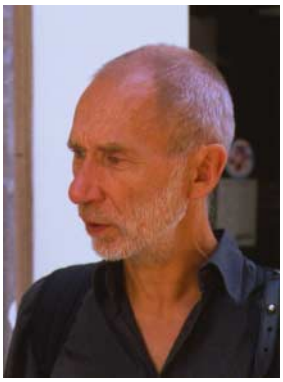
GERMANY Bremen

University of Bremen

Working Group Graphic Data Processing and Interactive Systems
University of Bremen
MZH, Bibliotheksstr. 1
D-28334 Bremen
☏ +49-421-218 4862
🖷 +49-421-218 4867
✉ nake@informatik.uni-bremen.de
🌍 www.agis.informatik.uni-bremen.de

Core Competence

3D-modeling, digital media design for learning environments and museums, hypermedia, visual programming, human-computer interaction, computer art, computational semiotics



Head of the Institute
Frieder Nake

History

Based on experience in computer graphics going back as far as 1963, the group was initiated in 1978 with the start of an official study program in informatics at the University of Bremen. It offers a four-semester cycle of courses and a lab course, besides occasional seminars and study projects. About 15 PhD's in this area have been granted. The group has organized or initiated a number of small working conferences on graphics in documents, human-computer interaction, and computational semiotics.

Staff

1 Professor: Frieder Nake
1 Part-time lecturer: Uwe Behrens
4 Research assistants: Kerstin Burgard, Andreas Genz, Susan Grabowski, Matthias Krauss
1 Technician: Stefan Schmidt
1 Secretary: Ina Chromik

Rooms and Locations

The group is located on one of the floors of the informatics building.

Financing

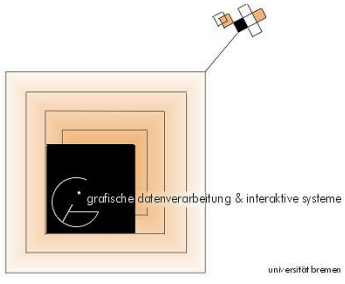
The group is financed by the University of Bremen.

Current Structure and Important Partners

The group is small and therefore does not need special internal structuring. Work is organized in projects.

Current Research

By mid-2002, the following projects are pursued:
- compArt. Design and implementation of a hypermedium that is metaphorically called "a space for computer art". Currently, we concentrate on the early history of computer art (up to 1980). The hypermedium is structured in four separate spaces: (a) the space of works (navigatable virtual galleries designed as a physical visual metaphor); (b) the space of works of art (navigatable virtual fantastic space with odd gravitational forces simulating neighborhoods of artists, works, exhibitions, critiques, etc.); (c) the space of learning (interactive virtual laboratories dedicated to various kinds of



algorithmic aesthetics, to be used in a playful way for study); (d) the space of data (relational non-standard data base containing all relevant data to be used by the other spaces). Digital Media for Learning Environments. Ongoing research on the use of digital media based on a moderate constructivist learning theory, and with an emphasis on the student, not the teacher nor the subject matter. In particular, we deal with the dialectics of algorithmics and aesthetics which both we view as semiotic events and processes.
MERZbau. Design and implementation of the virtual reconstruction of the Merzbau, a unique dadaist work that Kurt Schwitters constructed over several years in his parents' Hannover home and which was destroyed during World War II. The virtual architecture contains hidden cavelets that are there to be discovered by students. If they find one (by knocking at walls) and enter it, they may there play around with weird, funny nonsense structures, objects, tools, sounds, images, and they may create their own nonsense works. The installation has been successfully tested by children of age 6 to 10. - Computational Semiotics. Ongoing general theme vision of our research. All our individual projects are in one way or other related to the thesis that informatics in general, and computer graphics and digital media in particular, are cases of computational semiotics. This is an encompassing approach to algorithmic processes, software construction and use.

Important Recent Project Participations

- "viDeMus": Two hypermedia installations at the Stadtmuseum Delmenhorst, one a virtual reconstruction of a castle and its history, the other a virtual reconstruction of a fine art gallery and exhibition.
- "Bandkeramiker": An installation of the virtual reconstruction of a 7000-years old building of a stone age culture at the Niedersächsisches Landesmuseum Hannover.
- "softWert": Evaluation of software for primary schools.

Future of the Lab

The group will concentrate even more on the design of digital media for situation-sensitive installations, in particular learning environments and computer art. It will produce a hypermedium as a space for computer art, continue to establish the Aesthetic Laboratory, and develop media for the study of computability and beauty, algorithmics and aesthetics. The most general perspective is computational semiotics.