

Interactive Environment Processing

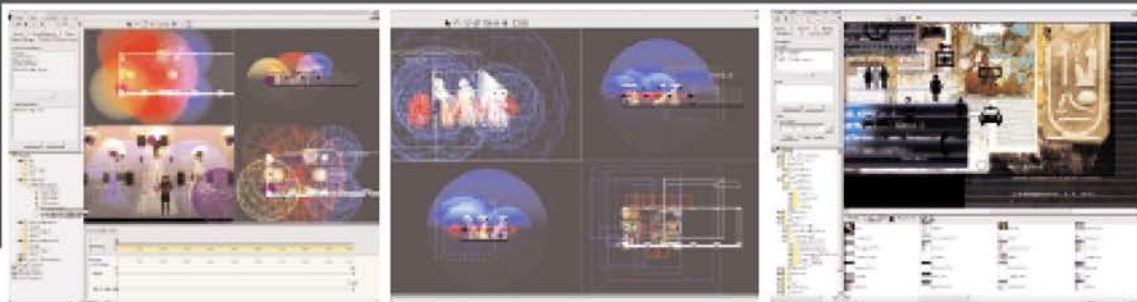


enclued

Technologies for Perception

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Products



enclued™ IEP Authoring Workbench

Environment design authoring suite for planning and simulating dynamic media allocation processes (video, light, sound) in real-time and in real space.

Enclued™ creates a seamless and intuitive production platform for environment design. It provides true scale 3-D modeling features to effectively simulate visitor interaction with sensor zones in real space. Environment designers link indexed database content to infra-red monitored sneer areas in an exhibition area, creating progressively evolving visitor experiences. Enclued™ structures media content in semantically organized databases, which facilitate associative datamining capabilities. Environment authors have access to real-time streaming video, multi-channel digital-audio, and to any hardware controlled by the DMX protocol (stage lighting, special effects etc.).

Enclued™ also offers an interface to the World Wide Web expanding the possibilities of interaction beyond the realm of physical environments. Internet data streams can be linked to content and sensor zones within a local presentation.

cartasia™

Infra-red Motion Tracking System. Visitor interaction with an environment is tracked by infra-red-cameras. Each spectator receives a small IR-Transmitter upon entry to a presentation. Cartasia™ links visitor motion data in real-time with the enclued™ environment.

Enclued™ provides a tracking-interface to utilize other sensor technologies such as mouse tracking, electromagnetic transponders and ultrasonic.



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Interactive Environment Processing (IEP)



IEP - the room transforms into an interactive world

twosuns™ has created an intelligent system of well coordinated presentation tools, giving terms like "multimedia" and "interactive" a completely new quality. The completely novel and so far unique solution is best described as an intelligent, interactive, simultaneously corresponding system of soft- and hardware, which pushes open the gate to a new dimension of multimedia presentation and experience. The key:

Interactive

The various media (video, light, and sound) act as presentation tools in real-time, i. e. directly and without delay. Cause and effect take place simultaneously.

Environment

The surrounding room and the persons moving about in it are equally and at any time action (impulse) and reaction (recipient). Every cubic centimeter of the room can be used as a media presentation zone. Virtual worlds in real rooms!

Processing

All data filed in the database can be used variably and facilitate a performance that is dynamic in every aspect: designers and authors of presentation programmes arrive at intuitive solutions just as the visitors who influence the multimedia process through simple movements.

IEP is the very first intelligent datacontrolling-system available on the market, able to transform every public space into a sensitive architecture.



References



polar

*Carsten Nicolai/Marko Peljan/CanonArtLab, Tokyo 2000,
Cooperation: twosuns™*

In polar, the whole space is integrated as the artwork. Participants, two persons in a pair, get into the space, each with an interface named "POL" developed for this project. They collect sensory information for a precisely set amount of time. When the collection is finished, information of each POL is analyzed, and seven keywords (concepts) corresponding to the qualities of information through an algorithmic calculation are displayed on each of two monitors- interfaces placed in the room. When one of the keywords is chosen, a specially developed intelligent information search system begins to operate, and newly linked concepts of the keyword are collected from various databases and websites on the internet. Thus a database is recomposed each time as a new dictionary. In the interaction with the dictionary, the participant can collect and construct his/her own ideas or concepts that are different from text-data input, categorized by the artists and initial dictionary knowledge base builders, as the starting point of this intellectual information system.

The spacechange processing and tactile response is done with the use of the enclued™ IEP Solution which is linked to the polar engine. For the project a special interface was developed by the twosuns™ team in cooperation with Canon to interface the enclued™ IEP system to the network matrix. With this interface the possibility of data streams changing the content of the sensor zones and coordinates in the space dynamically was achieved.



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References



Smoover - Get oriented

Interactive Citymap, Cityhall Berlin

Production by ama / powered by twosuns™ technology: enclued™ IEP

Size does matter.

Standard kiosk solutions do not attract people to come closer - at best you see is a grey box fusing with the background. Smoover attracts people from distances up to 30 Meter, even in crowded situations.

You can never repeat a first impression.

Research proved that people decide in less than 2 seconds to turn their attention to your message or leave. Smoover compresses any complex topic into a single fascinating picture, making people curious.

Smoover provides a long-term solution for this public place: On top of a 14 squaremeter lightbox, a detailed map of the city center is shown. The visitors can take a half-an-hour ride by shifting the interactive slider to the corresponding spots on the map. The Smoover application consists of up-to-date video and audio information about Berlin's most interesting places.

Enclued™ - IEP

- content navigation (database supported)
- matching of the videoclips, the dynamic fades and text animations
- representation of the enlarged map sectors
- parallel video- and audio output on flatscreen-monitor and projection
- 8 channel audio-output via soundcard, amplifier and 9 speakers



References

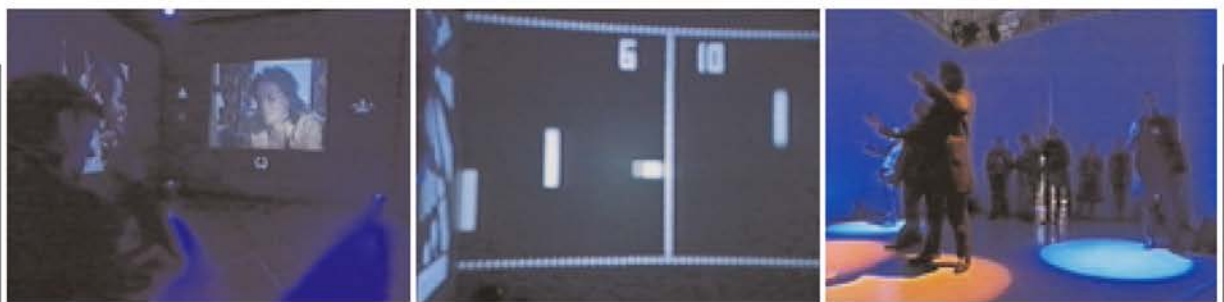


Inhouse Messe_Gahrens&Battermann, Berlin 2000

An interactive presentation on Popstars, Architecture and a variety of products.

Visitors could take part in a 3D-Game. Standing free in the environment, the players acted by means of the IR-Badges on the projection screens.

Also visitors experienced the history of writing interactively. On the horizontal plane in the environment the typefaces of an epoch were filed. Through a vertical movement of the IR-Badge, the size of the projected script could be changed, while a step backward or forward linked informations about different epochs.



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References



Design: archimedes GbR

BLUESTAGE / BLUE SPACE

Haus der Kulturen der Welt, Berlin 2001

Idea und Concept: archimedes and twosuns™

BLUE SPACE is a 250m² multi-media discovery centre which represents a milestone in media theory as well as in the development of 3-D display halls. More than two hundred visitors can have individual access to information and communications simultaneously - without having to use special glasses or other equipment. The BLUE SPACE combines various realms of knowledge, offering visitors a profound and multifaceted spectrum of information far beyond cross-referencing. By saving individual user profiles (comparable to saving bookmarks), it allows visitors to pick up where they left off on earlier visits and continue exploring the same topics.

BLUE SPACE in the House of the Cultures of the World provides encyclopaedic knowledge on the cultures of the world in the form of images, films, sound and texts. The presentation of artistic performances and works are augmented by background information.

BLUE SPACE is intended for the general public. It offers a platform not only to the computer literate, but to inexperienced visitors as well, since its use requires no particular previous knowledge.

BLUE STAGE is the 50m² Prototype-Project and will be presented to the public in August 2001. Location: Cafe Global / Haus der Kulturen der Welt, Berlin

Concepts



Design: Troughworks Inc.

ES3_babel

Feasibiliystudy -> Studio 3 / Babelsberg fx-Center, 1999

Idea and concept: twosuns™ and Troughworks Inc. / design: Troughworks Inc.

Es3 is a multi purpose exhibition and presentation venue, pivoting on the r.e.p. software enclued. It is designed to offer a unique and individual experience to visitors of context driven environments while creating a collective platform of interaction. Es3 facilitates event designers with 4 logical zones of interplay to utilize the existing studio structure effectively.

As visitors enter es3 and receive their individual tracking badge, the contextual capacity of enclued™ will guide each user through the different zones according to the contextual threading previously defined by the author of the presentation. The multilevel topology of es3allows spectators to experience the installation in acontent and media driven fashion, with the freedom of their own intuition.

IGE, Immersive Gaming Environment

Idea and concept: twosuns™ and Troughworks Inc. / design: Troughworks Inc.

IGE is an immersive gaming environment aiming to provide a new level of interactivity for the emerging real time gaming industry. It is suited for large exhibits as well as small venue implementations, and creates a console free multi user gaming experience.

IGE is a modular and portable gaming solution that redefines the relationship between spectators and players. IGE's immersive topology allows game designers to link spectators and two players through the 3D-real time motion tracking capabilities of twosuns' environment design suite enclued.



Design: Troughworks Inc.

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Concepts



Design: Troughworks Inc.

envision_Omnimedia Theatre

Idea and concept: twosuns™ / design: Troughworks Inc. N.Y.

Feasibility study for a software enhanced device (video, sound, lights,...) into a visitor controlled environment.

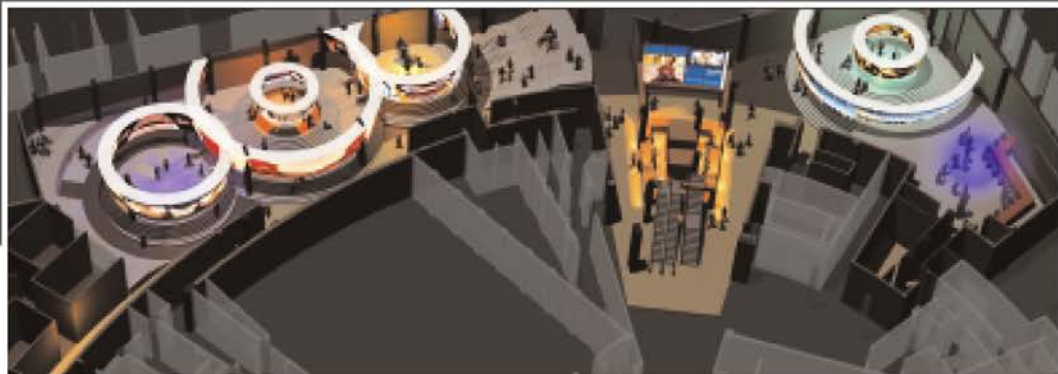
Structure is divided into a collective experience area which allows the definition of media content based on the tracking of the visitors movements and an individual research zone for terminal based data mining.



Design: Troughworks Inc.

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Concepts



Design: Troughworks Inc.

Sony Entertainment Lab - Sony Center, Berlin

Sony Entertainment Lab - Sony Center, Berlin

Idea and concept: twosuns™ and Troughworks Inc. / design: Troughworks Inc.

The site for the Sony Entertainment Lab (SEL) is a 2100 square meter subterranean space in Sony's European headquarters, at Potsdamer Platz, Berlin. The main entrance to SEL is shared with the adjacent Cinemax movie complex, which is also owned and operated by Sony. Egress is provided through stairways within the complex. Visitors reach the entrance to SEL on the basement level via 2 escalators connected by an intermediate landing.

SEL serves as a platform for cultural, educational and promotional events. It provides schools and media technologists with the resources to create truly interactive and evolving media scenarios in real space.

SEL relies on Twosuns™ IEP (Interactive Environment Processing) solution Enclued™, to envelop spectators in a multi sensual experience of visual and audible presentations. Enclued™ equipped environments turn visitors into participants within intuitively evolving mediascapes. Visitor interaction is continuously tracked with infrared cameras and linked to specific areas of interest within a presentation. Through this process, participants acquire anonymous identities, which can be recalled at a later date. The networked architecture of Enclued™ IEP also creates the basis for an array of linked entertainment labs that exchange data in real-time across continents.



Design: Troughworks Inc.

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Patents

1. device for control of rooms

Germany No. 196 53 682

International No. WO 98/26345

2. computer control system

Germany No.196 54 944

International No. WO 98/26346

www.twosuns.com

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1997 - 2001