



RESEARCH PROJECTS

During its first academic year the Institute produced several research projects:

Mobile Embodiments (Personal Technologies)

The project started from two observations:

- The mismatch between on the one hand the fact that portable devices are becoming increasingly smaller, lighter and (with new broadband mobile technologies) faster; and on the other, the growing number of services being offered on these tiny devices.
- The users' needs, which vary according to the situation they are in.

The project focuses on new devices and services that can offer specific functions according to the users' situation: in the home for example, in the city, or on the move. These functions would be enabled by wireless communication between the portable devices of the user and the technological 'elements' present within a specific environment. These services would change and adapt to best satisfy the needs of the users who, moving from one environment to another, continually change their needs.

The team started by analysing how today's electronic devices communicate with their users via light, sounds, images, vibrations and text. They looked at the types of activity people perform, and the places they do them. They then developed a set of examples: situations in which the user interacts through a portable device with specific environmental elements, for instance a mobile phone that could allow the user to print an SMS at an ATM.

Olympic Countdown Clock (Connected Communities)

The Countdown Clock, an interactive clock for the 2006 Winter Olympics, is conceived as a totem, a kiosk or even an entire interactive building to be constructed in Turin's historic Piazza Castello. It is an urban technological intervention that uses the amount of time left before this important international event, and transforms this data into a meaningful experience. More than just a clock, it is an instrument for permanent communication between the inhabitants of Turin, the tourists, the institutions involved, and the Olympics organisers.

The Countdown Clock allows the public and the user to:

- Get the core information—how many days remain before the Olympics open—in an intuitive, yet interactive way.
- Interact directly with the Clock and the way it represents time, by not just observing but participating and adding one's own image to the electronic totem.
- Obtain specific information on the Olympic Games and its associated events.
- Exchange information with other users.

It is even possible to imagine a system of Countdown Clocks, functioning simultaneously but in different places, allowing interaction between the public in Turin, the local alpine communities where the games will take place, or other Olympics cities and facilities (the press room, for instance).

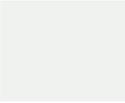


www.interaction-ivrea.it (Connected Communities)

How do we manage and visualise the ever-increasing volume of information we are all producing? How do we allow people to access it, and each other, from distant places? How can we create new forms of communication and interaction via online networks? This project studies the possibility of creating online communities of knowledge and interest (including companies) and online knowledge spaces where interaction design knowledge can be shared and its debates participated in.

www.interaction-ivrea.it is an experimental project that aims to:

- Develop a technological platform to improve online communication and relations and make information exchange more lively, interesting and effective.
- Create an online space that enables the international interaction design community, both in Ivrea and elsewhere, to access the Institute's research, design and teaching activities and be actively involved in it. On an experimental level the intention is to make the Institute itself and its communication with the worldwide community into a case study, where agendas are set and debated, knowledge shared, and ideas developed.



The Future of Train Travel (Tomorrow's Services)

Technological innovation could enable the design of digital and physical resources to improve and enlarge the range of activities and services that Trenitalia's passengers could experience before, during and after a train journey. Integrated information systems that continually produce, manage and disseminate dynamic train location and condition data, could help staff and passengers make informed decisions about their journey.

This three-month project began with mapping the user's travel experience: from dreaming about the journey, to planning, buying tickets, finding the train, departures, changing trains, delays and arrivals. The team also observed travellers in stations and on trains and conducted informal interviews with travellers and railway staff. Next came a brainstorming session to build up ideas for possible services, starting from people's experiences as well as possible technologies that could be implemented in a three to five year time-frame. The feasibility study was presented to the Board of Trenitalia.

Fluidtime (Tomorrow's Services)

Nowadays people are increasingly individualistic and flexible in the way they lead their lives, including how they manage and organise their time. Yet they often depend on fixed timetables of businesses and services that do not reflect the actual changes of events, and thus do not accommodate people's personal time flow very well. We continuously have to fit our personal 'event time' (Kairos) to public, clock-time (Kronos).



Can we use information and communications technologies to make people's relationship with time more flexible, thus accommodating their own time flow?

This project aims to develop tools that give people real-time information about public and private services and help them organise their personal time flow. Fluidtime envisages wireless products (connected watches, interactive mobile phones, newly conceived interfaces) that improve time-specific information flows and reduce waiting times.

Design For Future Needs

The quality of life in the European Union is constantly influenced by population factors, changes in work organisation and new models and lifestyles. Interaction design methodology, normally used for innovating and developing new products, can also be used to interpret these developments and guide policy planning, especially the EU's science and technology policies and its strategic planning of industrial R&D programmes.

This research project aims to identify and propose interaction design methodologies, used today by the biggest multinational corporations, to not only anticipate these changes but devise and prepare solutions and scenarios that policy makers and EU legislators could use to forecast trends and respond to the new socio-economic challenges.

The project intends to:

- Stimulate a dialogue between the design industry and policy makers at EU level.
- Illustrate the potential of design and trend forecasting techniques for improving European policy development.

Clever Brix

Intelligent bricks ('Clever Brix') interact and communicate through the built space we live in. Clever Brix started from the assumption that what happens in or around a building can be reflected via external inputs and sensorial stimuli on the building surface itself. The appearance of the prototype, a wall made of 'intelligent programmable bricks', can be changed at will, as it reacts to touch and to people approaching it, or is activated over distance or by mobile phone. The bricks were prototyped large-scale to explore the qualities of light and interactivity. The visual qualities of an interactive wall made of bricks were explored using computer-based animation and the final prototype which used electronics for the sensors and projection for the wall.

Clever brix can be programmed to have different behaviours and people can arrange them as they wish. The simplest module is a brick that lights up in response to touch. Another can be activated remotely, so you could send an image onto a wall using your mobile phone or play a game with someone on the other side. Another module is a camera brick that senses movement and either acts as a trigger to light the wall as people pass, or displays a huge image of them across the wall.



Video: 'Towards an Anthropology of the Mobile Phone'

This research video is the first investigation into the public behaviours needed in using the mobile phone. The hypothesis is that some cultures are more able than others to cope with new technologies because of their heritage of everyday 'street life' theatricality. Thus the southern Italian attitude favours the new situation and traditional gesturing in public helps users reconstruct the space left empty by the absence of the phone booth, and the visibility of the phone itself. This video is a first step towards an anthropology of technology in the contemporary world, where the approach of Southern Italy often shows more creativity than that of the northern part of the country.

