Ocean Industry Concept Lab, Oslo School of Architecture and Design

As told by Kjetil Nordby

How do you describe your lab to visitors? Ocean Industry Concept Lab (OICL) is a research and development lab hosted at the Oslo School of Architecture and Design (AHO). Our projects explore the use of emerging technologies and field knowledge to redefine marine workplaces. The lab supports this work by offering facilities for interdisciplinary design and research processes, and merges competences from industrial, interaction, graphical, software, and sound design.

How many people are in the lab, and what is the mix of backgrounds and roles? The team is roughly split between a development team funded by industry and a research team funded by the Research Council of Norway. The lab team consists of two interaction designers, two industrial designers, one sound designer, one graphical designer, a software architect, three Ph.D. research fellows, and four senior researchers. We also collaborate with students and host visiting workers and researchers.

Describe how people interact in your lab. The lab is a place where ideas are shared and discussed constantly among the participants. There are often frantic development activities going on, and there are many ad hoc design sessions taking place inside the team. Once a week we arrange a standup where all participants go through achievements of the past week and plans for the next.

Briefly describe a day in the life of your lab. The work in the lab follows an ideal of developing concepts through reflection in action, and we do a great deal of sketching, modeling, and prototyping of full-size interactive demonstrators. The lab consists of an open office and a simulator-equipped prototyping room placed in close proximity to well-equipped prototyping workshops. In the office, team members work individually or in small groups. From time to time people will meet up at a larger desk in the middle of the room and discuss emerging designs. In the prototyping room, we have constructed a rig defining the space of a quarter of a ship's bridge with a large screen in front. The larger builds are assembled in this room. The prototyping room is

— Kjetil Nordby, Ocean Industry Concept Lab

→ Simulators are useful to bridge some of the gap between land and sea. Here we are testing a new interface concept in a simulated environment.

→ This multimodal ship bridge console prototype demonstrates a number of novel concepts related to graphical, interaction, audio, and industrial design for marine work.

used by the various design professions to experiment with emerging concepts.

Some of the most interesting days in our lab are when marine workers visit us. Before they arrive, the lab is buzzing with activity. We rehearse the presentations and do a last run-through of the systems that are to be showcased. Typically we hold small workshops where concepts are showcased and discussed in small groups. Usually there is some kind of concept embodiment prepared in the form of an interactive soundscape, interaction techniques, screen sequences, graphic languages, or industrial design models.

What is a unique feature of your lab?

Marine settings are hard-to-reach places; access to real operations and users in context is rare in the industry. Previously, there have been few systematic efforts in gathering extensive user-related contextual data from marine industries with the purpose of informing experimental, design-driven innovation work. Through close collaboration with industry, the OICL has excellent access to marine operations and has carried out more than 1,500 hours of field studies for

design. Today, the majority of our design and research staff has experienced marine operations up close. The work has resulted in a design and research staff highly familiar with marine environments and a large repository of multimedia data from marine contexts readily available in the lab.

What is the one feature of your lab you could not do without? To be able to compose advanced multimodal interactions, we have developed software that facilitates rapid development of cross-media prototypes. The software allows us to use a large number of outputs and input devices and compose seamless interfaces. As a result, our lab can be seen as a very complex interactive space where designers can compose new multimodal interfaces using an extensive range of interaction technologies. The system is tightly integrated with commercial ship simulators that deliver simulated data and visuals that we can use in the various interfaces we create.

What is the one feature of your lab that you want and do not have? Today

commercial simulators are fairly rigid systems that are simply too slow and cumbersome to use in a high-speed conceptual design process. Ideally, we would like to use simulators that have more versatile authoring tools, much like game engines. Such a system could allow us to set the border between real and virtual freely, according to the needs of the design process.

What is the one thing you see as most important about what you do here?

In the past, design practices were not seen as important knowledge areas in their own rights in Norwegian marine research and industry. OICL is contributing to changing such views and has hosted projects that have gained much attention in research, industrial, and political arenas. Through our work we have brought interaction, industrial, graphical, and sound design into the forefront of marine research and innovation in Norway.

📄 <http://www.designresearch.no/projects/ocean-industries-concept-lab/>

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