micro.flow (former bit.flow) , Julius Popp, 2005 - 2008

As the depiction of a problem, that of human intelligence within the framework of a senseless robotic being, *micro.flow* addresses how our brain is dealing with information and its perception. It both unfolds the problem of the motori-sensory system and how it is able to create a relation or a graphic symbol. Despite its limited output – to pump two liquids that don´t mix and knowing nothing about its own configuration - *micro.flow* is able to watch its own action through a camera, its eye, and learn from it. In this way, it will eventually come to understand its own body and behavior.

A machine, a tube arranged in a accidental, non systematic way, a camera and a computer brain define *micro.flow*´s components. The machine has a task, to successively inject a colorless and a colored liquid, that doesn´t intersect or mix, into the transparent tube. Thus starts the process and as the liquids are pumped into the hose, a sequence of colorless and colored sections develop in a total random, unpredictable way. In the beginning, the system knows nothing about its own body, it can only perform the assigned task and through a camera, its eye, survey the process.

The video camera motion tracks the flow and so the machine should build up knowledge of where and how the fluids travel down the tube. As it assigns values to each individual action it took, the machine should build a comprehension in terms of abstact data of the process itself. It tries to „imagine“ patterns which should be written in the matrix of the tube and it tries to write these patterns by injecting liquids in an „consciouss“ order. Once it is able to recognize its own imagined pattern in the tube it will use this pattern as a „charachter“.

This abstract charachter is then sent to a second, identically constructed system. Only, the arrangement of the hose is different, though likewise in an absolute hazardous way. This twin system also tries to convert the transferred information into the same image but it can be, that the matrix of both have hardly anything in common. Obviously, reproduction, negotiation or communication is only possible when there is some common ground. In this communication/ negotiation process both machines can only agree or communicate on basis of a common matrix or territory.

Interpretation

Within Julius Popp oeuvre *micro.flow* is a key work since it simultaneously merges a scientific claim with the search for knowledge and a pure aesthetic expression. It connects the basic principles of communication with aesthetics, calligraphy and biology, simultaneously addressing such diverse issues as perception, communication, coding and translation.

Though *micro.flow*´s installation feels like a laboratory room, it arises strong biological associations in the viewer´s mind, for it reminds us a great deal of the human arterial system. The produced signals - that come to achieve a bodily representation - find a strong parallel in Biology, in the sense that the blood that runs in our veins also conveys signal information or, code just the same. *micro.flow* is simultaneously the human mind, depicted in its minimum level, made technology and experienced as body and code all together.

Once again and like other Popp´s works, *micro.flow* is a machine for the production of meaning. In the end, producing text turns out to be the most graspable feature for the viewer. On this topic the artist says: „*As soon as micro-flow starts to develop its own vocabulary, then I don´t need to explain it further, then it will explain itself for sure. It´s easy: a machine that observes itself and seeks through its own body to develop a language of signals. In the future one will recognize just that only by watching*“.

But though it becomes possible to calibrate the chaos and using the provided system, place text or images into it, that´s not what is happening here. The challenging feature of this work is exactly, that it can understand the pattern created by itself, without being programmed to do so. Except, because we are not able to recognize order in caos, the artist corrupts the process by programming a line, as an example of something that would be recognizable by all of us. This line is a metaphor for the idea that we need to be at the right time in the right place in order to have the right perspective. On this Julius Popp says: „*I want to show that things can be very complex but that, with the help of technology, we are still able to adapt to them*“.

micro.flow remains consciously unfinished, since the effect of the images in the hose supplants the search for knowledge. It becomes then necessary to distinguish between a fake solution – the one that can produce images (bit.flow mk 2) – and, an autonomous one, that will do with the scientific claim. When this last variant comes into function, once the machine is able to explore all possible patterns and comes to produce its own vocabulary then, something both astonishing and frightening has happened – the arise of artificial intelligence.