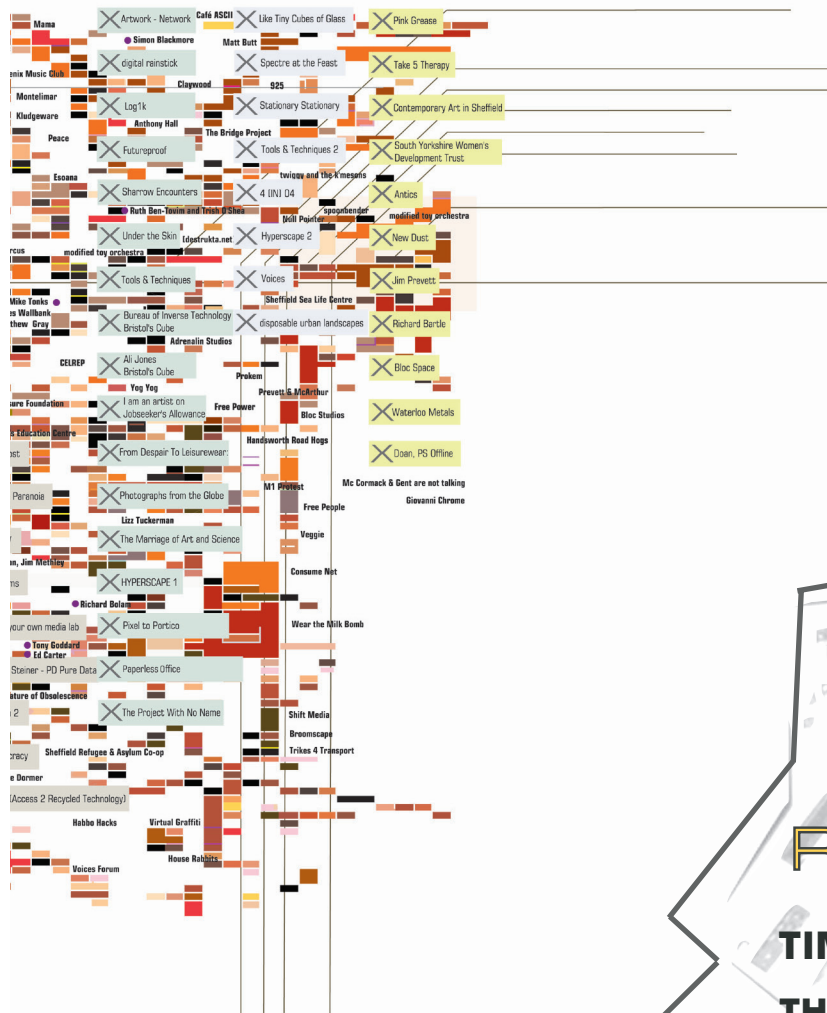




RE-PROGRAMME

TIME SPACE AND (LOW) TECHNOLOGY
THE 5-YEAR OUT-OF-DATE TRASH MEDIA LAB



_TIME SPACE AND [LOW] TECHNOLOGY : THE 5-YEAR OUT - OF - DATE TRASH MEDIA LAB [p02]

_KICKING THE UPGRADE HABIT (SURVIVING ON THE INTERNET FOR LESS THAN \$2 A DAY) [p08]

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RE-PROGRAMME

Time Space And [Low]Technology: the 5-Year Out-Of-Date Trash Media Lab. Text: Paula Roush

Kicking the Upgrade Habit (Surviving on the internet for less than \$2 a day. Diagrams: James Wallbank

Re-Programme Your Space And Others Will Follow

Robotic Birds: Acorn BBC microcomputer/ Z Lab interfacing techniques. Text: Paul Granjon/Z Productions Image: p23

Tech_nicks: Mobile Media Lab/Meet Space. Tech_nicks Closing Report For the Arts Council of England (October 2000) Text [selection]: Lisa Haskel

Lowtech Video Wall. Text: James Wallbank

Gender Changer/crash 2 upgrade. Text: Gender Changer Academy

FreePost. Text: Andy Welsby

Fax TV. Text: James Wallbank

Image/Urban Dereliction. Text: PR in conversation with Mozaz

e-films. Text: Scott Hawkins

Grow Your Own Media Lab : Intro to GNU/Linux. Text: A2RT

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Disposable Urban Landscapes. Text:PR in conversation with Steve Withington

Phantasy Star: Four Point Nine Recurring': intro
Text: Harriet Lowe

FAQ Frequently Answered Questions

Text: PR in conversation with James Wallbank

Lowtech Manifesto

Kicking the Upgrade Habit

time space and [low]technology the 5-year out-of-date* trash media lab

Lowtech Video Wall

A new form of media lab has emerged, at the threshold of dead technologies and live information systems: the trash tech lab. An emerging type of media lab, it is built out of trash hardware and open source software. In the intersection of redundant technology and online community, it consists of a physical space where people can meet and share resources, work in the development of new applications for trash technology and learn how to set up their own trash tech labs. Access Space, initiated in 2000, is UK's first trash media lab that provides at street level an ongoing research and development project on the use of trash computers for artistic and social purposes. It also recreates a networked open environment where anyone can come in and, without paying membership or a fee per hour, be part of a community that works with technology with total freedom and at no cost.

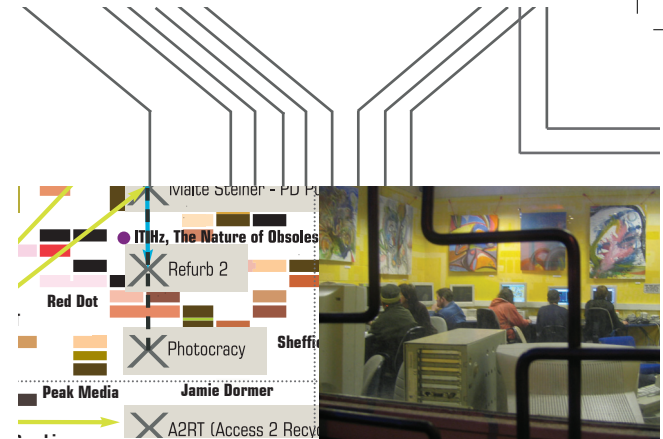
Open access has been the core of our current technological paradigm since its very beginnings in the 1960s when the internet was developed as a collaborative network to further the experimental work

being developed in media labs, enhancing the communication between researchers and allowing for the immediate sharing of knowledge and resources[1]. In this sense, our techno-space has, since its inception, been characterised by access. More than a public domain, it might be ideally described as a commons [2]. Thanks to all those that have been asserting the primacy of openness, it is possible today, and in spite of the increasing regulation and commercialisation of the internet, to legally download at no cost all the software needed to boot a computer and transform it into a global communications centre [3].

In terms of hardware, the situation can be described in a different manner. It is relatively easy in most western cities to find computers for zero cost in skips or just dumped in the street. Both integrated systems or spare components are also abundant in second hand markets at very low cost. However, unlike open source software that has worked as a control force in the software market, hardware production continues dominated by the often quoted Moore's law. This predicts that the ratio

price/ performance of processing chip continues to duplicate on average every 18 months [4]. This upsurge of output in the IT industry has resulted in a massive redundancy of computers specially amongst corporate users with problematic consequences for its survival (ie high maintenance budgets) [5], all part of a major bubble that is propelling the 'IT revolution' towards its downfall or recession point [6].

Judging by a look at its skips, it would be possible to assume that Sheffield has the fantastic abundance of trash computers of a city that is still undergoing its IT expansionist moment [7]. However, there are indicators that it is actually a shrinking city, a process that has accompanied deindustrialisation in other european cities [8]. Thus the city wide project of upgrading the 'steel city' [9] into a new information hub and converting the former cutlery factories into the Cultural Industries Quarter (CIQ) [10] faces two major issues: an unemployment rate higher than the UK average [11] and the concurrent emergence of a new worker that needs to acquire the skills to survive in the knowledge industries where the immaterial replaces the mass commodity and precarious labour is regulated by property rights licensing schemes.



The awareness of these three circumstances- availability of open source software, over abundance of redundant computers at zero cost, and an emerging class of cultural workers - is the driving force behind Sheffield's Access Space. Opened to the public in a former film props workshop owned by Sheffield City Council, it underwent a basic refurbishment which converted it into the temporary autonomous zone that it is today. Equipped with its own server and a network of trash machines running on GNU/Linux, it embodies the open source attitude behind the most prolific online communities and the low tech approach to media and technology developed by James Wallbank. The CEO behind Access Space, he is also the founder of Redundant Technology Initiative [RTI], the media art group with whom he continues to develop and exhibit work.

Since 1997 James Wallbank has been developing with RTI the process that links creativity with technology recycling. He started with Size Matters, RTI's first exhibition in a disused bar in Sheffield, followed by Redundant Array+Hard Copy in 1998, when a warehouse in the centre of Sheffield was occupied with an accumulation of 200 donated computers. This was followed in 1999 by two participatory installations in art spaces. Trash??, an exhibition and trash-tech workshops with kids at Huddersfield Art Gallery and Used Future at South Hill Park Arts Centre at the Bracknell Gallery, Berkshire. In the centre of Britain's Silicon Valley, Used Future satirised UK's obsession with the technological age. Recycled machines donated by individuals and companies around South Hill Park in response to a year long recycling marketing campaign, were converted into sculptural environments which included computer generated graphics and programmed activity.

Research into recycling and campaigning started being complemented by a series of presentations and discussions in temporary media labs to an audience of artists, activists, and arts administrators. In Low Tech Digital Revolution at ISEA 98, Wallbank challenged the Revolution theme of the conference, and suggested that

much digital arts activity is complicit in a massive marketing push. This critical attitude and a discourse about the availability of free IT to all people as empowering tools form the ethos of Access Space: 'People must have access to technology in circumstances in which they can use it to express themselves, communicate their opinions, to make connections, to campaign for what they believe in. At the moment the IT industry seems to have authorised two purposes for which it's okay for the mass of people to use computers: to work, to consume. We believe in two far more radical, empowering ways in which people should be able to use technology: to create, to communicate. So what are we doing about it? We're taking computers from the stream of machines that are being donated to us, and we're proposing to get these machines online, and give the public access to that technology at a very, very low cost.' [12]

Access Space as an independent organisation, extends into the public domain the ideas behind the RTI's own lowtech digital revolution: 'A lot of IT access projects suggest that they're empowering their users - but seem to foster a dependency on the machinery that they provide. We don't believe that booking two or four hours

e Opening

Genderchangers

e - films

Sheffield

per week in a high-tech IT suite constitutes useful, empowering access to technology. By dealing with computer equivalents of Ford Escorts, not Formula Ones, Access Space project will encourage users not to be forever dependent on the facilities that we'll provide - we can show them how to start to teach themselves about computers, and give them the time and space to get on with it. Then, if they feel that they want to develop their own involvement with IT, they'll be able to pick up the sorts of computers we'll be using in the space very cheaply from used computer resellers, and we'll have the freeware and shareware applications to get them going independently.' [12]

In collaboration with other media organisations, and the support of city councils, Access Space is developing 'Grow Your Own Media Lab!', a model of tech-sustainability that enables a diverse constituency, from community groups to small corporations, to create their own trash media lab. It is based on the use of open source software to upcycle trash computers into fully networked environments which are running on fully legal no cost GNU/Linux operating system. In the low tech approach, recycling means up-cycling, as machines that had a limited hardware, running on closed software are actually

adapted to new uses and moved away from the first chain of production. 'Dead' office computers, discarded components, are rebooted with non proprietary software and re-programmed with new artistic and communicative purposes. Waste as input. The project has started its dissemination with workshops in community and media art centres, teaching how to adapt GNU/Linux to low power processing machines. How to involve women in the maintenance of such networks. Most crucially, how to upgrade the system at no cost instead of depending on external public funding.

Richard

Grow your own media lab

Tony Goddard

Ed Carter

Malte Steiner - PD Pure Data

evens

Upgrade

eo Wall

Vertebrate Graphics

A2RT (Access 2 Recycled Technol

Tools & Techniques

Voices

Tools & Techniques has been another recurrent feature at Access Space programme. It engages through workshop format different interest groups to discuss artistic uses of open source software for creative purposes. It is based on the same principles as 'Grow Your Own Media Lab!' but focused on multimedia software and skills. It presents applications for sound work such as Pure Data that can be downloaded from the internet with its manuals and tutorials but due to its complexity greatly benefit from collaborative working sessions where sound can be generated collectively by sending data between wired computers.

During the five year project, media artists and activists from London, Sheffield, Manchester, Leeds, Munich, Boston, LA, as well as high school students and work placement trainees, skateboarders, womens' groups and non-profit organisations worked in all sorts of tactical projects reusing the technical and social strategies utilised in the context of the free open source software movement: from online networks to live laptop sessions, residencies, workshops, presentations, debates, barbecues, parties... people got together, doing things with old computers and free software, upcycling technology in a way that it cost nothing. A new type of technology user emerged,

not the 'netizen' sometimes associated with the internet, but the Spacer, or space user, the user engaged in its space, reminiscent of the 'prosumer' imagined by Alvin Toffler [1] as someone that is involved in the production of its own culture rather than being its passive consumer.

At the cross roads of all this activity, the launch of Re-Programme celebrating Access Space's fifth anniversary sets the stage for a series of relevant questions: What happens to a regional city when international trade and globalised labour markets make the dominant steel industry obsolete and its work force redundant? How long does it take to make the transition from an economy based on the cutlery and stainless steel factory to the post-industrial knowledge data-driven economy? When this happens, how many years before the workers learn the skills required to deal with the new machinery? When these are computers, subject to market laws of upgrade and redundancy themselves, what type of speed is capital imposing upon spaces, people and technology? Is the low tech approach the best response to the computer upgrade habit?

Is the free software as free speech attitude the most powerful challenge to the privatisation of the cultural market? Is five years the measurement unit for

Photographs from the Globe

Urban Paranoia

redundancy? How much is it possible to accomplish in a five year trash tech lab?

Notes / References

* This 5-year time lapse has also been noted by Saul Albert in 'Access Space: the Redundant Technology Initiative Get Low-Tech in Sheffield (2000)', du magazine and Ian Wylie in 'One Man's Trash (2001)', Fastcompany.

[1] For a detailed account of the development of the Arpanet and the collaborative networks between tech labs in the USA and UK see 'Where Wizards Stay Up Late, the Origins of the Internet' (1996), where Katie Hafner and Matthew Lyon challenge the accepted idea that the internet was created as strategic military/ defense communications tool.

[2] Lawrence Lessig in 'Code and Other Laws of Cyberspace' (1999) details the limits that the open code movement and organisations like the Free Software Foundation can impose on the regulability of behavior in cyberspace by governments and corporations.

[3] Not only the application but all its source code, allowing for user's comments to help improve its quality.

[4] Gordon Moore's 1965 prediction, the co-founder of Intel and creator of first microchip.

[5] Erik Keller: 'Technology Paradise Lost- Why Companies Will Spend Less to Get More from Information Technology (2004)' for more on the emergence of a new corporate attitude towards technology as the result of IT over-cost and redundancy.

[6] For a detailed description of the 5 tech -paradigms see: Carlota Perez, 'Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Age (2002)'

[7] Observation based on a Sheffield field trip with James Wallbank during which a large skip with outdated office computers was casually found.

[8] for more on shrinking city project, read 'Manchester/Liverpool Working Paper' in particular Adam Brown, Justin O'Connor and Sara Cohen, 'Local Music Policies Within a Global Music Industry Cultural Quarters in Manchester and Sheffield (2004)'.

[9/10] For detailed info on CIQ regeneration plan see: 'Cultural Industry Quarter Conservartion Area Appraisal And Guidelines', Sheffield City Council and CIQ Agency, document not dated.

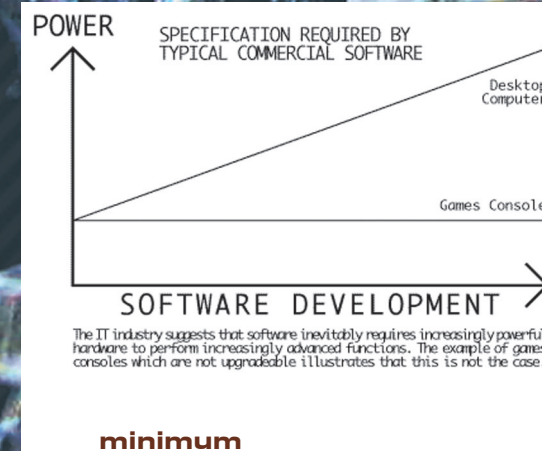
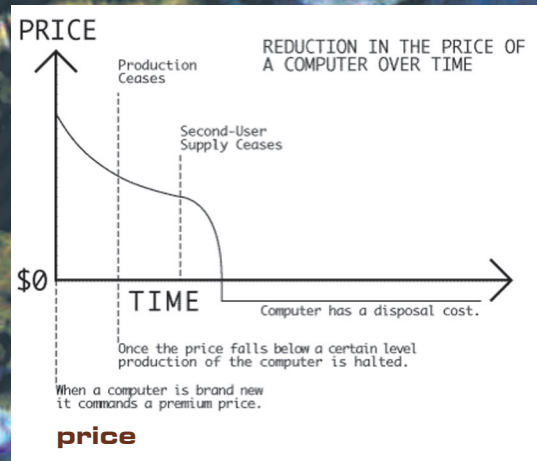
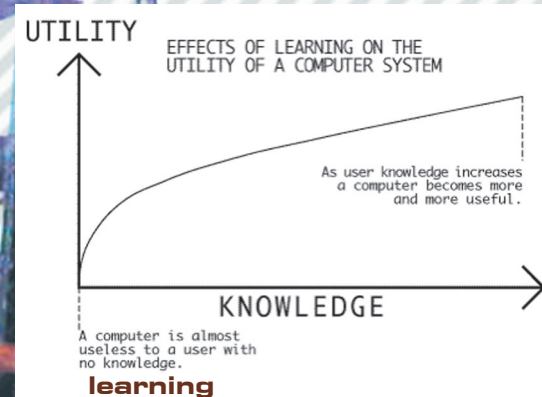
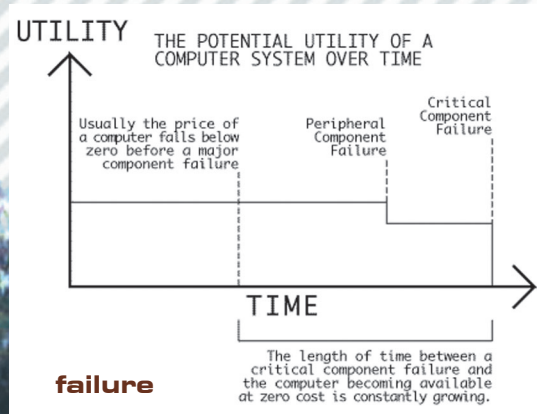
[11] A full statistical overview of Sheffield's labour market can be downloaded from www.sheffieldfirst.net

[12] James Wallbank, 'Low tech Digital Revolution' presentation at ISEA 1998

[13] see Alvin Toffler: 'The Third Wave (1980)'.

KICKING THE UPGRADE HABIT

[Surviving on the internet for less than \$2 a day]



UTILITY

THE EFFECT OF SOFTWARE UPGRADES
ON THE CAPACITY OF A COMPUTER
TO PERFORM ALTERNATIVE TASKS

Each software upgrade
actually reduces the
capability of the computer
in other areas of operation

Eventually a software
upgrade will render the
computer non-functional

UPGRADES

Upgrades

Power of Readily Available Zero-Cost Computers Over Time

MHZ	CPU	1997	1998	1999	2000	2001	2002	2003	2004	2005
1000	P3									X
866	P3									X
667	P3									X
500	P3								X	X
450	P3								X	X
400	P3								X	X
400	P2								X	X
350	P2							X	X	X
333	P2							X	X	X
300	P2							X	X	X
266	P1						X	X	X	
233	P1						X	X	X	
200	P1					X	X	X	X	
166	P1					X	X	X	X	
133	P1				X	X	X	X	X	
100	P1				X	X	X	X	X	
90	P1			X	X	X	X	X	X	
75	P1		X	X	X	X	X	X	X	
66	DX	X	X	X	X					
33	SX	X	X	X						
25	SX	X	X							

specs

RE-PROGRAMME YOUR SPACE AND OTHERS WILL FOLLOW

Robotic Birds: Acorn BBC microcomputer/ Z Lab interfacing techniques

The Robotic Birds are very simple robots. They are based on small electric motors and light emitting diodes (LEDs). They chirp and swing on their cable. Robotic Birds display several behaviours according to the intensity of ambient light and some semi random parameters. The chirping is synthesized in real time by the audio chip on a BBC micro-computer. The computer also controls the motion of the birds. There are two flocks of robotic birds: The first one comprises four members, and is installed permanently in the premises of Access Space. The BBC micro was introduced in 1982 by Acorn, a company based in Cambridge, UK. They created it to match the BBC (British Broadcasting Corporation) specifications of a computer to be used in a computer literacy program and was the starting point of a real superwave of BBC micros on the UK (more than 1 million were sold). Specs of BBC Micro model B: 2 MHz 6502 processor and 32 KB RAM.

The BBC Micro, featuring a design that invites the connection of customised interfaces and peripherals, is made for experimentation. I was seduced by this open philosophy, missing on most contemporary machines.

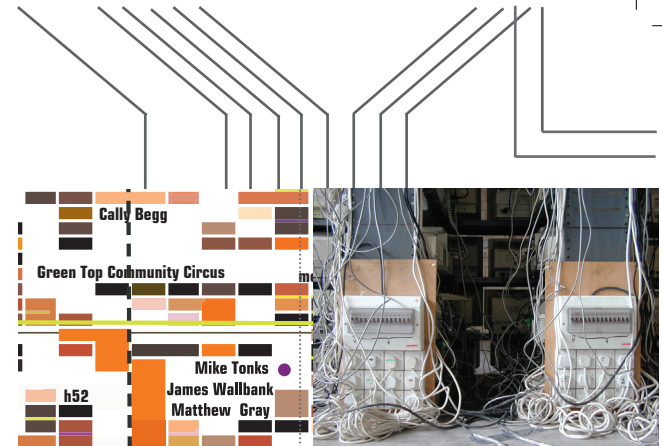
Tech_nicks: mobile media lab/meet space

The past six or seven years has seen the development of an international network of people working outside the commercial sector, actively experimenting with new media, creating new forms and uses as well as content, and who are interested in the social and cultural impact of new media technologies. Influential meeting points have been facilitated by large-scale festivals, conference and exhibition projects such as the ISEA events and Ars Electronica. These gatherings began to feel increasingly unsatisfactory for supporting and expanding a network of practitioners whose work is more geared towards lower-tech solutions and address communication needs that are not exclusively artistic. A series of projects in Europe which loosely fit under the banner of "temporary media labs" have done much to address many of these problems of large-scale media arts festivals. These have focussed on enabling existing or emerging networks of practitioners to meet and produce work, either together or individually. Initiatives in this category include: Hybrid Workspace at Documenta X in 1997, Revolting in

Manchester in 1998. However, they have also been plagued by difficulties in how to address, interest and involve people outside of these networks. Tech_nicks grew out of a response to a number of these problems; it tried to create a temporary and mobile space for meeting, information sharing and development of skills that would be cross-disciplinary, and that could be both an internal meeting point for practitioners and also provide a structured gateway for people who are not already part of these cultural networks.

Lowtech Video Wall

A single moving image is distributed across the 36 display screens in 480x150 resolution streaming ASCIIvision. In other words, the image that you see is made up of 72000 text characters, updated five times per second. (Each screen displays 25 lines of text, each 80 characters wide - our text-pixels are twice as high as they are wide.) The images themselves are video fragments from the "Doom"-like tunnels and chambers inside the fortress. The picture is fluid and mobile - not at all jerky. When you are near to the installation then each computer seems to be spewing out screenfuls of meaningless text - but as you move away the single moving image becomes clear. All the hardware cost virtually nothing! The 37



machines and monitors that we used were donated to Redundant Technology Initiative, and we also successfully scrounged the 10-base-T network (everyone's upgrading to 100-base-T nowadays). The 36 display clients are 486/25's and 486/33's and the image server is a 486/66 with 16mB RAM. The two principal components of the software, the image server (which streams UDP packets) and the client software run under Linux, the free operating system. Ingeniously, the image server is also a client server - so we can take a trash machine with no software at all, connect it to the network and boot from floppy to create another section of the display. This is very useful when machines fail.

Gender Changer/crash 2 upgrade

The Gender Changer Academy is a nonprofit organisation by women for women, its primary goal being to improve women's understanding and skills about computer hardware. To attain this the GCA provides workshops, makes and maintains a website and mailing list, and distributes a reader. We encourage women to crash computers and to put it all back together again. Preferably with an improved installation.

Technically speaking a gender changer is a small device or adaptor that changes the "sex" of computer cables. It has two sides with holes or two sides with pins, making any connection between port and computer cable a possibility. The holes are female and the pins are male. Women work a lot with computers but mostly with the software. They generally know very little about what is under the hood of this piece of equipment. Hardware is a mystery, a barrier and a lot of fun. Education and playing is a way to get to know how stuff works. Knowing how it works, being able to interact with it gives one a sense of control and independence. Secretaries of today should have a toolkit to be able to Do It Themselves, a millennium witch bag.

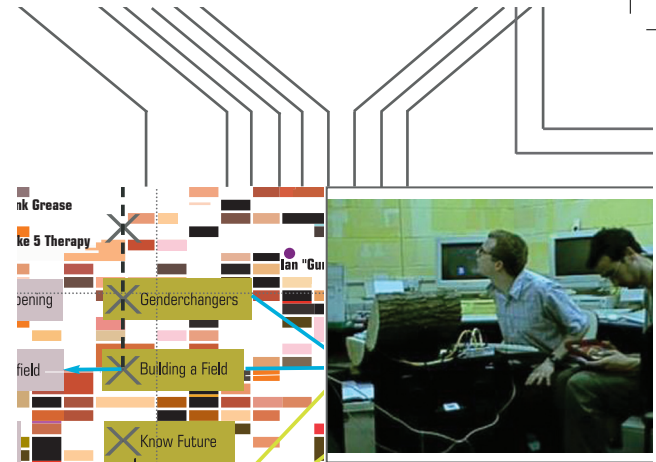
Freepost

Problem: Corporate Mailing System. Solution: Independent Communication Medium. Reply-paid envelopes and cards - they're annoying and they're everywhere: in banks, post offices, in supermarkets falling out of magazines and even piling through your letterbox. However there is a FREE form of communication, a sleeping giant of an underground subversive network using the FREEPOST address/ Business reply service... An envelope stuffed with something interesting, or a card stamped with a message provides some bored worker with a short break from it all. It's a direct form of communication.

Your letter or artwork or whatever is a personal touch in workplace filled with mind numbing predictability. (great opportunity for anti-work propagandising too...) It can't be censored. Since your communiqué arrives in the same envelope as all the other post, it can't be weeded out. Management's ability to control what is allowed in the workplace is undermined. The company pays for it. Every letter they receive in these envelopes costs them. It's a way of using the system against itself.

Fax TV

How to get creative with 28.8k modems? These old modems run at half the speed of modern modems, so if you're charged by the minute for dialup phone access, then it's actually cheaper to buy a new modem than use an old one. So, what could we do with this redundant technology? Then we realised: we could receive faxes with them. Faxes run at a maximum speed of 19.6k - so a 28.8k modem is well up to the job! How can an automated Fax to TV bridge transform the "one-to-many" televisual medium into an open access, "many-to-many" communication channel? It's easy to assume that there's something inherent about television that means it has to be the sort of medium via which a few powerful broadcasters communicate to many passive watchers. FaxTV proves that that's not the case! FaxTV employs three redundant computers installed with the Linux operating system, an external 28.8k modem, and a host of free, open source applications. The output of the "display" machine was converted into a TV signal with a simple digital-to-analog converter box, which was the most expensive element in the whole system. The total budget for technology was less than £100. The installation ran 24 hours per day, and a website gave information about how to fax RTI while they sat on a sofa in the "living room" that they create in the exhibition space.



Faxes could be received from anywhere, but RTI installed a fax right next to their sofa, so anyone could change the TV picture while viewing it!

Image/urban dereliction

Mozaz documented the effect of techno-economic change in the spatial layers of Sheffield. The 'image' collection- now containing more than 3000 digital photos- is available only in the server of Access Space. He calls it 'images of the urban paranoia we call the metropolis of Sheffield', formed of images of urban dereliction, nature based inner-city landscapes and out of place bucolic landscapes along with empty abandoned and non-abandoned buildings. They are a repository of the visible cycle of urban decay and gentrification visually recognisable in the redundancy of urban space.

Mozaz positions this archive as the counterpoint to a series of tactical interventions or symbolic occupations, sometimes through temporary squatting other times by ephemeral events such as the exhibition 'the spectre at the feast' which took place in a ghost tower block, whose empty rooms were documented and now sit online.

e-films

e-films meet the challenge of Information Vs Data bandwidth at the start of the 21st Century...small is beautiful, less is more. Can e-films transcend traditional physical and geographic limitations or border? Within a community of interest, resources permitting, they are free to be exchanged wherever. An e-film is: 1. A short audio-visual movie; 2. About the author's own original political or abstract ideas; 3. Freely exchanged, not for profit. Technical Requirements: 1. An e-film should have a total playing time of five seconds; 2. The quality of the audio for an e-film should be - 8 bit, 11,025 Khz, Mono .WAV file format; 3. The visual aspect of an e-film should be made up of 15 separate .JPEG images only; 4. An e-film should correspond to the Golden Ratio, measuring 1 Inch x 1.618 Inches; 5. The screen resolution of an e-film should be 72 pixels / Inch (i.e. 72 pixels x 116 pixels); 6. An e-film can be in either Portrait or Landscape

orientation; 7. An e-film should be rendered as an .AVI movie format; 8. An e-film must have a title and be accompanied by the author's name.

Grow Your Own Media Lab! Intro to GNU/Linux

The volunteer/community based development model of free software and open source is worth researching and contrast against the close model of proprietary OS. If one has an old machine, how can it be utilised ? As Linux is highly customisable, the ability to use a different GUI according to the machines' specs shows how 486's and P1 type machines can happily run as capable surfing machines. Window managers like Fluxbox/Blackbox, Icewm and XFCE take up very little system resources, meaning that not only can digital images be edited using The Gimp, the console can be used to greatly speed up any batch manipulation, for example, HtmlThumbnail, the perl script which resizes a set of pictures into thumbnails for the web. OpenOffice is not perfect yet, but more than adequate for MSWord/Powerpoint survivalists and the ease of ripping CDs and encoding MP3s using Grip shows that Linux isn't necessarily quiet. The availability of the open source Ogg Vorbis format is welcome as an alternative to MP3, with the exciting possibilities of the

same developers creating open source video codecs. The codec-tastic Mplayer plays VCDs, DVDs, AVIs, pretty much whatever, including outputting video through the highly impressive and cunningly lowtech AALib library. this results in the glorious hi colour video being rendered in ASCII text in various degrees of grey.

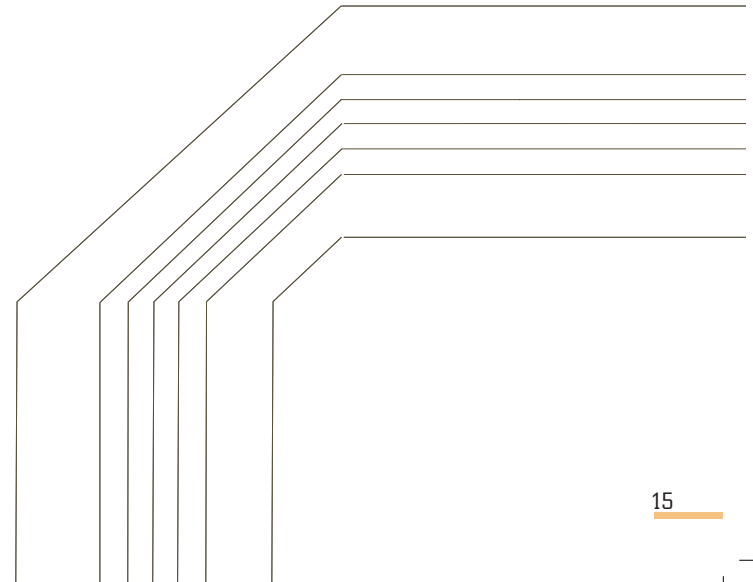
Pure data online diary 26.11.02

Later in the night, I got the idea for the workshop. We are going to jam through the network. Every attendee will have a patch incorporating a synthesizer and stepsequencer. A masterclock will send out the absolute index of the steps which keeps the patches and different computers in sync. This approach addresses several issues and demands: the session over the network creates a community feeling, the participants' needs to communicate with each other, creating a piece together. This even overrides the main paradigm of the lonesome computer musician. I will provide several stepsequenced patches for those who don't want to build from scratch. Each of them shows a different kind of synthesis, so it teaches the several ways of create synthetic sounds in common and how to patch with PD.

The distributed processing overcomes the lack of power of the given equipment. A simple and fast approach to create music with the computer, the immediate feedback avoids frustration.

IT Hz, the Nature of Obsolescence

Four adapted, distressed, directed laptop computers are incorporated to produce music (organised sound). Four products expressing nearly twenty years evolution in ICT, united for one last "live" performance, their specifications ranging from two obsolete 286 and 386 processors to a Pentium 133 and Powerbook G4. Malte Steiner improvising with Sensitive Metainstrument System, modulating / augmenting live sound generated on MAX / MSP via Wind Controller along with more brutal interventions from Scott Hawkins and Foster via QWERTY Keyboard (Slaptops).



Digital Rainstick

04-2003

14 days to create a series of wall mounted rain sticks that rotate (producing the sound of rain) when activated by a rain sensor located on the outside of the building. The rain sticks are built from recycled cardboard tubes, lentils, peas and other cheap materials and are wall mounted. They are connected to a rain sensor with a PIC/Stamp chip. Electricity is pulsed in sequence through the speakers by the pic chip when it rains outside. The 16F84a Microcontroller is basically a computer within one small microchip. It is one of hundreds of similar chips made by a company called Arizona Microchip. To use these chips you need the Hardware Programmer.

The cheaper and more Linux friendly alternative for the Hardware programmer, the piece of hardware that connects the chip to the serial port (or sometimes parallel port) of your computer is to build your own. The circuit to use is taken from a book called PIC in practice by D.W.Smith. The language we are going to use to program the chip is Assembly, which can be written in any text editor, but it needs to be compiled with a compiler. I used Yappa software for this. Open Yappa from the command line by writing 'yappa'.

Hyperscapes

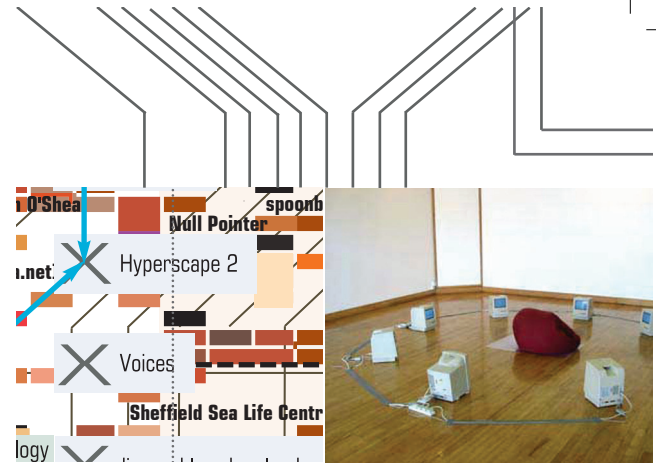
I have worked with Macintosh computers since 1990 and have seen how machines such as these have progressed from being expensive and highly desirable to obsolete. This installation could have been made 10 years ago using exactly the same technology but the cost would have been prohibitively expensive. Now it costs nothing. It is easy to forget that these computers run just as fast as when they were new. The upgrade spiral has left a wake of perfectly adequate computers with nothing to do. HyperScape 1 is a screen-based generative installation artwork that runs simultaneously on a network of 8 compact Macintosh computers, all running a software program written with HyperCard and AppleScript. One computer decides on the manipulations that are to be applied to the screen image and tells the other computers in the network what it has decided to do. The other computers perform the same manipulation to their own images. However, each machine has a 1 in 20 chance of ignoring the master computer.

The generated screen imagery suggests a cross section through an imaginary cityscape. HyperScape 2 is an immersive soundscape, again using 8 compact macs. This time the master computer instructs the other 7 to

play back a sequence of musical notes and they obey exactly. Because of the unavoidable latency of such old networking technology it is not possible to synchronise them accurately. The artwork relies on this limitation to create an overlapping wash of musical notes.

Like Tiny Cubes of Glass

How hard would it be to glue a windscreen back together? In this show Matthew Gray and James Wallbank use the powerful web server language PHP as both digital hammer and virtual glue - smashing pictures into fragments and putting them back together. But somehow, the reassembled images just aren't quite the same. Matthew Gray's work looks at processes to transform images. He uses PHP to translate individual picture elements to other forms which he manipulates further. Familiar scenes are transformed into stuttering digital arrays, iterating ticks, scratches and glitches that relate more to abstract techno-music than landscape. In 'Various Pen & Ink Treatments of a Picture of the Moulm Slab, Avon Gorge, Bristol', a picture of a rock slab with graffiti was processed in PHP (GDLib extension) to give a list of drawing instructions, which were then drawn using OHP pens.



The treatments use techniques such as pseudo-random number generation (right-hand sketches), one-dimensional cellular automata (upper left) and edge detection (lower left). This is an extension of the programming involved, where the program is an idea in the artist's head - and the processor is the brain.

Disposable Urban Landscapes

Steve Withington who was active as a painter during the 1980s and 90s is known for recycling his painting styles which leads him to move from painting into photography back into painting incorporating free software image manipulation programs. Having switched from using proprietary software to hand code http, the web site became an art work itself. Geographically, he shifts between spaces as well as he has moved into the net

from the street, having built reputation as a space hijacker by getting a peddler's license, under an old law from the 1870s which says that as long as one is mobile you can sell your own art anywhere. In his mobile gallery he displayed and sold his work in the public space, for many years.

His latest photographic work is a series of images which he describes as disposable urban landscapes. Taken on a low grade Agfa CL18 k digital camera, these primitive images (640x480 pixels) are coarsely manipulated using the GIMP, the free image manipulation program. London Road and Bits of Sheffield are some of the galleries at his site where this work can be viewed.

Phantasy Star: Four Point Nine Recurring: intro

The events of Phantasy Star Four Point Nine Recurring happen a few hundred years after Phantasy Star 4. However, they will never be found in the chronicles of Phantasy Star. They are not a link in the chain of events that give Phantasy Star its continuity. Phantasy Star is not an attempt to chronicle anything that has so far happened. There is a VERY strong anti-PSO presence on Motavia, mostly consisting of native Motavians, lead by Digo and Alsh. However, it is not yet successful, mostly because we hadn't planned for there being so many

sequels to PSO, whereas Four Point Nine Recurring is written in a world where it is successful. Parts 2 and 3 are set several hundred years in the future. Phantasy Star Four Point Nine Recurring is a breaking and mending of the circle. It is a defragmentation of Phantasy Star, a system tool of Algol. Or rather, because it is only a story, it is a manual for how to do this. It explains what is wrong with Phantasy Star, why it is important to fix it and how it can be fixed. Who in the plot is doing the right thing? Who knows? If you're a consequentialist and you like Phantasy Star, everyone is in the right. Everyone's victory and defeat, every precise calculation or error, contributed to the destruction of the False Sequel and the elimination of the virus. If you're a deontologist and you like Phantasy Star, the people who fought against the False Sequel are in the right, except possibly the people who were manipulated into it by Doran. If you're a deontologist and you think some other value is more important than the healing of Phantasy Star, then whoever expressed that virtue is in the right. Feeve, I don't care as long as Phantasy Star gets fixed. Another word of advice: don't try and politically analyse Four Point Nine Recurring. The author knows nothing about politics and the politics is probably complete nonsense. You can psychoanalyse it if you want. How mad am I? If you get it right I'll buy you a cookie.

Open Code: Free Tools and the Commons

CATREADER: documentation software developed for tech_nicks by Safetycat http://bak.spc.org/tech_nicks/

e-films

Broadcast 2000

<http://heroinewarrior.com/bcast2000.php3>

cinelerra <http://heroinewarrior.com/cinelerra.php3>

WINDOW MANAGERS

<http://xwinman.org/>

<http://fluxbox.sourceforge.net/>

<http://www.icewm.org/>

<http://www.xfce.org/>

XMORPH

<http://a2rt.org/xmorph/index.html>

<http://xmorph.sourceforge.net/>

GIMP

<http://www.gimp.org/>

Imagemagick

<http://imagemagick.sourceforge.net/>

HTMLThumbnail

<http://www.nihongo.org/snowhare/utilities/htmlthumbnail/>

OpenOffice <http://www.openoffice.org/>

Ogg Vorbis <http://www.vorbis.com/>

Mplayer

<http://www.mplayerhq.hu/homepage/design7/news.html>

Aalib

<http://aa-project.sourceforge.net/aalib/>

mozilla's firefox. <http://www.mozilla.org>

Pure Data resources developed during Malte Steiner's artist in residency

<http://access.lowtech.org/e-gehirn/pd.html>

Steiner's first patch at Access Space

<http://access.lowtech.org/e-gehirn/pdstandalone.html>

the workshop inclusive 7 synthesizer patches to download: <http://access.lowtech.org/e-gehirn/workshop.html>

GEM, the graphic / video addon for Linux and Windows

<http://gem.iem.at/>

GEM for MacOSX <http://homepage.mac.com/tigital>

PD Community <http://www.puredata.info>

Mailinglist <http://www.iem.at/malinglists/pd-list>

Pure Data, all versions <http://crca.ucsd.edu/~msp/software.html>

Fine installers, near all inclusive

<http://at.or.at/hans/pd/installers.html>

Pd (pure-data) [Justin Randell, workshop]

<http://access.lowtech.org/events/pdworkshop/>

FAQ

ACCESS

There is a real danger as the information economy develops that there will be an increasing division between the digital 'haves' and 'have-nots'. IT has the capacity to amplify opportunity but it does this more for the empowered than for the disempowered. It also amplifies division. It's really important that everyone can get involved and that people aren't excluded. If we don't encourage digital inclusion we are heading towards a neo-medieval future in which you have information aristocrats, media barons and superstars, and then the disempowered proletariat and this is the substance of the new economy. When we called Access Space 'Access Space' - initially we thought the word 'access' was absolutely crucial, in fact there is another word that is not encompassed in the title 'action'. To some people digital literacy seems to mean you can operate the website so you can buy your shopping at Tesco. We're not just talking about digital literacy but digital productivity. Access Space is partly about transforming access into action.

SPACE

There have been a lot of ideas that online cultures are very powerful things but there isn't necessarily a sense of community in these online cultures. You can only really build a culture when people physically meet each other;



when they ask questions and find out things that they didn't even know they wanted to know. Part of the idea of starting this space was to simulate in real life the culture of a bulletin board. What is the difference between a really good bulletin board or user group and a news group that is filled with spam? A sense of community. When you are in a community you have a sense of responsibility towards it to be as helpful as you can and to participate in a positive way. One of the reasons for physically having a space is to make a community of a limited number of people. People who come to Access Space on a regular basis live within five miles of the project. That was the reason for having a physical space rather than to just distribute computers to people who didn't have them.

REDUNDANCY

Redundancy refers to the idea that technology is getting thrown away; it's redundant. There are two points to make about redundancy: the first is that it can be applied to people. Lots of people that come in to use Access Space have been rejected by their employer or their industry or haven't had an opportunity to get involved with the things they'd like to get involved with. The second point to make about redundancy is to question whether redundancy is a quality of material. Is there something about material that makes it junk? The computers that we've collected are really useful, powerful information technology tools, global communication centres. What is it that makes them trash? The attitude of the people who have labelled them as trash, who have made them redundant. Trash is the label we give something the moment that our creativity runs out. Trash is about us, it's not about the stuff itself.

TIME

One of the things we've learnt using this free technology is that you have to pay. You have to pay with time. It can be extremely empowering for people who do not have financial resources. You may be money poor but you are time rich. Suddenly, people who thought they were poor, when they engage with free technology, are rich. People who are rich and have well paid jobs simply do not have the time to find out all these empowering skills or to get involved with free technology.

SCHOOL

Access Space is meant to be a place where people learn but it's completely unlike school in that we don't define the curriculum. Instead we ask people what they want to achieve and to direct themselves to the skills that they want to know. Everyone really benefits from this self-directed learning. We are very enthusiastic that everyone is pursuing some kind of constructive project that they are excited about.

WORK

What is work? Some people define work as exactly the thing that you don't like doing. In fact work can be fun. Certainly it can be fulfilling. Lots of people who come in to Access Space are pre-occupied by issues of work and jobs: something which they can do that gives them enough money and that will allow them to survive. Frequently people have thought they will get skills in order to get a job but they've ended up building their own job, and employing themselves. Of course the ideal is the circumstance in which what you're doing to be productive is also the thing that you're doing for fun. Their job is also their interest. We try to encourage people to be productive. Is that work? Is that fun?

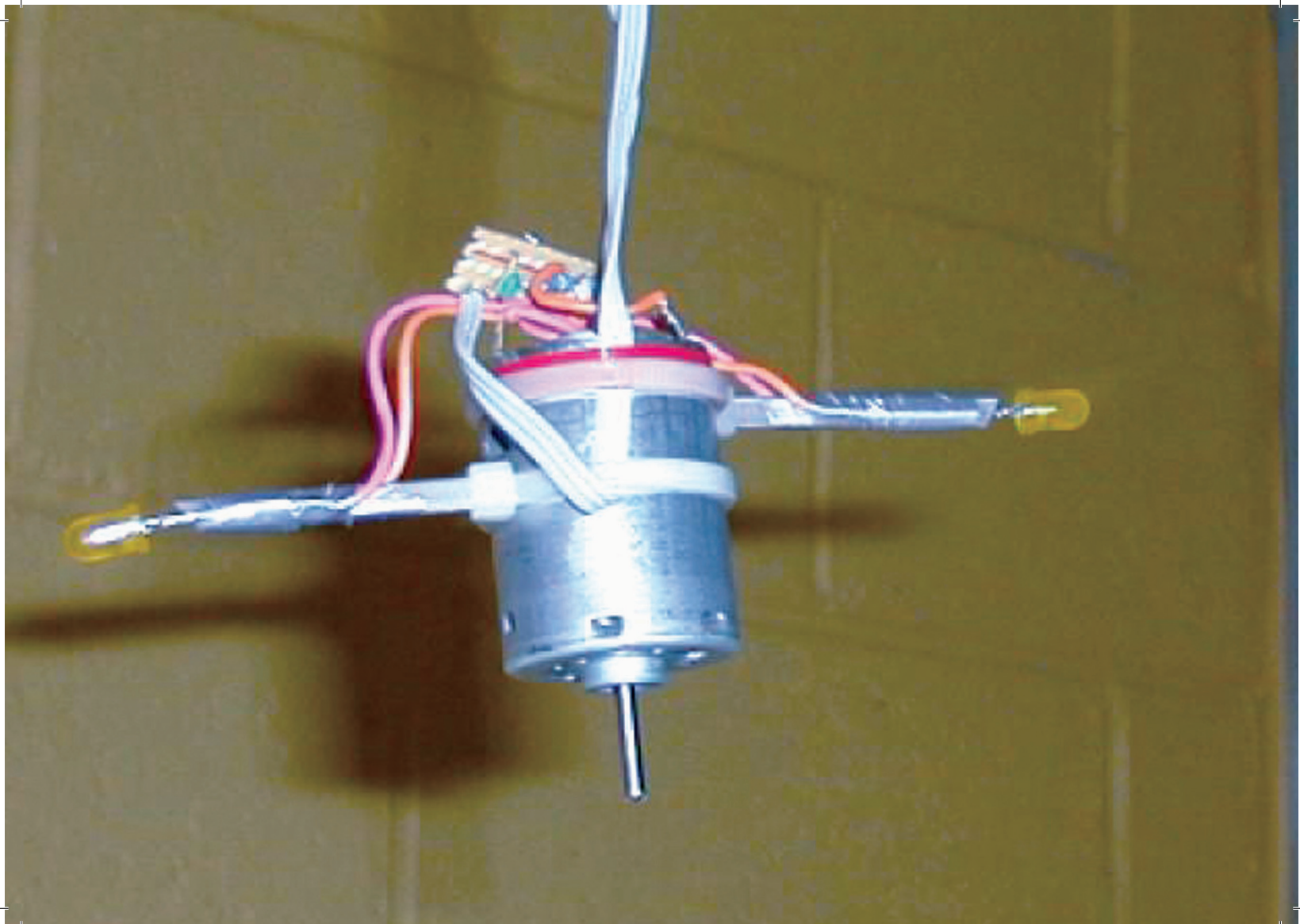


OPEN SOURCE

We started using open source software simply because it was free, however there is a very important concept to open source which is not just that you receive the software for free but also you receive the instructions for how to make the software. That means that you can change and develop the software yourself. This is relevant to people who develop software because it means they can make improvements to the programmes they are running but it is also really important for those who use the software because they can rest assured that there are tens of thousands of independent people throughout the world who are able to make that software better.

INTELLECTUAL PROPERTY RIGHTS

At the moment the way intellectual property law works, it protects the rich from the poor but not the poor from the rich. A large organisation can take an individual to court where rights have been infringed whereas individual artists simply do not have the money to take organisations to court and that's wrong. This is why intellectual property law has come into real disrepute. However, as artists and as an organisation that supports creative and productive work we think it's really important to play by the rules. In fact it's almost the most aggressive response to make sure that the software that we use is entirely legitimate, legal and freely available. Therefore people have the right to produce all the things they make at Access Space. Lots of media labs and individual artists operate using stolen software. I don't think that we should yield to the idea that individuals being creative have to build their own work in a way that is not really allowed. It's key that we don't accept the idea that we have to use a ripped-off copy of Photoshop in order to do our work. If that is the case, which for many artists at the moment it is, we say "don't use Photoshop, refuse to use Photoshop" because you can't apply your own skills without breaking the law and somehow becoming a disempowered outsider.



SHEFFIELD

Sheffield has been identified as an area in need of regeneration. This means that there are a lot of people who do not have jobs but who do have an attitude appropriate for an industrial economy, waiting for the economy to pick up and to be given a job. One of the key things in the information economy is that you have all the tools at your disposal to create your own job, employ someone else! Then the economy will pick up and you get to build it yourself. This 'do it yourself' culture hasn't necessarily been a familiar thing in Sheffield. Sheffield has had a great difficulty in emerging into the information economy and I think a lot of that has been to do with skills and how to make networks of people. One of the interesting things about Access Space is that Access Spacers are beginning to develop their own miniature economy, employing each other through social networks - key precursors to getting involved in the information economy. I think these networks are what have been missing in post-industrial Sheffield. It is getting people with different skills and backgrounds together that make these networks powerful.

MEDIA LAB

Media Lab is one of those buzz words that has been used by arts organisations. I think we're starting to move away from this but we need an alternative term.

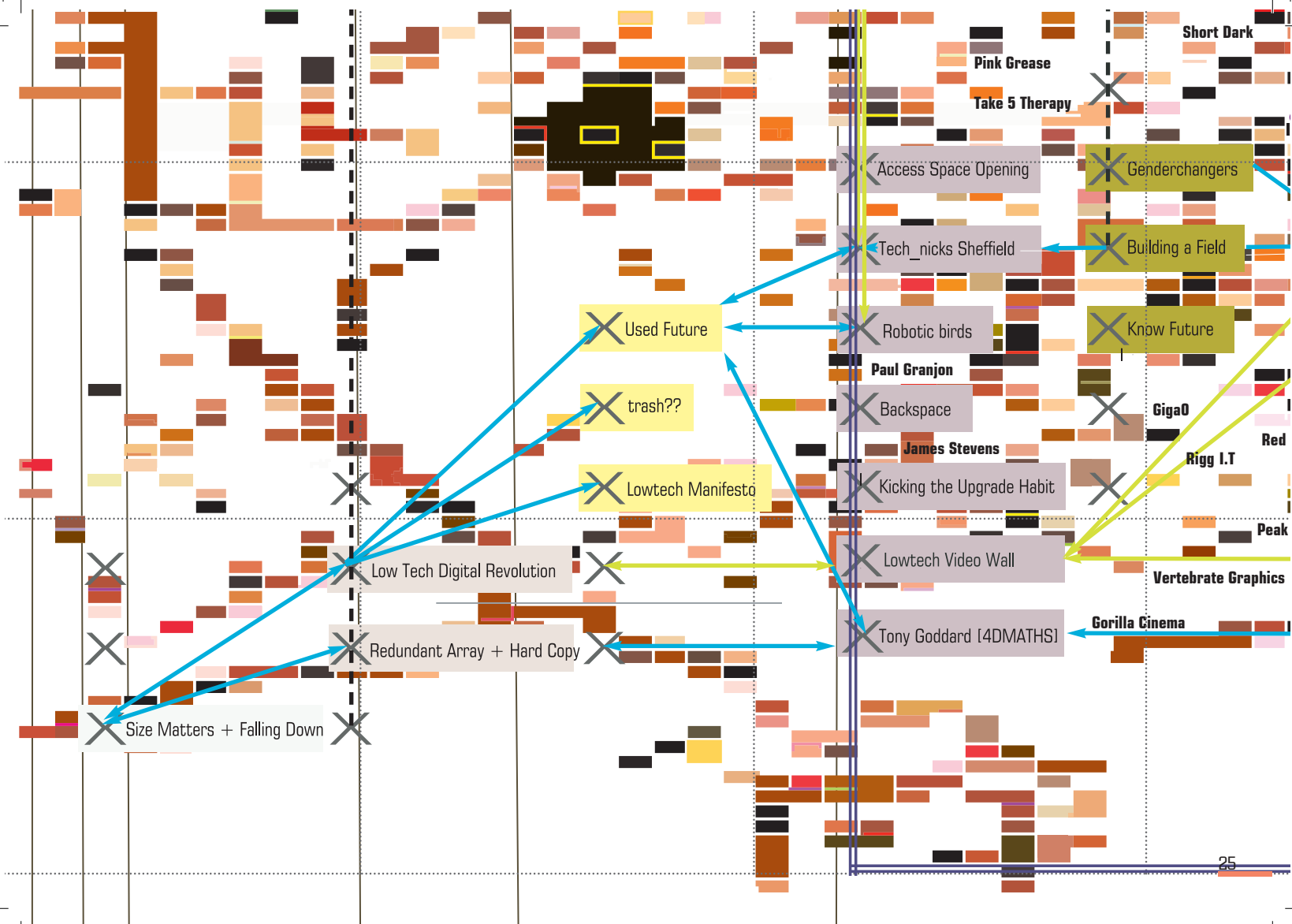
It is a term that's familiar to people inside media arts but it doesn't necessarily describe to an outsider what that actually means. It is necessary to distinguish between a cyber café and Access Space. A cyber café is something where people come in and use the internet as a new kind of recreation, as a form of TV; surfing and chatting.

The important concept behind Access Space is that it's about being actively involved with the internet; it's about building the net, not just surfing the net.

Not simply coming in as a customer but being an active participant in the Access Space culture.

TOOLS FOR CHANGE

We provide computers and we provide access to the software and to the internet. But the real tools that make a difference to people's lives are inside people's heads. A lot of the tools are about knowledge and know-how but the most important tools are about attitude. That you can just do IT without a licence, without permission, without government backing, is really the key thing. If people are excited by it they will find out the knowledge that they need to know. The hardware and software tools come where the skills have come. The real tool is the mental transformation that allows people to start understanding themselves not as consumers but as active agents, as participants not as passive recipients.



16-04-2000 Robotic Birds + Backspace [Paul Granjon /Z Productions, James Stevens and Gio D'Angelo/ Backspace, Exhibition/ Opening party]

30-06-2000 Tech_nicks Sheffield [Media Art Projects: Lisa Haskel with Lina Dzuverovic-Russell] with Irational.org and two related groups: Technologies To The People and Mejor Vida Corporation, Mobile Lab]

06-10-2000 Lowtech Video Wall [RTI/ Ian "Gumby" Vickerman, Jim Methley, James Wallbank, Tony Goddard, production Access Space, Installation Tech_Nicks Lux Gallery, Exhibition]

10-12-2000 Kicking The Upgrade Habit (Surviving The Internet In Less Than £2 A Day) [James Wallbank, Presentation to the worldinformation.org Project]

23-02-2001 Know Future [James Wallbank ,Ian Newcomb, Bryony McIntyre, Richard Bakewell, Jimi Albert , Vicky Morris, Exhibition]

11-03-2002 RTI, Fax TV [RTI/ Ian "Gumby" Vickerman, Jim Methley, James Wallbank, Tony Goddard, production Access Space, Exhibition in the Nieuwe Vide]

10-06-2001 The US/UK Exploratory Learning Partnership Project - Building the Field, Columbia College, Chicago in collaboration with London International Festival of Theatre (LIFT) with Artists For Humanity, in Boston and Los Angeles and Street-Level Youth Media, Chicago, International Exchange Program]

16-10-2001 Photocracy [James Wallbank Lesley Boulton Mary Gellender Nick Sambrook, Mozaz, Andy Welzby, Artwork Network part 1, Exhibition]

09-11-2001 Consume [Access Space & the Community Media Association, Workshop]

24-11-2001 Genderchangers [Workshops]

17-05-2002 Urban Paranoia, FreePost, Nieuwevide, The Project With No Name, [Mozaz, Andy Welsby, Nieuwevide, Justin Randell, Presentations]

07-06-2002 Gorilla Cinema Screening

08-06-2002 DIY T-Shirt [Marcelle Campher and Sheffield Skateboarders, Workshops]

01-08-2002 Digital Imaging [Peter Griffiths with students of Pyebank and Bankwood Schools, Workshops]

16-08-2002 Grow Your Own Media Lab! /Tech2: @ Folly! [Access Space/James Wallbank, Ed Carter with A2RT, Workshops]

31-08-2002 Digital Graffiti [Marcelle Campher and James Wallbank with young people, Workshops]

27-09-2002 Artwork - Network An International Lowtech Art Exchange (Launch Phase2) [Access Space with Café ASCII: Amsterdam, NL, Lotec: Berlin, DE, and Mama: Zagreb, HR, Exhibition]

15-10-2002 e-films [Scott Hawkins, Online Exhibition]

07-11-2002 Access Space Refurb [Joe James/ A2RT]

25-11-2002 Grow Your Own Media Lab! @Vivid. [Access Space/James Wallbank, A2RT, The London Genderchangers, Workshops]

18-11-2002 Pure Data [Malte Steiner, Residency Workshop]

25-11-2002 IT Hz, The Nature of Obsolescence [Malte Steiner, Scott Hawkins, Foster, Laptop Session]

24-01-2003 Access Space Php Driven Website [James Wallbank+Neil Ludlow/Shortdark, Presentation]

02-02-2003 Alternative Media Streaming [Bill Bove, Alan Gregory, Claire Buxton, Bill Best and Nick Thomas, Workshop]

22-03-2003 Pd (pure-data) [Justin Randell, Workshop]

28-03-2003 Under The Skin [Stephen Carley, Audio Visual Presentation]

25-04-2003 Tongue & Groove [Stephen Carley , Epicentre, Sieben , Live Sound Performance]

07-04-2003 Digital Rainstick [Simon Blackmore, Artist Residency]

30-05-2003 Simon Blackmore and Antony Hall: Log1k [Laptop Performance]

11-05-2003 Stories from the City [Marcelle Campher with Heeley ME Support Group, Workshops]

17-07-2003 Encounters [Ruth Ben-Tovim and Trish O'Shea, Presentation]

03-09-2003 Tools & Techniques 1, The Linux Operating System For Multi-Media Tasks: 3d Animation / Video / Audio Synthesis / Mp3s / Indymedia Software / Image Manipulation [A2RT , Mike Tonks / Cube and Indymedia Bristol, James Wallbank, Matthew Gray]

10-10-2003 Project Hyperscape 1 [Richard Bolam, Exhibition]

31-10-2003 ManNipple8 [Adrian Alvey, Chris Cook, Live Audio]

04-11-2003 To Habbo Hacks [Kristien Harrott, Habbo Hacks]

12-12-2003 Pixel to Portico [Nicky Kirk, Exhibition]

05-09-2003 Prevett & Mcarthur "I Am An Artist On Jobseeker's Allowance"[Jim Prevett, Exhibition], Bureau Of Inverse Technology And Bristol's Cube [Kate Rich And Ali Jones, Presentation]

04-10-2003 From Despair To Leisurewear- The T-Shirt Years [Dave Green /NTK.net (Need to Know), Exhibition]

11-11-2003 Harriet Lowe [Doan, Chrono Trigger Webzine; Shining Force, Plot Ideas]

14-11-2003 Photographs from the Globe (by day) and the marriage of art & science (by night) [Ali Davies & Lizz Tuckerman, double exhibition]

30-01-2004 Like Tiny Cubes of Glass [Matt Gray (destrukta.net) and James Wallbank, Exhibition]

19-03-2004 Stationary Stationary [Philip Welding, Exhibition]

24-04-2004 4[in]04 : Tools & Techniques 2 [James Wallbank, Jim Methley, Nullpointer /Tom Betts, Consume Sheffield/ Alan Dawson, Matthew Gray, Workshops]

24-04-2004 4[in]04 : Perform [Nullpointer /Tom Betts, Brian Duffy/Modified Toy Orchestra, Spoonbender/ Twiggy and The K'mesons, Matthew Gray, Live Sound]

05-06-2004 Spectre at the Feast [Mozaz, Tonny Goddard, Andy Welzby, Exhibition]

04-06-2004 Tech/work [Sergio Ali, Graham Clark, Dan Harris, Arron Marshall, Roy Pemberton, Matthew Tabrizy, Daniel Travis, Work Placements to Learn Free Open Source Tools and Web Design]

01-10-2004 Voices [Xan Byatt, Mark Foster and Adam Tyson with PJ, Ross, Hannah, Jade, Sam and Hayley, Exhibition]

12-12-2004 Disposable Urban Landscapes [Steve Withington, Photography]

15-12-2004 Tools & Techniques 3 :Linux Audio Software [Jake Harries, Matt Gray and Ed Carter, Presentations]

15-03-2005 Harriet Lowe [Spaced_Out, Interactive Web Hack Game]

This catalogue is published to mark the 5th anniversary of Access Space

Re-Programme

Time Space And (Low) Technology: The 5-Year Out-of-Date Trash Media Lab

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266 P1

233 P2

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166 P1

133 P1

100 P1

90 P1

75 P1

66 DX

33 SX

25 SX

Re-Programme is the result of a commission to curate a book as a re-[trospective] programme for the occasion of the fifth anniversary of Access Space in Sheffield. The book is a chronotope, a non-authoritative time-space guide, to the 5-year out-of-date history of a unique trash tech media lab. An A2 map stretched out into the format of an A5 publication, it is organised to provide information about Access Space and its key projects with links to the underlying free culture which underpins the ideology of the open source movement.

The book starts with an introduction to 'Time Space and (Low) Technology' and is followed by a diagrammatic lecture on 'Kicking the Upgrade Habit' which sets out the background for the activity developed at Access Space. It follows with a selection of projects developed by the Spacers - the artists, technologists and activists - that contributed to the development of a model for a sustainable practice that make it now possible to any group anywhere to grow its own trash media lab.

Re-Programme your space and others will follow