

# Impressions from the third Nordcode Workshop and Seminar in Lyngby April 28-30, 2004

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The third Nordcode workshop and seminar was held at DTU in the days 28-30 April 2004. In accordance with the general topic "Design communication" – the seminar continues the building of a platform for future cooperation, initiated at the first two Nordcode seminars. The aim is to share opinions and to encourage and support research within communicative products design seen from a Nordic perspective. Researchers are invited to present their work in progress in working papers and short presentations. There were 44 participants at the seminar from Norway, Sweden, Finland, England, Holland, France and Denmark. 23 presented their work including the 2 keynote speakers Paul Hekkert from TU Delft and Stine Brahm Lauritsen from Futuressense in London. Prior to the seminar a workshop was held on Wednesday the 28/4. The workshop focused on "design communication experiments" and was limited to 12 participants.

## The workshop

The idea in having a workshop before the seminar is to let a smaller number of researchers meet and go into more detail of a research subject at the host institution. At the second Nordcode seminar in Helsinki there was a workshop where the participants took active part in a usability lab test where the semiotic messages in mobile phones were explored. The present workshop in Lyngby took the participants into a research project on verbal communication of semantic properties based on the work by Lenau and Boelskifte.



The work explores how semantic product properties are communicated among the participants in design work. The scene was set by asking the participants to fill out 2 questionnaires. In the first questionnaire they should name specific products of their own choice that they thought was characterized by each of the semantic properties listed. In the second questionnaire they chose which semantic properties best characterised 4 products that was displayed to them. The same questionnaires had previously been filled out by 50 students and it was interesting to see if there were differences between the more inexperienced students and the more experienced professional researchers. Generally speaking the professionals also had problems with many of the same words that the

students disagreed on the meaning of. This indicates that some words that are frequently used to describe semantic expressions are understood differently depending on the receiver. One example is the term “organic shape”, which either can mean “smoothly curved”, “chaotic shape” or “amorphous shaped”. On the other hand the professionals seemed generally to have a better grasp at describing product properties.



The 2 questionnaires also served the purpose to focus the participants' minds on verbal expressions of semantic qualities. In the second part of the workshop everyone went to the “Kunstindustrimuseum” (Art and craft museum) that presently had the exhibition “The Industrial Icons”. The exhibition displays 900 items divided into 13 categories (e.g. “design for the body”, “housekeeping” and “cityscape”). In groups of 2 persons the participants should choose 2 items and describe them using the vocabulary from the questionnaires. Based on these verbal descriptions another group should then retrieve the items. About 50% of the items were retrieved. The lesson learned was that the vocabulary was well suited for identifying parts but not precise enough for discriminating between parts that reminded of each other (e.g. two shining jugs). Another lesson was that the participants were motivated by the element of play in the exercise.

### **The seminar**

The seminar was opened on Thursday April 29<sup>th</sup> by Per Boelskifte who introduced the seminar. Torben Lenau presented DTU and the Design-ing group that arranged the seminar and is the driving force behind the new Design & Innovation education at DTU ([www.design-ing.dk](http://www.design-ing.dk)) and the new research activity “Spaces”. The new education was further described by Per Boelskifte. Tony-Matti Karjalainen and Anders Warell presented the Nordcode network and told about the previous two seminars in Göteborg and Helsinki.

The seminar theme was “Design communication” covering the 4 topics

1. Semantic and aesthetic functions – How do products communicate? And how do designers communicate their thoughts about design intentions?
2. User involvement - How can users be involved in the design process?
3. User centred design - How can user requirements be handled in the design process?
4. Conceptualization - How can designers communicate early design ideas/concepts within a design team? And with potential consumers?

All papers contributed to one or more of these topics.

The semantic aspect of product communication was treated in several papers. In his keynote speech Paul Hekkert from TU Delft described the increased focus on the emotions people associate to different products. He described a theoretical framework for analysing the emotions from different products and presented examples of products that were designed with specific intended emotions in mind.

Stine Brahm Lauritsen from Futuressence gave insight into the work of forecasting and trendsetting. Designers create the products and experiences that we will expect tomorrow. In order to foretell what will be the important tendencies she looks at mega-drivers and main trends in the global society. This could for example be the aging population in the western countries, the changed communication patterns and the environmental problems. This is broken down into meta-drivers that more directly influence our daily life. Through a so-called distiller model these input are translated into trends that can help to set the direction for the design work.

Susann Vihma examined the different theoretical foundations that are used as a basis for research and teaching in design semantics. Josiena Gotzsch seeks an understanding and classification of product expressions in order to encourage a clearer communication in early design stages. Torben Lenau told about how sensed and symbolic product expressions are expressed in words and that preliminary investigations indicate consensus about the understanding of many of the words. Marianne Guldbrandsen analyses how companies deals with so-called non-quantifiable product qualities.

Jesper Clement deals with the communication aspects of packaging design and its role for the commercial success for the product. Kjersti Kjøl Øverbø also looks at packaging design focussing on food products from the sea. The work is done in collaboration with a number of Norwegian sea-food industries. Toni-Matti Karjalainen proposes a frame for describing the semantic content in a product throughout the different design phases. In his research he explores how strategic brand identity is communicated using semantic references.

Hans Bjelland is part of a research group that looks at user interfaces for bridge operations in high speed crafts. The higher speed of these vessels makes it more important that operators get the right information and acts upon it quickly. He therefore explores interfaces that are perceptually rich, i.e. they communicate to more senses (sight, hearing, feeling, smell) in advanced ways. The problem however is that the technology necessary for these interfaces is still immature and there is little experience with the use of it.

Other topics included the role of the user in the design process, particularly in the conceptualization phase.

Birgitte Gert Jensen describes the increased use of participatory design where the user takes an active role in the design process. User requirements have traditionally been understood using ethnographical methods, i.e. the study of the user behaviour. So far the user involvement has been restricted to fairly simple tools like paper and scissors and Lego building blocks. The question is how more sophisticated tools will change the role of the user in participatory design work.

Claus Thorp Hansen and Mogens Myrup Andreassen proposed an enhanced design concept understanding by formulating a mindset for conceptualization. They described how concepts are composed by two elements: The idea with the product and the idea in the product. Furthermore they described four operational principles and how concepts can be gradually concretised.

Peter Schachinger told about the work being carried out at Chalmers University in order to bridge the gap between traditional engineering design and industrial design disciplines. A central point is the relation between the functional description of a product and the conceptual description of product form. Peter explores how the aesthetics, semiotics and ergonomics of industrial design can be linked to hierarchical functionality product models, namely the function-means tree and the organ model.

Anna Valtonen argued that there has been a change in the role and the specialisation within industrial design profession in Finland. It seems that designers are presently more specialised and that many more are directly employed by industry. Her research explores which factors that control this development. Kamille Friis explores how various design agencies handle multidisciplinary work, prototyping and their relation to the client. She sees a shift away from the designer as a "lone ranger" towards being a member of a multidisciplinary team. Tore Kristensen has observed that consumers are becoming more involved in the design process. Consumers want products that fit their individual needs and that set new requirements to the roles of the designer.

Ulrik Lie postulated that the success of products today are to a growing extent dependant on the acquisition, the use and the appreciation of the product. These activities are difficult to handle in the traditional way of describing product requirements as functions. He therefore argues that there may be a need for new methods in the design work, for example more use of transdisciplinary work, and the need for new skills from designers.

Ben Mathews looks at user centred design (UCD) where users and other stakeholders are included in the design process. He focuses on the fact that only a limited amount of stakeholders can take part in the work and he analyses how the "others" (that are not part of the design process) are represented by the stakeholders in UCD.

Arild Berg works with communication in ceramic tiles. He presented 4 case studies. One of them was the creation of tiles for a secondary school. Before the making of the tiles Arild was in dialogue with a number of pupils in order to identify objects and symbols that were important to them. By taking these viewpoints into consideration the tile decoration would hopefully be more meaningful to the pupils.

Mikko Laakso described the work with designing a software platform (so-called middleware) that will make the integration of different communication software easier. In the design process they involve users that will work with the prototypes. The users are studied using observation and questionnaires.

Outi Turpeinen researches museum exhibitions and how objects are displayed in museums. Many museums now recognize that objects displayed alone in the traditional

way only tell part of the story. Great efforts are therefore put into visualising the objects within their surroundings. This tendency is parallel to the increased awareness on the surroundings (context) that design objects have to function within.

Lauri Repokari presented the work that he and Juha Ainoa do on semantics in mobile phones design. He presented a case study of the laboratory analysis of the semantic communication of the mobile phones. New phones are designed with different user interfaces and new expressions. It is therefore important for the designer to get user responses on the product concepts to see if they match the intentions. The tool used is a usability lab where users can be exposed to products in controlled environments while their behaviour is monitored by video cameras.

Yutaka Yoshinaka presented work done in collaboration with Christian Clausen on user representations. They focus on the socio-technical side of design work where the context the products are part of and the way the user domesticate (take ownership of) them are important aspects. Yutaka presented a couple of case studies from a course in *Product analysis and redesign* on the Design & Innovation education. One case concerned the understanding of professional female users of motorized chainsaws in order to identify the right design goals for the redesign of the saw.

In the round up discussion the form of the workshop and the seminar was discussed. It was debated whether there should be more time for each presentation. At the present seminar short working papers were available on the net in advance of the seminar so people could prepare themselves. The presentations were 15 minutes and there were 5 minutes for questions. More time would however require either that the number of papers were limited or that parallel sessions were introduced. Other ideas were to leave more time open in the schedule in order to allow for poster sessions, more in depth discussions in smaller groups or simply to have time to digest the impressions.