

# Agenda for a ‘Live’ Document for Emergent User Research

## ABSTRACT

The world of Emergent Users is evolving in a complex manner. For research for Emergent Users to remain relevant it needs to respond to the changes in a continuous fashion. Therefore, there is a need for a ‘live’ document that is contributed to as well as used by the researchers around the world in a dynamic way. This resource should contain tools, practices, resources and terminologies. It is continuously updated by the researchers as they learn new knowledge during their research. At the same time, it also act as a concurrent repository for the other researchers.

## CCS CONCEPTS

• **Computer systems organization** → **Embedded systems**; *Redundancy*; *Robotics*; • **Networks** → *Network reliability*.

## KEYWORDS

datasets, neural networks, gaze detection, text tagging

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## 1 INTRODUCTION

Consider the following scenario:

*The three researchers stepped into the family courtyard.*

*They were part of a team that wanted to help the rural people to become part of the banking system. As smartphones were aplenty they had been thinking of developing an app. However, they first needed to understand why people were excluded in*

*the first place. Low-literacy and remoteness were not the only problems. There were many issues that did not become apparent sitting in the city. They wanted to know more. That was why they were in this village in a remote part.*

*They entered with a translator, a man of 30 from the nearby town, who could speak English as well as the local dialect. There were only men in the compound; women remained inside the house. The group-interview was about mobile phone-usage. Everyone sat on low rattan stools. The guests were offered hot chai. The atmosphere was convivial.*

*Everything was going well. However, somewhere towards the middle of the interview the conversation began to deteriorate. There was a sudden drop in the voice of the family head. The mediator also seemed less enthusiastic. The energy, which was there earlier, had simply faded away.*

*Somehow the interview ended. The interviewers shook hands, thanked the participants and stepped out of the house. They were aware that something unintended had happened, but they did not know what. So, they asked the mediator. His reply was:*

*“Look, sir, somewhere during the interview, you changed your sitting position and your foot started pointing out at the elder man’s face. Now, that is considered to be a mark of disrespect in our region...”*

Most current Information and Communication Technology (ICT) artefacts have been designed with a typical user in mind: one who is urban, educated, and has a good disposable income. Those people who do not fit these descriptions – for example, those who are low-literate, earn less or live away from city centres – have been termed as Emergent Users<sup>1</sup> [1].

Designing for emergent users can be difficult. This is because the contexts of emergent users differ from those of

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<sup>1</sup>There are other terms in use as well: Next Billion Users [4], Bottom of Pyramid [3] and Digital-Divide [2]

the designers of ICT, who are likely to be urban, financially capable and well-educated. Therefore, it is difficult to ascertain what are their needs and what solution would be appropriate for them. For example, text is employed significantly in design of interfaces. However, many emergent users cannot read and write. Many who can, do so only in local languages. Many design related challenges arise as a consequence. For example, how to help a less-literate person navigate an interface without text? How to help him type in his own language? How can speech-to-text be integrated in the interface when the user lives in an area with erratic Internet connection? What could be appropriate translations into a local language that appear natural, not too classical, to a low-literate user?

The above questions make it sufficiently clear that research is critical for designing meaningful products for emergent users. As we have said earlier, the factors that affect an emergent user's ICT usage are embedded into their contexts. These contexts are characterised by complex and intertwined socio-cultural and economic conditions, such as resource constraints, low political power, low-literacy, geographical isolation and information asymmetry.

The complexity of ICT usage by emergent users is exacerbated by the fact that the world of today is changing faster than before. The important changes include the pace of technological-shifts and globalisation. These changes are affecting the emergent users in myriad ways. For example, the lowering costs of mobile phones go hand in hand with an increased pressure to migrate to the urban centres. This results in new behaviours regarding technology use, for example, searching for regional songs by typing in English.

A critical fact in this discussion is that there is no single set of conditions that can be identified for all emergent users. For example, it is highly likely that an emergent user in a Namibian village has a different set of challenges, expectations and lived-experiences than one in an India.

Given the fact that the worlds in which emergent users live are complex, dynamic and heterogeneous, research for designing ICT for them becomes extremely tricky. The challenge may come in many forms, such as:

- Finding the right users.
- The logistics of conducting research in users' context.
- Building a relationship with users during research.
- Research ethics.
- Looking for important insights.
- Cultural, social and political aspects of doing research.
- Getting the right data.
- Interpreting the data correctly.

These difficulties are worsened by the fact that a large number of Human-Computer Interaction (HCI) researchers are non-emergent users. However, in spite of the challenges,

HCI has a long tradition of researching for and with emergent users. Increasingly, as HCI researchers have produced a significant body of work in the domain of Human-Computer Interaction for Development (HCI4D), it is implied that they have faced and dealt with these challenges.

As has been touched above, the world of emergent users is changing fast. It means, the issues and discourses around emergent users are themselves emerging, and are likely to do so for the foreseeable future. Therefore, the tools and methods required to be able to produce useful, effective and worthwhile designs with and for emergent users also need to evolve over time.

## 2 OBJECTIVE

It would be a worthwhile aim to come up with a pragmatic approach to help people who are both new and experienced in the field of HCI4D. Hence our objective is not to come up with some "rules" that would then be set in stone. Rather, we aim to create a living resource which is (a) dynamically contributed towards and (b) utilised by the HCI4D professionals over time.

To identify what is needed to reach these goals, we propose an *exploratory workshop* at India HCI 2019. This workshop aims to create a living document of a collection of tools, resources and terminologies as we understand them today. It is meant for two groups of people: *researchers* and *writers*.

For researchers, we plan to document a set of *processes*, *methods* and *tools* that HCI4D researchers have created so that they can work with emergent users to develop ICT interventions. This includes changes and translations made to existing HCI methods so that these methods will work well in emergent user contexts.

For the writers (of papers, articles, books etc.), this document will discuss the nuances in terminologies and will try to advocate the preferred *terminologies* and *guidelines* of use.

## 3 ELIGIBILITY

We expect participants from a wide variety of backgrounds—academia, NGO, industry, government and policy-makers, for example. It is desirable that participants are practitioners, researchers or decision-makers who have experience of working in the domain of *ICT design for emergent users*. It will be good if a participant has published research paper(s) or has worked on a project related to ICT usage by emergent users.

### Prerequisites

A two page case study of an emergent user focused project/research, describing:

- What were the unique challenges faced while conducting research/doing projects for emergent users?

- How these challenges were overcome?
- How the challenges were reported, communicated and documented in your organisation?
- How the understanding gained from research or projects might be framed or articulated as a guideline for future work in this field?

#### 4 SCHEDULE

- Agenda setting (0.5 hr)
- Presentation: Introduction to design for Emergent Users. (1 hr)
- Presentation: Case studies and examples highlighting the complexities of Emergent User Research. (1 hr).
- Knowledge sharing session by the participants. (1.5 hr)
- Ideation and Discussion. (3 hrs)
- Synthesis of the insights generated in earlier sessions and its presentation by the workshop organisers. (1 hr)

#### 5 OUTCOME

- A Chance to contribute to a potentially important resource.
- Learn from others with experience in the area.
- Exposure to the finer issues of an important domain of the future.
- Build and be part of an eco-system comprising of researchers from academia, government, non-profit organisations and industry..

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