

UMwelt-VIRUtopia

The UMwelt-VIRUtopia art and technology project is built on top of the Wanda* micro robotic and swarm research project designed by the Karlsruhe Institute of Technology (KIT) within the DFG Research Training Group "Self-organizing Sensor-Actuator-Networks" and the KIT project KITCoRoL (Germany) in close collaboration with Alexander Kettler and Marc Szymanski. The project was partially funded by the Flemish Ministry of Culture [BE] and with the support of the Karlsruhe Institute of Technology.

The project consists of minimum 23 robots equipped with laser beam class 2 technology mounted on top of each single robot. The robots execute swarming behaviours and while doing so creating an architecture of security. Patterns emerge and a choreography of light, sound and space unfolds in front of the audience. The installation space is filled with artificial smoke evoking a dreamscape. The smoke articulates visibility the laser beams.

The project plays on the psychology of borders. What is a border? How psychological is a border? What is security? Can the laser beams be perceived as some sort of kinetic cage? Can we change the architecture through interaction? Can we 'break' the patterns as an audience? Are borders made to be crossed? Can we reprogram space?

*The Wanda miniature robot aims to be an affordable, easy to manufacture but still very versatile and extensible platform for automated experiments with cooperating robots, featuring a large number of different sensors, such as a colour sensor, light sensors at the front-, bottom-, and top-side, an accelerometer or a battery monitor. It comes with a simple but efficient differential drive, a robust infrared communication and ranging system which is especially suited to be used in a large swarm of robots.