

HUMANITARIAN INNOVATION FUND

Final Report

Organisation Name	LIRNEasia
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Project Title	Knowledge Sharing of Voice-enabled ICT for Disaster Management (VoiceICT4D)
Problem Addressed / Thematic Focus	Enabling localized interactive voice ICT with standardized emergency data exchange for low computer-literate Community Emergency Response Team (CERT) members
Location	Sri Lanka
Start Date	01-March-2012
Duration	06 months
Total Funding Requested	17,014

Partner(s)	1. Sarvodaya Shramadana Movement¹ 2. TVE - Asia Pacific² (TVEAP)
Total Funding	27,018

Innovation Stage	Invention
Type of Innovation	Product positioning
Project Impact Summary	Project developed video was viewed by 496 patrons and 48 completed the associated questionnaire; several others commented with meaningful insights. The policy influencing was successful with the Sri Lanka National Disaster Management Centre agreeing to develop a register of alerting authorities and enabling local agencies to coordinate and manage their local crises.

Reporting Period	Final
Total Spent	17,014

¹Lanka Jathika Shramadana Sangamaya home page: <http://www.sarvodaya.org/>

²TVE Asia Pacific home page: <http://www.tveap.org/>

ACTIVITIES CARRIED OUT

Research video – The project used the video to intrigue the audience with ground level truth of the need for investments in voice-enabled technologies for crisis management. The VoiceICT4D project developed, ten minute, video was hosted on YouTube. Video was linked to the audience through LIRNEasia, HIF, and other partner websites. Postings in web forums and email blasts were also used to introduce the video to targeted audiences.

Relevant blogs: New film looks at voice-based emergency communication - <http://nalakagunawardene.com/tag/matara/>

Digital Story – The project developed several other videos and presentation that emphasised the key message. Those videos were short messages highlighting the core research findings. Additionally, a video highlighting the research results was made available.

Peer reviewed publications – Four peer-reviewed academic papers were presented at four conferences:

- 1) Communication Policy Research africa and asia, paper published: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2146397
- 2) International Conference on Computer and Information Sciences 2nd World Engineering, Science, and Technology Congress (IEEE-ICCIS-2012); relevant blog: <http://lirneasia.net/2012/06/iccis/>
- 3) 9th International Joint Conference on Computer Science and Software Engineering (IEEE-JCSSE-2012), Bangkok, Thailand, 2012 May 30 - June 02; relevant blog: <http://lirneasia.net/2012/06/voiceict4d-jcsse-2012/>
- 4) 9th International Conference on Information Systems for Crisis Response and Management (ISCRAM-2012), Vancouver, Canada, 2012 April 23-25.M; relevant blog: <http://lirneasia.net/2012/05/masas-iscram-2012/>

Stakeholder forum – Third LIRNEasia Disaster Risk Reduction (LADRR) Public Lecture was utilized as a platform to engage the Disaster Management Centre along with relevant stakeholders and the public. The focus of the public lecture and discussions were on empowering local authorities with alerting and situational reporting for effective emergency communication through voice-enabled technologies.

Relevant blogs:

- LIRNEasia's 3rd Disaster Risk Reduction Public Lecture: Beyond Tsunamis: <http://lirneasia.net/2012/06/ladrr3/>
- Public Lecture: Beyond Tsunami Warning in a Vocal Society: <http://www.humanitarianinnovation.org/blog/LIRNEasia/public-lecture>

Other actions -

Communicating with Disaster Affected Communities, Freedom Fone and Sahana case study presented at the CDAC Technology Fair:

<http://www.humanitarianinnovation.org/blog/LIRNEasia/CDAC-Case-study>

Common Alerting Protocol Workshop, IVR for CAP-enabled localized emergency coordination, Environment Canada: <http://lirneasia.net/2012/05/cap-workshop-montreal/>

ACHIEVEMENTS

Video, articles, and forums

The video stimulated several discussions with the audience providing insightful information for enabling IVR for emergency communication. The digital stories, peer-reviewed articles, and conference meetings were a good way to spread the word. The peer-reviewed articles were mainly a basis for scientifically documenting the empirical evidence.

The project had a series of discussions with members from the Internews organization. They were keen in the innovation and had expressed interest in some investments that may lead to further developments. A potential solution would be integrating the voice with radio for broadcasting crisis information.

Sahana Software Foundation also realized the potential and need for extending their software with voice-enabled interfaces. Thereby, position the disaster management system to enable those non-latin script utilizing communities to join the digital habitat.

Patrick Gannon (President & CEO, Board Director at OASIS), in an email, “You provide some very interesting information on the open source Sahana effort and examples of using citizen volunteers for disaster situation reporting.

Influencing the NDMC

The DMC was in the midst of operationalizing and IVR for coordinating ambulatory and fire brigade services. The project ceased the opportunity to introduce the Sahana alerting and situational-reporting to complete their other disaster communication needs.

METHODOLOGY

A short questionnaire was offered to the video viewers to express their views on the key message. Those polled opinions would help determine the impact of the message and also determine the likelihood of the reality or practicalities of the DM community investing in voice-based technologies for emergency coordination.

MAJOR OBSTACLES

Video production - A major challenge the media partner TVEAP encountered was consolidating the rich set of video footage. The project had envisioned developing an 8 minute video. However, that was a tedious challenge and the video stretched to 10 minutes, instead. There were many key messages from the interviews that did not make in to the video. With great difficulty, the TVEAP media director had to strategically develop the video to maximize the message impact.

Review video - In the present world of information overload, a key task was getting the audience to spend a few minutes responding to the email inviting them to view the video as well as respond to the associated questionnaire. One strategy practices was having key personnel associated with certain organizations and groups forward the email to their co-workers and friends with a short personal note. This seemed more effective than the project team delivering the email directly to the intended recipients. It is known that less than 10% will respond to an email blast (or email marketing). The project was sceptical that less than 10 people would respond. However, surprisingly, there were 48 responses.

Think voice not text - With the new age social media and advance text-based technology, the disaster management practitioners, especially, from the developed nations and those countries that use more popular languages, are inclined to advocate and use text-based technologies. Moreover, those countries that are inclined adopt text-based solutions have a higher internet penetration and computer literacy.

The VoicelCT4D message was important in the sense that it intended to alter the mindset of the western thinkers when recommending solutions for developing countries. Funding agencies and researchers are strongly advocating solutions like twitter, which has failed to integrate in to societies for developing countries.

BENEFICIARIES/HUMANITARIAN INTERVENTIONS IMPACTED

We asked the video questionnaire respondents “which parts of the world they worked”. The lower scale of 5 indicates that five responded saying they worked in lighter shaded regions. Most of the responders, 22, indicating that they worked in India and Sri Lanka. The level of impact of the video can be estimated by assuming the people who saw the video would share the message or adopt such technologies for use in those countries.

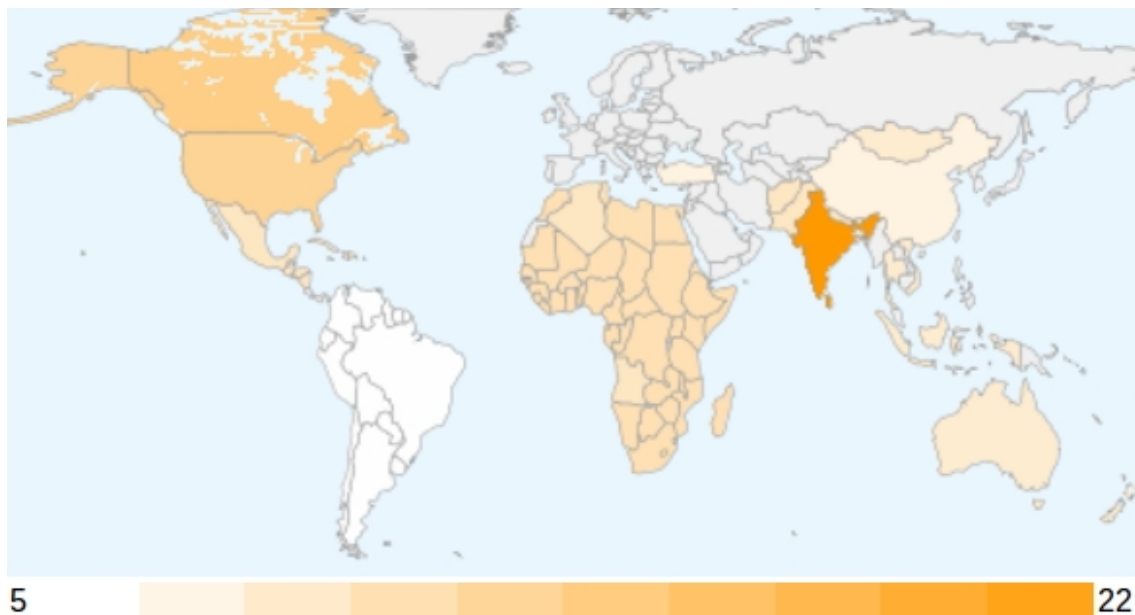


Figure 1: Countries the respondents to the questionnaire work in

PARTNERSHIPS AND COLLABORATION

There were no changes in the original partnership. Additionally, the project exchanged knowledge with other stakeholders who expressed interest in future collaborations; Internews and Sahana are two of them.

DISSEMINATION

This project was a diffusion activity. Therefore, all of the activities were designed to share the research knowledge to influence policy. The section on “Activities Carried Out” summarises the dissemination work.

TRANSFERABILITY

There is growing interest in improving the Freedom Fone IVR and Sahana software. Media organizations and community-based disaster management organisations would benefit the most. Both Freedom Fone and Sahana are FOSS products supported by a global community with a large user base. New users don't need much for infrastructure; simply a computer and a GSM modem. Then use the on line guides to install and operationalize the software.