

Hackteria and Bioelectronix

Andy Gracie (gb)

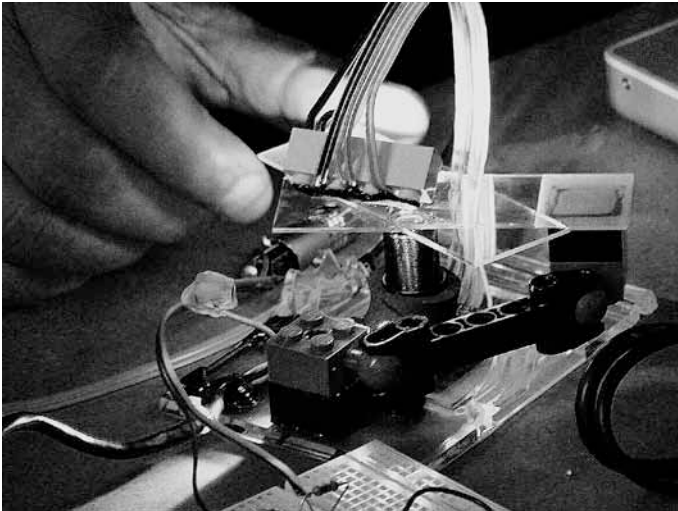
Artist

Marc Dusseiller (ch)

Transdisciplinary Scholar, Lecturer for Micro- and Nanotechnology/Artist

Hackteria is a collection of Open Source Biological Art Projects instigated by Andy Gracie, Marc Dusseiller and Yashas Shetty with the aim of developing a rich resource for people interested in developing projects that involve DIY bioart, open source software and electronic experimentation. Hackteria encourages scientists, hackers and artists to combine their expertise, write critical and theoretical reflections, share simple instructions to work with lifescience technologies and cooperate on the organization of workshops, festival and meetings.

The majority of our work so far has been under the label 'Bioelectronix', a marriage between the bio and the electric, or to be more succinct the locus at which the biological and the technical can meet, or collide. We embrace the idea that technology, applied correctly and intelligently, can be a valuable tool for the investigation of the organic world around us, and especially the microbiological world that remains largely hidden. A second, and maybe more important aspect of the Hackteria ethos is that our techniques, our discourse and our products are open source. This is not to align ourselves with the growing FLOSS movement but as a necessary stance in the current scientific climate. It is said that Athanasius Kircher was the last man to know everything, and in the 330 years following his death it has become impossible to know all of science not just because of the sheer volume of information but also due to the prevalent practice of obscuring or patenting scientific discovery and knowledge. To be able to share a deep and informed sense of wonder about our world it is necessary to be able to engage with scientific knowledge and practice, by getting our hands and minds wet and dirty we can empathise and understand the functioning of nature much more intimately. By understanding the things around us we can make more meaningful descisions about how we relate to and interact with them. The hackteria project, through procedures such as the 'Bioelectronix for Artists' series of workshops, tries to stick a foot in the door and open it a fraction more.



So, what is Bioelectronix?

Bioelectronix is not bioelectronics; the emerging science of biomedical technology centred around such devices as 'lab on a chip' and implantable neural interfaces. Complex and expensive technologies from the closely guarded and secret world of cutting edge scientific research. Bioelectronix is the appropriation and development by artists and hackers of certain aspects of these technologies in an open-source and DIY environment. Relatively cheap and simple technologies which can be shared, improved and distributed through an open network of users and enthusiasts.

Bioelectronix has emerged out of artistic disciplines such as bio-art, software-art and robotic-art; although the philosophy is less to do with defining an approach to working, and more to do with an open sharing of ideas,

opinions and practical techniques to allow artists to experiment freely and economically with a range of cutting edge tools and techniques.

Bioelectronix of some form or other has been practiced by various artists, each with their own approach, style and interpretation for a number of years now, and we make no claims to inventing the 'artform'. A common factor of the works that are most appropriate to the Hackteria bioelectronix idea is that none explicitly or directly discuss the notion of the cyborg. That is to say not solely about the augmentation of an organic element through the use of technology, but more the attempt to create a situation where organic and machinic, natural and artificial can begin to form relationships and methods with which to share and transform information and behaviours.

Bioelectronix can be much simpler still. Works involving bioelectronix can be simple experiments in exploring possible relationships between ubiquitous life and ubiquitous technology. Maybe we employ the technology to enable us to simply view or sense organisms which are too small to see with the naked eye. Or we could carry out simple processes of interaction allowing us to share in some way the experiential world of other life forms. Or maybe we just want to see 'what happens if...'

The fact that we are coupling the organic and the electronic is the key issue, the fact that we are working with the ubiquitous life forms of bacteria, protozoa or insects alongside the ubiquitous technology of electricity and the possibilities for communication and transformation it offers. We must emphasise that we are not aiming to recreate the fictional work of Dr. Frankenstein; ours is a gentler inquiry into the many intriguing aspects of a mostly 'invisible' world with comment and critique on our ongoing and rapidly changing relationships with the natural world due to the assimilation of technology into most aspects of our lives.

Despite this, the ethics of each practitioner of bioelectronix must be his or her own. We each have our own views on how we should treat the rest of the animal kingdom, and we each put into practice our own methodologies to allow us to reflect those ethical views. The practice of bioelectronix may lead us to a point where we feel a need to reappraise and review those ethics. Maybe this practice will lead us to reflect in new and different ways the way we use technology, how we relate to the animal kingdom and how we appreciate the advantages of science which has been built on techniques similar to these.