

## Reclaim your public space!

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### Introduction

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Mankind has always wished to augment itself with powers he doesn't possess naturally. This desire is the main motivation in the efforts to conquer the oceans and the skies. The 20th century has witnessed the fulfillment of these dreams with the development of aviation and space technologies. It was then that the term "cyborg" was coined by NASA scientists Clynes and Steele (1) the pilot became a symbol of the cyborg, the ultimate fusion of man and machine.

The 20th century also witnessed the development of the computer. Computer technology is perceived as augmenting human mental and intellectual capacities. The exponentially rising complexity of integrated circuits and the shrinking size of magnetic storage(2) fuels the bionic man dream, in such a way that researchers constantly explore ways of integrating these augmenting technology into our bodies either, permanently - turning us into cyborgs, or semi permanently as "wearers"(3).

An important part of these augmenting devices rely heavily upon the use of immaterial matter: the electro magnetic waves. These waves have augmented our physical space with an additional one - the Hertzian space (4). The air we breath is buzzing with electromagnetic waves carrying information from everyone to everyone else. This immaterial, invisible Hertzian space re-defines our physical living space and is being explored (and exploited) both by Arts, Industry and others.

One of the most common usage of this Hertzian space is for communication and information distribution. Physical space gets augmented with information gathered and processed by machines. We are changing in the same direction, we adapt ourselves to that space, and adapt space to us by augmenting our bodies with machines. The borders between our body functions and the machine functions is constantly getting more and more blurred, machine functions are regarded as natural additions to our bodies, and the boundaries between what is physically feasible and what is not become machine dependent. Our perception of our body and its abilities includes the machine augmentation, not always in our best interest (such as the notion of "second home" (5)). Machines invade and alter not only our physical environment, but also our non material environment, such as our social relations, and our use of space (such as the notion of "second home" (5)). I believe we tend to embrace these technologies somewhat too eagerly, without giving full consideration to the possible implications, not only the immediate ones, but also the remote ones. Technology is most of the times associated in our thinking to progress, and progress tends to be equated with 'good'. One thing that is true with progress is that one can't stop it from happening, especially when corporate economics support it. Evolution has taught us that in order to survive, we must adapt. This calls for further cyber devices that will facilitate our survival and adaptation

abilities, to this complex organic-technologic system that our habitat has turned into.



Desire

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In this spirit I would like to emphasize the difference and the border between "us" organic forms and "them" machines. I'd like to somehow maintain a clear line between us and the machines, and have a constant reminder that technological devices are not natural extensions of our organic bodies, but alien objects to be treated accordingly. These augmentations of the body should be used with care and moderation. I would like to devise some sort of "human protection" devices, that will come between us and our machine extensions, in the purpose of protecting us, shielding us to a certain extent of some of the by products of these machines. This concept is very similar to the concept of a "screen saver", in fact I am aiming towards a "user saver", in the same way that a screen saver protects the screen from the damages of extensive use, these "user saver" devices will protect the organic part of the cyborg from the damages involved in extensive (and abuse) use of his cyborgian functions.

A natural and immediate candidate for this concept is the cell phone. This device is an extension of the human communication ability. First we had the Telephone, which was a miracle by itself, but still required certain environment of its own. Now we have the mobile phone, which makes every mobile phone user reachable (almost) everywhere, anytime.

This Mobile device has gained enormous popularity. Our public space was invaded by people with communication extensions, buzzing their private conversations everywhere. Not too long after that came also the reports about the radiation emitted by these devices, and by the antennas that supply this communication craving(6). These findings haven't really affected the extent of use of cell phones, it only led to the invention of new products to smooth their negative effects(7).

Background

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I would like to propose devices that will help the user to protect itself from the damages caused due to extensive and uncontrolled use of this device, not by somehow miraculously causing these effects to disappear, but by helping the user to draw a line between himself and the mobile phone, and limit the extensive use of it. I'd like to bring back the mobile phone to the status of a work tool, and reduce the level of its integration in our existence.

When new devices invade our daily routine, they affect the social fabric around us to some (varying) extent. Especially where interpersonal communication devices are involved, a new set of social rules has to be set, a new etiquette. One of the main issues that have to be dealt with is the temporary relationship established between the mobile phone user and her direct physical environment, during that period she is using her cell phone in a public space. The persons around her are immediately drawn, even forced out of their environment into her world, and have to share with her details they never knew

they wished to share. There is little this audience can do, except close their ears, or leave the space, Simply ignoring the conversation is extremely hard to do. Their public space has been forcibly instantly taken over by a regular mobile phone call.

This type of disturbance calls for well defined etiquette to regulate the use of cellphones in public spaces. The solution is simple and clear: the public use of mobile phones should be restricted to designated remote areas, just like public phones. Yet such a rule is hard to impose, since there are no ways to force it. There is no penalty on the creating a public nuisance with your mobile phone. This device attempts to make clearer to the mobile phone user that he is creating a public nuisance to his entourage. This device emphasises the need for a physical separation of the virtual private space from the physical public space. In other words: your private cell conversation are none of our business!

#### Previous "mobile-busters" works

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There has been quite a number of projects and inventions dealing with both the sociological and physiological problems that arise from using the mobile phone. These projects are easily divided into 2 very distinct groups: the first group is generally supported by the cell phone industry, and develops commercial products that are supposed to "erase" the effects of cell phone radiation by providing him with a (dubious) shield. Another commercial products category deals with the social and noisy nuisance caused by the use of mobile phones in public places. These are the cell phone Jammers, or Disruptors. These devices interfere with the cell phone signals. These are considered illegal in the EU, and Canada, and are aimed for use at theatres, cinemas and such, and also for military or security reasons (cell phones can be used as remote explosives triggers).

The second group of mobile phone projects are of an artistic nature. A very explicit example of such an "anti cell phone" project is the "i-bomb" by the EIU (The Experimental Interaction Unit), their device is : "The system allows for the disruption and/or disabling of electronic devices and systems within a limited range and without physical contact. It will also corrupt and/or erase any magnetic storage medium such as floppy disks, credit cards, etc. The result is the creation of a physical space guaranteed to be devoid of technology, a Technology Free Zone (TFZ)" (8). This project carries off a lot more than mere cell phone disruption.

Another project in that spirit is the "Digital Shelter" by Pedro Sepulveda (9), that wishes to provide shelters from the digital surveillance and communication systems spread in our urban "scanscape", or : "rchitecture and electronic objects that shelter our life within the electronic spaces that surveillance and telecommunications systems produce"

Usman Haque also wishes to provide us with temporary shelters from this magnetic pollution, in order to restore some of the privacy we used to have in the public realm. This he wishes to accomplish by designing : "...floatable jellyfish-like vessels that drift around cities...(in order) to create temporary, ephemeral zones of privacy: an absence of phone calls, emails, sounds, smells and thermal patterns left behind by others". This structures are further supposed to block all kinds of microwave transmissions, (GPS, cell phone, and also television broadcasts) (10).

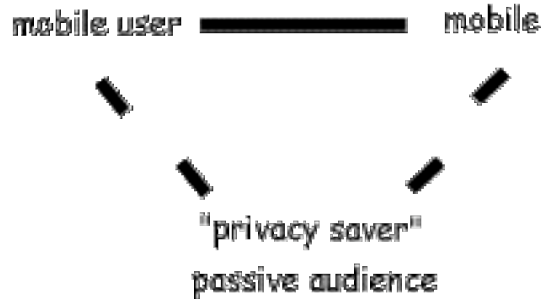
Another "anti cellular" project, which is rather "low-tech" is "cell phone bashing" 11,

where the participants are simply asked to physically remove every cell phone they see, and physically bash it.

privacy saver - concept:

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This device enters the triangular relationship of user-user's cell-crowd around user. It responds to the remotely triggered nuisance by creating a remotely triggered nuisance of its own. Actually they are both triggered by the same source. The same call triggers the nuisance and the anti-nuisance.



This device allows its user to pre record a message expressing his feelings towards bothersome cell conversations carried out in the space around him. The user doesn't have to go out of his way, or make any specific effort to express his discomfort at such a situation, this device does it instead, automatically. Moreover, since the user can record his own messages, this leads him to reflect and formulate his personal opinion regarding the use of the cell phone, while also potentially avoiding confrontation with the mobile user.

When this device senses an incoming conversation in a certain radius around it, it plays a pre recorded message, such as: "your conversation is very important to us, please speak up". This is a gentle reminder to the other cell phone users that their private conversation are a nuisance and an invasion of public space. Mobile phone users are reminded to restrict themselves to SMS messages, or to keep their conversation as short as possible. The advantage of this device over cell phone jammers is that this device is legal, it isn't aggressive - it allows the use of cell phones, but reminds the user of the social nuisance they cause, and moreover since it is not an active device - it doesn't have to produce any random noise or counter transmission, it doesn't emit any radiation, and most important: it allows its users to reflect on their relationship with the cell phone, and phrase it accordingly (and creatively - not unlike the earlier use of answering machines (12)).

The projects represent a compromise between the constant advent of progress and technology, and between our organic limits and needs, which are not changing. This project, while admitting the human need for cyborgian augmentations, is a gentle (but firm) reminder of the problems these augmentations create, and sets limits to the extent of their use.

Design through hacking - hacking into the unknown

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The design process starts with hacking systems, preferably simple ones. This hacking

experience starts with a complete lack of any practical knowledge regarding electronics. Of course I know Ohm and Tesla, I even knew (once) the laws they developed, but there is a long distance from there to actually putting together the most basic electric circuit. Or actually it is a very short distance if you're willing to climb down from the theory tree (a very high one) and attack those menacing wires with a relentless soldering sword. Being an absolute beginner, I was trying to be as lenient with myself as possible, and started off willing to embrace every possible mistake I might make, as stupid as it can be (and they were....). I discarded all thought that might prevent me from advancing in to the practical phase, such as trying to understand the physics of electricity before I even touched the soldering iron. Starting off with more or less the simplest kit ( a giant flashing LED) was a good thing. The fact that it went well and that I didn't have any problems with it was less promising, since I knew that error and failure were waiting for me, at a more advanced stage with more complex circuits where it would be hard to solve problem.

There was still the problem of how to hack kits I haven't constructed yet, and that I don't even understand. I tried to think of them as abstract Lego blocks, as complete elements that have to be added together somehow. This approach wasn't very fruitful, and I couldn't come up with any idea.

Next step was assembling all the other kits. Soldering turned out to be a very social activity, we were 3 women, sitting around the table, chatting, listening to music, and soldering for the 1st / 2nd time in our life. It felt like those embroidery salons from the 19th century, where upper middle class women would gather together to do embroidery, and at the same time exchange information about the world around them(13). This impression changed later, when soldering was no longer a new experience, and became a rather technical detail, and then I started feeling like a part of the Asian labor force, assembling tiny circuits. I guess this process is not unlike the process fine handiwork underwent a similar process in the last 50 years (13)....

But still, even with 3 out of 4 circuits working fine, hacking the kits was not very clear. I guess that this hacking creativity develops itself as I will continue working with circuits, and will have to face concrete problems. A proof of that was that after another lecture with Stock, and after we managed to get the non working kit to work, connecting the electrical acupuncture set together with the heat sensor was a natural option. And as I write these lines, actually new ideas come to mind....

#### Hacking the incoming call - hacking the flashy circuits

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This device uses hacked gadgets prefabricated for the cheap gadget industry. It consists of 2 main parts: the detecting and triggering part, and the audio recording and playing part.

The detecting and triggering part consists of an antenna that detects wireless communication in a small radius around it. Once such communication is detected, it sets off a blinking LED light. This was connected to the audio unit, so that the antenna triggers also the audio part.

The audio playing and recording part: This circuit is composed of an audio recording unit that enables the user to prerecord messages, and of an audio playing unit, that plays back the message when triggered. Power is supplied by 3 1.5v. batteries + 1 3v battery for the

detecting system.

This device is lightweight, and can be carried in the users pockets, or strapped to the user's bag, in such a manner that once worn it is immediately forgotten.

The whole device is placed inside an emptied tomato puree tin can. This is a reminder of the communication devices most children used to fabricate some years ago. We used to attach a wire to 2 tin cans, the wire would carry the sounds waves between the two cans, that thus served as a phone. This design choice is a reference to the almost forgotten period when long distance communication was still wired, and wasn't taken for granted, A time where a phone conversation required a physical space of its own, when the communication device was still wired to something, and those electro magnetic waves weren't all around us, traveled only along specifically allocated wires

testing and conclusions

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The device was exhibited during the 3-day graduation show at the Piet Zwart Institute, and also sporadically to random friends. Every one immediately wanted to test the device by initiating a phone call. The results can be divided into a couple of categories: those who liked it immediately, and those who came back the next day and said :”oh, we were traveling in the train today, and we really needed your device....”

On the train the reaction was less amused. Mobile phone users were too immersed in their conversation to notice the repeating message. They took note of it only after they finished their conversation, and then chose to ignore it, again out of confusion – I think they were not quite sure as to whether the device was aimed at them.

The device seems to achieve its goal of making people reflect on the use of mobile phone in public spaces. On the other hand, users didn't seem affected by it, and moreover, every mobile phone owner didn't hesitate to test the device by generating a conversation in a public space....

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