

The PLAY Research Group: Entertainment and Innovation in Sweden

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PLAY: Applied research on art and technology
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ABSTRACT

In a short time the research group PLAY has established an unorthodox but effective work style, where a creative approach to research in information technology is combined with a strong focus on achieving high-quality results. Being a young research group (both regarding the time it has existed and the average age of its members) has presented PLAY with both challenges and opportunities. We face the challenge of building a credible basis for research in the academic community, but also think that we have the opportunity to contribute innovative results to the research community and our industrial partners.

Keywords

HCI research groups, future HCI, European HCI, IT design

INTRODUCTION

How can one perform exciting and unorthodox research in information technology, while still assuring that results are useful and of good quality? How can a small group, consisting mostly of relatively inexperienced students, in a small country with very little traditions in groundbreaking IT research, compete in the same arena as legions of well-funded and well-connected international research organizations? These are some of the challenges that we are facing in the PLAY research group.

It is still too early to know if we will succeed in the long run, but several short-term successes give us hope that we are at least on the right track. Most importantly, we have already had the opportunity to present our results in a variety of fora and formats, including ACM-sponsored conferences such as *Multimedia '98*, *SIGGRAPH '98*, *CSCW '98*, *CHI '99* and *UIST '99*, IEEE Computer Society-sponsored conferences including *ISWC '99* and *InfoVis '99*, and additional venues such as *HUC '99* and the *Journal of Personal Technologies*. Here, we will try to give a flavor of what PLAY research is all about, how we work, how the group is

composed, what our motivations are, and how we try to maintain quality and credibility without getting bored.

HISTORY

The PLAY research group was formed in January 1998 at the Viktoria Institute, a new (June, 1997) research institute in Göteborg, Sweden. Viktoria aims to perform innovative IT research in collaboration with local industry partners. In August 1999, in contest with eight other applicants, PLAY was chosen to become a studio in the Interactive Institute, a national research institute with extensive funding from both government and industry. Being part of the Interactive Institute will give us the opportunity to move from the short-term, unreliably funded projects at Viktoria to develop a more long-term strategy. Our chosen research theme at the institute is *Entertainment and Innovation* – something we have been wanting to work with since the start, but only now have received dedicated funding to pursue [4].

RESEARCH APPROACH

In PLAY we believe that there are many ways in which computers can be used to make life better, more pleasurable, or more fun. Most of these are as yet unknown, and we hope to discover some of them. We consider our approach to be fundamentally user-oriented, but perhaps paradoxically, we do not for the most part use methods traditionally associated with the human factors field. Our primary focus does not lie in user evaluations or empirical studies – but we definitely want to see our results leave the lab and get out into the real world! In fact, virtually all our prototypes are meant to be used in real-life situations by ourselves or other people. We have found that walking that extra mile, going from a demo to the stage where a prototype is actually good enough to use, is extremely rewarding – but also extremely hard. Being innovative often means there is at first glance no clear “usefulness” in what we do, which makes it doubly important to really try out theories in practice rather than leaving them as half-finished demos in the lab.

The relationship between “serious” (or “work”) activities and “fun” (everything else, presumably?) interests us. Many groundbreaking innovations in human-computer interaction have initially been considered frivolous or useless – for instance, graphical user interfaces were long considered to be of no practical importance. In this spirit, we uncovered an interesting and not easily explained “blind spot” in IT research when it comes to computer-based entertainment: despite being a big part of the lives of many people and

playing a vital part in the development of computer technology, computer games have received almost no serious study in the Scandinavian research community [5]. With art and entertainment being so important to just about everybody, we argue that IT researchers should start treating “fun” just as seriously as “work”! To stimulate thought in this area we instigated a series of international workshops, *The Future of Fun*, which provide the opportunity to speculate about future entertainment technology in a structured way [3].

Our practical approach to research means that we want to be able to go from concepts to results in a short time. For this reason, we often make use of readily-available technologies, sometimes in unusual ways. An example is our adoption of the *Nintendo Game Boy*, an handheld video game which offers surprisingly advanced features at a low price. By equipping the Game Boy with a radio transceiver, it became a *Hummingbird*, a portable awareness device for co-located groups [6]; through some re-engineering it became small enough to wear as a “public” computer [7]; and so on.

Sample Research Projects

- *Display strategies for small screens*: As hand-held computers become more common, and devices such as mobile phones become more and more like computers, the need for designing effective user interfaces on small devices grow. PLAY has been active in this area since day one, the most notable result so far being WEST, a novel web browser for small terminals [1].
- *The ChatterBox*: This project is an attempt to make use of the electronic “buzz” that exists in a modern workplace or home: the endless stream of e-mails, web pages, and electronic documents which fills the local ether(-net). The ChatterBox picks up this noise and transforms and recombines the texts in unexpected ways, and projects the results in a public place. The goal is to provide a subtle reflection of the local activities and provide inspiration for new, unexpected combinations and thoughts [9].
- *WebStickers*: Here, we explore how readily-available technology (bar-code readers and stickers) can be used to create links between physical objects and virtual information. Barcodes are everywhere, but rarely used – with WebStickers, every barcode can be linked to a URL on the Web, and since barcodes can easily be printed on adhesive stickers using a standard printer, users can easily augment any object with a hyper-link [8].

COMPOSITION OF THE GROUP

Alan Kay once remarked that he was attracted to the MIT Media Lab because of the “...attempt to collide technology with the arts, rather than [to] collide technologists with artists”, and continued “You’re always better getting people who have already had that collision in themselves” [2, p. 83]. In PLAY, rather than composing a multi-disciplinary group, we try to have a group of multi-disciplinary *people*. PLAY has grown from two to currently nine members, most of whom are Ph.D. students in informatics or computer science. With the increased stability that the Interactive Institute brings, we have recently been able to widen the scope of the group, bringing in members with other backgrounds including fine arts and music composition. However, no group member specializes in only one topic. A typical mem-

ber has a degree in a relevant field such as computer science, informatics or fine arts, but a strong interest in several other fields such as electrical engineering, linguistics, literature, film, or music. Whether accompanied by academic degrees or not, a wide range of interests is seen as a vital factor in the composition of the group.

MANAGING PROJECTS AND MEETING DEADLINES

Most projects in PLAY are highly collaborative, from original concept through implementation and testing all the way to published research paper. With the wide variety of competences, we often need to take help from each other, and thus most members tend to become involved in most project at some point. About twice a year, we have a big meeting where future work and up-coming projects are outlined. The resulting work plan is not intended to be strict or all-encompassing, but it serves to establish important milestones and goals. This in turn lead to one of our most important inventions: the “*deadline chart*”. This was a low-tech but effective solution to the problem of keeping track of all the various projects and deadlines. A large wall chart shows all projects and the deadlines for when results (usually academic papers) are due. When a paper has been delivered, it is ticked off the chart; when the reviewer results come in, “accept” or “reject” is added to the entry. We found this to be a good way to display the work plan of the whole group, and also found that it provides immense satisfaction to “tick” a paper that has been delivered – and even more so to be able to write “accept”! (Writing “reject” is of course a less pleasurable, but sometimes necessary, task.)

THE FUTURE

PLAY is now at a very exciting point. The funding from the Interactive Institute brings a new stability to the group, and for the first time we are free to plan more than six months ahead. We are now sketching our first major projects in the area of *Entertainment and Innovation* – and we hope to be able to tell more about them soon!

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