ABSTRACT

In this article we report the state-of-the-art of the HCI field in Brazil. We start with a brief history of the access of institutions and individuals to technology. After that we present some of the efforts done in academia in the 90’s to establish the HCI field and to organize the HCI community. We briefly describe the personal profile of the participants of this community and how the field stands in relation to the Brazilian industry and government. Finally we expose our view on how to pursue our goals in the near future.

The information here presented reflects mainly the work and experiences done by the participants of a recently established HCI group of interest, whose main interactive medium is the internet. This group has emerged in the academic milieu and has strong links with computer science departments.

KEYWORDS

Brazil, HCI, HCI community, university, industry

1. Introduction

The history of computing technology in Brazil can be abstracted as having three phases. The decades of the 60’s and 70’s were dominated by mainframes. Only big corporations or governmental institutions were able to afford the costs of such technology.

The 80’s were characterized by market restrictions established in order to “protect” the national computer industry. At that time, personal computers should be produced in Brazil, and could not be imported by law. Due to high costs associated with high taxes, the access to personal computers were very restricted, the technology used was generally obsolete and was restricted to PC like machines.

In the beginning of the 90’s the market restrictions were opened. As a result most hardware industries were not...
able to compete and closed. Now academic institutions
are allowed to buy equipment paying little or no taxes.

It was not until the 90’s that the first studies in HCI
emerged in Brazil. At that time there were no HCI re-
searchs and projects being done, therefore these first stud-
iess were originated in other projects that had come across
some interesting interface issues. Only then did some
people start focusing their research in HCI. Most of the
research was still done on problems applied to other ar-
eas, and most articles were published in conferences such
as the Brazilian Symposium of Computer Graphics and
Image Processing, the Brazilian Symposium of Software
Engineering or the Brazilian Symposium of Artificial In-
telligence.

In the last few years the number of researchers in HCI
in Brazil has grown and the focus of their studies have
spread. Many universities now have HCI graduate pro-
grams and undergraduate courses. In some of these
universities, research groups have started to consolidate
around professors that have been working in the field.

There is still very little contact among HCI groups and
researchers. Although some of these researchers have
presented tutorials and talks in some conferences spon-
sored by the Brazilian Computer Society, there are no
HCI conferences or activities in which researchers can
exchange and discuss ideas or publish. It was not until
1996 that the first efforts towards creating an active HCI
community appeared in Brazil and only this year (1997)
these efforts are starting to produce results.

2. State-of-the-art

In 1996 some Brazilian researchers met at CHI’96 and
they realized that HCI groups in Brazil did not know each
other nor the researchs that were being done. After some
organizational efforts within computer science forums, a
list of people working with HCI in the country was cre-
ated. People then started to discuss the next steps to fur-
ther organize the group and to form a community. As a
result, in the beginning of 1997 a Brazilian HCI discus-
sion list was created (ihc-l@furb.rct-sc.br) and so was a
WWW site (http://www.inf.furb.rct-sc.br/ihc/) that con-
tains information about the Brazilian researchers and in-
teresting HCI pointers. These results have already proven
themselves valuable. They have allowed researchers and
professionals to learn more about each other, to discuss
topics of interest and to plan the next steps in structuring
the emergent community.

We next present an initial profile of the Brazilian com-
nunity. In order to try to establish this profile an informal
survey was done using the above mentioned interest list.
It’s worth pointing out that this data only reflects a small
part of the community, since the list has 52 participants
and about 23 answered the survey. Other sources of in-
formation such as data previously collected and our own
experience were also used.

Most of the community participants work in academia
and have a background in computer science or engineer-
ing. However, there are a few people with background in
other areas such as linguistic and education. Almost all
participants work in software development, a few teach
at the graduate level, but the majority is still doing their
graduate studies in Brazil. Most of these graduate stu-
dents are already employed by universities and will prob-
ably continue research in the field. Moreover, the num-
ber of HCI students is increasing, which is an indicator of
the growth of the field as a whole.

In the table below we show the main research institu-
tions ordered according to the number of participants in
the HCI-List. The table only shows those institutions that
have more than one participant in the list. There are indi-
vidual researchers from 12 other institutions in the list.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>State University of Campinas (UNICAMP)</td>
<td>11/52</td>
</tr>
<tr>
<td>Catholic University of Rio de Janeiro (PUC-Rio)</td>
<td>8/52</td>
</tr>
<tr>
<td>Federal Center of Education and Technology of Paraná (CEFET-PR)</td>
<td>6/52</td>
</tr>
<tr>
<td>Federal University of Rio Grande do Sul (UFRGS)</td>
<td>3/52</td>
</tr>
<tr>
<td>Federal University of Santa Catarina (UFSC)</td>
<td>3/52</td>
</tr>
<tr>
<td>Federal University of Minas Gerais (UFMG)</td>
<td>3/52</td>
</tr>
<tr>
<td>Brazilian Telecommunication Company (Telebrás)</td>
<td>3/52</td>
</tr>
<tr>
<td>State University of São Paulo (USP São Carlos)</td>
<td>2/52</td>
</tr>
</tbody>
</table>

It is worth pointing out that PUC-Rio has about half
of the HCI Ph.D. students in Brazil. The remaining half
is spread throughout the country. The number of partici-
pants linked to the industry is still modest (9/52), but
as joint projects between universities and industries pay
more attention to the interface design and issues involved,
we hope to see that number grow.
Many Brazilian companies have partnerships with universities for the development of software (i.e. Federal University of Minas Gerais/Telecommunications company of Minas Gerais, Pontifical Catholic University of Rio de Janeiro/Brazilian Oil Company, etc). Although these projects are in areas such as optimization, database or engineering, the search for high-level quality and consistency among different applications has required the involvement of HCI researchers.

It seems to us that people are starting to realize the importance of the interface and the interaction in computer and information systems. HCI researchers and people working in joint projects with the universities seem to be in great part responsible for that. For instance, the Federal University of Santa Catarina in a joint effort with the National Service of Industrial Learning has created an usability laboratory, called LabiUtil, whose main purpose is to give companies advice in interface development and evaluation. Moreover, both universities and companies already offer training courses and consultancy in HCI.

At the governmental level there are several programs related to human resources and technology development in which an HCI expert could contribute. At the present moment, there are several governmental programs to support and stimulate software research and development. In software development, certain programs such as SOFTEX and PROTEM aim at bringing growth to the area associated with software quality. One of their goals is that the companies in the program receive the ISO 9000 certificate. Other supporting programs are in educational technology (PROINF) and in continuing education (TV Escola). It is clear for us that HCI issues are fundamental to the success of these governmental initiatives. Most of these programs do not require the participation of an HCI professional, but we hope that they soon will.

3. The Future

In Brazil, the HCI research is quite recent and still has a long way to go. Our current concern is to consolidate the HCI field and the community in our country. In order to do that we plan to use all the experience and help we can get from national and international organizations, such as the Brazilian Computer Society, IFIP, SIGCHI, etc.

We would like to have activities in which our community could exchange ideas and research conclusions at a national level. To achieve that, we have established as a first step the organization of one or more HCI workshops in already established computer science Brazilian workshops. Then we would work towards turning them into a Brazilian HCI conference. These activities would aim at not only consolidating the HCI community, but also getting the recognition of the field by other researchers and professionals, both at the university and industry. Once HCI becomes an established and recognized field in Brazil, the next step would probably be to have HCI courses become part of the Brazilian standard curriculum of computer science and engineering courses.

World-wide HCI is traditionally interdisciplinary. In Brazil most research and work in the area is done by people related to computer science. Some of these people have different backgrounds and study on their own disciplines related to human sciences. However, we think it necessary to have a bigger involvement with other areas. This would include not only more cooperative work among researchers and professionals from other areas and current participants of our community, but also the inclusion of more human sciences related courses in the HCI programs.

4. About the Authors

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