

Artistic Vision

WERC

Flip the word WERC and you get CREW. A crew consists of a group of people who work closely together. WERC also forms a group like this with its makers from different disciplines. The interdisciplinary art collective WERC consists of Joachim Rümke, Olav Huizer and Jelle Valk and is based in Groningen. Their work is characterized by experimenting with new media and technology, in which new forms and challenges are always sought in changing formations and diverse disciplines. In WERC's interactive installations and performances, their shared fascination for the connection between the digital and the physical world is always apparent. The humanization of technology and the interaction between people, nature and technology are the guiding principles in their work.

Staatsbosbeheer

Staatsbosbeheer manages the Netherlands' green heritage; 265,000 ha of protected nature that needs to be experienced and that we utilise, sustainably, together with and for everyone. Aided by a contribution from the Province of Drenthe, Staatsbosbeheer purchased the Pixi light installation to turn the forest into an exciting place to be during those short, dark winter days.

A meticulous process was started to find a suitable environment in Drenthe. This environment needed to be resilient enough to handle the extra visitors, and it needed to be able to absorb the technique to ensure that the installation interfered with nature as little as possible. In the end, the forest near the Buitencentrum Boomkroonpad in Drouwen was selected. To reach this decision, biologists, nature lovers, and any proponents and opponents were consulted. An independent agency has performed an ecological check. As the installation was constructed, tested, and installed, Staatsbosbeheer and WERC took into account how Pixi influences the environment. Variables such as light intensity, colour, and placement of the installation have been adjusted to minimise this influence.

Pixi; the first member of the Lumo family

With the Lumo family, WERC presents a series of art installations that connect natural processes, art and technology. WERC calls such an installation a 'digital organism' and has been inspired by the biological processes that take place within a group of organisms such as a flock of starlings, a group of fireflies or a school of fish. Pixi is the first member of the Lumo family with his own habitat; the forest.

Pixi; a digital organism

- With Pixi, WERC wants to find out whether a technical natural phenomenon can imitate the complex aesthetics of nature, and whether the installation can interact with that nature.
- The Pixi was designed to be self-sufficient; able to survive in a natural environment. Pixies make their own choices, but they are also influenced by environmental factors from nature.
- Each Pixi contains a pulsating light. When we observe only a handful of Pixies, there are no discernible behavioural patterns. However, when we step back and look at them from a distance, the connections in the flock become clear and visible. A group intelligence arises that is greater than the sum of its parts.

Pixi patterns and behaviour

- The Pixi was developed as a single individual and then reproduced. The more organisms are added to the flock, the more complex the patterns become, and the more intelligently the organism communicates and collaborates. This creates a lively network of feedback that is reminiscent of a neural net. The Pixi flock does not show a pre-programmed pattern. The shapes, directions, and colours are decided by the group as they pass signals on to each other. The Pixi's brain is a microprocessor containing behavioural rules, the bases of which are identical. The behaviour dictates how often, how fast, and to how many other Pixies a message should be sent. When a Pixi receives a message, it interprets this and then sends it on. When a Pixi hasn't received a message for some time, it will initiate contact on its own.

By having the behavioural rules executed locally and in multitudes, complex images arise. WERC makes the organism do the work by very quickly and very precisely repeating simple rules until they form complex images. WERC then assesses these images and adjusts them. Inputting variables into these rules creates an infinite number of combinations. WERC enjoys relinquishing control and letting unpredictability develop. WERC no longer makes any decisions; they simply provide the framework within which the Pixies are free to move. Fascinated by biology and technology, WERC has tried to create a life form that has a close relationship with both its own kind and its environment.

Environmental influence

Nature plays host to the installation. Nature becomes part of the design process due to visitors and other, ever-changing environmental factors, such as temperature and humidity. This creates a symbiosis between digital technology and nature. Because of this, the Pixi adopts location-specific behaviour. Pixies communicate wirelessly with each other, over radio waves. This communication is visualised by the duration, intensity, speed, and colour of the light. This gives rise to flock-inspired patterns and movements.

Creating the Pixi

The Pixies have a battery that provides sufficient energy for them to work during the autumn and winter months. They sleep during the day, waking up at night whenever a visitor takes a Pixi lantern into the forest. When a Pixi's energy levels drop, it will become less active. The imitation of nature is also visible in the shape of the casing. The variable of this shape was generated by Pixi itself, and then created using a computerised cutter. Just like other organisms, the Pixies have similar characteristics. When you look closely, however, you'll see that no two Pixies are exactly the same. The casing is made of wood; a natural product that fits perfectly within the environment.

Pixi visiting address
Buitencentrum Boomkroonpad Staatsbosbeheer
Steenhopenweg 4, 9533 PN Drouwen

Pixi visiting period 2016 - 2020
October through the end of December.
Buy your tickets at www.staatsbosbeheer.nl/pixi



www.werccollective.com
mail@werccollective.com
+31 50 211 34 72
Neutronstraat 7-18
9743 AM Groningen

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