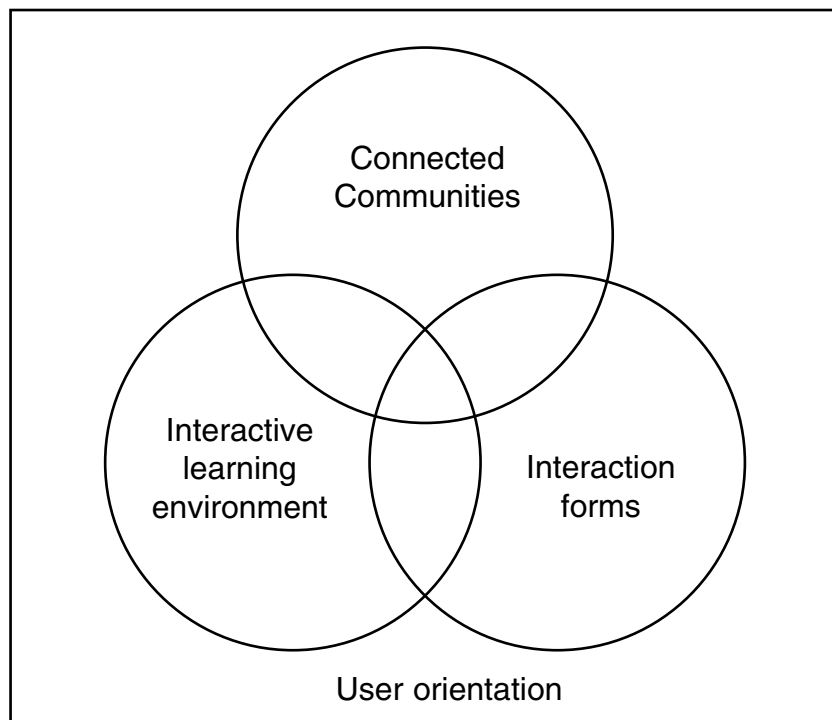


January, 2002
CID – steering group, NADA, KTH

Current and finished CID projects



CID's overlapping research areas



Current projects concern CIDs 3rd phase, July 2000–June 2003.
(Phase 1 ran 1995–1997, phase 2 1997–2000.)

Projects are listed under the four research areas of CID. Connected Communities (page 3.)
Interaction forms (5.) Interactive learning environment (7.) User orientation (10.)

Research students take part in the projects as basis for and part of their dissertation work. A
collected list of their subjects and time plans are given towards the end of this catalogue.(13.)

Finished dissertations(14.) and projects(15.) are listed at the very end of the catalogue.

P = participant
O = observer

CID partners phase 3 July 2000–June 2003	Work mths per year	Connected Communities	Interaction forms	Interactive learning environment	User orientation
DataDoktorn	2			P	
Ergolab	1				P
Ericsson	6	O		O	
Hjälpmiddelsinstitutet, HI	4	O	P	P	P
Icon Medialab	3				P
Lentus	2			O	
Lernia	3			P	
LO (trade union configuration)	4	P			P
Riksskatteverket	2				P
Saab	3		P		
SIH Läromedel	2			P	
Skolverket	6			P	
Sverige Direkt	3	O			P
TCO Development	1	P			P
Telia	5	P	P		O
Teracom	3	P			
TietoEnator	3				P
TimeCare	2				P
UR, Utbildningsradion	2	P		P	
Vattenfall	7.5	P			P
Interactive Institute, II	6	P	P	O	
Total	75				

Current projects in the area Connected Communities,

responsible Sören Lenman

In this research area Digital Environments are studied as virtual places for communication, meetings and interaction. How can co-operation, social interaction, and trust between people be built and supported in digital networks? Use situations range from work tasks, to entertainment, games, and contact between families and friends. We want to make communication rewarding by creating use situations that are natural and immediate, where the exchange of thoughts, emotions and materials is simple and direct with no feeling of mediation.

VideoSpace

The VideoSpace project builds on the research tradition of Media Spaces, and is a continuation of the VideoCafé project at CID. The project studies how informal social interactions, community, and common culture can be upheld between separate physical locations by means of digital video- and audio connections. VideoSpaces stay continually open in order to provide windows to distant, physical locations. Although they are primarily intended for maintaining everyday interaction and contact between people they can, of course, be used for traditional, formal video-conferences as well.

- “K.” This project studies the use of VideoSpaces for connecting the staff at a distributed workplace, the Call Centre of the Stockholm County Police, which is located on three islands in the Stockholm archipelago.

- Power Place.* The objective is to study the use of VideoSpaces for integrating the distributed offices of Swedpower (Vattenfall), a major Swedish energy provider and CID industrial partner. A secondary objective concerns the use of VideoSpaces for connecting industry to students and the academic world.

Participating partners: TCO, Per-Erik Boivie; Telia, Lars Lindblad; Vattenfall, Kim Alpgard.

Observing partners: The Handicap Institute.

From CID: Sören Lenman, Minna Räsänen, Björn Thuresson, Bo Westerlund.

Time period: January 2000–December 2003

Inhabited Digital Environments

The goal of Inhabited Digital Environments is to study how digital, virtual environments can be used for mediating human-to-human interaction and communication. All kinds of digital environments for communication could be of interest, but currently the project focusses on three-dimensional, virtual and hybrid environments. Current applications mainly concern exhibitions in museums and other public environments. The project has a strong connection to the EU-project Shape, described below.

- CyberYard. Collaborative creation of a flexible, shared, three-dimensional environment for meetings, exhibitions, and real-time text chat discussions on the World Wide Web.
- CyberMath, a shared virtual environment for exploring mathematics.
- Expressive Avatars. The representation of people in 3D, virtual environments.
- Wasa – a toolkit for building distributed interactive 3D applications.

Participating partners: LO, Filis Sigala; and representatives from a number of workplaces. Vattenfall, Kim Alpgård.

Observing partners: Lernia; TCO.

From CID: Anders Hedman, Sören Lenman, Olle Sundblad, Åke Walldius, Gustav Taxén, Björn Thuresson.

Time period: January 2002–June 2003.

Interactive Digital Broadcast Media

In the project Interactive Digital Broadcast Media we focus on the possibilities for a redirection of interactive broadcast programs. How could they be turned into integrated products that consist of content and seamlessly integrated interactive services that, for example, provide for real-time access to other related content.

- IDTV programs and services. Usability evaluation of current programs and services, and explorations of the mix between the event characteristics of broadcast media and the communicative aspects of the Internet.
- Wireless Vehicle Dépôt. Explores the possibilities of digital broadcasting platforms, i.e., digital TV and digital Radio, in the area of services for mobile users in vehicle environments.

Participating partners: Teracom; Utbildingsradion.

Observing partners: The Handicap Institute.

From CID: Anders Hedman, Björn Thuresson, Sören Lenman.

Time period: January 2002–December 2002.

SHAPE, shared mixed reality in public environments, EU- project

This project is part of the Disappearing computer initiative within FET (Future Emerging Technologies). The use of mixed reality is developed and studied by university departments in public environments, especially museum in Stockholm, London (Science Museum with Kings College), Nottingham and Limerick.

From CID: John Bowers (co-ordinator), Sten-Olof Hellström, Gustav Taxén, Helena Tobiasson.

Other participants: Universities of Limerick and Nottingham; King's College London; The Stockholm Science museum; the Natural History museum.

Main funding: EU IST-FET-DC-initiative.

Time period: Jan 2001–Dec 2003.

Current projects in the area Interaction forms,

responsible Bo Westerlund

In this area we study new forms of interacting with computers. Both in the way we know computers today and what the new possibilities are when the computing power moves into the physical world. Interacting with things is a normal activity for everybody. And there is a long experience of designing and reflecting over how we people use artefacts of all kinds.

We have a spectrum of projects, from basic research to reuse of existing technologies in new contexts.

Gestural interfaces

In collaboration with CVAP at NADA we develop and study computer vision based for real-time recognition of gestures interaction with computers and home electronics. Initial demonstrations concern remote control of home electronics.

Participating partners: HI; Telia, Lars Lindblad.

From CID: Lars Bretzner, Per Bäckström, Sören Lenman, Björn Eiderbäck.

From CVAP: Tony Lindeberg.

Time period: Jan 2000–Dec 2002.

Haptic interfaces (with force feed-back)

Two equipments for haptic interaction have recently been acquired and initial applications for cooperation through passing of objects have been developed and studied with users together with IPLab, NADA. A EU project within the FET Presence initiative, together with Medailab Europe in Dublin, is under consideration.

Participating partners: Saab, Cecilia Lundin.

Observing partners: Telia; Vattenfall.

From CID: Yngve Sundblad, Björn Eiderbäck.

From IPLab: Eva-Lotta Sallnäs.

Other participants: ReachIn Technologies.

Provisional participants: Sile O'Modhrain and Ian Oakley, Medialab Europe, Dublin.

Time period: Jan 2001–Jun 2003.

Auditory direct manipulation

The possibilities of using sound for giving blind people computer control like direct manipulation are studied and developed. Experience gained from a demonstrator around the game "Towers of Hanoi" is now generalised and developed further.

Participating partners: HI, Stig Becker.

From CID: Fredrik Winberg, Sten-Olof Hellström.

Time period: Jan 2002–Jun 2003.

Silent Sound Sculpture

With the project “Silent Sound Sculpture” we want to achieve silent zones in noisy environments. The purpose is artistic, to “visualise” our noisy environment to a wide audience and open the debate on this issue, as well as a practical contribution to the development of a better sonic environment. A condition for realising the silent sound sculpture is broad research and development work including new methods and technical solutions on active sound control.

From CID: Ann Lantz, Ann Rosén, Yngve Sundblad.

Other participants: Dept. for Telecommunication and Signal Processing at Blekinge Institute of Technology; Emotional and Intellectual Interfaces Studio at the Interactive Institute.

Main funding: Pre-study from "Culture of the Future", large support applied for from Environment Research Fund.

Time period: Sep 2001–Jun 2003.

InterLiving – EU project

This project, Designing Interactive, Intergenerational Interfaces for Living Together, is part of the Disappearing computer initiative within FET (Future Emerging Technologies). Communication over generations are studied in families in Sweden and in France. Possible IT support in the form of communication surfaces will be prototyped and studied together with the families. Research partners are University Paris Sud, INRIA in Paris and (indirectly) University of Maryland.

Participating partners: Interactive Institute, Åsa Harvard.

From CID: Yngve Sundblad (co-ordinator), Ben Bederson, Hilary Brown, Allison Druin, Björn Eiderbäck, Sinna Lindquist, Catherine Plaisant, Bo Westerlund, Helena Tobiasson.

Main funding: EU IST-FET-DC-initiative.

Time period: Jan 2001–Dec 2003.

Current projects in the area Interactive Learning Environments, responsible Donald Broady

Content design

This project aims at development of principles and tools for design of content, such as text, images, graphics, sound, video etc. in order to gain modularization, portability and adaptation to international standards (e.g. XML, SGML, IMS) in the activities MarkupToolBox, Designing for accessibility, Learning Components and AntiLoop 2.0.

Participating partners: SIH Läromedel, Björn Nyqvist & Lars Karlsson.

Observing partners: Lernia, Johan Ågren.

From CID: Hans Melkersson, Olle Sundblad, Donald Broady.

Time period: Jan 1999–Jun 2003.

Explorative Mathematics Education

Personalized and Shared Mathematical Courselets (PSMC)

PSMC is part of an international collaboration project called Personalized Access to Distributed Learning Resources (PADLR), within the Wallenberg Global Learning Network (WGLN), co-ordinated by the Learning Lab Lower Sachsony (L3S).

This subproject attacks two major difficulties for teachers and learners: the difficulty to share and reuse learning material, and the difficulty to personalize and adapt existing learning material to a particular learning situation.

From CID: Ambjörn Naeve, Mikael Nilsson.

Other participants: DSV/KTH, Prof. Carl-Gustaf Jansson.

Main funding: Wallenberg Global Learning Network.

Time period: April 2001–March 2003.

Mathematics Educational Research

Through its work in e-mathematics, CID has been approved for participation in a nation wide network called the National Research School of Mathematical Didactics. One doctoral student will be based at CID and will specialize in various aspects of user-centered interactive mathematical learning environments.

From CID: Ambjörn Naeve (supervisor), Mikael Nilsson (doctoral student).

Other participants: National Research School of Mathematical Didactics, especially Stockholm Univ.; and Univ. of Mälardalen.

Main funding: The Jubilee Fund of the Swedish State Bank (Riksbankens Jubileumsfond).

Time period: Aug 2001–July 2006.

e-Learning Infrastructure and Standardization

Virtual Workspace Environment (VWE)

VWE is a distributed Learning Management System, which is complementary to the Conzilla concept browser. Using VWE, resource components from a digital archive (that can be browsed with Conzilla) can be downloaded and combined (somewhat like LEGO-pieces) into learning modules that provide customized learning experiences.

Participating partners: Skolverket.

From CID: Fredrik Paulsson, Matthias Palmér, Mikael Nilsson.

Other participants: Umeå University; UNI-C (Denmark); Sema Group (Spain); Sun Microsystems; CodeFactory.

Time period: April 1998–Dec 2003.

Edutella – An Infrastructure for the Exchange of Educational Media

Like the PSMC project, the Edutella project is also part of the PADLR project mentioned above. This subproject aims to develop an infrastructure for the exchange of educational media by constructing Edutella, which is a meta-data based peer-to-peer (P2P) system for handling educational resources. Edutella nodes will provide different client/server functionalities based on common and interoperable P2P- and meta-data conventions.

From CID: Ambjörn Naeve (principal investigator), Mikael Nilsson, Matthias Palmér.

Other participants: KBS/Uni. Hannover, Prof. Wolfgang Nejdl; Infolab/Stanford Univ, Prof. Stefan Decker.

Main funding: Wallenberg Global Learning Network.

Time period: April 2001–March 2003.

IMS Meta-Data

The IMS meta-data project is working on defining the emerging de-facto standard for describing online learning resources. CID has taken the lead in developing an implementation of IMS meta-data in the emerging standard language for semantic web description (RDF). This implementation has become part of the upcoming IMS 1.2 meta-data specification.

See www.nada.kth.se/~mini/ims, and www.w3c.org/RDF for details.

From CID: Mikael Nilsson.

Other participants: IMS Developers Network.

Time period: Jan. 2001–.

ISO-JTC1/SC36 – Information Technology for Learning Education and Training

This project involves the formation of a Swedish standardization subcommittee (AG36) for e-learning, working within the following scope: Standardization in the field of information technologies for learning, education and training to support individuals, groups, or organizations, and to enable interoperability and reusability of resources and tools.

Participating partners: Skolverket.

From CID: Ambjörn Naeve, Fredrik Paulsson (elected chairman of AG36).

Other participants: ITS; IT-center; LUB Netlab; Framkom; IBM; Contento.

Time period: May 2001–.

Knowledge Management

Conzilla

Conzilla is a prototype of a concept browser, which is a new type of knowledge management tool with which one can organise and explore electronically stored components of information. Conzilla supports an overview of the concepts involved by separating between context and content and by controlling the presentation of the content through filtering on different aspects.

Participating partners: Datadoktorn, Richard Wessblad; HI, Hans Hammarlund.

Observing partners: Ericsson, Hans Nihlén; Lentus, Daniel Fagerström.

From CID: Ambjörn Naeve, Mikael Nilsson, Matthias Palmér, Fredrik Paulsson.

Time period: Jan 1999–Jun 2003.

Modeling of Knowledge Domains

This project investigates how modeling of organisations (e.g. in Conzilla) can contribute in making the structure of the organisation visible and how activity modeling can clarify the work processes of the organisation.

Participating partners: HI, Hans Hammarlund; UR, Janniche Henriques.

Observing partners: Ericsson, Rolf Leidhammar & Hans Nihlén & Jimmy Westlund.

From CID: Ambjörn Naeve, Matthias Palmér, Bo Westerlund.

Time period: Jul 2000–Jun 2003.

Current projects in the area User orientation,

responsible Ann Lantz

Continuous activities

We work with competence supporting activities and empirical studies of user orientation in CID-projects. Activities performed continuously are presented below.

User orientation in practice

Workshops and seminars are arranged. During spring 2001 a workshop on prototyping was arranged and during fall 2001 a seminar series about several forms of disabilities was presented by HI.

Participating partners: RSV; Sverige Direkt; TietoEnator; HI.

Observing partners: Icon Medialab; TimeCare.

From CID: Ann Lantz.

Time period: Continuing.

Standardization

We are representing KTH in work in international standardization in the following two standards:

- TC 159, SC 4, WG 5 software and Ergonomics and Human-Computer Dialogues Interaction
- TC 159, SC 4, WG 5 Human Centred Design Process for Interactive Systems

Observing partners: HI; LO; TCO; Vattenfall.

From CID: Jan Gulliksen, Tomas Berns.

Time period: Continuing.

Projects

Public Internet Monitor

This is a Sweden-wide project, between a numbers of governmental agencies, where CID contributes with user studies of terminals in public areas. The terminals are offering public information and services via Internet also for them who do not have access to a computer of their own. It is a matter of accessibility and democracy.

A planed user study is focusing on the use of Internet in public areas and the help needed and accessed in brake down situations.

Participating partners: RSV, Kjellåke Henriksson

Observing partners: Sverige Direkt.

From CID: Minna Räsänen.

Other universities: Blekinge tekniska högskola, Sara Eriksén & Annelie Ekelin;

Mitthögskolan, Peder Björk.

Others: RFV (State Social Insurance agency).

Time period: Jan 2001–Dec 2002.

Formal meetings at a distance

The aim is to study human communication processes within distributed formal meetings supported by synchronous computer systems and to increase users possibility to influence the design or re-design of IT. This is taking part in the context of distributed meetings where we think the co-operative approach will demand a re-design or new development of IT and also increase the use of the technology and support the activity i.e. distributed meetings.

From CID: Ann Lantz.

From IPLab: Tessa Cerratto.

Observing partners: Vattenfall; Skolverket, AMT, Luleå tekniska Univ.

Main funding: VINNOVA.

Time period: Aug 2001–June 2004.

ITQ – Quality of IT support for workplace end users

This project carries out a series of pilot studies of IT support for local planning of daily work on the work floor in industry and in health care. It also arranges the yearly “User’s Award” presentation to the best vendor and workplace, evaluated by a jury, from nominations by the end users. From this experience a process of quality certification of IT support for local planning is developed and studied. The project has specific support from NUTEK/VINNOVA’s MTO (Human-Technology-Organisation) programme.

Participating partners: LO, Torbjörn Lind & Renée Andersson.

Observing partners: TCO; TimeCare; Vattenfall .

From CID: Yngve Sundblad, Åke Walldius.

*Other universities: HCI/Uppsala University, Bengt Sandblad & Jan Gulliksen;
Industrial economics/Gävle, Lars Bengtsson; Production technology/Luleå, Torbjörn Ilar
Main funding: NUTEK/VINNOVA MTO(Man-Technology-Organisation) programme .
Time period: Sept 1999–Dec 2002.*

Procurement competence

The project explores the procurement process from a usability and organisational standpoint in order to develop understanding and models for good procurement practices. Procurement competence is devoted to exploring the powers of user centeredness and usability from the inception of system development projects. The goal is to produce a practical and theoretically grounded procurement model, which take the procurer perspective and is based on the users' needs and actual system use.

Procurement competence expects to contribute with knowledge and experiences from case studies and field experimentation, which will help procurers demand and formulate user centred processes.

Participating partners: IconMediaLab; TCO.

Observing partners: TietoEnator.

From CID: Henrik Artman.

Main funding: VINNOVA.

Time period: Aug 2001–June 2004.

Current research student themes, subjects and time plans

- Awareness in informal communities (Human-Computer Interaction: Cristian Bogdan, Jul97–Jun02(Doct))
- Accomodating visitors in digital communities (HCI: Anders Hedman, Jul97–Feb01(Lic)–Jun02(Doct))
- The effect of Internet on the development of media – an evolution or revolution (Media and communication, Gothenb.Univ.: Eva-Maria Jacobsson, Jul97–Sep02(Doct))
- Internet users in a socio-cultural perspective (Media and communication, Umeå Univ.: Peter Petrov, Jul97–Mar02(Doct))
- Narrative in digital media (Cinema studies: Björn Thuresson, Jul97–Jun02(Doct))
- Subjectivity in shared virtual information environments (Computer Science: Kai-Mikael Jää-Aro, Tekn.Lic, Jan98–Jun02(Doct))
- Auditory direct manipulation for blind computer users (HCI: Fredrik Winberg, Jul98–Sep01(Lic)–Jun03(Doct))
- Sonification (Music: Sten-Olof Hellström, London Univ: Sep98–Jun03(PhD))
- Aesthetics for new forms of interaction (HCI: Sara Ilstedt, Mar99–Jun03(Doct))
- Ethnographic studies of mixed reality event production (HCI: Marie-Louise Rinman, Jan00–Mar02(Lic))
- Learning components (HCI: Fredrik Paulsson, Dec00–)
- High-quality graphics interaction in collaborative environments (HCI: Gustav Taxén, Jan01–)
- Learning environments (Computer Science: Matthias Palmér, Jan01–)
- Ethnographic studies of communication in intergenerational families (HCI: Sinna Lindquist, Jan01–)
- VR and concept browsers in mathematics education (Mathematics, Stockholm University: Mikael Nilsson, May01–)
- Ethnographic studies of video communication (HCI: Minna Räsänen, Jan02–)

Finished thesises

Doctoral dissertations

- Björn Eiderbäck, PhD, Computer Science, Stoockholm University, 23 March 2001: Object Oriented Frameworks with Design Patterns for Building Distributed Information Sharing.
- Angela Boltman, PhD, Computers and learning, Maryland, 25 Sept 2001: Shared storytelling in children's development.
- Konrad Tollmar, PhD, Computer Science, SU, 12 Oct 2001: Design for desktop and video collaboration.
- Åke Walldius, PhD, Cinema Studies, SU, 18 Dec 2001: Patterns of Recollection; The Documentary Meets Digital Media.

Licentiate thesises

- Anders Hedman, TechL, Human-Computer Interaction, Feb 2001: Accomodating visitors in digital communities.
- Fredrik Winberg, TechL, Human-Computer Interaction, Dec 2001: Auditory direct manipulation for blind computer users.

Finished CID projects

Sonification of Towers of Hanoi, July 1999–Dec 2001

In order to investigate the nature of auditory direct manipulation, we have implemented an auditory version of the game Towers of Hanoi (where discs of different sizes have to be moved between three towers according to certain rules).

The sonification model is exclusively based on the sounds of the discs. Every disc has a sound that differs mainly in pitch and in timbre. The larger the disc, the lower the pitch. In order to distinguish which tower a disc is located on, both stereo panning and amplitude envelopes are used. We use a mouse as input device. The volume of the discs on the tower that the mouse cursor is located on is increased. The key aspect we investigate is continuous presentation where three different configurations are tested with blind and seeing persons.

From CID: Fredrik Winberg, Sten-Olof Hellström.

Participating partners: Handicap Institute, Stig Becker, Margita Lundman.

Prototype: Towers of Hanoi, exhibited also at Technical museum etc.

Follow-up: Doctoral project of Fredrik Winberg.

Reports: CID-74, CID-112, CID-130, CID-132, CID-136, CID-145 (licentiate thesis).

Explorative mathematics education with 3D visualisation, Jan 2000–Dec 2001

The project is part of a collaborative project called Archives, Portfolios, Environments (APE) within the Swedish Learning Lab. The goal of the activity on Context and Content of Mathematics in Engineering Education is to encourage the students to reflect on their mathematical learning process by making use of conceptual modeling techniques. The other activity, CyberMath – a 3D Visualization Environments for Exploring Mathematics, aims to increase the ability of the students to understand complex spatial and dynamic mathematical relationships, as well as to increase the possibilities of collaborative interaction between students and shared exploration of mathematical course content from remote teacher settings.

From CID: Ambjörn Naeve, Mikael Nilsson, Gustav Taxén, Yngve Sundblad.

Other participants: DSV/KTH, Prof. Carl-Gustaf Jansson; DIS/Uppsala Univ., Stefan Seipel

Main funding: Wallenberg Global Learning Network.

Follow-up: PSMC project within Wallenberg Global Learning Network and Educational mathematics network project.

Reports: CID-110, CID-129, CID-137.

KidStory, EU-Project Sep 1998–Aug 2001

This project is part of the Experimental School Environments, initiative within ESPRIT LTR (Long-Term Research). Tools for collaborative storytelling has been developed as prototypes and studied together with the same elementary school children (5 to 9 years old) over 3 years. Technology started with a desktop drawing tool (KidPad) with zooming and referencing facilities, which over the second and third years was combined with storytelling objects for creation and navigation (dice, sofa, carpet, active feet) and other control devices into a storytelling room.

From CID: Angela Boltman (also University of Maryland), Allison Druin (d:o),

Carina Fast (also Teachers Training dept, Uppsala University), Marita Kjellin (d:o),

Yngve Sundblad, Gustav Taxén.

Other participants: Rågsvedsskolan; SICS; Univ. of Nottingham (co-ordinator) with Albany Infant School; Univ. of Maryland (indirectly).

Main funding: EU ESPRIT-ESE-initiative.

Time period: Sept 1998–Aug 2001.

Prototypes: Sept 1998–Aug 2001.

Follow-up: InterLiving project on intergenerational communication surfaces within the EU Disappearing Computer initiative, Jan 2001–Dec2003.

Reports: CID-69, CID-86, CID-87, CID-88, CID-103, CID-115, CID-116, CID-127, CID-xxx (deliv 3), CID-146(doctoral dissertation).

Kom hem apartment, Jan 1999–June 2001

The apartment, installed in the premises of Skanova/Telia, with video mediated communication installed in different forms in living room, kitchen and sleeping room/working room will be used for demonstration and testing of gestural and haptic interfaces as part of Videospace (Connected communities).

Participating partners: Telia/Skanova.

Other participants: Interactive institute; Ericsson.

Prototypes: Video installations in bedroom, kitchen, living room.

Reports: CID-97, CID-82, CID-61 (with CHI video), CID-46.

Follow-up: InterLiving Jan 2001–Dec 2003.

eRENA, EU-project, Sep1997–Aug 2000

Results include

- Techniques for visualisation and sonification of data from performances
- Production tools for inhabited television and mixed reality events

Ethnographic studies of inhabited television and mixed reality event production as well as mixed reality performances

From CID: Yngve Sundblad (coordinator), John Bowers, Sten-Olof Hellström, Kai-Mikael Jää-Aro, Marie-Louise Rinman.

Other participants: Blast Theory theatre group and Illuminations television production company in London; Universities of Nottingham and Geneva; EPFL-Lausanne; GMD-Bonn; ZKM-Karlsruhe.

Main funding: EU ESPRIT-I3-initiative.

Prototypes: Round visualisation and sonification table, Blast Theory performance "Desert Rain" at KTH September 2000.

Follow-up: InterLiving Jan 2001–Dec2003.

Reports: CID-77, CID-79, CID-80, CID-81, CID-83, CID-84. CID-85, CID-89, CID-90, CID-91, CID-92. CID-93, CID-xxx (licentiate thesis).

Follow-up: SHAPE project on sharing public environments (e.g. museums) within the EU Disappearing Computer initiative, Jan 2001–Dec 2003.

DiME – Digital Meeting Environments for formal meetings, Sep 1997–Dec 1999.

The DiME project was a collaboration between the DCE group at SICS, the 3D/VR group at Telia Research, and the Digital Worlds project at CID. The main objective of the project was to study the use of shared, 3D-, virtual environments for formal computer supported meetings between geographically separated persons. The main finding was that current technology for VR-meetings lack important functionality for supporting meetings and, especially, for representing people. The experiences from the project became the foundation for the current Wasa project.

Participating partners: The DCE group at SICS; Telia Research.

From CID: Sören Lenman, Olle Sundblad, Eva-Marie Wadman.

Publications and Reports: CID-41, CID-58, CID-98.

Prototype 3D-, shared environments for meetings implemented in DIVE.

Follow-up: Wasa, Cybermath.

VideoCafé, Jan1996–June 2000

Human communication resulting from using broadband technology to connect geographically distant rooms into a "common room" for informal (coffee break) and formal meetings using video and audio has been studied technically, socially and behaviourally. In an iterative process a prototype that illustrates critical requirements concluded from user studies has been installed and refined, also with interior design aspects, including adapted furniture, made as graduation work from Konstfack. It was also the basis for extended work, technical and sociological on video mediated communication and its acceptance from awareness, presence and integrity aspects.

Participating partners: Ericsson Medialab, Staffan Liljegren & al; Telia, Lars Lindblad.

From CID: Konrad Tollmar, Yngve Sundbald, Tomas Soltesz, Ann Lantz, Sören Lenman.

Time period: Jan 1996–Jun 2000.

Follow-up: VideoSpaces project, July 2000–June 2003.

Publications and Reports: CID-2, CID-4, CID-47, CID-61, CID-126, CID-xxx (doctoral dissertation).

Prototype: The video café is in continuous use between CID and partners, e.g. Vattenfall, Telia apartment, SICS and the Interactive Institute. It has also become a product, installed by Ericsson between two Swedish airports.

Garden of knowledge, Mar 1996–June 1999

Logical, structural and visually appealing navigational tools for the dynamic classification of and interaction with an evolving body of knowledge has been developed. An important goal is to document the process of interdisciplinary co-operation in the production of interactive, multimedia based tools for individualised education. Project members include university teachers of music and mathematics, graphic designers, social scientists, computer scientists and programmers.

Participating partners: Apple; Skolverket.

From CID: Ambjörn Naeve, Kenneth Olausson, Bo Westerlund, Fredrik Winberg, Yngve Sundblad.

Publications and Reports: CID-17, CID-49, CID-52, CID-59.

Prototype: A program developed in Macromedia Director illustrates the ideas in a graphic and sound and film environment ("The Garden of Knowledge") where students can explore and experiment with connections between mathematics and music, e.g. use and breaking of symmetry in mathematical patterns and in e.g. Bach's music, and rational numbers as basis for music scales (described already by the Pythagorean school).

Follow-up: Educational mathematics projects.

Information exchange and communication in large, distributed organisations, Jan 1997–June 1999

The project has designed flexible, shared visual environments on the World Wide Web for exhibitions, meetings, and discussions in large distributed organisations. The digital sites build on existing networks in the real world, in which members have a shared interest and a clear sense of community and purpose. Both 2D Web and 3D Active worlds meeting environments have been built and used in broad communication and information exchange between members of the large Swedish trade union confederations LO and TCO. Communication patterns are studied and the users' own building of meeting places is encouraged. An observation is that for experienced computer users building in Active Worlds seems a lot easier than building directly for the Web. Communication patterns within the trade union user community, that has grown to spread all over Sweden, are studied.

Participating partners: LO; TCO; Telia; UI-Design.

From CID: Sören Lenman, Ann Lantz, Åke Walldius. Anders Hedman, Björn Thuresson, Yngve Sundblad.

Publications and Reports: CID-33, CID-37, CID-65, CID-73.

Prototype: 2D Web and 3D Active worlds environments.

Follow-up: Cyberbygget, ITQ.

Smart and emotional things for Communication, July 1997–June 1999

At CID work was performed in the "Smart things and environments" in the first two years of CID's phase 2, in the following projects.

- White Stone
- 6 th sense - active family tree
- Softair Communication - light in chairs

Participating partners: Ericsson Medialab, Staffan Liljegren & al; NoPicnic Ind.Designers.

From CID: Konrad Tollmar, Olle Torgny, Yngve Sundblad.

Follow-up: EU InterLiving project (2001–), Interactive Institute smart studio (1999–).

Publications and Reports: CID-35, CID-96.

Prototypes: Working interactive communication chairs, working family light tree, mock-ups of e.g. emotional communicating stones.

CID'97 and Usor, guidelines and methods, July 1997–June 1998

Efficient and enjoyable interfaces, that support users in gaining information from web documents, and help in navigation through the complex, hyper-linked information structures that characterise the Web, and that encourage communication and collaboration between users, are studied. Practical solutions and guidelines for the use of advanced metaphors, especially concerning problems related to navigation, have been developed and collected into a WWW prototype presentation.

These are guidelines and advice for developing Web sites for use in daily work situations and to user oriented methods for development, including experience and advice on their applicability in different situation. Practical solutions and guidelines for the use of advanced metaphors, especially concerning problems related to navigation have been developed and collected . They are based on extensive study of literature and experience from users in academic, industrial and user organisations.

Participating partners: Enator, Nomos; Telia; TCO; UI-design; Vattenfall.

From CID: Ann Lantz, Michael Ortman, Johanna Ullman, Fredrik Winberg.

Publications and Reports: CID-29, CID-42.

Prototypes: Usor and CID'97 are available on CID's web site.

Olga, July 1996–Dec 1997

The aim of the OLGA project was to create and study the use of an interactive multi-modal tool with voice and visual interaction for navigation with help of an animated person ("Olga"). This 3D-animated assistant was intended to help in situations where people seek information. It was demonstrated with consumer advice about microwave ovens.

Participating partners: Telia.

Other participants: Speech Technology; KTH; Linguistics; SU; SICS.

Main funding: KK-stiftelsen.

From CID: Olle Sundblad, Eva-Marie Wadman, Yngve Sundblad.

Publications and Reports: CID-20 (CHI report and video).

Prototypes: Fully working prototype using connected computers between participants.

CUT! a film is made - and you're editing it, March 1996 - Dec 1998

CUT! is a double CD-ROM. On CD 1 you follow the process of making a film, from the idea of a script to the finished film. We produced a Swedish version (Åka svart) of a German short film, Schwarzfahrer. On CD 2 we have included all the takes used in our film (approx. 30 mins) which you edit to your own version of about 4 mins. You can also compare your version with a version edited by a professional editor.

On CD 1 you can either watch a compressed version as a lecture (Short Cut) or browse the extensive version (Cut) at your own will. The process of the production of the film is thoroughly documented and presented in a pedagogical manner. The material is structured from the three main topics in the production: pre-production, production and post-production, all attached with several sub-headings.

The package is mainly aimed as a pedagogical tool, but has proved to have wider general interest. You learn some of the basic fundamentals in telling a story with moving images, and you get the opportunity to get "hands-on" experience.

For the film we used an all-professional crew, both behind and in front of the camera. Firstly, to get a good result, secondly, for interviews on their different professions. On the day of the shooting, we actually made two films: the "real" film and a documentation of the process. In the CD-ROM context the combination of the two gives a good, simultaneous view of the process.

Participating partners: Department of Cinema Studies, Stockholm University

From CID: Yngve Sundblad, Ann Lantz, Björn Thuresson

Publications and Reports: CID-13, CID-16

Prototype: Actual product, released by FilmHusförlaget