<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A few words</td>
<td>2</td>
</tr>
<tr>
<td>About Interactive Institute</td>
<td>4</td>
</tr>
<tr>
<td>Art, an engine for development</td>
<td>6</td>
</tr>
<tr>
<td>IT is not the future!</td>
<td>8</td>
</tr>
<tr>
<td>Can IT make us feel better?</td>
<td>10</td>
</tr>
<tr>
<td>Young designers of the future</td>
<td>12</td>
</tr>
<tr>
<td>Real world computer games</td>
<td>14</td>
</tr>
<tr>
<td>What is the next big “thing”?</td>
<td>16</td>
</tr>
<tr>
<td>Highlights during 2005</td>
<td>18</td>
</tr>
</tbody>
</table>
“Sweden will die without industrial research”
A few words

People who see and try the research results of the Interactive Institute react in numerous different ways, positive and negative. It is safe to say that very few individuals come across what we do without reacting.

Our exhibits in the public arena might even give us the reputation for seeking popularity rather than in-depth research. I feel this is very far from the truth. I firmly believe that applied IT research is vital for the development of Sweden.

Research within the Interactive Institute is heavily based on building prototypes, thus making us similar to an innovation shop. Just as our mission is to investigate applied IT, it is always vital for us to build functioning prototypes.

This working method facilitates the goal for our work to be within the sphere of applied results. It also serves as an interface to make our research tangible for the general public.

In some sense, our work may be closer to popular science, but it’s always driven by a research focus. The search for new knowledge and new understanding is always the force behind what we do.

The Interactive Institute was started by the Foundation for Strategic Research. Last summer we became an integrated part of a newly established group of four institutes, all within the field of applied IT research. Ownership of the Interactive Institute has thus been transferred to the Swedish Institute of Computer Science (SICS).

Through this strengthened research body we will have increased opportunities to extend our visibility in the international arena.

It is clear that this new relationship will serve to strengthen existing experience and competence within the Interactive Institute. We look forward to the future with great hope and anticipation, while thanking the Foundation for Strategic Research for their belief in us and the value of our originality within the IT research field.

Staffan Truvé

CEO, Interactive Institute
"Our results should reach society - sometimes they do and sometimes they don’t"
About the Interactive Institute

The Interactive Institute is a special kind of research institution. We work experimentally to create results through a combination of art, design and technology. We aim to conduct and publish research of the very best quality while creating concepts for new products and services.

The institute consists of different thematic research groups spread throughout Sweden from Piteå in the north to Växjö in the south.

Each group has a unique orientation based on the fundamental idea of mixing different disciplines to create new results and unique ways of working. Research examples include: games, sound, energy, learning and quality of life.

We gather creative, inter-disciplinary people, who understand not only technology and art, but also what it takes to bring new ideas to a larger audience.

Our researchers are recruited from university, industry, the public sector and art and culture organisations. Basically we look for any individual with the right competency, vision, background and experience, be it academic or non-academic.

Our researchers develop innovative ideas and prototypes, from intelligent textiles and new games to tools that fight stress. Our results affect all sectors of society; industry, academia, politics and the public – and through this, the everyday lives of people.

Facts

• Started by SSF 1998
• Number of researchers approx 70
• Made up of thematic groups throughout Sweden – from Piteå in the north to Växjö in the south
• CEO Staffan Truvé
• Board: Bernt Ericson, Marie Persson Björkman, Björn Brandt, Per Andersson, Peter Gärdenfors, Jonas Ryberg and Annika Öhrner
• Summer 2005: became part of the SICS Group of research institutes, which also includes SICS, Viktoria Institute and Santa Anna IT Research
"It's like something created by Dr Spock!"
Art, an engine for development

Do you remember the old game 'Battleships', in which a mine could blow up your ship any second? This metaphor, although far-fetched, describes the explosive nature of discussions on art and culture within the institute.

We firmly believe that art is independent and free. When art is created no one can command its function or meaning. At the same time we also assert that art and culture are necessary components in the development of new technology - ideas which may bring great success to Swedish business.

We therefore like art to be free from expectation in the world of commercial product creation, yet still be an integral part of the process. We live in constant conflict! When art and technology are combined, something extraordinary happens. Paths between different worlds open up, and create the chance for new ideas. After all, technology is not neutral. Technological development is a direct reflection of our cultural thought process and the way we solve problems.

The Interactive Institute combines art into IT in many different ways. This can include using artistic methods to create a prototype, creating a piece of artwork itself, exhibiting at art fairs or creating entire research programmes around art and technology.

Our goal is to explore the value of art & culture within our field and allow it to be the engine in what we do. Sometimes we succeed and sometimes we fail. It's therefore natural for the institute to exhibit our results at arenas like Avesta Art-festival, Prix Möbius and NIFCAs exchange programmes.

As one of our oldest, most distinguished studios in combining art & technology nears project completion, we were proud of the Swedish Institute's recognition of the challenges we faced and what we have achieved within the scheme. As a result SI decided to support our celebration exhibition which toured the major European cities during the year – Touching the Invisible.

At the same time our board has given us the green-light to go ahead with a brand new three-year programme aimed at boosting art & technology in Sweden.

Want to know more?
http://w3.tii.se/ii.asp?page=vision
(info on the vision to combine art with research)
http://www.tii.se/touchingtheinvisible/
(info on the celebration-exhibition)
"The light of daybreak is the illumination of nightfall"
IT is not the future!

IT is just one material among others in design creation. This may sound strange from a research institution based on applied IT, but it’s our belief that IT carries its own characteristics, limits and possibilities and is therefore one of the key resources at ones disposal in form creation.

For example, within the Interactive Institute research we combine IT with other factors such as textiles or energy and use the different combinations as a way to learn more about using IT as a design material. When building functioning prototypes we achieve not only an applied result but also a tangible interface which makes the research question real to the general public.

Outcomes vary from Interactive Pillows and Energy Curtains to the Power Aware Cord. If you can touch, feel and try an energy awareness-tool like this, it’s much easier for people to understand how to use it, both in know-how and as an energy saving product. By converting the flow of energy used to power an everyday appliance into visible light, it’s easier to inspire people to reduce their individual energy-consumption.

On many occasions we exhibit results that best represent technology as a design material and provoke people to think about IT in a new way. Several different prototypes were shown at the recent Wired NextFest in Chicago, the largest innovation conference and exhibition in the world. One of the prototypes that generated the most interest was our Tic-Tac-Textiles. This unique design consists of a comfortable set of chairs and a table-cloth containing digital technology. The participant sits and drinks coffee while simultaneously playing a game with an unknown opponent.

At the Swedish conference and exhibition, Future Design Days, we displayed several prototypes from our energy-awareness research as well as DigiWall, a climbing wall equipped with digital technology. The wall is a physical activity which incorporates both a computer game and a musical instrument.

Want to know more?

http://www.tii.se/static/ (studio involved in our energy project)
http://www.tii.se/designgbg/ (studio involved in the energy project and responsible for the IT+Textiles)
http://www.itpress.biz (where you can order a book about IT+Textiles)
"We want to use technology to change life"
Can IT make us feel better?

Does IT make us feel better – or worse? This question is of course a paradox. On the one hand the never-ending accessibility of our lives through e-mail, mobile phones and BlackBerry's can create tremendous stress on our souls. But on the other, technology can play a vital role in solving growing problems in modern society including depression, loneliness, dementia, anxiety and self-destructive lifestyles.

The EMMA project is developing "mood devices", a range of virtual environments on various levels from full-body-immersive VR to hand-held PDA's. An example of this is Relaxation Island, a virtual paradise island, where one can alleviate anxieties and let go.

Music has been linked with well-being since time began. **BodyResT** is a project in which we tie music with technology, using the music as a means for relaxation. The aim is to combine a wearable device that plays relaxation music with biosensors measuring the listener's stress-levels. By using music for relaxation and stress reduction, the Biofeedback Music will result in an improvement of the users' health and overall well-being.

We are part of a consortium of 21 project partners from 9 European countries that work together with the shared interest of gathering and evaluating tools to design for emotion – **ENGAGE**. The aim is to bring together industry research and design in the field of affective engineering to create a knowledge community thus ensuring the most important elements of current and future knowledge are accessible for all.

In a joint venture with students within cognitive science/interaction design and computer science we are creating a new application for the Interactive Tent Platform. The original Interactive Tent is a prototype based on several years of research on how human creativity can be supported with modern information technology. It is a tent, not meant for outdoor activities but to support creativity and well-being. The participant lies down and rolls into an interactive cylinder-shaped area where he is receptive to a unique relaxation experience. The purpose of this creation is to generate an interactive 3D-application that supports and facilitates stress management and relaxation. The interaction will be based on biofeedback sensors measuring parameters such as heart rate, skin-resistance, blood pressure and muscular tension.

Want to know more?

www.tii.se/qlife/ (does research within health and IT, runs the project EMMA and Interactive Tent)

www.tii.se/sonic (the studio that runs Biofeedback Music)

www.engage-design.org (about the network ENGAGE)
"Do kids of today even bother?"
Young designers of the future

The Interactive Institute has many projects that involve young people either as participators and/or end users. All youths in the western world are witness to a rapid evolution of technology, which makes their way of thinking different from past generations. We try to reinforce this in our work.

During the year we hosted a three-day workshop Let’s work with kids! on how to create with young audiences. The workshop was carried out with a combination of young people and seniors from industrial, academic and media areas.

A subject that might not automatically interest young people is energy and energy use. We held a series of workshops with young people to find a way to communicate with them on their own terms. The workshop resulted in an idea to create a computer game providing knowledge and awareness on energy consumption. This computer game will be developed within the project Young Energy.

How can one improve staff learning at a musical festival where co-workers are young, part-time and work for free? This is the question we set out to answer in our project, LIFE. The scheme has, among other things, created “a well” - a physical place where the co-workers can talk to a digital monkey and let their feelings and thoughts run free.

DigiWall is another of our popular designs. DigiWall is not only a cross between a conventional climbing wall and a computer game, but also an extraordinary musical instrument with which you can perform as a musician or composer. It’s popularity has been boosted by its appearance at numerous exhibitions including Future Design Days in Stockholm and Next 05 in Copenhagen. It has been designed, tested and enjoyed by both the young and the old.

Want to know more?

www.tii.se/studio_1221
(carry out research with and for young people)
www.tii.se/power
(studio that runs Young Energy)
www.tii.se/share/LIFE/
(about LIFE)
www.tii.se/sonic
(DigiWall production studio)
www.digiwall.se
(about DigiWallTM)
“Have you ever phoned a ghost?”

Photo: Peter Knutson
Real world computer games

We continue to create new experiences through games that lie on the border of fiction and reality – where passive players start to develop their own gaming experience. We want to make the real world into a magical playground!

Pervasive games contain a radical new format which extends existing game forms into the physical world. The use of new technology is paramount to achieving this high quality interactive experience. The Interactive Institute is involved in IPerG, a large EU-research project consisting of many research institutes working in the field of pervasive games. The aim of IPerG is to develop infrastructure, tools and methods for pervasive games.

One sub-genre of pervasive gaming is real-life role-play games. The games can be played paralleled to ordinary life and often use innovative technology. One example of this is Prosopopeia, a game in which a player becomes a medium for a ghost on a mission on earth. The project also contains “A phone to the Other side” through which players could communicate with ghouls. This hugely successful game was trialed in Stockholm over a 48-hour period.

Haunted University is another example of a spooky real-life role-play. This game generated strong reactions at the game-developing education in Gotland earlier this year. The game involves “non players” – players that are affected but un-aware of the games existence. Following a series of post-project interviews, researchers have concluded that games involving unsuspecting participants can have controversial results.

Another game that moved out into the real world is Backseat games, games that you play in the back seat of your car – a combined project with industrial partners like Microsoft. Imagine sitting in the back seat of a car staring out of the window. What if you could search the river bed beneath the bridge you have just been over? What if the person sitting in the back seat of the car in front is actually a detective on your trail? The world moving past you is the game engine, a game which will certainly take your “back seat experience” to new levels!

We think it’s important to emphasise the scientific depth within the gaming area. During the year we have been involved in creating Fosfor, a National Research School for Game Development, the first seminar took place earlier this year.

Want to know more?

www.tii.se/game (research into games)
iperg.sics.se (project Iperg)
www.tii.se/mobility/Backseat/backseatgames.htm (Backseat games)
“Research - for or against society?”

Photo: Peter Knutson
What is the next big “thing”?

Visitors and fellow collaborators often ask us what we believe to be the next important area. This is a difficult question as the reply not only depends on how one interprets ‘importance’ and ‘involvement’, but also how far into the future we are talking. One year? Five years? One hundred years?

For example, let’s take two areas that we have a vested interest in and believe will catch the public-eye in the near future.

One such area is **IT research within the field of social sciences.** An interesting field for future research simply because IT can be seen as a bearer of culture and inherent messages. An example of this is the recently initiated **Interactive lounge project.** The lounge consists of a 100 square metre room contained within the Stockholm City museum (2006 to 2008) and is used to enhance our cultural heritage through digital media.

IT can also be used as a tool for society, handling social problems or social development. This process has already been clearly demonstrated, not least through political games used to teach people about anything from the UN’s food programme to smearing political opponents in elections. IT is a powerful tool which can be used in everything from supporting subversive groups in dictatorial states to reducing the tension within a divided a country. We believe that joint research initiatives with the government should be extended.

Another sector in dire need of research is **new film and media.** The new combination of media and IT has meant movable images are not only confined to cinema and television. Today moving imagery is as much a part of big-image arenas like shopping malls and galleries, as it is influencing computer games and waiting-rooms. Our entire public sphere is changing, and the research knowledge of what this means has only just begun. Film and moving images carry great potential to influence how we interpret the world around us and what we perceive as positive and negative.

As IT increases the cooperation and responsiveness between the imagery and the viewer, interaction design has become a buzzword. While the one-sided activity of interaction design creates possibilities to involve a user, the area of new film and media provides the possibility to study the common language in development, and what this interaction might mean in the future. Over the last few years we have seen a rapid increase of interest in this area and a growing need for research around it. Within the Interactive Institute we have a long-term interest in this field.

Want to know more?

You can always find out more at our website http://www.tii.se
For the latest news why not sign up for our newsletter? (Find the link on the first page of the Interactive Institute website)
"To affect society you have to be visible within society"

Photo: Magnus Carlsson
January
Exhibition at the 1:st Moscow Biennale of Contemporary Art
Launch of TRANS-REALITY GAME LABORATORY at Gotland
Release of Patterns in Game Design - a book from II about practical design choices is released.

February
II at WMSCI 2005
II at Vetenskapsfestivalen in Göteborg
II at DIGRA 2005
II becomes a finalist of Prix Möbius Nordica

March
Seminar series on Energy & Design starts
II spin-off company starts – Innovation Impact
Reality game from II frightened students at Gotland
FOSFOR, a National Research School for Game Development, started
Patent granted for DigiWall!
Staffan Truvé becomes new CEO of the II

April
The project Backseat Playground gets funding from Microsoft Research.
II starts new research theme around quality of life

May
II co-organizer to the first Nordic Design Research Conference
Touching the Invisible, exhibition from II, is shown in London
Energy and Design seminar and exhibition in Göteborg.

June
II co-organizer to the SITI conference – the national meeting place of Swedish IT-research.
II at top research exhibit - Wired NextFest in the USA.

July
New owners for II and extra funding to the sum of 50 million SEK!

August
Let’s work with kids! -a three day workshop on how to create with the young

September
Start of a new project with funding from Framtidens Kultur: "My home 10 years from now", -a design and technology project.
IPerG Open House

October
Conference about Art & Culture together with the Swedish Government
II part of international exhibition at Beall Center

November
II part of the new ICT research institute in Sweden
II at Future Design Days!

December
2.5 millions from the EU to II Piteå!
"Interactive lounge" starts at Stockholm City Museum