Pixelspaces Conference

The *Pixelspaces* series of events initiated in 2001 by the Ars Electronica Futurelab is the yearly conclave of a community made up of freelance media artists, media labs & institutions, and assorted newcomers. *Pixelspaces* is essentially a setting for communication and display of current research approaches being employed in the artistic, scientific and technological confrontation with socially relevant issues.
Since the inception of *Pixelspaces,* the lineup of discussion topics has undergone a very dynamic process of development; what has remained constant is the focus on some of the work currently being done at the Ars Electronica Futurelab. Initially the accent was on computer gaming, architecture and virtual & augmented reality; now, it's robotics, games and exhibition design. Lab staffers present exemplary projects, and exchange views and experiences with counterparts, colleagues and peers.

Das Ars Electronica Futurelab initiierte 2001 mit der *Pixelspaces*-Veranstaltungsreihe die alljährliche Zusammenkunft einer Community aus freischaffenden Medienkünstlern, Medienlaboren und -instituten sowie Newcomern. *Pixelspaces* ist Kommunikations- und Schauraum aktueller Forschungsansätze in der künstlerisch-wissenschaftlichen und technologischen Auseinandersetzung mit gesellschaftlich relevanten Fragestellungen.
Die Auswahl der Themengebiete hat sich seit den Gründungstagen von der ursprünglichen Ausrichtung auf Computer Gaming, Architektur und Virtual/Augmented Reality stets dynamisch weiterentwickelt und orientiert sich exemplarisch an Forschungsfragen, die das Ars Electronica Futurelab aktuell bearbeitet: Robotik, Architektur, Games und Ausstellungsgestaltung bilden Schwerpunkte der Veranstaltungsreihe, in der die Akteure der Labore nicht nur ihre Arbeit präsentieren, sondern Erfahrungen und Herangehensweisen im gegenseitigen Austausch miteinander teilen.



Photo: Martina Hechenberger

Labs as repair shops?

Will labs devote greater effort to social and civil entrepreneurship in the future? A wide array of projects now in their initial phases stems from this area. The *Pixelspaces* conferences will take up and discuss several of these initiatives. This part of *Pixelspaces 2010* will scrutinize the future of labs in light of changing framework conditions, and elaborate on the extent to which laboratories can function as the "repair shops" of our world.

Traditionally, media laboratories—labs for short—discuss the chances and risks of new technological possibilities, elaborate on artistic standpoints, and seek ways to nurture innovations. This is the mission that I impute to labs. Ultimately, this is a matter of embedding new and previously "unthought-of" ideas in a discourse that is as public as it can be. One might even characterize this as a facility that seeks, enables and discusses innovation. This applies to all of their areas of activity: art and design, technology and society. The picture of our social future that emerges from this activity is another definitive characteristic attributable to all labs—in fact, it's probably the most important criterion of a lab. Going about accomplishing this takes place on multiple levels—imparting knowledge and information, which means the process of exchange with peers as well as with the general public. New forms of education and training as well as various modes of access to the discourse in the public sphere are made possible by labs. In short: the wide-ranging process of getting across media competence was launched in these labs.

Most labs were founded to serve as infrastructure providers, whereby the infrastructure was placed at the disposal of the laboratory's staff and a new type of artistic nomad. These people migrate as artists-in-residence from one infrastructure oasis to the next in search of new possibilities of working out their ideas.

Nevertheless, media art, media design, the creation of new media technologies—in short: media production—increasingly takes place outside of such oases. This doesn't mean that labs have ceased to be inspiring sites; rather, it's because there's no shortage of suitable infrastructure in the areas in between them. Broadband internet connections and thus the availability of massive computational power, the possibility of media processing as well as unlimited remote access to the lab staff's know-how through the use of elaborate communications tools—today, everyone has these options at their fingertips. All areas of social life, everyday life, science and technology feel the impact of omnipresent information & communications technologies (ICT). The land between the oases has gone "green."

We can no longer speak of ICT as the key technologies of the future without immediately recognizing that they have already become the key technologies of the present. What we perceived as a revolution back in the '90s—namely, digital technology pervading all aspects of life—is a process that has been pretty much concluded at this point. The further development of ICT is advancing across the board, so that the accelerating sequence of developmental cycles brings forth more or less evolutionary improvements. However, the future of our society will continue to be considerably affected by ongoing revolutions, upheavals that initially—like at the outbreak of the Digital Revolution—were recognized as such only by a few "insiders."

Nanotechnology, biotechnology, cognitive sciences, the arts & humanities and the social sciences have become art's new domain. Since 2004 [1] at the very latest, this area of activity has been designated (via invocation of ICT) with the all-encompassing term "converging technologies." The coming technological revolutions will emerge in this area!

In May 2010, Craig Venter "constructed" the first form of life with completely synthetically produced DNA. "My God, It's Alive," screamed the headlines in newspapers all over the world, but only a few nerds in the synthetic biology scene truly grasped the potential of this quantum leap.

Media competence? That's old hat, yesterday's news! What's the story with knowledge, opinion formation and the assessment of ramifications in fields affected by these technologies? And what about the process of social reflection on these developments and their consequences, and how results and insights from the labs are communicated to the general public?

This expanded technological and scientific domain is the field of activity of art forms that are to a substantial extent spinoffs of media art and that the Prix Ars Electronica has subsumed in the Hybrid Art category since 2007. Nevertheless, this art form—hybrid art—is still seeking its oases!

Here and there, scientific or technical laboratories at universities are indeed made available to artists and their work, but this trend has been almost totally ignored by media labs. Knowledge about the Digital Revolution's technologies that have been the key driving forces behind social transformation and the ability to deal with these phenomena is still part of the labs' mission. It's not that this knowledge wouldn't be useful, but additional concrete skills that will be useful in the future are (still) lacking!

The question is thus whether the shift of infrastructure from media technology to the equipment of converging technologies will substantially determine labs' future? HybridLab instead of Medialab? If laboratories wish to continue to perform their indubitably important function in society, then this process of opening will be unavoidable—on one hand, in order to be able to accompany

the art forms of the future and thereby continue to scan signs on the horizon, and to live up to the responsibility of hosting a public discourse and mediating the public's encounter with these phenomena; on the other hand, to avoid the danger of the lab itself being left behind in the dust. In light of the quantum technological leaps to come, it's important to configure the process of dealing with them in a way that is playful and brings out essential ideas—a domain of the labs—and to open up these fields with tremendous future promise for as much experimentation as possible. Access is necessary for competence to develop.

Nevertheless, changing tools and infrastructure and the accumulation of knowledge and skills in the not-yet-established technologies and sciences won't suffice. The lab as mediator at the nexus of art, technology and society and as the attractor of creative potential will have to have the courage to take an additional step. According to the latest sociological studies, the next social upheaval is already upon us: the transition from Knowledge-based Society to Conception-based Society.

This shift is being brought about by two fundamental changes in the way our economy works—first, the costs of knowledge-intensive routine activities are falling; secondly, the consumer's subjective experience with an article of merchandise is becoming the primary determinant of that merchandise's value. The decline in the price of knowledge-intensive routine activities such as software development, construction work and translating is being triggered by the wide availability of such services and, above all, of the tools that simplify performing them. In the private sector, this price decline is being intensified by the outsourcing of these knowledge-intensive routine activities to low-wage countries such as India, China, Brazil and Russia. The social consequence of this—especially among the technological and economic elites in industrialized countries—is enormous pressure to innovate. Only knowledge-intensive non-routine activities—developing new technologies and concepts, which is to say innovating—will be the only remaining basis on which to create value in industrialized countries. This pressure to innovate will pervade all sectors and areas, and thus media (art) production too. The art that has already made considerable progress in getting established in new technological and conceptual areas thus needs new oases.

Moreover, the subjective experience is becoming the dominant component of the object. At present, the shifting of this relationship increasingly towards subjective experience is also happening with respect to ordinary consumer products, which means that a particular person's perceived lifestyle is becoming the primary basis on which purchasing decisions are made.

Our behavior as consumers is characterized by our subjective attitude towards life, and our general social affluence makes it possible for more and more people to base their purchasing decisions on their taste or their conscience. Fair-trade merchandise is more expensive, but it benefits companies that monitor their suppliers' working conditions; a particular car costs more but it does less damage to the environment. The additional costs that these classes of consumers have lately demonstrated they're prepared to assume are reminiscent of the selling of indulgences to Catholic sinners—a "clear conscience" suddenly has a price again. But in contrast to the indulgence business, we can today proceed under the assumption that at least part of the price paid will actually benefit that effort the consumer wishes to support and thus make an actual, direct impact—to wit, that at least part of the price paid is reinvested in the development of ecologically sustainable and socially acceptable products or processes corresponding to the lifestyle of those who purchase them.

Labs are not unaffected by this development. They're a part of it. If labs want to continue to lodge a claim to design excellence that they have rightfully earned, we'll have to deal with the world

around us. Incessantly progressing global warming, the widening of the so-called digital gap between urban areas and regions with lower-grade infrastructure and between industrialized and developing countries are just a few of the scenarios on which labs are expected to take a stand. The labs of the future will (have to) deploy their entire creative potential in order to utilize technology as a means of bringing about advances in other sectors (like social welfare and education) that have a major impact on culture. Initial examples of this already exist–for instance, *The Eye-Writer* [2] project of the OpenFramework community.

> "Art is a tool of empowerment and social change, and I consider myself blessed to be able to create and use my work to promote health reform, bring awareness about ALS and help others."
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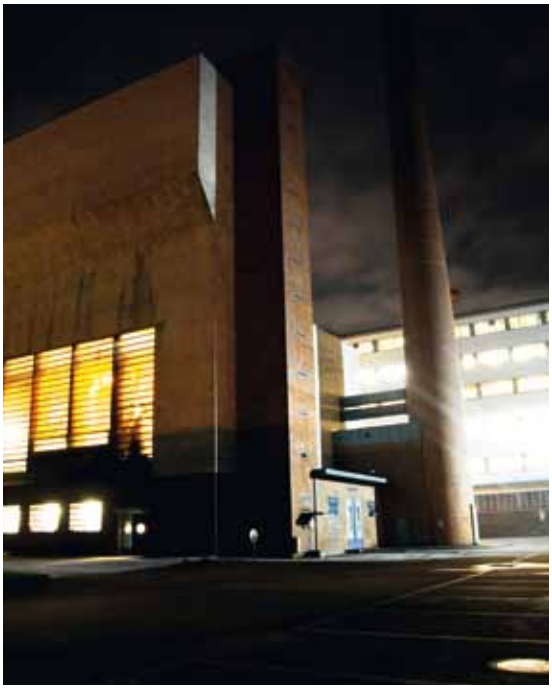
> Tony Quan, aka TEMPT ONE

Tony Quan, aka TEMPT ONE is a Los Angeles graffiti artist & writer who's afflicted with ALS (amyotrophic lateral sclerosis, Lou Gehrig's disease). The inquiring eye will no longer focus solely on our society, on the technological and economic elites; instead, we will be confronted by projects that deal with people and societies beyond the realm of these elites. The next step after penetrating the public sphere will (have to) be embedding these projects in a global complex.

1 Alfred Nordmann: "Converging Technologies–Shaping the Future of European Societies", *HLEG Foresighting the New Technology Wave,* European Commission Research, 2004
2 *http://www.eyewriter.org/*



Photos: Ewald Elmecker