

Position paper for HCI for community and international development workshop, CHI 2008

**Title:** ICT for Creative Engagement: Participatory Design and Ethnographic Action Research

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### **Abstract**

This paper describes two current applied research projects which investigate the design and implementation of ICT-based participatory content creation programs by community multimedia centres and similar organisations in India, Nepal and Sri Lanka. These projects are informed by both Participatory Design and Ethnographic Action Research methodologies. The application of these methodologies has resulted in an innovative creative relationship in which embedded local researchers use their ethnographic data to inform participatory content creation projects by community media organisations. It is hoped that this relationship may provide a sustainable creative engagement system incorporating underserved communities and ICT infrastructure initiatives.

### **Introduction**

Access to knowledge is a key concept in both ICT for development and HCI. UNESCO has placed significant emphasis on the application of ICT to achieve “knowledge societies” [1]. Shneiderman suggests that “the new computing is about supporting human relationships” and “participating in knowledge communities” [2]. Various HCI-oriented articles have made similar arguments for universal access to new technologies in order to support community cohesion [3]. Yet various sociocultural commentators propose that the provision of physical ICT infrastructure does not automatically generate demand for digital products and services within target communities [4]. Further challenges have been made to the assumption that ICT brings “development, critical information and participation to all sectors of society” [5]. Within the context of underserved communities, it has even been suggested that new technologies may widen existing gaps ‘further blocking access to those already without access’ [6].

### **Finding a Voice**

The *Finding a Voice* project is funded for three years by the Australian Research Council in collaboration with UNESCO. The project has established a research network across 15 local media and ICT initiatives in India, Nepal, Sri Lanka and Indonesia. Its aim is to increase understanding of how ICTs can be both effective and empowering in each local context through the implementation of social and technological systems which can empower poor people to communicate their ‘voices’ within and beyond marginalised communities. One example of this approach is the training of volunteers in participatory content creation techniques, using facilities at local community multimedia centres (CMCs). These training programs teach participants to write short microdocumentaries about individual and/or community issues. The participant then creates the story using still images and a voiceover, edited using bundled PC applications. Many of these stories can be viewed at [www.findingavoice.org](http://www.findingavoice.org), and they demonstrate a wide range of ideas and issues: advocacy on behalf of a marginalised or voiceless group; positive messages about excluded or discriminated groups; or messages that promote good health-related behaviours. The training programs have been conducted across all four countries and it appears that there is no lack of volunteers wanting to use the facilities of CMCs to raise social issues. This kind of training demonstrates how ICT infrastructure can be used for more than the teaching of basic email, web and office skills to underserved communities.

### **Methodologies and tools**

*Finding a Voice* uses Ethnographic Action Research (EAR), a new participatory research methodology whose central innovation is the embedding of a research culture locally within the target community. 12 local researchers are situated across 15 research sites, and the data generated by their participant observation helps to illustrate the constraints that poor people face in using CMCs and ICT infrastructure. As the project has progressed, the EAR researchers have become involved in community content creation activities by using their field notes as sources for microdocumentary production. Not only does this provide an innovative and powerful means for publishing elements of their work; it also helps to build a local participatory content creation system in which the EAR researcher collaborates with community media organisations to produce and distribute content.

Elements of Participatory Design methodology have been employed to further research the potential development of participatory content creation systems by the community itself. By privileging community volunteers and embedded researchers as system designers, the project is generating powerful qualitative data on how to improve community engagement with CMCs and similar infrastructure initiatives: “Encouraging user participation and

designing for skill means paying attention to things that are often left out of the formal specifications, like tacit knowledge or shared knowledge and communication” [7]. This combination of ethnographic and HCI-based approaches has demonstrated many areas of mutual interest throughout the project; we agree with the observation that “While the ethnographer is interested in *understanding* human behavior as it is reflected in the lifeways of diverse communities of people, the designer is interested in *designing* artifacts that will support the activities of these communities. The current challenge is to develop ways of linking these two undertakings” [8].

### Moving Content

Another example of ICT-facilitated creative engagement is the e-tuktuk in Sri Lanka ([www.etuktuk.net](http://www.etuktuk.net)). This an auto rickshaw which houses a mobile ICT centre complete with laptop, printer, phone, CDMA handset, loudspeakers and data projector. The e-tuktuk operates out of the Kothmale Community Multimedia Centre and travels to underserved local communities to encourage participation in community radio and digital storytelling programs [9]. In so doing, it acts as a mobile technology catalyst in a creative engagement system. Inspired in part by the e-tuktuk example, a new research project will make a deeper exploration into instances of creative engagement with ICT in low infrastructure areas. *Moving Content* is a collaboration between the Australian Research Council Centre of Excellence for Creative Industries and Innovation; and Intel Research, part of Intel Corporation, USA. This study will explore whether mobile ICT initiatives can support community participation in content creation programs. Sites of enquiry will be selected from the route of India’s new ‘Golden Quadrilateral’ highway. We are looking for ‘bottom-up’ rather than ‘imposed’ instances of creativity within underserved communities – the latter identified by lack of infrastructure, rather than by economic conditions. Specifically, we will examine how active individuals and communities use mobile technologies and/or technological networks to tell and exchange stories and to enhance interaction among members and their peers in other groups. We are particularly interested in the concept of “creative appropriation” whereby “users innovate new functionalities for already existing technologies” [10]. Therefore examples of content creation that leverage both analog and digital ICT will be closely examined as part of *Moving Content*.

### Summary

As part of the *Finding a Voice* project, teams at CMCs in India, Nepal and Sri Lanka are establishing ongoing participatory content creation systems within underserved communities. This demonstrates how CMC technology infrastructure can allow different voices to be heard from underserved communities. These voices reveal alternative perspectives and challenge our notions of the appropriate relationships between ICTs and poor communities. In so doing, we are demonstrating one route towards building “knowledge communities” in underserved areas through creative engagement with ICT. The *Moving Content* project will go beyond fixed-site CMC infrastructure to examine instances of bottom-up creative engagement in underserved communities, enabled by mobile technologies. Both projects combine ethnographic and HCI-based methods in order to facilitate research into participatory content creation systems.

### References

1. Bindé, J., *Towards knowledge societies*. UNESCO world report. 2005, Paris: UNESCO Publishing. 226.
2. Shneiderman, B., *Leonardo's laptop: human needs and the new computing technologies*. 2002, Cambridge: MIT Press, pp.12-13.
3. Schuler, D., *Community networks: building a new participatory medium*. *Communications of the ACM*, 1994. **1**(37): p. 38-51.
4. Warschauer, M., *Technology and Social Inclusion: Rethinking the Digital Divide*. 2003, Cambridge, Mass.: MIT Press. 260.
5. West, A. and A. Selian, *Experiencing Technical Difficulties: The Urgent Need to Rewire and Reboot the ICT-Development Machine*. Thematic Reports, ed. J. Barker and A. West. 2005, London: Article 19. 45.
6. Rice, R. and C. Haythornthwaite, *Perspectives on Internet use: Access, involvement, and interaction*, in *Handbook of New Media*, L. Lievrouw and S. Livingstone, Editors. 2006, Sage: London. p. 93.
7. Bødker, S., K. Grønbaek, and M. Kyng, *Cooperative Design: Techniques and Experiences From the Scandinavian Scene*, in *Participatory design: principles and practices*, D. Schuler and A. Namioka, Editors. 1993, L. Erlbaum Associates: Hillsdale, N.J.
8. Blomberg, J., et al., *Ethnographic Field Methods and Their Relation to Design*. *Participatory design: principles and practices*, ed. D. Schuler and A. Namioka. 1993, Hillsdale, N.J.: L. Erlbaum Associates, p.123.
9. Tacchi, J.A. and B. Grubb, *The Case of the e-tuktuk*. *Media International Australia incorporating Culture and Policy*, 2007(125).
10. Feenberg, A. and M. Bakardjieva, *Consumers or Citizens? The Online Community Debate*, in *Community in the digital age: philosophy and practice*, A. Feenberg and D.D. Barney, Editors. 2004, Rowman & Littlefield: Lanham, Md.; Oxford. p. viii, 293.