net as a public space. They show that it can be used as an arena for mass political protest like a city square or a street. The privatizations and enclosures which are pushed forward by a neo-liberal network agenda are countered by collectivization of the electronic communication sphere.

More recently, artist-led initiatives using the 2.4 gigahertz frequency spectrum and 802.11 Wi-Fi technology have taken this "public" agenda to the physical network layer. The broad and loose coalition of the international free network movement encourages people to create their own network nodes, with or without wires, and to patch them together by the use of peering agreements, shared node databases and agreed conventions of file formats and standards on a technical network layer. The ultimate goal is to create a ubiquitous network that bypasses commercial networks by creating its own shared infrastructure, relying on the goodwill and initiative of many individual participants who share some of the bandwidth that they legally own.

This shared netspace, made up of many small nodes that interconnect and permit free transit of data, is continued on an application layer by projects such as Last.fm, Frequency Clock and Nine [9]. These are server-based software applications that harvest the power of collective action on the net for purposes of live-scheduling of audiovisual content, peer-group interaction and mapping of social relations. These three projects (which have been included as "curated links" in KOP's exhibition at FACT) are just the tip of an iceberg of an emerging trend of net art that allies itself with the free software and free network movements. Artificially created scarcity, prohibitous laws and privatised networks are not attacked head-on, but rendered irrelevant by the existence of viable alternatives. This is not piracy, as industry associations want us to believe, but the creation of open spaces in a number of different ways; they facilitate freedom of expression, collective action in creation and political expression and the notion of a public interest in networked communications.

Notes

(1) Owen Rutter, The Pirate Wind, Oxford University Press, 1987.

(2) Whiteg Weng, The Right to Copy: A Local Study of Copying as a Carrier of Creations, Taipei, Taiwan. <KOP> website http://residence.aec.at/kop/writers/html/w1texts.html
(3) Janko Röttgers, 'P2P: Power to the People' (in this volume).

(4) Bernhard Günther, 'Piraten im Reich der Daten', in Netzpiraten, edited by Armin Medosch and Janko Röttgers, dpunkt Verlag, 2001.

(5) Definition of Moore's Law by Webopedia, http://www.webopedia.com/TERM/M/Moores_Law.html

(6) Felix Stalder, 'Culture Without Commodities: From Dada to Open Source and Beyond', Toronto, July 2002, <KOP> website http://residence.aec.at/kop/writers/html/w3texts.html

(7) Raqs Media Collective, 'Value and its Other in Electronic Culture: Slave Ships and Pirate Galleons' (in this volume).

(8) http://theyesmen.org

(9) http://www.ubermorgen.com

Read_me, run_me, execute_me: Some notes about software art

Inke Arns
http://www.v2.nl/~arns

"Software is mind control. Come and get some." [1]

Today artists do not only use prefabricated software to produce something, but engage with programming and software itself in playful, inventive and critical ways. Software art in the broadest sense describes activities which use software or code as an artistic material. I'd first like to direct your attention to the question of why software or code could be at all an interesting material for artistic production. Secondly, I will try to define the term "software art". And thirdly, I will talk about the notion of the performative.

1. Software as artistic material

Software has become ubiquitous which means that even unknowingly you cannot avoid it anymore today. Software nowadays can be found not only in computers but in almost everything ranging from communication devices, telephones, all sorts of media machines, even washing machines and other household devices. Ubiquitousness in this case does not only mean that software is everywhere, that it is all pervasive, but it also means that most of the time it remains invisible. This general invisibility of software applies on two different levels. First, in most cases the so called "raw" source code is covered by glossy surfaces where you are not manipulating the code directly but where you are working with a graphic user interface. The second level of the invisibility of software applies to the interface itself. It is what computer scientists call the "transparency of the interface". In everyday language transparency normally means visibility or clearness, or controllability through visibility. However, transparency in the case of computer science rather stands for information hiding, which means that the user does not notice the software working in the background.

Even if information hiding in the case of interface design can be useful, it can be said that at the same time it suggests to the user or to the viewer a direct or even natural view or access to the data. This is of course not the case as Lev Manovich notes in his book *The Language of New Media*. A short quote: "Far from being a transparent window into the data inside the computer the interface brings with it strong messages of its own." [2] Today, in a time when our environment gets increasingly mediatized and digitized and thus can be said to be based increasingly on software, it becomes more and more important to be aware that code or software directly affects the virtual and actual spaces in which we are moving, communicating and living. It has the capabilities to directly mobilize or immobilize its users.

This is why Lawrence Lessig in his book *Code and other laws of cyberspace* [3] claims that program code increasingly tends towards becoming law. Today control functions are being build directly into that very architecture of, for example, the net, which means into its code. Taking as an example the online service America Online (AOL) Lessig poignantly makes clear how code directly enables or disables freedom of movement, of speech and of behavior. Code should – even if it remains largely invisible – not be accepted as something natural or as god given fact. It is rather written by humans and can therefore be changed or conceived differently.

Software art deals with these coded structures underlying and generating visible surfaces. It focuses our attention on the all pervasive program code which our increasingly digitized working and living environment is based upon and uses this code or this software as its artistic material.

2. Software art

"Software art" describes an artistic activity which in the medium (or better: the material) of software allows for a critical reflection of software (and its cultural impact). Software art does not regard software merely as a pragmatic, invisible tool generating certain visible results or surfaces, but on the contrary focuses on the program code itself – even if this code is not explicitly being laid open or put in the foreground. According to Florian Cramer, software art makes visible the aesthetic and political subtexts of seemingly neutral technical commands. Doing so, software art can happen on different levels: it can be located on the level of the source code, on the level of abstract algorithms or on the level of the result generated by a certain program code. [4] Thus it comes as no surprise that there is a broad spectrum of software artworks ranging from so-called "Codeworks" consisting predominantly of ASCII-Code (not being *executables*), to experimental web browsers (e.g. "WebStalker", 1997), and fully-executable programmes (e.g. Antoine Schmitt's "Vexation 1" [5], 2000, or Adrian Ward's "Auto-Illustrator" [6], 2000). Software art *can* contain elements of generative art but does not necessarily have to be generative in a strict technical sense (see "Codeworks"). Software art and generative art can therefore not be used synonymously. Rather, these two notions function in *different registers*, as I hope to show in the following examples.

My first example is the project "insert_coin" [7] by Dragan Espenschied and Alvar Freude. In the framework of their diploma work which they realised under the motto "two people control 250 people" in 2000/2001, the two media art students secretly installed a Web proxy server at the Merz Academy in Stuttgart, Germany, which via a perl script manipulated the entire Web traffic of students and professors in the Academy's computer network. According to Espenschied and Freude, the aim of this project was to critically assess the "competence and the critical faculty of the users concerning the everyday medium Internet" [8]. The manipulated proxy server redirected the entered URLs onto other addresses, modified HTML code, transformed the content of the latest news

on news websites via a simple search-and-replace function (e.g. by replacing the name of politicians), as well as – and this was most unsettling – the content of private e-mails that were read through Web interfaces like Hotmail or Yahoo! During four weeks this project was manipulating the Web access of the entire Academy – and now that's the best: it remained unnoticed. When Espenschied and Freude announced the project publicly, almost nobody was interested. They even published a simple-to-follow instruction manual which would enable everybody to independently switch-off the filter that was manipulating the Web content. But only a minority of those concerned took the time to make the minor adjustment in order to regain access to unfiltered information. Still several months after the end of the experiment the Web access from most of the Academy's computers was filtered.

My second example, "walser.php" [9] by textz.com/Project Gnutenberg (i.e. Sebastian Lütgert), has been called "political" or "literary" [10] software. We might call it an anticopyright-activist software which has been written in response to one of the biggest literary scandals in Germany after the Second World War. The file name "walser.php" is not only an ironic allusion to the file "walser.pdf", a digital pre-printed version of Martin Walser's controversial novel which was distributed by the Suhrkamp publishing house as an e-mail attachment – and later on, due to the unfavorable circumstances, called back by the publisher (nice try: calling back a digital document). Rather, "walser.php" (or rather "walser.pl") by textz.com was/is a Perl script which via an appropriate Perl interpreter can generate a human-readable ASCII text version of Walser's novel *Death of a Critic* from the 10.000 lines of source code [11]. While the source code written in Perl contains the novel itself in an "invisible", machine-readable form and thus can be distributed and modified as free software under the GNU General Public License, it may be *executed* only with the written permission of the Suhrkamp publishing house. [12]

While Espenschied & Freude's experiment on filtering and censorship of Internet content points to the relatively unlimited potential of control that is contained in software, "walser.php" offers a practical solution for dealing with the commercial restrictions which threaten the freedom of information on the Internet in the form of Digital Rights Management Systems. While "insert_coin" temporarily realises a dystopian scenario in form of manipulated software, textz.com with its "walser.php" project develops genuinely utopian "counter measures in the form of software". [13]

Both of these projects are *generative* in the best sense of the word. However, neither "insert_coin" nor "walser.php" comply with the definitions of "generative art" currently found predominantly in the area of design. For Philip Galanter, for example, the term "generative art" refers to "any art practice where the artist uses a system, such as a set of natural language rules, a computer program, a machine, or other procedural invention, which is set into motion with some degree of autonomy contributing to or resulting in a completed work of art." [14] Similarly, Celestino Soddu, director of the Generative Design Lab at the Polytechnical University of Milano and organiser of the "Genera-

tive Art"[15] conferences, defines "generative art" as a processual tool enabling the artist or designer to "synthesize […] an ever changing and unpredictable series of events, pictures, industrial objects, architectures, musical works, environments, and communications […]."[16]

What becomes apparent in these quotations is the fact that "generative art" is interested predominantly in the *results* created by generative processes. Software in this context is seen and employed as a pragmatic-generative tool or device for the creation of certain results – without being questioned itself. The generative processes brought about by software here primarily do serve to avoid intentionality and to produce an unexpected, arbitrary and inexhaustible diversity of forms. The "n_Gen Design Machine" by Move Design, submitted to the *Read_Me* Festival 2003 in Helsinki, as well as Cornelia Sollfranks "net.art Generator"[17] (1999) which at the push of a button generates net art, should be seen as ironic commentaries on "generative design" (mis-)understood in such a way.[18]

"insert_coin" and "walser.php" go beyond such definitions of "generative art" or "design" in so far as these projects are interested far more in the *coded processes* generating certain results or surfaces. This interest in the coded processes, or, to be more precise, in the significance and implications of software and coded structures, sharply distinguishes them not only from generative art but also from many interactive installations of the 1990s which displayed their disinterest in software by hiding the program code in *black boxes*. Instead, projects like "insert_coin" and "walser.php" aim at questioning software and code as culture – and at questioning culture as implemented in software. For this, they develop "experimental software" (in "insert_coin" a proxy server and in "walser.php" a perl script), which does not only generate arbitrary surfaces but which critically investigates the technological, cultural or social impact of software. What's more, the writing of "experimental software" is very well concerned with *artistic subjectivity*, as can be seen in the usage of different private languages, and less with proving evidence of a machinic creativity (whatever this may be): "Code can be diaries, poetic, obscure, ironic or disruptive, defunct or impossible, it can simulate and disguise, it has rhetoric and style, it can be an attitude"[19], thus the emphatic definition by Florian Cramer and Ulrike Gabriel, both members of the *transmediale* software art jury in 2001.

I have tried to set up a somewhat polemical comparison between generative art and software art which I would like to show you:

Generative art	Software art
Focus on the <u>surface</u> ("phenotext") created by a generative process ("black box problem")	Focus on <u>generative process</u> (set in motion by a "genotext") which might generate surfaces or other results
Software as pragmatic/neutral tool serving to create a certain result; the tool itself is not being questioned	Software as <u>culture</u> which is being questioned; interest in aesthetical and political subtexts; software can be "experimental" and "non-pragmatic"
Software as pragmatic-generative tool	Software or code as a <u>work of its own</u> (possibly experimental)
<u>Efficient</u> code ("beautiful algorithms"*)	Code as excess, code as extravagance, <u>not necessarily efficient</u>
Employment of generative processes in order to <u>negate intentionality</u>	"Software artists […] seem to conceive of generative systems <u>not as negation of intentionality</u>, but as balancing of randomness and control. […] Far from being simply art for machines, software art is <u>highly concerned with artistic subjectivity</u> and its reflection and extension into generative systems."** (Cramer/Gabriel)
Fascination of the generative	Interest in the "performativity" of code

* Cf. Donald Knuth, *The Art Of Computer Programming: Vol. 1, Fundamental Algorithms*, Reading, Mass. 1997.

** Florian Cramer / Ulrike Gabriel, quoted after Andreas Broeckmann, "On Software as Art", in: *Sarai Reader 2003: Shaping Technologies*, New Delhi 2003, pp. 215-218, here: p. 216.

The notion of "software art" [or: artistic software] was first coined and introduced as a competition category in 2001 by the Berlin media art festival *transmediale*.[20, 21] Software art, which other authors call "experimental"[22] or "speculative software"[23] as well as "non-pragmatic" and "non-rational"[24] software, encompasses projects, if we are to follow the definition given by *transmediale* festival, whose essential artistic material is program code, or who critically deal with the cultural understanding of software. Program code is not being understood as a pragmatic tool serving to make the actual work run, but as a generative material of machinic and social processes. In this way, software art can as well be the result of an autonomous and formal creative practice as well as it can also critically refer to existing software and the technological, cultural or social impact of software.[25]

Interestingly, the difference between software art and generative art reminds one of the difference between contemporary forms of software art and early computer art of

the 1960s (and here I am referring to Tilman Baumgärtel's "Experimental Software" from 2001). The difference can be described as follows: Works from the field of software art, or experimental software "are not art that has been created *with the help of the computer*, but art that *happens in the computer*; software is not programmed by artists in order to produce *autonomous artworks*, but the *software itself is the artwork*. What is crucial here is not the result but the process triggered in the computer by the program code." [26] Though the computer art of the 1960s is close to concept art in its privileging of the concept as opposed to its realisation – nevertheless, computer art is not consistently thinking this idea to an end: With its works executed on paper by plotters and dot matrix printers it emphasised the final product – but not the program or the process which generated the work. [27] In current sorftware art projects this relation is reversed: Here its is "exclusively about the process generated by these programs. While the computer art of the 60s and 70s regarded the processes in the computer only as a method for generating an external result, but not as a work in its own terms, and treated the computer as a sort of black box, thus conceiling the operations and procedures going on inside it, today's software projects precisely want to focus on these processes, make them visible and to bring them up for discussion." [28]

3. Performativity of the Code vs. Fascination of the Generative

The current interest in software is, as I see it, not only grounded in the fascination with the generative aspect of software, i.e. on the ability to create and to procreate in a purely technical sense. What interests the authors of these projects is much more something I'd like to call the *performativity* of code. By *performativity of the code* I mean its ability to act and perform in the sense of speech act theory.

I am thinking here of a series of lectures held by John Langshaw Austin at the Harvard University in 1955. In these lectures, entitled *How to Do Things With Words*, Austin formulated the groundbreaking idea that language does not only have a descriptive, referential or constative function, but also possesses a performative dimension. Austin distinguishes three different speech acts: the locutionary [29], the illocutionary [30], and the perlocutionary [31] act. Only illocutionary speech acts are performatives – i.e., they create or do what they describe, provided that they are set within a matrix that is simultaneously social and semiotic. This draws attention to the importance of the *context* of a performative utterance. The illocutionary, or performative utterance can succeed or fail, depending on whether it is set an an appropriate context or not.

Accordingly, if I speak of the performativity of code, I claim that this performativity is not to be understood as a purely technical performativity, i.e. it does not only happen in the context of a closed technical system, but affects the realm of the aesthetical, the political and the social. Program code is characterised by the fact that here "saying" coincides with "doing". Code as an effective speech act is not a description or a representation of something, but, on the contrary, it directly affects, and literally sets in motion – or it even "kills" a process. [32] This "coded performativity [33] has immediate, also political con-

sequences on the actual and virtual spaces (amongst others, the Internet), in which we are increasingly moving and living: it means, ultimately, that this coded performativity *mobilises or immobilizes* its users. Code thus becomes Law, or, as Lawrence Lessig has put it in 1999, "Code [already] is Law" [34]. This is the reason why software art is rather more interested in the "performance" than in the "competence" (terms coined by Noam Chomsky), rather more interested in the *parole* than the *langue* [35] (famous opposition coined by Ferdinand de Saussure). In our context, *performance* and *parole* mean the respective actualisations and concrete realisations and repercussions a certain program code has on, let's say, social systems, and not only what it does or generates in the context of abstract-technical systems. In the projects "insert_coin" and "walser.php" the generative is deeply political – and this is so because the secret transformation of existing texts (in the case of insert coin) and the extraction of a text protected by copyright law from a Perl script (in the case of walser.php) is questionable and critical *not* in the context of a *technical* system, *but* in the context of *social and political systems* that are increasingly relying on these technical structures.

Certainly one of the "most radical understanding[s] of computer code as artistic material" [36] can be found in the so-called "Codeworks" [37] and the artistic use they make of program code. "Codeworks" almost exclusively consist of texts which are sent to mailing lists like Nettime or 7-11 in the form of simple e-mails. "Codeworks" make use of formal ASCII instruction code and its aesthetic – without relying on surfaces and graphical user interfaces normally created by this code. Works by Jodi, Netochka Nezvanova aka antiorp and mez [38] thus recall the existence of a hidden, "invisible shadow world of process" [39], as Graham Harwood has called it. Technically speaking, these "Codeworks" are located on the opposite side of an imaginary spectrum of generativity. However, the status of these languages or these language-like bits and pieces remains ambivalent: In the perception of the recipient they oscillate between supposed executability, thus functionality, and non-executability – i.e. dysfunctionality – of the code; in short: between significant information and meaningless noise. This phenomenon can be seen very clearly in Jodi's "walkmonster_start ()"-e-mail which was sent to the Nettime mailing list on October 22, 2001. While the text contained in this e-mail resembles executable program code, for the non-specialist reader it remains completely open whether in another location in the computer this text could in fact be compiled, and thus be turned into machine-readable algorithms, and thus, ultimately, be executable.

What plays a major role here rather than the actual technical execution is the understanding of the fact that the code fragments used in the Codeworks can *potentially* be executed and thus become performative. However, in "The Aesthetics of Generative Code" Geoff Cox, Alex McLean and Adrian Ward claim that "the aesthetic value of code lies in its execution, not simply in its written form". [40] While I can agree with this assertion for projects like "insert coin" and "walser.php" – because their critical (and perhaps even poetic) momentum lies exactly in their technical execution – this definition would have to be extended regarding the structure of the "Codeworks". The aesthetic and poetic value of these "Codeworks" indeed is constituted not only by their textual form, but

by the fact and the knowledge that they might *potentially* be executable. I would like to broaden the notion of the generative in the sense that code is not only executable in technical environments, but can become extremely productive as "imaginary software" in the reader him– or herself.

In contrast to generative art, software art directs our attention on the fact that our (media) environment is increasingly relying on programmed structures. In doing so, the "Code-works" use the "poor" medium of text which at the same time appears to be performative, or executable in the context of the command line. By using precisely this ambivalence or this oscillation between simplicity and totality of execution, the codeworks, and, more generally speaking, software art as a whole, point to the potentially totalitarian dimension of the algorithmic program code, the "invisible shadow world of process".

In kuda.org, 09. 04. 2004.

Notes:

(1) Slogan for the "Web Stalker" (1997) by the London artists group I/O/D, http://www.backspace.org/iod
(2) Lev Manovich, *The Language of New Media*, Cambridge, MA., 2001, p. 65.

(3) Lawrence Lessig, *Code and other Laws of Cyberspace*, New York 1999, http://www.code-is-law.org/.

(4) "Is it at the level of source code? If so it's a form of typographic layout or illumination. Is it at the level of abstract algorithms? If so it's a form of conceptual art or architecture. Is it at the level of the output of the program? If so it's a form of preparatory sketch." Rob Myers, "Re: 'Code as Art' Digest [from the PD-List]]", in: *[eu-gene]*, Jan 4, 2004.

(5) http://www.gratin.org/as/

(6) http://www.signwave.co.uk

(7) http://www.odem.org/insert_coin/ ; English: http://www.consorship.odem.org/content.html

(8) Cf. Espenschied/Freude's text for the Internationaler Medienkunstpreis 2001, http://www.online-demonstration.org/insert_coin/imkp2001.html

(9) http://textz.com/trash

(10) Florian Cramer, "walser.php", in: Olga Goriunova, Alexei Shulgin (Hg.), *Read_Me 2.3. Reader*, Helsinki 2003, pp. 76–78, here: S. 76.

(11) http://textz.com/trash/walser.pl.txt

(12) Cf. textz.com, "Suhrkamp calls back walser.pdf, textz.com releases walser.php", o. J., http://textz.com/trash/readme.txt ; Michael Thomas, "Tod einer Kritik. Walsers umstrittenes Buch als Perl-Script im Internet", in: *Telepolis*, 27.6.2002, http://www.heise.de/tp/deutsch/inhalt/on/12807/1.html . The project "pngreader" (http://runme.org/project/+pngreader/) functions similarly, the only difference is that here texts are encoded into PNG image files and thus can be distributed freely.

(13) Cramer, "walser.php", p. 77.

(14) Philip Galanter, "What is Generative Art? Complexity Theory as a Context for Art Theory", in: *Generative Art Proceedings*, Milano 2003, p. 4, http://www.philipgalanter.com/pages/acad/media/ga2003%20proceedings%20paper.pdf

(15) Cf. http://www.generativeart.com/

(16) Celestino Soddu, "Generative Art and Architecture", abstract, no year given, http://www.nyu.edu/studio/generative.html

(17) Cornelia Sollfrank, "net.art generator" (1999), http://www.obn.org/generator

(18) Cf. Olga Goriunova / Alexei Shulgin, "n_Gen Design Machine", in: Olga Goriunova / Alexei Shulgin (eds.), *Read_Me 2.3. Reader*, Helsinki 2003, pp. 66–67, here: p. 66.

(19) Florian Cramer / Ulrike Gabriel, "Software Art", in: Broeckmann, Andreas / Jaschko, Susanne (eds.), *DIY Media – Kunst und digitale Medien: Software – Partizipation – Distribution. Transmediale.01*, Berlin 2001, pp. 29–33, here p. 33.
(20) Other notable events: "Kontrollfelder" (Dortmund 2001, curated by Andreas Broeckmann and Matthias Weiß, http://www.hartware-projekte.de/programm/inhalt/kontroll.htm); the "Read_Me" Festival, conceived by Olga Goriunova and Alexei Shulgin (Moskau 2002, Helsinki 2003, http://www.m-cult.org/read_me/) and the exhibitions "Generator" (GB 2002, curated by Geoff Cox, http://www.generative.net/generator.html), "CODeDOC" (New York, Sept. 2002, curated by Christiane Paul, http://artport.whitney.org/commissions/codedoc/), "I love you – computer_viren_hacker_kultur" (Frankfurt/Main, Jan. 31-Feb. 5, 2003, http://www.digitalcraft.org/index.php?artikel_id=269) and the software art repository "Runme", launched in January 2003 (http://runme.org). Further examples of software art can be found on these Web sites. The most historically significant year in terms of software art is 1970, during which three software art-related events took place: Jack Burnham's exhibition "Software – Information Technology: Its New Meaning for Art", which took place at the Jewish Museum in New York; the exhibition curated by Kynaston McShine at MoMA in New York, entitled "Information"; and the foundation of the magazine "Radical Software" by Beryl Korot, Phyllis Gerhuny, and Ira Schneider (http://www.radicalsoftware.org/).

(21) For an early, programmatic concept paper on software programming and art, see Geoff Cox / Alex McLean / Adrian Ward, "The Aesthetics of Generative Code" (2000), http://generative.net/papers/aesthetics/ . An attempt to formally define and research the archaeological history of software art using literary and artistic examples can be found in Florian Cramer, "Concepts. Notations. Software. Art", Mar. 23, 2002, http://userpage.fu-berlin.de/~cantsin/homepage/writings/software_art/concept _notations/concepts_notations_software_art.html .

(22) Tilman Baumgärtel, „Experimentelle Software. Zu einigen neueren Computerprogrammen von Künstlern", in: *Telepolis*, Oct 28, 2001, http://www.heise.de/tp/deutsch/inhalt/sa/9908/1.html

(23) Matthew Fuller differenciates between "critical", "social" and "speculative software". Cf. Matthew Fuller, "Behind the Blip: Software as Culture", in: *Nettime*, Jan 7, 2002, http://amsterdam.nettime.org/Lists-Archives/nettime-l-0201/msg00025.html

(24) Olga Goriunova and Alexei Shulgin define "artistic software" as "non-pragmatic" and "non-rational": "[I]f conventional programs are instruments serving purely pragmatic purposes, the result of the work of artistic programs often finds itself outside of the pragmatic and the rational." (Olga Goriunova / Alexei Shulgin, "Artistic Software for Dummies and, by the way, Thoughts About the New World Order", in: *Nettime*, May 26, 2002, http://amsterdam.nettime.org/Lists-Archives/nettime-l-0205/msg00169.html

(25) Cf. http://www.transmediale.de/04/pdf/tm04clubtm04_formular_ausschreibung.pdf. On software art cf. the panel discussion during transmediale.03 (Künstlerhaus Bethanien, Berlin, Feb 4, 2003), http://www.softwareart.net/ , as well as Olga Goriunova / Alexei Shulgin (eds.), *Read_Me 2.3 Reader – about software art*, Helsinki 2003, http://www.m-cult.org/read_me

(26) Baumgärtel, "Experimentelle Software" [my accentuation].

(27) Typical in this context are the artworks by the so-called "Algorists", who were co-founded by Roman Verostko. Cf. Roman Verostko, "Epigenetic Painting: Software As Genotype, A New Dimension of Art" (1988), http://www.verostko.com/epigenet.html ; Roman Verostko, "Epigenetic Art Revisited: Software as Genotype", in: Christine Schöpf / Gerfried Stocker (eds.), *Ars Electronica 2003: Code – The Language of Our Time*, Ostfildern 2003, pp. 156–167. Here one finds formulations like: "The essential character of each finished work is derived from the ›form-generating-procedure‹ or ›algorithm‹ acting as genotype. For this reason one could say that the finished work is an epiphany, or manifestation, of its generator, the *code*. For me each work celebrates its code […]."

(28) Baumgärtel, „Experimentelle Software".

(29) Locutionary: The speech act as meaningful utterance.

(30) Perlocutionary: A meaningful utterance with a certain conventional – performative – force.

(31) Illocutionary: A meaningful utterance with a certain conventional force non-conventionally bringing about a certain effect.

(32) Cf. Inke Arns, „Texte, die (sich) bewegen: zur Performativität von Programmiercodes in Netzkunst und Software Art", in: Inke Arns / Mirjam Goller / Susanne Strätling / Georg Witte (eds.), *Kinetographien*, Bielefeld 2004 [forthcoming].

(33) Reinhold Grether, "The Performing Arts in a New Era", in: *Rohrpost*, July 26, 2001.

(34) Lawrence Lessig, *Code and other Laws of Cyberspace*, New York 1999.

(35) The distinction between competence and performance is credited to Noam Chomsky's generative transformation grammar (See Noam Chomsky, *Aspects of the Theory of Syntax*, Cambridge, MA., 1965); the distinction between *langue* and *parole* is attributed to Ferdinand de Saussure (See Ferdinand de Saussure, *Cours de linguistique générale*, Paris 1967 [1916]).

(36) Florian Cramer, "Exe.cut[up]able statements: Das Drängen des Codes an die Nutzeroberflächen", in: Christine Schöpf / Gerfried Stocker (eds.), *Ars Electronica 2003: Code – The Language of Our Time*, Ostfildern 2003.

(37) Cf. on this Alan Sondheim, "Codework", in: *American Book Review*, Vol. 22, Issue 6 (September/October 2001), http://www.litline.org/ABR/PDF/Volume22/sondheim.pdf

(38) Cf. for more examples Florian Cramers "<nettime> unstable digest" at http://www.nettime.org/archives.php

(39) Graham Harwood, "Speculative Software", in: Andreas Broeckmann / Susanne Jaschko (eds.), *DIY Media – Kunst und digitale Medien: Software – Partizipation – Distribution. Transmediale.01*, Berlin 2001, pp. 47–49, here p. 47.

(40) Geoff Cox / Alex McLean / Adrian Ward, "The Aesthetics of Generative Code" (2000), http://generative.net/papers/aesthetics/ .

Molecular Invasion and another projects

Beatriz da Costa and Steve Kurtz, Critical Art Ensemble

The idea of tactical media and what we mean by that has been a theme since we started to work. It is very important to say that we were quite disturbed by the idea of the cultural "monument" in terms of various types of cultural production. There was something that an artist was going to build – this grand body of work on a massive scale intervenes in art history and makes a place for oneself, and builds a bunker of meaning that will be there on perpetuity. Critical Art Ensemble wasn't particularly interested in that. We were interested in what was immediate and temporary. Perhaps the meanings that we are going to make will fade away over time. They weren't really made to last, or to be some type of a universal statement. We just dumped that out and said instead: "What we're interested in is looking at very specific territories at very specific moments of time, as well as the understanding of our audiences. Like a kind of reversing the traditional model of trajectory of the artist in which you are inspired in some way, you express this inspiration, then you put it out and people can come look at it", we went the other way looking at what's out in the world and how we respond to it within a social context?

What is Tactical Media?

We will try to illustrate what we mean by "tactical" as opposed to monumental ideal of the strategic by presenting some projects. The first project that we will present named "Renaming Project" was done in Australia, at Victoria Square in Adelaide. The situation that we ran into there was that the Aboriginals, local citizens of that particular area were having a very difficult time getting themselves represented in the public sphere. The focus of the project was the Center Park of the city, which to them was a secret land, but they had no place in it. It was called Victoria Square, and it has this huge statue of Queen Victoria, the ultimate – the great colonialist of the world. Needles to say, this was somewhat upsetting. There was a feeling that there was another history that should be represented in the same place. It was a strange meeting of the Aboriginal culture and the Western culture, because our idea of activism has always included doing things very directly and very fast. Their idea of producing a public meaning implied doing things very slowly. Those were two completely different cultural senses of time meeting together. Local citizens had been requesting/demanding that the city council dual-name Victoria Square with its local aboriginal counterpart "Tamdanyungga" (meaning: The dream space of the red kangaroo). The council neither refused nor consented. Frustrated by this situation, it was decided by the tribal Elders, local activists, and a variety of concerned parties that the square would be renamed by direct action. Street signs reading "Tamdanyungga" were contracted and made by the same company that had manufactured the signs for the city of Adelaide. It was when the Public Art Art Coalition (PAAC) was

formed. The group changed 10 of the 20 signs marking Victoria Square, thus dual-naming it. It was a way of showing a kind of agency in which people could control material conditions around them. They didn't have to feel that only a passive resistance was the only option. They've only lasted a couple of days. But, the interesting part was that six weeks later, the City Council relented, and now there is a dual-named square. It was a material kind of intervention that made public presence and changed things over – the representational structure that had been there for centuries. This is very close to what tactical media is. What we mean by that is to try to create not necessarily an object, but a process in a situation in which new perceptions and new ideas can be realized. Thus, other possibilities become probable and realizable.

Project "Radio Bikes" we realized together with a lesbian group in Graz that were very concerned with social programs in Austria, which basically reduced women's role to church, kitchen and children. More progressive women were not too pleased about this step back in a possibility of gender role in women's activity in the social-economic space. We started to work with them during the "Steiricher Herbst" festival, which is a monstrous, tourist, primarily main stream art festival that I wouldn't necessarily recommend. But, for the festival, the city authorities started redoing the entire city. They were tearing up all the roads and filling in the potholes, relaying the asphalt. And that was causing a tremendous amount of traffic jams and people were just jammed up in their cars, and about all there was to do when in that position, was listen to the radio! So, we designed a broadband pirate radio, nice and small that we could camouflage in, and connected it to the bicycle frame, which would act as an aerial and send out the broadcast. The women made their own particular broadcast for it, in protest to this re-introduction of the program. And we put it on an endless loop, together with a copy the ORF radio style of broadcasting, downloaded their jingles and slogans and peppered it all in there, so it sounded like an official news report.

Important thing is that we are working with low-tech products and that media is not so important to us. We don't consider ourselves digital or analog artists, or painters or sculptors, or new media artists. We try to resist all these categories, but appropriate what we can from any of these tools, for all of them are possible and useful and they just have to find their own situation. One of the things that upsets me quite is when someone says: "This medium is dead, and it has no purpose anymore." There's always a place where it has a purpose again, that it can re-live and it can carry a message better then other media. It's just figuring through that, and that too is part of this tacticality that we're looking at. Nothing is ever dead. It just needs the proper context for bringing it back again. I've never done a painting, but I'm sure that there can be a time I might do that.

Another project that we realized is "Child as Audience", that we did in 2001 with the Carbon Defense League, a group of software and hardware hackers. This project was trying to speak to teenage boys between 12 and 17 years of age about gaming cul-

ture, which is quite dispersed in the US. It provided the entire network we could act within as a kind of virus, although it was hard to figure out what teenagers would respond to. We made a package CD containing two different things. One was instruction on how to hack your Game boy, which is a little hand held game, and then how to create a game on your own. We provided a sample game, in this particular case called "Super Kid Fighter". Basically, what you had to do was to avoid all of the disciplinary apparatus of the town and interact with its criminal one. The aim is to avoid the officers and the police. The first thing is to escape from the boredom of school, and the more things you escape from, the more points you get. And, we also collaborated with hard-core death metal band called "Creation is Crucifixion" and did a CD with them on exploitation of child labor. This CD package was also distributed during a "Creation is Crucifixion" tour in Europe and North America. There, it reached another kind of audience.

A lot of those projects are very performatively oriented and embodied. While we are very interested in the virtual and what it means, and particularly how it confronts different power structures that are virtualized themselves, we don't leave it at that. That face-to-face interaction is qualitatively and exceptionally important to us. We think about that a great deal as we go through these different projects. The question is what models we use to solve problems. We don't hand out flyers or do whatever else. We made infrastructure through which free access becomes possible. The kind of work that we admire and tend to do is to set a model that could be replicated and that makes these kinds of situations credible and sustainable.

Tactical Hardware

Working with machines, doing robotics and microelectronics is out of our realm, but we have always felt that there is something that needs to blend in here. It is similar to biotech projects, which have always been one of our major interests. What we did in working with hardware is that we developed a series of workshops in different places, with different groups of people, and asked them what subject matter they were interested in, what the particulars to the area of their social environment were, and developed a small project around that. A few of them had a little addition to it, and that was not only a tactical media workshop like we called it, but tactical gizmology. "Gizmo" in the English language usually refers to a low-tech electronic toy, anything you'll find in toy stores, but it also refers to a single electronic component. We developed a few gizmos ourselves. One of them was a "digital tag". The idea was to develop the boards, and to bring the components with us so that people could see them, could get a little lesson on how to manage something, and to type their own messages in this digital display, and then use these gizmos as part of intervention in the city or wherever they were interested in. In the way these gizmos were developed, we tried very hard to keep them as cheap as possible and as easy as possible to use. So, a person could enter the text and to do that takes just any kind of PC and a cable. You could just type it, download it, and use it. Basically, this little device that we can buy for 5$ is for the people who

have never used it, because they have never been introduced to the possibilities of low-tech technology.

BioTech Projects

Critical Art Ensemble has developed several biotech projects. In one of them we tried to create a situation in which people could confront their fears of science and hopefully develop one form of understanding of what potential risks of positive uses of transgenic organisms could be. Looking into catalogues, texts and explanations, the main point was showed as kinds of transgenic organisms, in this case, bacteria. This particular one was designed in a way that its food source is oil, meaning that it's a bacterium that has been engineered to eat and digest oil. But, the beauty with these bacteria is that there is no potential risk of them mixing with their "wild relatives" – other bacteria that are out there. What people did not have to be afraid of is that the bacteria would replicate and transport as a gene, which was implanted in them, and get out of hand by going out there and mixing with all kinds of other bacteria. BT is a naturally occurring soilborne bacterium that is found worldwide. A unique feature of this bacterium is its production of crystal-like proteins that kill selectively specific groups of insects. BT Corn is designed to create a toxin, a pesticide toxic to insects that are harmful to the corn. The positive side of it is that you need to use less pesticide. The negative side of it is the pesticide that BT Corn produces is not only harmful to insects that are harmful to the corn, but also to other ones. So, it's not target specific. Another problem is that the toxin, which is produced by BT Corn, goes out in the soil, meaning that there is a certain amount of soil pollution. The soil toxicity level is breaking down, but it's very contested how fast this happens. The third issue is that the pollen of BT Corn flys over to fields, which do not contain engineered or modified food, and starts pollinating them. It often pollutes fields of organic farmers who really don't want to have bio-engineered corn on their fields. That has happened a lot in North America and Canada. On the top of it is that not only that their fields get polluted, but they also get sued for having BT Corn on their fields. You do need to have a license in order to plant BT Corn and the biotech company would then sue the organic farmer for using their product without a license. It was really quite a grotesque situation. That was a start position for us to develop "GenTerra" project. "GenTerra" was a fake, environmentally friendly, biotech company. We organized few computer stations that contained a web site of "GenTerra". People would usually just walk up to that and we would start talking to them and getting them started by asking question like: "What are transgenetic organisms? What are they used for? What might be the potential risk? What do you think about it?". Huge parts of these performances were dialogues and then the action with people. All of us were posing as technicians, so we were wearing these white coats and nametags. None of us pretended to be a scientist, because we simply weren't. What we did with "GenTerra" is that we developed our own transgenic bacteria. The type of bacteria we used was *Escherichia coli*. There are a lot of different kinds of *Escherichia coli* bacteria, but the ones we used are the ones that we all have in our own digestive

system and the ones we need to survive. We have organized a kind of bacteria release machine with little dishes containing bacteria cultures. By interacting with the bacteria release machine, a person could hit the spot and manually stop at one of the dishes. So, someone would come down, open the dish, go up and close the dish again. It was a kind of transgenic bacteria roulette wheel. For non-transgenic they got a green light, and for transgenic they got a red light. It was immediately after we had talked to people and raised a lot of these issues, were they willing to "take the risk" to release that type of bacteria, which we told them was completely safe, into the public environment. We taught them that the bacteria were safe from a position of only lab technicians, but still with the authority of wearing white coats. We had about maybe 60-70% percent of the people who were willing to interact with that and "play the game". The next step was to inspire people to take Petri Dishes that did not contain any bacteria, only the food source from the Lab. So, people could streak out their own bacteria culture, put it in a dish and seal it up, take it home and watch it grow. After people got interested in releasing the bacteria into the public environment, the next step was to ask them: "Are you willing to take them home with you? Are you willing to live with them for a while?" That was maybe 40-50% of the people who were willing to go this one step further.

The one thing that connects tactical gizmology and this project is that we really try to demystify, even on a very simple level, what is really going on in this scientific lab. Usually, biotech labs or any biology labs are really sealed up for the public and people have no access, no idea what's really going on in there. This experiment is actually very simple, in terms of just streaking out the bacteria, for any biology student, or anyone who has been in the lab. That wasn't a really exciting part. For a lot of people who have never seen that, who have no idea about it, simply learning this basic step, as a kind of equivalent of using a tool, a screwdriver or something, was really one way for them to get involved and to become more interested in a different perspective or understanding of biotechnology.

Many of these science initiatives are so aliened and no one really has a stake – it just seems too far away. From that reason we are trying to bring it home. And we thought that we could do that too in terms of practical models. This is the point when we started contestational biology initiative, of how methodologies, equipment and databases within the scientific world could be used to answer more politicized questions regarding the representation and products that were being made. The question we assigned ourselves was: "If round up ready corn is the No.1 product being sold right now as transgenic organism, and that's within the food chain, is there something that we could do to intervene at a biological level, rather then waiting for it to simply be there, and then all that's left to us are more standardized political procedures?" And: "What can we do as amateurs in this situation apart from just intervening in government policy or in policy formation in some way?" We started thinking this through and it was a difficult one for us. The big question that was truly haunting us, going back to "GenTerra" or

even earlier projects that we had done was: "What does it mean when transnational corporations begin to control food production from the molecular level up until the time that food is eaten?" In other words, what does it mean if they have the whole thing and if they could use these crops as a means to create dependencies particularly in the Third World countries or developing nations? Particularly the US and Great Britain have a great stake in this and are doing everything they can to pressure other countries to accept these products. We're not so worried about the health issues. We are more worried about the politics of it. Because, if you can create food dependency, you have no greater hope, short of military action over a given country, or given culture whatever the case may be. There has been a lot of resistance, both in Africa and India, in South America and Central America to the introduction of these types of organisms. And for a good reason! Most of the time they are seduced in a way by the level of the harvest that can be obtained. They are too worried about becoming a different kind of colonial dependent once again.

Until there is a greater democracy in terms of being able to access information, learning about biotechnology won't help that much, because you have to have the information that's available on the web and on the Internet, in order to be able to intervene. It's our only source of it, unless you know scientists that are going to let you in. So, we took a step back. As for what the future here will be, I'm sure that the transnational companies are looking at this and licking their chops going: "Look, this is going to be an incredible stretch of agrarian market!" And they would love nothing more then to build a dependency in places like Serbia for their food source. In their minds, it would help to "stabilize the area" or to impose Anglo American hegemony. We expect it's coming.

Novi Sad, 16. 04. 2003.
Transcription of the lecture is not authorized.

Mapping Contemporary Capitalism

Bureau d'Etudes

The "Bureau d'Etudes" group focuses its activities on the theoretical organization and production of different maps, presenting a visualization of relations in the context of contemporary social processes. In its research the group works with people and groups from different countries engaged in similiar forms of information gathering. First of all we will explain how we develop maps, then how they function, and finally how and where we distribute them.

In the research process we draw on facts relevant to what a company owns. This data reveals a kind of intricate architectural structure, in which each company is owned by a bigger company, or depending on which way you look at it, each company owns a smaller one. We source data from the Internet and newspaper articles which first set out relationships between companies in one country, and then relationships between companies in other countries. In our research we use facts that we find in 'directories' of large organizations, most often banks. In these directories you can find detailed information about their work expressed in percentages. These figures explain how and on what basis capitalism functions in the world today. The maps include special pictograms that illuminate those groups involved in large-scale investing and financing. These groups are generally banks and similiar organizations connected to centres of political power. Then we look at industrial lobbies and organizations that influence the preparation of laws, meaning they exert influence in all spheres – in secret societies and the state. We also examine individuals, both those who operate solely as individuals and those belonging to influential families. When we look at organizations we are guided by facts which specifically deal with numbers of employees, and total capital, ie. the income a company earns. Numerous connections exist between different organizations. It is critical to note that a person who owns one of the world's leading media organizations is also a member of the intellectual elite that influences the preparing of laws. There are also personal connections, marriages in which both parties are prominent in their respective spheres. In creating our maps we try to explain how the world is ruled. With individual connections between people and connections among the intellectual elite as our starting point, we try to explain how these relationships reflect on world politics. Control of the financial domain can even influence the political and religious relationships in a country. The centre of maps are occupied by countries belonging to organizations like the G-8 group, or countries that are highly influential in terms of population. Organizations that possess large amounts of money and have distribution networks throughout the world, in Europe, in America, those at the very "heart of financing" are also present. Questions are posed about the nature of the connections between the "big players'". In principle, companies that play substantial financial roles in various countries, are in reality purely political organizations, with extremely good mutual connections.

From the seventies, with the development of the information industry and communication networks, in these companies the evolution of "personal rights", and "personal laws", which function only for them can be observed. Generally speaking, the aforementioned intellectual elite works for them and the realization of their interests. They make laws that in their entirety match the needs of influential companies. In the main, these laws are later applied in all possible domains, even in public and state structures. In doing so, state institutions validate norms and standards that are largely the result of realizing the interests of big companies. We when look at lobbying, it is first and foremost the intellectual elite that gives directives on how to think. For example, if they say that prisons should be privatized, this signifies that the idea originates from their own interest to participate in the process, this is proven in reality, with America being a case in point. The concrete example of prison privitization illustrates the intellectual elite having influenced a law change that to a large degree provided for the criminalization of the whole society. At a certain point crime rates in America stagnated, only to witness enormous growth when the law change on prison privatization was introduced. At issue is the structure of capitalism according to the Japanese principle, where societies are connected in different ways. This principle has been around for centuries. After the Second World War the relationship between America and Japan changed with the regulation of an agreement, the result of which is manifested in their current political engagement. This concerns groups belonging to families and leading multi-national companies involved in capital investment and the insuring of bankst.

When we talk about controling the world, about a "world government", there are different kinds of networks capable of illuminating its functioning. The fact is that the world order is determined by a single set of information used in different ways. What is common to the foundations of all networks is that they are military networks, centred around military organizations and interests. When we talk about the Internet, we must be conscious of the fact that it is a military product, that the whole idea concerning a new form of exchanging information originated from the military. On one hand, there are international organizations that establish norms, standards and influence legal regulations, and on the other hand there are lobbies that work hand and hand with them. Civil society and finance are at the same time connected with the military, with the secret services, and also with large multi-national corporations. A number of former CIA bosses today head large multi-national corporations that have huge amounts of money at their disposal. The situation is the same in America, as it is in France and Russia. We have developed a map illustrating institutions working in Europe, and the kind of hierarchy that exists between them. When we look at these institutions, it needs to be noted that there is a 'heart', a centre of financial power from which everything stems, this centre also functions in terms of laws that issue future directives, setting down how a large number of institutions in other countries will act. In the centre of the map is the European Commission, and this is surrounded by different directives of the central European Commission. Therefore, what we are dealing with is norms and programs governed from the centre of the European Commission. Norms and directives are swayed by large European and inter-

national lobbies, and these exert great influence on national policy, on the politics of certain countries and ways of investing and distributing money. Maps are a very good vehicle to show how these relationships function in the world. Via the gathering of this kind of information and the developing of maps, the primary idea is to create a data base accessible to and usuable by all. On the basis of these facts it is possible to visually present the geographic distribution of power and mutual interests that link individuals, political structures and companies. They are very complex visual representations illustrating the complex structures and connections between the given entities. In one state there is one society connected with other societies, however, states maintain different types of relationships with societies of a similiar kind in other countries. On the basis of all this, it is possible to construct a kind of hierarchical, geographical map, in terms of establishing power relationships in the world. The maps deal with diffusion – cooperation between organizations engaged in similiar activies. In the broader sense, the maps are a means of identification and interpretation in contemporary society and are intended to explain the kind of world we live in today.

In September 2002, the European Social Forum was held in Florence, at which various discussions were initiated. The forum was intended to accurately present the essence of what Europe is today. Independent media intiatives were present at the forum and reported on the goings on from their own perspectives. One example of informing society was the distribution of free sample maps. The maps distributed in Florence were the result of collaboration between groups and individuals from different countries – England, France, and Italy. They jointly participated not only in the maps' development, but also in the financing of their production. This is a kind of network within which information is circulated and then, as in Florence, distributed as a way to inform the world at large. The next map was made for an event in Strasbourg in July 2002, where a large number of media activists gathered. Strasbourg is home to a police data base for immigrants, for everyone changing their place of residence, it serves all European countries in quickly locating the movements of immigrants. This data base is used by signatories to the Schengen Agreement and supports the visa regime it sets out. Thanks to the Internet's speed in disseminating information this data base is growing extremely quickly and extends to the smallest details such as medical records. Of course, this kind of data organization is chiefly used to combat theft and prevent potential illegal acts. Police use this data when searching for suspects, but at the same time they possess detailed information about immigrants. A gathering of activist groups was organized in Strasbourg in 2002 on the issue, debates, discussions and even protests on the streets of Strasbourg were organized, taking a critical approach to this kind of reapportionment and use of information. The map dealt with centres in which immigrants are detained and state-sponsored secret organizations. It is suspected that a large number of camps for immigrants exist, financed, maintained, and controled by state institutions and multi-national companies. In 2003 a World Summit on the Information Society was organized in Geneva, at which time an independent gathering of activist groups was organized alongside the official event. This time the map that emerged was different from

its predecessors. If prior maps were more global and explained the world order in global terms, this map concentrated exclusively on activites connected with Geneva. The main subject of the summit was the information society, how information is used and how to overcome the "digital divide". Specifically, research revealed that developed countries can use information to finance various projects in their spheres of interest, most often in less developed countries. The map also dealt with societies specializing in media manipulation. Ever present is the issue of the 'double-standards" of international politics, in that politically correct speech is always fed to the public, but little attention paid to the flipside, ie. to policies being implemented in the society.

All Bureau d'Etudes' maps can be found on the website (http://utangente.free.fr), which itself is a kind of information diffusion network. "Tangente University" is a platform for collaboration between activist groups, and all information concerning their activities, their texts, links etc, can be found in one place. The site looks at various research centres, autonomous knowledge, free access to information and collaboration. This form of self-organization exists as an opposition to the official information system in France, which is based on the work of the centre for informatiom, a former military organization and the biggest arms' manufacturer in France.

Q & A

Q: How is this form of activism financed? I'm sure that the government doesn't fund the printing of these maps, or the development of the site. Is work done on a voluntary basis?

A: Different systems of financing are used for different projects and the development of different maps. Take the Social Form in Geneva, this was financed by various parties, by truly diverse groups from many countries. In Italy there are numerous groups and social centres that work with and help in financing independent projects. In England a magazine is published thanks to individual contributions. There are many activist groups and it is not difficult to collect money on a voluntary basis. In the realization of certain programs, the state provides a certain amount of money for projects operating in accordance with the law. The state did provide money for the development of these maps, but later ran into problems with certain political parties.

Q: What forms of action do you want to provoke using the knowledge gained via these educational maps?

A: It depends on the map and where, how, and why it was created. As far as Geneva was concerned, the issue was the Summit on the Information Society, where civil society was denied access. Why? What sort of contemporary information society denies access to citizens? In general the maps are created to provide information to the man in the street, the average citizen. This poses the question of how an information socie-

ty functions if the civil sector is excluded from the whole process, its presence completely marginalized. On the other hand, citizens can also be seen as victims of the whole system, if we are aware how big companies function, that today brand names rule the world, and if we know whose labour is used in the process. There is a hotel chain in France, very popular in terms of its rates, but it needs to be known that this chain employs illegal immigrants when it is short of labour, and then participates in their removal when this need dwindles. The policy is always twofold. We need to help people see things from our perspective, and then to act in the most concrete way possible.

Q: How do you technically carry out the research and access information? It's not easy to gain access to essential information. Who does the research and collects the necessary data?

A: Collecting information is a very demanding job and assumes an unlimited time commitment. The Internet is the most common source of information, but the print media is being used more and more often. However, in terms of sources the language barrier is a problem. If you want information from Japan or another language areas, it's often difficult. It's a demanding job, the level of difficulty often depends on the subject that interests us. If this is the relationship between large international firms, we set about collecting information from all available sectors, many people work on this. Likewise, there are smaller groups and initiatives in possession of local information, through the pooling and exchanging of data relevant information is gleaned. Smaller groups largely employ the same methods and create a kind of data base, in this way the use of the Internet is rationalized. Later each group can use the data base and find the information they need. In the initial stages this work was neither synchronized nor defined, but via experience gained though the developing of maps, everything was given broader meaning.

Q: When did you start work and in what field?

A: Our basic motivation is an attempt to understand capitalism and the way in which it functions. There were several years of research and defining ideas before the first map was created. We began as artists who made artistic installations. We also write texts, in some part philosophical. For example, we've written about the relationship between someone who is unemployed and an artist, the difference between them and the kinds of relationships between them. Our point of departure was that we ourselves were artists, but in France for example, there is an entire machinery of exploiting artistic work, wherein everything is free, and in the end it always comes down to the valorization of work from which other people benefit. This led us to questioning whether artistic work was worth one's while. Does artistic work have a concrete artistic value and how does the arts' system as a whole function?

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Not Just Another Wireless Utopia
– developing the social protocols of free networking

Armin Medosch

The discovery of radio waves and their potential use for communication more than 100 years ago stimulated a flurry of competing wireless utopian visions: a commercial boosterist version with worldwide monopolies, pyramidal fraudulent stock market schemes and lots of badly informed speculation in the press about the promises of personal communication freedom; the idea that communication fosters democracy and thereby leads to a better and fairer world (liberal, social democratic and socialist version); ideas of a similar but more utopian mold such as Tesla's dream to provide free (wireless) energy (engineer's utopia); futuristic visions of poets and artists like Klebhnikov and Marinetti who thought that radiowaves had psychotropic properties and could be used to directly influence the mind (artistic utopia).

Most of the futuristic artistic wireless dreams in the early 20th century smacked of the totalitarian systems those artists were associated with. The artist as member of the elite is granted access by the state to use the broadcast quality of radio to simultaneously reach out to all citizens.[1] Only a few thinkers saw the one-tomany direction of this communication model as a problem. The German playwright and communist Bertold Brecht thought about radio as a two-way communication medium. Walter Benjamin in "The Author As Producer" demanded that writers should help to create mechanisms for others also to become writers.

It is hard to overlook how 100 years later wireless technology inspires wild utopianism in the commercial realm again. The ICT industry looks at the introduction of high-speed mobile broadband communication (3G or UMTS) as a potential savior after the sector suffered heavily from the New Economy crash. Those commercial dreams are challenged by the notion of "Free Networks", independent wireless community networks built and maintained by their users. Free Networks are an engineers' utopia minced with ideas that could be described as Internet egalitarianism (a set of values and ideals derived from earlier versions of a pre-privatization internet arcadia) and information ethics (based on "hacker ethics" where hacker is a positive term, someone who actively engages with digital technology on the basis of a do-it-yourself philosophy). Artists are discovering electromagnetic waves as material and medium for art and are switching increasingly into the modus operandi that Benjamin suggested. Instead of seeking to express their subjectivity they try to create communication systems and collaborative platforms. [2]

In between the two wireless bubbles circa 100 years apart the world had to come to terms with the introduction of radio, TV and, as the century progressed, an ever more relentless flow of innovation in information processing and transmission technologies.

(3) The point here is not to claim that the two wireless bubbles are just the same all over again but to see if there are common patterns in their unfolding and to get a better understanding of this process of how new technologies influence society and how they change under societies influence. One premise of this article is that we need to move on from speculative media theory and establish a clearer language of analysis and description based on material and structural properties of the "media" we are talking about.

One of the cornerstones of such a type of critical framework is to always look at the network topology. This term can describe both the physical layout of a network (how its nodes and edges are connecting) and a social model of organization (how messages are being passed on in a social system, which power structures, command control and feedback mechanisms are involved). The physical material and technological properties of communication media are another important factor that should be closely studied. This comprises the laws of physics (electromagnetic waves) and informatics (the protocols that govern communication in digital/electronic systems). On this level it makes sense to follow the approach that engineers have taken when creating those networks in the first place and look at them as a layered protocol stack (TCP/IP, OSI referential model). Each layer in the protocol stack has different functions to fulfill – establishing connectivity, transporting bits, forming messages out of bits, aggregating and channeling messages into types of "content" and "media" – and is entangled in a different political economy and social context.

Some threads in media theory, media studies and media art criticism showed a tendency to mix up the layers they were talking about, confusing the medium with the message, focusing on the content layer and its symbolic implications and overemphasising the societal impact or "true meaning" of media. Having failed to develop a clear descriptive language and sober analytical and terminological foundations, those sections of the media art/theory circuit run danger of paying a bitter price, having to play catch-up with the latest technologies, while the ground underneath them keeps shifting. They can be simply rendered irrelevant because forces are at work – we may call them half-jokingly the techno-economic subconsciousness – they have not even tried to understand. Thus, this type of "new media" artists and their hapless critics find themselves caught between a hungry festival machinery crying out for the latest and most trendy discourses (which are dropped like a hat at the very next occasion), an industry that keeps using them as cheap guinea pigs of new technology and a creative industry discourse that is about to crush the last attempts of semi-autonomous practice between the big wheels of technologically driven "progress".

To avoid past mistakes a clearer analysis of the interplay of the forces of production involved is suggested, looking at issues such as ownership and regulation or self-organization in regard to the layer of network communication to which they apply. On the physical layer of network communications this would be ownership or access to the hardware and carrier media; on the logical layer (loosely speaking, not strictly OSI) the

intellectual property rights of programs and standards which facilitate communication; on the application and content layer control or ownership of channels and the conditions surrounding production and dissemination. Each of these layers is affected also by regulatory powers, either generated internally (self-regulation) or externally (telecommunications laws and regulations, spectrum regulation). Once we have come to understand those layers and how they are interconnected more complex social layers such as ability or skills, social struggles and ideologically driven interests of particular groups almost automatically catch our attention and we can begin to speculate in a hopefully more meaningful way about the bigger picture, guided by an intellectual framework that includes disciplines such as the history of ideas and philosophy of science. This might help us to understand that network technologies have not simply fallen from the sky but are the result of concepts that we have, actively or passively, created as societies.

The naivety of the first wireless bubble around 1910 was soon punished when history unfolded. The relative ease with which a broadcast license could be obtained in the United States led to frequency wars after WWI, when commercial radio started to become viable. Stations tried to cancel out their rival stations signal by erecting stronger transmission towers and blasting stronger signals exactly on their neighbor's frequency. This forced the state soon to react and create a system of state regulation of radio spectrum. (4) The totalitarian streak in wireless utopianism of the 1920ies and 1930ies came to the fore when Nazis seized power in Germany and embraced radio as a favorite propaganda medium with Der Volksempfänger. After WWII those threats, totalitarianism on one hand, wireless free market anarchy on the other, shaped the postwar consensus on the regulation of wireless, which stayed in place for many years, until liberalization/deregulation began.

The consensus was that the use of the carrier medium, electromagnetic waves, should be regulated by the state in the public interest. Parts of the spectrum got allocated for exclusive use by state organs (emergency services, military) or other privileged license holders (state media, radio and TV, air traffic control). The content layer was also regulated following a state sponsored model. Most countries created a semi-independent National Broadcaster – independent enough to resist direct manipulation by the government of the day, but as a public broadcaster, governed in its conduct by rules written by parliament and broadcast commissions. Personal telecommunication (for a long time synonymous with the telephone) was the exclusive domain of state monopoly companies, which were under a "universal service" obligation.

The European postwar consensus started to break apart when neo-liberal policies of "deregulation" were put in place after the oil price shock in the seventies. Private radio and television companies were granted access to the airwaves and state monopoly telephone companies were gradually privatized. The emerging new Duopoly of state and privatized commercial media was attacked from the left by free media movements, which emerged first during Anti-Vietnam and student protests in the 1960ies. When the Internet was opened up for private use in the early 1990ies those threads seemed

to come together for a moment. The Internet was both seen as a Mecca for non-commercial, political activism and artistic intervention and as the pinnacle of the free market ideology. The crash of the new economy should have destroyed many of the myths and legends surrounding the net but next generation mobile phones have triggered a resurgence of the commercial boosterist utopianism replacing the "e" with an "m" – from e-to m-commerce.

In the 1900s wireless (mobile) telephony seemed to be just around the corner, but it did not happen like that. It should take till the late nineteen nineties for the mobile phone to become the worlds most cherished icon of consumer capitalism. The upgrade from GSM via GPRS to G3 is the trigger for a new wireless revolution, a new speculative bubble the industry has been waiting for after much of it had flatlined growth rates after 2001. The speculative bubble is not just based on economics but also on the expectation that the switch to GPRS and 3G marks something more substantial, the shift to a mobile networking paradigm. Mobile devices are said to be about to become our main way of accessing electronic communication networks. This would imply a shift away from the Internet paradigm and its egalitarian and participatory ideas, towards a much more tightly controlled mobile paradigm, which is based on proprietary control of a centralized network topology. As Internet access provided through wires gets also upgraded to so-called "broadband", changes in the ownership structure and provider landscape mean that the freedom which the net once promised and in a way still facilitates is under threat. It is worth noting here that "freedom", one of the worlds most abused concepts, is meant to be understood in this context not as a metaphysical concept and not even on the level of political philosophy but on a very pragmatic level as a hacker type of freedom – the freedom to access and use communication networks under a minimum of restrictions, empowering individuals and communities to make the best use of those networks as they see fit. The radical libertarianism of this approach may be limited in its value as a political ideology but still separates this idea clearly enough from the two dominant models – the declining state ownership model and the still expanding private corporate "empire building" model. [5]

Over the last few years loosely connected groups all over the world have started to build free networks, networks which are owned and maintained by their users and are largely free of state and corporate influence. This fledgling free network movement is not one coherent group, campaign or strategy, but another one of those multitudes, a free association of individuals who work together for a common goal under a loose umbrella of a few principles and with a lot of enthusiasm. Free networks try to build large-scale networks following a bottom-up grassroots approach by using DIY technology (homemade antennas, second hand hardware, free software) and suggesting decentral self-organization as preferred organizational model. There is no single entity that plans and builds the network. Instead groups promote the suggestion that people share bandwidth and organically grow a network by (wirelessly) connecting their local nodes.

This can be achieved with a number of technologies but recently the technology of choice became 802.11, a family of wireless Ethernet standards developed by the IEEE, which is incorporated in many mass market networking products such as WLAN network cards and chipsets. Hardware prices have fallen dramatically over the last few years thanks to the commercial boom in wireless (powered by Apple Airport and Intel Centrino, among other players). Radio Networking brings together two powerful technologies, innovative wireless transmission technologies such as spread spectrum and computer networking technology. 802.11 is based on open standards which is an important advantage for the free network movement. It means that free software can run on most proprietary hardware platforms as long as the protocol has been properly implemented. It also works well with embedded Linux chips and with older computers running some Unix version. Networking across different platforms but based on open standards has been the success formula of the Internet, a story repeating itself with 802.11.

The 802.11 technology was originally considered a substitute for cable based local networks in homes and offices. Wireless access points or hotspots create a Local Area Network (LAN) which can be accessed by any device within range with an 802.11 radio card or chipset; usually an access point also provides or is connected to a gateway to the internet. This type of node (access point plus gateway) is sitting at the center of a star topology; it is the master of all communications in the local net, while connecting to the next higher level on the internet, for example via an ADSL connection. Such a set-up is called a hotspot in the commercial world.

The vision of Free Networks as expressed by Consume [6], London, one of the ideologically most influential groups, is to apply the peer-to-peer principle known from file sharing networks to the underlying physical material layer of network communications. Consume proposed in 2000 that a wireless "meshed network" should be built, a highly distributed network where each node is connected to many other nodes and no node is in a central or privileged position. The owners of nodes are legally independent from each other and arrange the traffic of data across the net by following the minimal requirements of the Pico Peering Agreement – a framework for owners of nodes to establish connections and formulate the rules that govern them.

The WLAN standard 802.11b has two modes, the infrastructural mode (for Access Points) and the ad-hoc mode (also called peer-to-peer or computer-to-computer mode, depending on hardware/software vendor). When a wireless network is set-up in the latter way, each node can connect to each other node as long as they are within range of their radio signals. Since there is no privileged place in the network, each node carries out functions of switching data packets around, acting as a router and Internet gateway. Since every node shares this task of switching packets around, the overlapping radio coverage of all nodes together forms a single wireless cloud. Computers located within this cloud can communicate with high data rates while the cloud is connected at its edges at a number of points with the Internet. "Unwiring" the edges of the commercial

Internet, owners/users in a free network cloud are reclaiming their right to self-define how they do their telecommunication.

The Consume idea of a large free data cloud over London has not succeeded (yet). Currently, what we have got is hundreds of wireless community networks in the UK and thousands more worldwide. Most of them operate on a local scale, forming little wireless clusters where people can at last share files, play games or watch videos without any outside interference. At the pragmatic end of the argument those networks allow to share the cost of bandwidth efficiently between a greater number of users. At the visionary end this should only be the beginning. The small free network islands should grow together and "unwire" ever-growing parts of a city, a region, a country, the world. By becoming bigger, the community networks could gain leverage in peering negotiations with commercial bandwidth providers and get cheaper access to global networks. In the long-term bandwidth might become free or reasonably cheap. And, more importantly, free networking might completely change the way telecommunication is provided.

Meshed networking – not as the description of a network topology but as a specific technology [7] – has generated a kind of geeky buzz around "mobile ad-hoc networking". Bleeding edge mobile ad-hoc networking protocols are seen as the key to a bottom-up wireless utopia. If ad-hoc network technology gets implemented in mass-market mobile devices (handsets, PDAs), everybody who carries such a device becomes a walking personal telco. Dynamic, self-healing routing software and computer controlled radio would always find the nearest working node within range and use it to pass on information. If this approach gets enough support it could in the end lead to a world without telecommunications providers and the people would truly become the network.[8] The free network paradigm and the mobile broadband paradigm as proposed by the mobile telcos are at opposing ends of the spectrum in regard to all major factors – the network topology, the political economy, their regulation and the social context: they could not be more different. For instance, free networks don't "meter" traffic, they usually don't measure the volume of data exchanged because the network is built on mutual consent of allowing "free transit". Mobile phone networks meter just about everything, the volume of data, the time spent online, the location, calls made and received, etc. Mobile phone networks have the classic star network topology inherited from the age of monopoly telcos. The switching stations at the centres of connections have total control over every aspect of the network. The old way of thinking in the Post Telephone and Telegraph (PTT's) offices' way which is still the mobile network owners' credo reduces users of a network to being consumers. There is a network, which is theirs, because they own and maintain it, and users are being sold access to this network. Probably deep down inside they even think that they are generous letting anybody use their network. The consumer is considered as a leaf at the thin end of the tree structure of the network, as someone who mainly wants to download stuff.

In the free network scenario this is radically turned around. The user is not considered a dead end street, someone just sucking away somebody elses bandwidth, but is seen as a node that is fully integrated in the network and contributes to the value of the network as a bandwidth and content provider. Every connection is two-way and symmetrical, which means that the data rates for uploading and downloading are the same. The free network movement says that if we do things the right way we could create abundance – a maximum of bandwidth available at a minimum of prize; scarcity of bandwidth is, according to some activists [9], a fiction upheld by the industry not to let their markets collapse.

One main reason why free networks could be so successful is that they operate in a band of the spectrum, which is license exempt in most industrialized countries. That means that certain frequencies can be used without needing to ask the authorities. The success of spectrum deregulation of the frequencies used by 802.11 inspired an "open spectrum" movement which demands that more parts of the spectrum become license exempt. New software controlled radio technology (spread spectrum, ultra-wideband) will allow micro-regulation to happen on a local scale without the strong arm of the government being needed, according to open spectrum activists. [10] The problem of interference that dogged radio in the 1920ies can be avoided with those new techniques and therefore we should completely rethink the way spectrum is regulated.

The mobile telephony industry has been crippled by the high license fees companies had to pay when spectrum was auctioned off at the height of the new economy boom. The auctioning of spectrum marked an approach very different from the recent past. For the first time spectrum was sold as a commodity to the highest bidder. With the launch of 3G in many European countries already delayed, commercial pressure on companies is piling up. The name of the game is maximizing the ARPU, the average revenue per user. Mobile business is frontier capitalism bending over backwards to microtune itself to every whim and whiff of the consumer. Many different models, services and price plans target different peoples tastes, priorities, preferences, incomes, life-styles. In this race to increase the ARPU phones are getting gizmoed up to the eyeballs, with phones that can play "true tone" ringtones, download, store and play music, shoot pictures and even video. Part of this campaign for the purse of the user is that mobile telcos have started to believe they must become "content providers" and offer music and video files for download as well as news, sport and soft porn. This approach that telephone companies act simultaneously as content providers has failed 100 years ago is almost certain to fail again.

The sum total of these developments is that accessing the Internet via mobile phone is probably the most expensive way of doing so on a bit per penny ratio. Behind the glossy brochures and consumerist promises looms a brave new wireless reality. The centralized command and control model flies in the face of ideas of communication freedom. The upgrading of phones will soon provide even more opportunities for social control. With the new generation of picture phones the whole (connected) world becomes a panopticon, a world of permanent oberservers and the permanently observed, where

public and private, intimate social spaces and global networks are from now on permanently intertwined. As the mobile incorporates ever more functions such as being used as an electronic purse and in the context of emerging technologies such as biometry, it could become the preferred way of confirming ones identity – purse and passport all in one, managed by your corporate multinational of choice.

Another worrying factor in this respect is that mobile phones have proprietary system architectures. The operating systems of PCs have been liberated by Linux and other free versions of Unix. Paying the prize of having to do a bit more of installation and maintenance work than the average Windows or Apple user, the Linux community enjoys the freedom to configure their machines exactly the way they want. With mobile phones we are back in the closed world of proprietary systems, the secrecy of corporate research and development laboratories and ever present Non-Disclosure Agreements (NDAs). Many of the freedoms that we just started to enjoy with the combination of the Internet and freely programmable personal computers are threatened with the switch to mobile networks. The mobile urgently needs to get open sourced.

The Internet facilitated a gift economy where millions engaged in the exchange of communications without any financial renumeration. From the personal homepage to communication in mailing lists and web-fora people worldwide embraced this opportunity to communicate in ways which were open ended and not directly goal oriented, not serving a specific purpose. When every communicative action becomes subject to metering and billing a gift economy is hard to sustain. What fascinated us about the net first time round, that it was non-locative, a non-space, where it did not matter where you were, as long as you had access to the net, is getting reversed. With mobile phones as with a range of other devices which are location sensitive the information sphere gets connected with geographical space. Every user can be pinned down geographically, which opens a wealth of possibilities for surveillance and intrusive business propositions (location based spam). [11]

As Myerson observes in "Heidegger, Habermas and the mobile phone" [12] our concept of "communication" has already changed and is undergoing further change. We are now likely to accept that it is an act of communication when two machines connect. Our personal motivation to use those connections is to satisfy needs or "wants", or at least that's what the industry is selling: personal freedom to get what we want. There is no human other required in many of those "communications", we are accessing information, retrieving data. This is not "the great conversation" imagined by neo-libeal internet guru JP Barlow. It is also very different from Habermas' idea of the "public domain". But we have to be careful here. Many narrations about new media speak of loss, decline, etc (email ruins our grammar and spelling, and texting is the last nail in the coffin of the written language, according to cultural conservatives pessimistic outlook) [13]. We can savely ignore the concerns of cultural conservatives who see the apocalypse of European high-culture behind every corner. But what is really at stake her, and if I understand him right this is also what concerns Myerson, is the shaping of future technologies through our collective social imaginary.

When we speak of new media or communication technologies what matters is not just the technology – its cool naked efficiency – but how it is embedded into society. The free network proposition is to rethink our relation to technology and to reconceptualize technological systems based on them being grounded in communities which are actively involved in shaping them. Technologies of the future are developed now in our collective social imaginary; and the technologies that we have now have been shaped by imaginary futures of the past [14]. In the case of mobile telcos we are promised a consumer bonanza based on Cold War style command and control architecture. Their networks are technological expressions of schizophrenia and paranoia. The free network proposition is to generate alternative future technologies based on ideas along the lines of a grassroots movement or the "multitudes". It is a utopia (if we even have to use this word) on the plane of immanence, where control is handed over to a distributed many-to-many architecture. Shaping future technologies becomes a job where everybody can and should be involved.

Within only a few years the wireless community and free network idea has come a long way. It has been recognized that there is an intrinsic connection between free networks, free software and free hardware [15]. They mutually depend on each other to guarantee their survival in the long term. Providing a liberated infrastructure for communication those movements protect freedom of speech and other communication rights. This interdependency has recently been described by the term "network commons". The network commons does not just comprise the physical network itself but also the protocols that run it and the content that is being carried. The network commons re-defines our understanding of the public domain in electronic communication.

What is yet missing is the social glue that binds all that together, the social protocol of sustainable network self provision and self-organization. There are efforts underway with the Pico Peering Agreement to provide such social glue between network owners. Other open source developers are working with FOAF, RDF and other social network techniques, which can help to bring together like-minded people. Those efforts have sofar failed to gain mass appeal. The free network movement has been carried forward by nerd enthusiasm. To grow beyond those isolated free network islands built by a handful of nerds and establish a viable network commons more people of different backgrounds need to join and together develop the social protocols of networking. This implies that we finally overcome the totalitarianism inherent in the wireless utopia of then and now. Free Networks are (hopefully) not just another wireless utopia but a practical proposition for slowly changing the world by introducing a different relationship with the technical means of communication.

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Notes:

(1) About the notion of totalitarianism in wireless futurism see for instance Gregory Whitehead:
Out of the Dark: Notes on the Nobodies of RadioArt
http://www.somewhere.org/NAR/writings/critical/whitehead/main.htm

(2) This sentence refers to a second part of this article which has not been written yet and which deals with the work of wireless artists and activists such as Marko Peljhan and Shu Lea Cheang.
The publication 'dive' by <Kingdom of Piracy> gives an introduction into copyleft culture and collaborative platforms. http://kop.fact.co.uk

(3) Basically the whole electromagnetic spectrum can be used for communication, from very low to very high frequencies. Our understanding of spectrum is often obscured by language. 'Radio' is just one application that we have found useful. It operates at the lower end of the spectrum. While heat and visible light are the only parts of spectrum we can perceive through our senses, scientific progress has helped to make use of spectrum which we didn't even know it existed 100 years ago. We can now 'look' at things very small and very very far away, which means we are also looking back in time. See for instance "Hubble's deep view into the cosmos"
http://news.bbc.co.uk/1/hi/sci/tech/3546803.stm

(4) How the spectrum has been divided up can best be understood by looking at a frequency allocation map such as this one:http://www.ntia.doc.gov/osmhome/allochrt.pdf

(5) For a more coherent explanation of the 'free' in free networks look at my lecture notes for a presentation at the Open Culture Conference, Vienna June 2003:
http://twenteenthcentury.com/uo/index.php/OpenCultures

(6) Consume http://consume.net

(7) Meshed networking technology has first been developed in a military context and is now carried for ward by a special working group at the IETF, the mobile ad-hoc networking group (MANET); protocol specifications are published as RFC's and implementations released as open source.

(8) At the time of writing mesh networking has been successful in small experimental settings (of up to 30 laptops running, for instance, the mobile mesh protocol) but has not been tested on a mass scale.

(9) Malcolm Matson, co-counder of the Access To Broadband Campaign and a telecommunications insider for 20 years claims that if the market really was free bandwidth would cost nothing nowadays.

(10) A very useful briefing on open spectrum issues: Open Spectrum, New America Foundation
http://www.newamerica.net/index.cfm?pg=article&pubID=1002

(11) A group of programmers, writers and artists is trying to introduce a more productive viewpoint on location based 'services' by re-naming it 'locative media': http://locative.net/

(12) Myerson, George, 'Heidegger, Habermas and the Mobile Phone', 2001

(13) Maybe there is actually a decline in standards of language use, maybe we cannot uphold any more the values of the classic era of the book. But even so that may be the case, there is a dialectical trade-off coming with that as was already described by Benjamin in the 1920ies, which is that we increasingly will see the benefits of widening participation: move over Joyce and Musil, here comes everybody. The internet, by cultural conservatives regularly blamed as consisting of 99 percent trash, has stimulated unprecedented amounts of text production. For example, with the public diary keeping of 'bloggers' or 'web-loggers' amateur publishing is an ongoing success story as never before.

(14) Barbrook, Richard, 'Imaginary Futures', Chapter One, 2004 (forthcoming)

(15) Eben Moglen at Open Cultures, Vienna 2003: http://opencultures.t0.or.at/oc/participants/moglen

A Concise Lexicon
Of / For the Digital Commons
RAQS MEDIA COLLECTIVE

ACCESS

The facility to log on and log in to a space or a network where people and meanings gather. To be present, to have the ability, the key, to decode a signal, to open doors, to be able to download/upload on to any system of signs and signals – be it the Internet, a book, an art work, or a dinner party. There can be no excess of access.

BANDWIDTH

Describes the dimensions that are necessary for messages, signals and communications to get through. The greater the bandwidth of a system, the higher the number of messages and the higher the quantum of information that it can accommodate at any given time. It follows from this that access is a function of bandwidth. More people can make themselves heard when there is room for them to speak and be spoken to. Bandwidth translates into content-rich information, streams of video, audio and text flowing into each other. It also translates at the moment into cash. The hard cash and control that comes from selling pictures and sounds and numbers to more and more people.

CODE

That which carries embedded within it a sign. A code is always a way of saying something to mean something other than that which is merely said. A codecan be "opened", in the sense that it can be accessed and entered, as opposed to "broken". An open-accessculture of communication "reveals the source" of its codes. A closed culture of communication blocks access to its codes. "Free code" is code which welcomes entry, and is open to change. "Free code" needs to be shared for it to grow. Code connotes community, a community of "encoders, decoders and code sharers". Like eggs, code is sometimes best had scrambled.

DATA

Information: Can mean anything from numbers to images, from white noise to noise to sound. A weather report, a portrait, a shadow in surveillance footage, a salary statement, birth and death statistics, a headcount in a gathering of friends, private e-mail, ultra high frequency signals, sale and purchase transactions and the patterns made by pedestrians as they walk in a city – all of this can be and is data. Data, like coal, uranium and other minerals vital to the running of the world economy is mined, processed, refined and sold at a high price. Battlefields, early twenty-first-century inter-personal relationships and stock exchanges have been known to be hypersensitive to data traffic. Data mining is a major emerging industry in Delhi. The miners lead very quiet days, and spend long nights coding in low temperature zones called " Data Outsourcing Centres". Contrarily, the word Data (dātā) in Hindi/Sanskrit is taken to mean "giver", which suggests that one must always be generous with information, and make gifts of

our code, images and ideas. To be stingy with data is to violate an instance of the secret and sacred compacts of homophonic words from different cultural/spatial orbits (dātā in Hindi and "data" in English) as they meet in the liminal zone between languages, in the thicket of the sound of quotidian slips of the tongue. Errors in transmission and understanding too carry gifts and data.

ENSEMBLE

The conceit or delight in togetherness in an increasingly anomic, fragmented world. Playing or working together to create finished or unfinished works. Chamber musicians, criminals, code-hackers and documentarists form ensembles. Artists try to. Effective ensembles are high bandwidth assemblies that build into their own architecture portals for random access into themselves. They are, when they are at their best, open systems that place a premium on shared information within them. They can at times maintain high levels of secrecy while appearing to be transparent. Here, confidentiality is an index of practices in gestation. Mined data is, sometimes, restored to natural states of information entropy in data dissembling ensembles, which have been found to work best at night in media labs. The Raqs Media Collective is an ensemble and everything it does is an ensemble of existing or anticipated practices.

FRACTAL

The self-organising design of repeating, replicating structures, often found in snowflakes, tree branch growth patterns, molecular structures and free code. Every part of a fractal pattern carries within it the signature or the emboss of the whole. A single fractal iteration carries within it the kernels of all others of its kind. Every fractal is a rescension of every other fractal that has grown from within it. In the same way a fragment of free code, or free cultural code, carries within it a myriad possibilities of its own reproduction and dispersal within a shared symbolic or information space. Fractals best describe the geometry of the matrices that are formed when data is shared instead of being just mined and shipped by a community of coders. Fractals are the fruit trees of the unconscious designing mind.

GIFT

Something freely given, and taken, as in free code. Gift givers and gift takers are bound in networks of random or pre-meditated acts of symbolic exchange. The code begets the gift as the form of its own survival over time. In this way a gift is a quiet meme. Reciprocity begets reciprocity. The principle of the gift demands that the things being given be priceless, in other words so valuable as to be impossible to quantify in terms of the possibilities of abstract generalised exchange. The gift must at the same time, be easy to bear and keep, easy to use and there must be no guilt involved in its destruction or dispersal when its use value either changes or demands redistribution in order to be effective. Gifts open doors to our own possibilities of generosity. In this way they facilitate access to the things we did not even know we had. And, there is such a thing as a free lunch, although it requires the pursuit of a special recipe.

HETEROGENOUS

That which begins in many places, like the story of a person's life. Diverse, dispersed, distributed, as in the authorship of culture, and in the trajectories of people who come to a site. Interpretations and ideas embrace greater freedom only when they encompass heterogeneity. In this, they are like most intimacies and some kinds of fruitcake. The richer they are, the more layers they have.

ITERATION

An articulation, when seen as an event, is an iteration. Utterances, whispers, manifestoes, graffiti, stories, rumours and fragments of poetry found in the streets – each of these are iterations. The organised rendition of a stretch of code is also an iteration. Iteration implies a willingness to say something, and access to the means of saying it, and a time in which it can be said. Every iteration resonates through orbiting memes that are set off on their vectors by the fact of an utterance. An iteration is the kernel of a rescension. It needs to be said, and then said again.

JOURNAL

A record of the everyday. Annals of matters varied and quotidian. Data from day to day to day. On reams or scraps of any material that can carry the emboss of time. The material may vary from newsprint to video to sound to binary code, or a combination of the same, and the journal may transmogrify from being a witness, to a participant in that which is being recorded. The extent and scale of "participation" depends on the frequency of entries into the journal, and the number of correspondents it can muster. The higher the frequency of entries or number of correspondents, the greater is the intensity of the inscription of a time on a journal. A densely, thickly inscribed journal is one that is usually open access in terms of writing, reading and publishing. Why else would strangers want to write in? An open journal expects to be published anywhere at all. An open journal actively practices xenophilly. When a journal becomes more than a gazetteer of a moment it turns into a history. It then begins to make sense of itself as much as it does about a time that it spans. Conversely, every history begins life as a journal.

KERNEL

The core of a work or an idea. The central rescension, of a narrative, a code, a set of signs or any other structure that invites modification, extrapolation and interpretation, by its very presence. Here, the term core must not be confused with "origin" or with any other attributions of originality, which mean little within an open access system. It is almost impossible to determine the origins of a code, because the deeper we go into the constitutive elements of a code, the more it branches out to a series of nodes within and outside a given system of signs. It is more meaningful to talk of the "custody", rather than the "origin" of any system of signs. A kernel is often the custodian of a line of ideas that represents within itself a momentarily unique configuration. Kernels embody materials in states of intense concentration. This is because they have to encapsulate a lot of information, or nourishment, or structure building materials, within very limited dimensions. The density of information within a kernel is a key to its own extensibility. The more the thread that is rolled into a tight ball, the more it can be unwound. Kernels,

by their limitedness and compactness, are portable, not cumbersome. As in the kernels of certain fruits, they may be hard to crack, but once they have been opened, they yield delicious and nourishing stuff. Kernels lend themselves to easy reproduction, but are fragile and often in need of protection. This protection may also come in the form of an outer layer of interpretation, which states the purposes and nature of the kernel, so that it is not prised open to answer every basic query about itself.

LIMINAL

Interstitial, vestibular and peripheral. Far from the centre, close to the border. A zone both between and without larger structures. Liminal spaces and moments are those into which large stable structures leak animated data about themselves and the world. Things happen in liminal zones. A city carries within it the contradiction of liminal zones located in its centre, because inner cities are the city's farthest borderlands. Liminal fringes are often the most conducive environments for the culture of memes. This is because exiled images, ideas and meanings from several stable structures mingle in the corridors between them. Here, bereft of identities and other certainties, they are free to be promiscuous and reproduce. They infect each other with recombinant strands of thought and image. At the same time, the perspective of liminality brings intimacy to bear on an exclusion. Being liminal is to be close to, and yet stand outside the site of the border of any stable system of signs, where meaning is frayed from being nibbled at on the edges. Nothing can know the centre better than the sideways glance of peripheral vision. Liminality may be acquired from prolonged exposure to the still air of airport departure lounges, thick and over-boiled tea at the Inter State Bus Terminus on the ring road in Delhi, or the sub liminal flicker of a cursor in an e-mail message.

MEME

The life form of ideas. A bad idea is a dead meme. The transience as well as the spread of ideas can be attributed to the fact that they replicate, reproduce and proliferate at high speed. Ideas, in their infectious state, are memes. Memesmay be likened to those images, thoughts and ways of doing or understanding things that attach themselves, like viruses, to events, memories and experiences, often without their host or vehicle being fully aware of the fact that they are providing a location and transport to a meme. The ideas that can survive and be fertile on the harshest terrain tend to do so, because they are ready to allow for replicas of themselves, or permit frequent and far-reaching borrowals of their elements in combination with material taken from other memes. If sufficient new memes enter a system of signs, they can radically alter what is being signified. Cities are both breeding grounds and terminal wards for memes. To be a meme is a condition that every work with images and sounds could aspire towards, if it wanted to be infectious, and travel. Dispersal and infection are the key to the survival of any idea. A work with images, sounds and texts needs to be portable and vulnerable, not static and immune, in order to be alive. It must be easy to take apart and assemble, it must be easy to translate, but difficult to paraphrase, and easy to gift. A dead meme is a bad idea.

NODES

Any structure that is composed of concentrated masses of materials which act as junction points for the branching out of extensible parts of the overall system may be described as nodal. The concentrations or junctions being the nodes. A nodal structure is a rhizomic structure, it sets down roots (that branch out laterally) as it travels. Here, nodes may also be likened to the intersection points of fractal systems, the precise locations where new fractal iterations arise out of an existing pattern. A work that is internally composed of memes is inherently nodal. Each meme is a junction point or a node for the lateral branch-ing out of the vector of an idea. In a work that is made up of interconnected nodes, the final structure that emerges is that of a web in which every vector eventually passes through each node at least once on its orbit through the structure of the work. In such a structure, it becomes impossible to suppress or kill an idea once it is set in motion, because its vectors will make it travel quickly through the nodes to other locations within the system, setting off chains of echoes and resonances at each node that trace a path back to the kernel of the idea. These echoes and resonances are rescensions, and each node is ultimately a direct rescension of at least one other node in the system and an indirect rescension of each junction within a whole cluster of other nodes. Nodes, when written, perhaps erroneously, as "no-des" gives rise to an intriguing hybrid English/Eastern-Hindi neologism, a companion to the old words – des and par-des. Des (in some eastern dialects of Hindi, spoken by many migrants to Delhi) is simply homeland or native place; par-des suggests exile and an alien land. "No-des" is that site or way of being, in des or in par-des, where territory and anxieties about belonging, don't go hand in hand. Nodes in a digital domain are "No-des".

ORBIT

A path that describes the continuous movement of anything within a structure. Because the movement within it is continuous, it (an Orbit) is also impossible to define in terms of origin or destination. What is possible to determine at any given moment is the vector of an orbit. A meme, when orbiting within a structure of signs, is neither travelling away from its origin, nor is it travelling towards a destination. This is why, in an open access system, which is composed of memes, it is meaningless to talk in terms of authors and audiences, rather one can only speak of the node where one got on to an idea, and the junction where one got off, perhaps to enter the vector of another orbiting meme. Sometimes a work of interpretation, like certain comets and other stellar objects, can have an eccentric orbit. This means that there is always a likelihood of a cluster of signs and images from afar, brushing past objects on its path, entering the orbits of other constellations, when it is least expected to. The sky of meaning is full of shooting stars.

PORTABILITY

The feature of a system or work that best describes its ability to move quickly through different spaces and mediums. A sign or a meme that can travel well between image, sound and text media is portable. A work, which while it speaks of one site, is understood in another location, is portable. A work that describes many locations in the course of its interpretative orbit is also portable. A portable work is rich in memes, which act as engines for its movements, and is endowed with compact kernels that can travel

well without danger of being cracked open. Briefcases, languages, postcards, Swiss knives, computers, jests, stories and shoes are portable. Gifts, because they change hands, must always be portable. Monuments can never be. The life histories of some (itinerant) individuals and (nomadic) communities make them approximate the condition of portability.

QUOTIDIAN

Common but not commonplace. The memorable nature of the everyday. Memory walking down a street and turning a corner. Memory buzzing in a hard disk. Ubiquitous, the dirt in a site, the fog in a liminal zone, that which is thickened through repetition. Milk, computers, onions, computers, pyjamas, computers, carpal tunnel syndrome, computers, accidents, computers, sex, computers, bread, computers, night, computers, class, computers, skin, computers, love, computers, money, computers, headaches, computers, police, computers, buses, computers, bicycle, computers, radio, computers, horoscopes, computers, matrimonials, computers, funerals, computers, biscuits, computers, conversations, computers, silences, computers. The quotidian is that which makes a journal turn, over time, into a history, because it induces the search for patterns and meanings in an otherwise tangled mass of time, in memes iterated beyond reasonable limits. Routine, yet random, the quotidian nature of anything demands fleeting moments of lucid engagement with the real world, which now includes within it the world that is forged every time any fingers do a qwerty dance on a keyboard. The quotidian is a measure of all things, rare and commonplace.

RESCENSION

A re-telling, a word taken to signify the simultaneous existence of different versions of a narrative within oral, and from now onwards, digital cultures. Thus one can speak of a "southern" or a "northern" rescension of a myth, or of a "female" or "male" rescension of a story, or the possibility (to begin with) of Delhi/Berlin/Tehran rescensions of a digital work. The concept of rescension is contraindicative of the notion of hierarchy. A rescension cannot be an improvement, nor can it connote a diminishing of value. A rescension is that version which does not act as a replacement for any other configuration of its constitutive materials. The existence of multiple rescensions is a guarantor of an idea or a work's ubiquity. This ensures that the constellation of narrative, signs and images that a work embodies is present, and waiting for iteration at more than one site at any given time. Rescensions are portable and are carried within orbiting kernels within a space. Rescensions taken together constitute ensembles that may form an interconnected web of ideas, images and signs.

SITE

Location, both as in the fact of being somewhere, and also as in the answer to the question of "where", that "somewhere" is. Hence, situation. In a system of signs, site – understood in the sense of the kernel of a situation – is not necessarily a place, although a place is always a site. A site can be a situation between and through places. A web site is an address on the Internet that always implies a relation of desire between hosts and visitors. In other words, it doesn't really mean anything for a place to exist (virtu-

ally) if it is left unvisited. In this way, a site can be both located as well as liminal. Real as well as potential. A system of signs (a work) that carries the markings of a location on a map may be situated in the relation that a map has to the world. It may be situated between the map and the world. This situation may be a special characteristic of the work's portability, in that, although mobile the work always refers to the relation between sites that fall on its orbit. In this way, marking a site as an address calls for the drawing up of relations between a location and the world. A site is a place where the address is. A site is a place where the work belongs. A situation between these two locations (where the work is and where it belongs) is a site where the work orbits. A site is also a place where people need to wear hard hats to protect themselves from random falling bodies, travelling in eccentric orbits.

TOOLS

Things that help make things. Ideas, instruments, concepts, ways of doing things, and ways of being or acting together that are conducive to creative work. In the context of an online environment, a community or an ensemble of people is as much an instrument as a software application. Conversely, a tool emerges when a group of people discover a method that helps them act together to create something. Again, a work that acts as a navigation aid, a browser or interface in a web of memes, is also a tool with which to open and search for other tools.

UBIQUITY

Everywhere-ness. The capacity to be in more than one site. The simple fact of heterogeneous situation, a feature of the way in which clusters of memes, packets of data, orbit and remain extant in several nodal points within a system. The propensity of a meme towards ubiquity increases with every iteration, for once spoken, it always already exists again and elsewhere. It begins to exist and be active (even if dormantly) in the person spoken to as well as in the speaker. Stories and the kernels of ideas travel in this way. A rescension, when in orbit, crosses the paths of its variants. The zone where two orbits intersect is usually the site of an active transaction and transfer of meanings. Each rescension carries into its own trajectory memes from its companion. In this way, through the encounters between rescensions, ideas spread, travel and tend towards ubiquity. That which is everywhere is difficult to censor, that which is everywhere has no lack of allies. To be ubiquitous is to be present and dispersed in "no-des". Sometimes, ubiquity is the only effective answer to censorship and isolation.

VECTOR

The direction in which an object moves, factored by the velocity of its movement. An idea spins and speeds at the same time. The intensity of its movement is an attribute of the propensity it has to connect and touch other ideas. This gives rise to its vector functions. The vector of a meme is always towards other memes, in other words the tendency of vectors of data is to be as ubiquitous as possible. This means that an image, code or idea must attract others to enter into relationships that ensure its portability and rapid transfer through different sites and zones. The vectors of different memes, when taken together, form a spinning web of code.

WEB

An open fabric woven of strands and knotted at usually regular, but equally possibly irregular, intervals. Intricately structured, accessible and yet endowed with complex networks of coded messages. The world wide web is a zone in which a digital constellation of memes can find an orbit. A web of code is used to harvest meanings, just as a web of threads is used to harvest fish.

XENOPHILLY

Friendliness and hospitality towards others, a human quality that best describes the moral economy of an ideal digital domain. The search for connectedness, and the desire to travel along the vectors from elsewhere. The meaning of the hyphen that transforms "no-des" into a positive value.

YARN

Fabrics, and stories, are made from yarn. A yarn is a snatch of reality that travels by word of mouth. Or it is shipped along with lots of html cargo. It is said that each fragment of code contains rumours and gossip, or yarns about the makers of the code. Yarns collect in basement cyber cafés, in stairwells of cinemas, in call centres and behind the opaque surface of the walls of an apartment whose address is Error 404, which can be anywhere and everywhere at once. In these places, yarn collectors stitch different stretches of code-fabric to make long bolts of data, which are then taken apart by hackers, and distributed into many orbits. Yarns can adjust the amount of information they bear in relation to the width of bandwidth. That is why yarns are good kernels.

ZONE

A site, within a location, or a work, that demands an attenuated awareness because of the porosity of the lines that demarcate its existence. A zone is differentiated from a grid that frames a site because its borders are fluid and accessible, or because they witness a lot of traffic. It is difficult to distinguish the centre from the liminal periphery of a zone. Alertness about where one stands is a prerequisite for entering any zone. A zone may also be described as the overlap between orbits in a work, where memes transfer material from one orbit to another, where logic likes to fuzz. The zone of a work extends to the outer circumference of the orbit of its ideas. Zones are places where serendipity might be commonplace, and the commonplace serendipitous. They are best entered and exited at twilight on shunting cars along abandoned railroads that connect different data stations. The timing of twilight may vary, depending on one's longitude, but twilight lingers longer in the zone of the web.

New Delhi, 2001.

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Eric Kluitenberg is theorist, writer, and organiser on culture and technology, currently based at De Balie – Centre for Culture and Politics in Amsterdam. He taught courses on culture and new media at the University of Amsterdam, the post-graduate education programs of Academy Minerva in Groningen (NL), and worked on the scientific staff of the Academy of Media Arts Cologne. He lectures and publishes extensively on culture, new media, and cultural politics internationally. Since 1988 he has been involved as an organiser in a series of important media culture events in Europe.

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Darko Fritz is born 1966 in Croatia and lives and works in Amsterdam and Zagreb. He is media artist, curator and graphic designer. Studied architecture at University of Zagreb and Art Media at Rijksakademie van Beeldende Kunsten in Amsterdam. He works with reproductive medias and technology in artistic and cultural context. Works with video since 1988 (as TV virus). First computer-generated environment in 1988. Digital photography since 1990. First attempt to webcast 1994. Founding member of (all) artist groups Cathedral (1988), The Imitation of Life Studio (1987 – 1990), Young Croatian Electronic Films (1991) and The Future State of Balkania (1998). Involved in Syndycate network. He curated exhibitions "Culture of Graphic Design in The Netherlands" (1999), "I Am Still Alive" (Internet art and computer art from sixties, 2000), "Club.nl" (art and art networks from the Netherlands, 2000) and "Lights from Zagreb" (interactive light installations, 2001).

http://www.mi2.hr/alive/

Armin Medosch (AT/UK)

Armin Medosch is a writer, curator and artist. He co-founded the on line magazine "Telepolis" in 1996 and co-edited it till summer 2002. With "Telepolis" he won the European Online Journalism Award 2000 for investigative reporting and the Grimme Online Award 2002 for media journalism. He curated the online exhibition "Shopping Windows" (2001) and organized the free networking meeting "Berlon" (2002). Current work includes the book and CD ROM "DIVE" for "Kingdom of Piracy" and a forthcoming book on "Free Networks".

http://kop.fact.co.uk/
http://residence.aec.at/kop/DIVE/cd/dive/intro.html

Inke Arns (DE)

Inke Arns (born 1968) is an independent media art curator. She finished an M.A. thesis in Free University of Berlin in 1996 on Neue Slowenische Kunst and she also finished her PhD at Humboldt University on the Historical Avant-Garde in Eastern Europe in the 1980s-1990s. Her curatorial work includes exhibitions, festivals and conferences on international media art and culture, like OSTranenie 93 at the Bauhaus Dessau; Minima Media: Medienbiennale Leipzig 1994, Leipzig; discord. sabotage of realities, Hamburg 1996/97; body of the message, Berlin 1998; and update 2.0, ZKM Karlsruhe for the Goethe-Institute, 2000. She is a founding member of the translocal "Syndicate" network (1996-2001), of the Berlin-based "mikro" association for the advancement of media cultures (1998) and of "SPEC-TRE", a mailing list for media culture in Deep Europe (2001). She has published widely on issues of media and net culture and art in international magazines and books, amongst others in Leonardo Electronic Almanach (USA), Kunstforum International (D), ArtIndia (IN) and Convergence: Journal of Research into New Technologies (UK). Author of two books, "Neue Slowenische Kunst" and "Net Cultures".

Critical Art Ensemble (SAD)

Critical Art Ensemble (CAE) is a collective of five tactical media practitioners of various specializations including computer graphics and web design, film/video, photography, text art, book art, and performance. Formed in 1987, CAE's focus has been on the exploration of the intersections between art, critical theory, technology, and political activism. The collective has performed and produced projects for an international audience, and has written five books: "The Electronic Disturbance", and its companion text, "Electronic Civil Disobedience and Other Unpopular Ideas", "Flesh Machine: Cyborgs, Designer Babies, and New Eugenic Consciousness", "Digital Resistance: Explorations in Tactical Media". Their most recent work is "The Molecular Invasion" (Autonomedia, 2002).

http://www.critical-art.net

Bureau d'Etudes (FR)

Founded in 1998, the Paris-based **Bureau d'Etudes** is a media artists group. Bureau d'Etudes concentrates on mapping various issues of world governance and also contributes to Université Tangente, research about autonomous knowledge in Strasbourg. With its work Bureau d'Etudes develops pictographic installations that deal with themes such as networks of data-gathering systems, bio-war and global resistance movements. They visualize the distribution of power in its various forms – political, cultural and financial – on a global basis and show the relationships between the different actors involved.

www.universite-tangente.fr.st

Sarai / Raqs Media Collective (India)

Sarai, the New Media Initiative, a programme of the Centre for the Study of Developing Societies is an alternative, non-profit space for an imaginative reconstitution of urban public culture, new/old media practice and research and critical cultural intervention. The framework of Sarai includes scholarly reflection and creative work on film & video, computers, telephony, print culture, radio, multimedia and the Internet. Sarai's initiators are group of people from Centre for the Study of Developing Societies and Raqs Media Collective.

http://www.sarai.net

kuda.org – Social implications of new media

New Media Center kuda.org is an organization which brings together artists, theoreticians, media activists, researchers and the wider public in the field of Information and Communication Technologies. In this respect, kuda.org is dedicated to the research of new cultural relations, contemporary artistic practice, and social issues.

Kuda.org's work focuses on questions concerning the influence of the electronic media on society, on the creative use of new communication technologies, and on contemporary cultural and social policy. Some of the main issues include interpretation and analysis of the history and significance of the information society, the potential of information itself, and the diffusion of its influence on political, economic and cultural relationships in contemporary society.

The development of new communication technologies has brought about numerous changes in contemporary society, touching the political, social, and cultural realms. The Internet, processes of applying new technologies and new models of communication via the "networking" process and the development of critical thinking towards the above, have become part of our everyday lives. A large body of researchers, theoreticians, programmers, critics and media activists are devoted to the research and explanation of the global phenomena of our time and their consequences.

New Media Center kuda.org opens space for both cultural dialog and alternative methods of education and research. Social questions, media culture, new technologies art, and the Open Source and Free Software principle are areas in which kuda.org is engaged.

Programs:
Kuda.info / infocentar

Provides information in the field of new media, contemporary art, social phenomena, research and education by means of a library, mediatheque and digital archive. In addition information is disseminated about cultural events, seminars , call for proposals (inter(nationally. For all visitors of kuda.org Internet is free as a free beer.

Kuda.lounge / presentation and lectures

Consists of lectures, workshops, talks, public presentations of artists, media activists, theorists, scientists and researchers. kuda.lounge is a place of active participatory dialog. From 2000 onwards over 100 events have been organised . The center boasts its own venue for public events and workshops (real time recording of programs, digital archiving and Internet uploading).

Kuda.production / production and publishing

Creates a matrix for non-profit artistic production in the field of new media and technologies, interdisciplinary research and experiment. In 2003 collaborations have been with a.o. Institute of New Cultural Technologies Public Netbase – Vienna, and with the Museum of Contemporary Art Belgrade. kuda.org has organized the Serbian edition of the exhibition World-Information.Org. From 2004 onwards kuda.org offers free web space on the kuda server for artists, activists and the NGO sector.

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