„How Does a Space Communicate?”

Interview with Professor Bernd Benninghoff, UAS Mainz School of Design
resonate is a light and sound installation. It consists of several kilometers of resonating strings and eight interaction bodies containing a total of 1600 controllable LEDs. When you pluck the strings, the tension and vibration of the cords change. Visitors can play the strings to generate individual sounds which are translated visually into light waves. The surface of the objects is the interface between sound and light. During the Luminale 2012, resonate was exhibited inside a container boat in Frankfurt am Main, from where it moved to the ZKM [Center for Art and Media Technology] in Karlsruhe, one of the most important sites for contemporary media art. resonate was the winner of the gold medal during the international design competition Commaward in the category Space in 2012, and this year it won the “Golden Nail”, first prize of the ADC competition in the category Young Artists/Spatial Realization.
Aspects of spatial communication are at the focus of the master’s study program directed by Professor Benninghoff at the UAS Mainz School of Design. Interaction and integration of ICT play an essential role in the projects. The professor spoke to DMR about his research work.

Professor Bernd Benninghoff is the director of the master’s study program in interior architecture “Communication in Space” at the University of Applied Sciences Mainz School of Design. From his perspective as both professor for furniture and interior design and freelance designer, he sees the product and its surrounding space in a reciprocal relationship which must be considered holistically during the design process. The university projects he has initiated are characterized by their interdisciplinary orientation and the collaboration with external cooperation partners from industry and professional trades.

DMR: What is meant by the term “spatial communication” and what function is interior architecture expected to play here?

B. Benninghoff: The scope of activities performed by interior architects has expanded tremendously in recent years and has become extraordinarily complex. Besides the classic range of activities for interior design, interior architecture today moves within an interdisciplinary field of work encompassing architecture as well as product and communications design. Creating an atmosphere through light, color, and materiality in conjunction with the design of spatial structures has always been a part of the core competencies – the scenographic element, the production of spatial atmosphere and communication between a space and its users, is becoming more and more important.
This prompted us to establish the master’s study program “Communication in Space” at the UAS Mainz School of Design three years ago. Since that time, we have been engaged in an intense examination of the opportunities of communicative and interactive space and product design. As part of the Cologne Passagen in 2011, for instance, we refurbished the basement bar of a traditional Cologne hotel, turning it into an atmospherically charged interaction space in which visitors could, by their joint actions, affect the lighting atmosphere.

**DMR:** Digital media change spaces as well as the behavior of the people in the spaces. What demands does this make on interior architecture, and what future developments are even now becoming apparent?

**B. Benninghoff:** In this age of digitalization, the study of new media and their significance for interior design is becoming an important aspect of design. Rooms of the future will be able to respond more interactively to the needs of their users. The features we currently find primarily in the fields of exhibition design and trade fair architecture will gradually begin to appear in private and public spaces as well. The users’ sense of well-being will turn decisively around the degree to which the technology which is employed runs unobtrusively in the background and can be operated intuitively in a user-friendly environment.
DMR: What form do designing and planning processes take in the digital age?

B. Benninghoff: Obviously today’s designers have an array of tools at their disposal which differ tremendously from what we had just ten years ago. Powerful software programs now enable the generation and visualization of extremely complex, parametric spatial structures. There has been enormous progress in the area of model construction as well - digital rooms and products can be transformed directly into physical models with the aid of computer-controlled milling machines, lasers, and 3-D printers. However, all of this technology is nothing more than a supporting tool and ultimately is only as good as the people operating and using it. So imaginative concepts frequently result from people reaching for pencil and paper, just as in the past, rather than their computers during the initial phase.

DMR: Tell us what comes to your mind when you imagine an "atmospheric office world". Can design itself be the communications solution?

B. Benninghoff: The design of the rooms is certainly not a panacea for a healthy, communicative working atmosphere - but well-planned spaces can support a positive working atmosphere and enhance the interaction among the associates. This is no simple matter because the means of individual, electronic networking possible today create a strong temptation to restrict communications to e-mails, text messages, or smartphone conversations. The technical opportunities of a home office are simultaneously a blessing and a curse.

Assuring active communication in an office is dependent on the work procedures established within the company. They must be defined in such a way that they encourage teamwork and communication among associates. If consciously designed spatial planning and atmosphere support this strategy, associates will recognize and appreciate once again the quality of personal encounters.

DMR: Your study program is dominated by group work, most of it interdisciplinary. Is this where we find the key to innovation?

B. Benninghoff: In the future, it will be more important than ever for people to be transdisciplinary in their work. While competence in your own field will remain essential, looking outside of its boundaries into the neighboring work areas is of great importance. That is why we are trying to encourage interdisciplinary ways of thinking before our students ever leave school. Many of our projects are conducted in collaboration with related business divisions or in cooperation with industrial enterprises. One fantastic example of this is the project "resonate", which we developed jointly with the Mainz School of Music. The intense, experimental debate with another discipline and the linking of competence in diverse fields were what ultimately endowed the installation with its persuasive depth and innovation.

DMR: Many of your projects, especially "resonate", display the grace of art and performance. Is there nevertheless always a connection to actual daily practice, or are you more concerned in these cases with the experimental character?

B. Benninghoff: The university environment offers to us and our partners the opportunity to approach new topics in spatial communication from the perspective of experiment and research. But during our work with our students, we never lose sight of our major aim: the development of an independent, robust, conceptual approach. When you are in a position to put aside for the moment the commercial and technical constraints of a realization, you will often come up with surprisingly innovative ideas. However, we are not content to create intellectual pipe dreams and leave it at that. This is our motivation for realizing as many of the university projects as possible - most of them in close cooperation with industrial partners and sponsors. You cannot determine how successful a concept truly is and what difficulties it entails until you begin to realize the ideas. This is often an exhausting, although extremely instructive, process for everyone involved.
DMR: Are there ideas to utilize your design elements in places where interaction is necessary, but almost never occurs in the required scope for many different reasons — for instance, in nursing care?

B. Benninghoff: During the course of our master's program, we certainly take on public and social issues, some of which are definitely disturbing. Once of last year’s projects revolved around the subject of death. How do spaces and products deal with this taboo subject? What design possibilities are there?

We have planned a project for the design of meditation rooms at Frankfurt Airport in cooperation with the Fraport in Frankfurt for the coming winter semester. How can rooms be designed for various faiths? What features must be incorporated into a room which serves different religions? How does this room communicate — without using religious symbols?

DMR: How does your work give due regard to the subject of environmental sustainability?

B. Benninghoff: No designer who has any sense of accountability can ignore the subject of environmental sustainability today. Our curriculum includes instilling in our students an awareness for the use of long-lasting materials, designs, and design concepts. This is not a simple issue, especially in our business, because giving due regard to sustainability is a thorny matter when you are planning temporary exhibitions, installations, or trade fair appearances. It is not easy to convince customers of the value of a long-term exhibition concept because they always want to show something new to the outside world. Anyone who has ever glanced into the large waste containers after the conclusion of a trade fair will know what I am talking about. We must awaken a sense of awareness in the companies and offer them concepts which make long-term spatial utilization possible — without being repetitive. New media and technologies which can fill long-lasting spatial structures with constantly changing content are an intelligent approach.

DMR: Do you have such a thing as a pet project?

B. Benninghoff: No — not really. It may sound like a cliché, but it’s true: the next project is genuinely always the most exciting one and always confronts us with new challenges. We are delighted that the success of our past installations has in the meantime attracted the attention of third-party companies and museums to our study program. They have subsequently approached us with new subjects which we can realize in the form of cooperation projects.

DMR: What projects can we look forward to in the near future?

B. Benninghoff: Since our previous master projects have primarily examined communications and interaction of spaces and their users, we will be focusing more intently on the object and its possibilities for communication in this semester. We will ask ourselves: What situations in life cry out for interactive products? What objects gain genuine value from a consciously interactive design or the sensible integration of information technology? We will be looking this time for objects somewhere between the opposing poles of furnishings and space which make contact with users, prompt them to engage in communication, address the senses, yet operate as simply and intuitively as possible. Right now, a group of 18 students is in the middle of the concept and development phase — in a joint effort with a group of project partners from industry and professional trades. I am sure the results, which will be presented in September, will be of interest to you.