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#### LED-ART

**Staff:** Project-based  
**Management:** Paul Klotz  
**Founded:** 2006  
**Operates:** Worldwide

#### KEY PROJECTS

**Concept design,** MAF, Leeuwarden/Netherlands, 2007  
**Interactive light installation,** Almelo/Netherlands, 2007  
**Hotel Mercure: Light plan & concept design,** The Hague/Netherlands, 2007  
**Streetgallery: Concept Design,** Rotterdam/Netherlands, 2007  
**Generator: Interactive light installation,** The Hague/Netherlands, 2006  
**Foundation Kop: Interactive light installation,** Breda/Netherlands, 2006

**Saxion University: Interactive installation,** Enschede/Netherlands, 2006

#### PROFILE

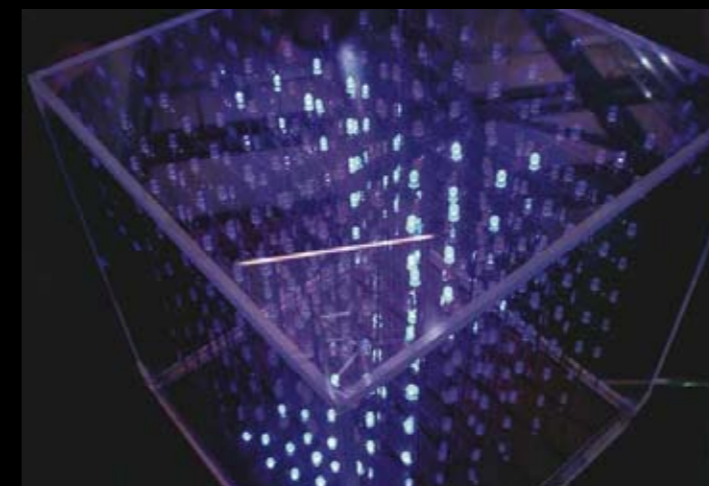
Founded by applied-art engineer and lighting designer Paul Klotz, LED-Art creates light-based art installations designed to enrich the consumer experience; both public and private. Specializing in the manufacture of interactive, microcontroller-based installations, Klotz describes light as a variable that 'determines our state of mind'. LED-Art combines interaction, art and architecture, with the aim of creating a dialogue between the participant and the installation. Visitor presence, environment and the desired identity or emotion are elements used to steer the direction of participants' experiences. The company strives to provide high quality products and services for exterior and interior architecture.



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01 EQUIPPED WITH ITS OWN IP AND MAC ADDRESS, INTERACTIVE INSTALLATION 3D-MESSENGER DISPLAYS MESSAGES POSTED ON A WEBSITE, LETTER BY LETTER, IN ITS STRUCTURE.

02 CLIMATIC INSTALLATION EL-37 (ECO-LINE 37) - A 6-M-TALL MODULAR THERMOMETER LOCATED IN ALMELO - DISPLAYS THE CITY'S TEMPERATURE AND RESPONDS TO PASSING TRAFFIC. THE PIECE PROVIDES A VISUAL NARRATIVE OF THE INFLUENCE OF MANKIND.

03 FITTED WITH AN ULTRASONIC SENSOR TO TRANSLATE THE DISTANCE BETWEEN PEOPLE AND ITS STRUCTURE INTO LIGHT ANIMATIONS, LIGHT INSTALLATION CUBBLUE RESEMBLES A STRAND OF DNA RANDOMLY MUTATING AND CHANGING DIRECTION.

# EDD The Hague, Netherlands

## CLIENT

PROPOSAL FOR  
GENERATOR

## LIGHTING DESIGN

LED-ART

## CONSULTANT

KITT ENGINEERING

## VISUALIZATION

MILCHBAR

## ENGINEER

LAGOTRONICS

## MANUFACTURER

LAGOTRONICS

## LIGHT SOURCES

DEKO-PANELS, DMXII

## CONTROLLERS

LAGOTRONICS

## TOTAL SURFACE

1200 M<sup>2</sup>

## PHOTOGRAPHER

STEFAN VAN WEELE

[WWW.STEFANVANWEELE.NL](http://WWW.STEFANVANWEELE.NL)

NL

A proposal for Generator, LED-Art, headed by media artist Paul Klotz, used EDD – Embedded Data-texture Display – to offer a concept designed to transform the skin of a traditional building into a dynamic façade.

Initially developed for the Today's Art festival in The Hague, the proprietary concept was re-worked to fit the formulaic window structure and building frontage of The Hague's Hotel Mercure, situated in the city's central Spui Plaza. Prohibited from making alterations to the original architecture, Klotz was responsible for ensuring the project remained considerate to the building's primary function. The design therefore included considerations such as maintaining window transparency to allow hotel guests to see out. As an alternative to attaching external fixtures to the building, LED-Art decided to employ the use of LagoLED Deko panels. Providing a unique printed dot matrix, distributing light to the surface of a side-lit acrylic panel, the Deko panels were fitted with LagoLED RGB strips to guarantee a full RGB colour spectrum and strong, even light output. A high refresh rate was provided by DMXII controllers.

Inspired by the endless number of sequences in our natural environment, the artistic ideology behind the EDD is to take the sometimes hidden, dynamic patterns that surround us daily and translate these into abstract light animations. With this in mind, the content for the system is designed to continually change; specific themes are elaborated at the discretion of the curator-orientated art and content management system. In addition to the project's website providing information on current, future and previous concepts, Hotel Mercure and the Municipality of The Hague also have the option to become involved in the promotion and marketing of the façade.

Unlike other large-scale billboards that mask the front of buildings, by web-enabling the system, there are very few limitations concerning the input of data. Using sensors linked to small but powerful embedded systems, like the MRP developed by KITT engineering, the control units can process obtained data and transmit it via the internet to the main controller in The Hague. Desired data can also be retrieved from existing databases, accessible on the internet.

By combining an interactive visualization program with open-source accessibility allows the content provider or artist for each project to make a custom application and have it implemented by the system programmer.

Ensuring all plans presented are within the boundaries of the cultural policy is an important issue for EDD, enabling the curators to make appropriate selections. Applied themes can include social, cultural, environmental, political or educational issues. It is hoped that

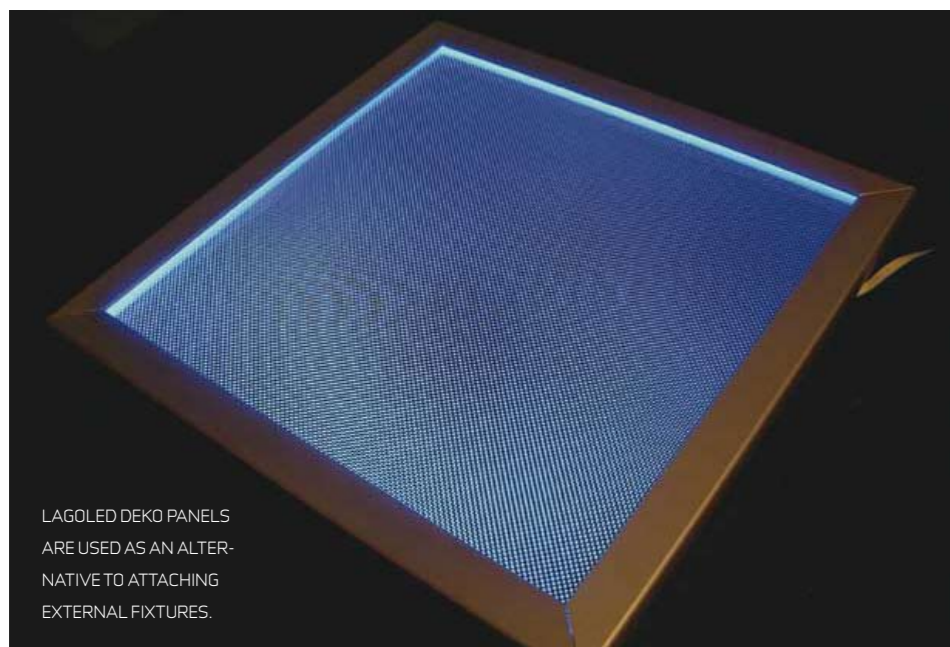
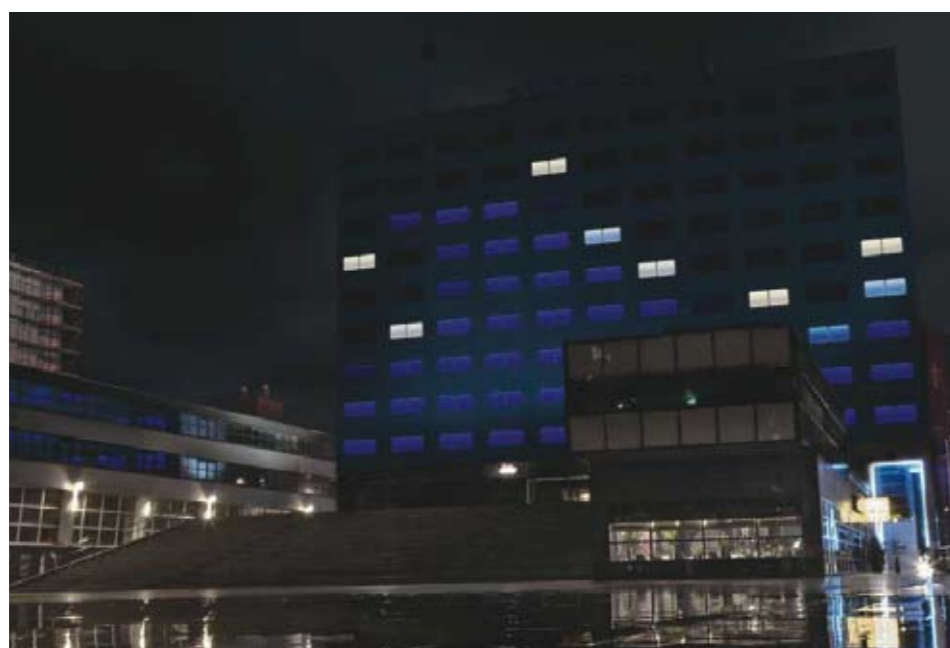
the beauty of these visual transformations will prompt people to question the ideas behind them and, in turn, increase their social awareness.

Concepts for the façade:

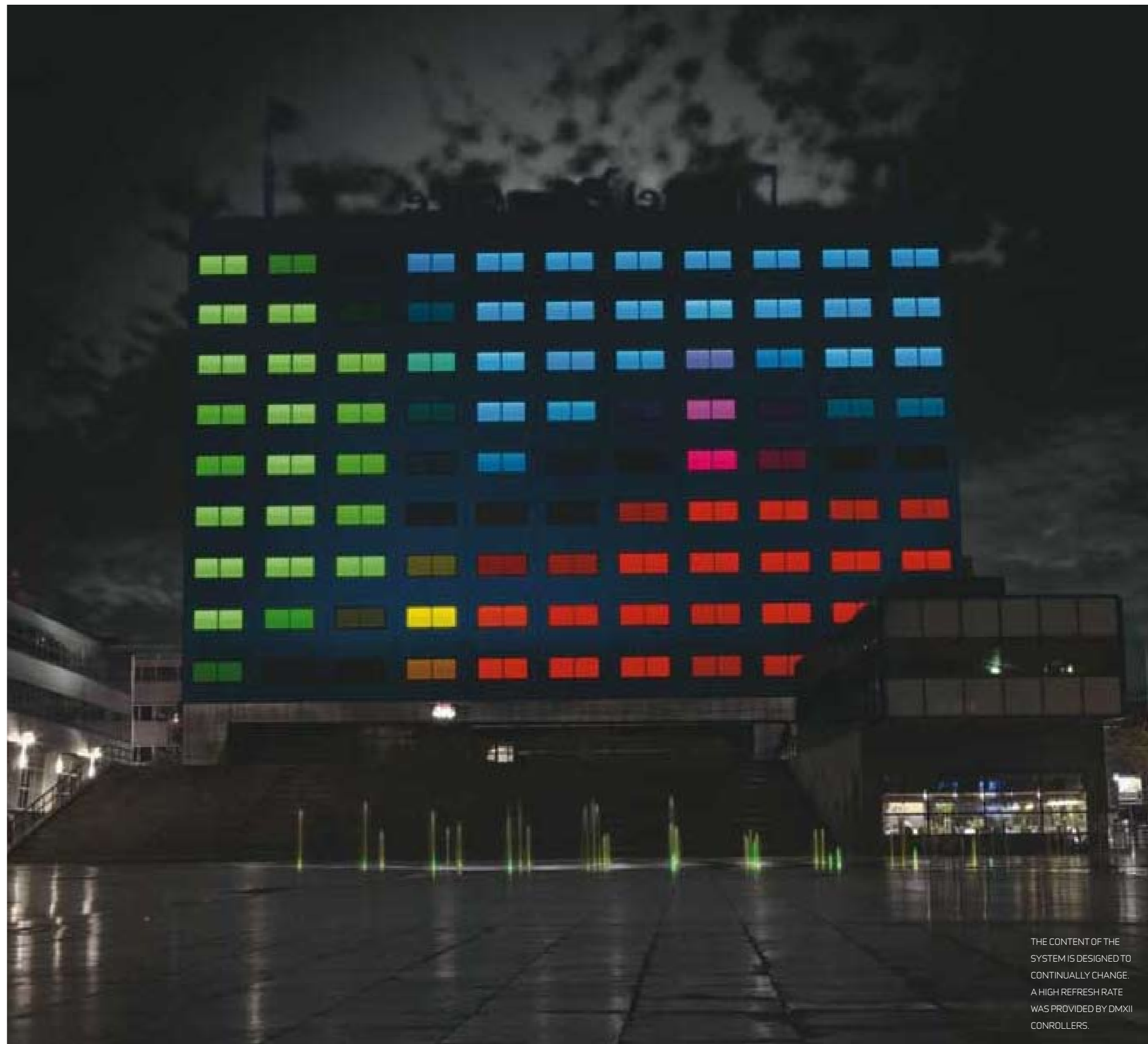
- An interactive display incorporating a camera interface to track people's activity on Spui Plaza. The idea is to encourage people on the street to move playfully and consciously communicate with the architecture to generate patterns. Movements captured would be instantly translated into colour traces on the panels.
- Animated natural phenomena, such as waves – a reference to The Hague's historic infrastructure and the recent floods occurring worldwide – supported by live sounds from the nearby seaside. This application would be reliant on real-time data such as wind force and sea levels to generate input variables.
- A global communication system, gathering data from multiple continents simultaneously to show visual transformations from a global point of view.

Keen to avoid illumination glare which could become a source of annoyance for people in the surrounding area, LED-Art intends the colours in the EDD's animated 'data-textures' to adapt in a gentle and smooth transition. Naturally, the actual speed of transition will depend on the concept written by the artist and can easily be adjusted for specific themes and events. For a festival for example, a more vivid, dynamic content can be generated in response to the visitors on the plaza.

CONCEPT TO TRANSFORM  
THE SKIN OF A TRADI-  
TIONAL BUILDING INTO A  
DYNAMIC FAÇADE.



LAGOLED DEKO PANELS ARE USED AS AN ALTERNATIVE TO ATTACHING EXTERNAL FIXTURES.



THE CONTENT OF THE SYSTEM IS DESIGNED TO CONTINUALLY CHANGE. A HIGH REFRESH RATE WAS PROVIDED BY DMXII CONROLLERS.

The idea is to encourage people on the street to move playfully and consciously communicate with the architecture to generate patterns

WHEN MOTION IS DETECTED, THE SYSTEM USES THE CAPTURED DATA TO UPDATE THE FAÇADE IMMEDIATELY. WHITE REPRESENTS THE HIGHEST MOTION RATE CAPTURED ON THE RELATED COORDINATES ON THE PLAZA.

