Toward Scalable Voice Forums in Rural Communities

Bill Thies

Voice Remains Primary Interface for Mobile Subscribers in India
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- Literate in English
- Non-Literate
Voice Remains Primary Interface for Mobile Subscribers in India
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Interactive Voice Response: $1B Industry
Your Facebook, in your voice.

Now express emotions that words can't with Facebook Voice Updates on Aircel.

Aircel & Facebook partner to introduce Voice Status Updates. Now express your emotions and much more on Facebook in your own distinctive voice. Just dial 51555 from your Aircel mobile to record and update your status, without even having access to the internet. The recorded voice clip will appear on your Facebook wall as your status update. So go ahead, voice your mind!

Call: 38040 12345 for Kolkata & 98510 12345 for ROWB or 121*
Egypt protesters use voice tweets

Google and Twitter have launched a service which circumvents the ban on net services in Egypt.

The so-called speak-to-tweet system allows people caught up in the unrest to post messages without any need to use an internet connection.

The service, which is already live, allows people to dial an international telephone number and leave a voicemail message.

The message is then sent out as a tweet with the hashtag #egypt.
Polly: A Viral Voice-Based Game
[ICTD’12, DEV’13, CHI 2013 Best Paper, DEV-4]

- That also advertises job opportunities!
- Over 2.5M calls in Pakistan

At Carnegie Mellon:
- Agha Ali Raza
- Roni Rosenfeld

At LUMS, Pakistan: F. Ul Haq, Z. Tariq, M. Pervaiz, S. Razaq, U. Saif
Chhattisgarh, India
Journalism in Chhattisgarh

Number of speakers (in millions)

- Gondi: 2.6
- Kurukh: 1.7
- Kui: 1.0
Journalism in Chhattisgarh

- **Gondi**: Number of speakers (in millions) - 2.6
- **Kurukh**: Number of news outlets (print or audiovisual)
- **Kui**: Number of speakers (in millions) - 1.0

Legend:
- Red: Number of speakers (in millions)
- Blue: Number of news outlets (print or audiovisual)
CGNet Swara: A Voice Portal for Citizen Reporting

supported by the United Nations Democracy Fund, Gates Foundation, Hivos Foundation, Macarthur Foundation, MIT and the International Center for Journalists

- Anyone can report news, issues, etc. in local language
- Submissions are reviewed by moderators over the Web
- Appropriate submissions are published:
  - For playback on audio channel
  - For browsing on Web
- Activists follow-up on reports
Sustained Usage Over Time

**Calls per Day**
(>400,000 total calls)

**Posts per Day**
(>5,000 total posts)
Father wanders for due NREGA wages, son dies in hospital...

Manish Rai from Ambikapur says some days back I had heard an interview on CGnet Swara with a labourer called Pitbasu who had completed 100 days work in NREGA but had not been paid any wages. Today by chance I met him in the hospital and found that while Pitbasu was making rounds for his due NREGA wages his son died in the hospital. Is there any provision in NREGA to punish officials who has caused this grave incident? NREGA laws should be so strong that no one should wait for their wages as has happened with Pitbas. Fore more on the story please contact Manish at 09826538904

POSTED ON: JAN 14, 2011, BY MANISH RAI

Post a Comment

To record your comment, please call and leave a message at +91-80-4113 7280. Recording your comment in audio format will ensure that it is accessible to all CGNet Swara users, most of whom lack Internet access and access the reports via phone.
Father struggles to get NREGA wages, son dies in hospital

Supriya Sharma, TNN, Jan 21, 2011, 10.04pm IST

RAIPUR: A week after he lost his ailing son, and ten months after he worked on a village road project, Pitbasu Bhoi finally got the ten thousand rupees he had earned under the Mahatma Gandhi National Rural Employment Program (MNREGA).

"Of what use is the money now? I have just immersed my son’s ashes. When I needed the money to save his life, I did not have it," says Bhoi.

The disabled man, in his forties, along with his wife, seven-year-old daughter and another disabled brother, lives in a small house on the outskirts of Raipur.

The couple also has a son who died in December 2010 of a liver ailment. Bhoi, who has no job, had to sell this son’s body to get money to treat his older son and pay for his funeral.

He said he had approached theWindow of Opportunity" Committee of the MNREGA, but was told that his application had not been approved as he was not the family head.

Bhoi, who has also lost his right hand, said he approached the district collector, district social development officer and Panchayat and Panchayat Samity welfare boards, but could not get any help.

The project details that the man worked on in the village of Ch toola have been confirmed by the District Rural Development Agency, the collector’s office and the local Panchayat chairperson, Bhoi said.

The State Social Welfare Board has been told of the case, and will try to get the money paid to Bhoi, Satish Pratap Singh, member of the State Social Welfare Board, said.

The collector’s office has also been asked to hold an inquiry, a spokesperson for the collector said.

"We are trying to help the family," the spokesperson said.

In the meantime, Bhoi has asked the collector to help in getting the money that he has received so far, as he has to pay for his family’s food and other expenses.

The collector’s office has been asked to hold an inquiry into the case, the spokesperson said.

"We are trying to help the family," the spokesperson said.
280 Similar Cases Resolved to Date
Borewell stopped working long back, We need to walk long for water, pls help...

My name is Kurasam Rambabu. I am calling from Ramaraopeta village in Dummugudem mandal, Khammam district of Andhra Pradesh. In our village bore well is not working from so many days. We complained to the mandal officers many times but they didn't respond. We are struggling for safe drinking water. For water we need to walk very long. Please help us. For more Mr Rambabu can be reached at 07893421794

POSTED ON: SEP 10, 2012, BY KURASAM RAMBABU

Post a Comment

To record your comment, please call and leave a message at +91-80-4113 7280. Recording your comment in audio format will ensure that it is accessible to all CGNet Swara users, most of whom lack Internet access and access the reports via phone.
Petitioned Sri Siddarth Jain I.A.S

Collector, Khammam: Fix the Borewell in Ramaraopetta village

Petition by
Swara For Change
Ghaziabad, India

Victory

October 2012

1. More than 2800 signed the petition sending thousands of emails to the Collector asking him to take immediate action to fix the Borewell in Ramaraopetta village. 2. The District Collector of Khammam also received several phone calls from petition signers asking him to fix the Borewell. 3. On October 13th, a day after the petition was launched the collector sent the engineers to inspect the Borewell and take it for repairs. 4. Within two weeks, the Borewell was fixed and the entire village has access to drinking water.
Malaria Deaths in Chhattisgarh: Official Government Figures

CGNet Swara starts
Malaria Deaths in Chhattisgarh: Official Government Figures

CGNet Swara starts
Song from 3 days festival in Odisha where girls only enjoy and do no work...

“Shilpi from Odisha is telling us about Raja festival which is celebrated each year in the month of June. On these three days girls do not work and make merry after wearing good clothes and eating good food. She is singing a song in Odiya which girls sing on these days asking them to enjoy the festival.”

http://cgnetswara.org/index.php?id=22097
“Shilpi from Odisha is telling us about Raja festival which is celebrated each year in the month of June. On these three days girls do not work and make merry after wearing good clothes and eating good food. She is singing a song in Odiya which girls sing on these days asking them to enjoy the festival.”

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Broader Impact of CGNet Swara
[Marathe, O’Neill, Pain, Thies - ICTD 2015]

• Mixed-methods study of CGNet Swara impact
  – 70 interviews, 9-day immersion, 200+ posts analyzed
Broader Impact of CGNet Swara

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A Diversity of Impact

- By resolving grievances
- By contributing content
  - Being heard
  - Expressing culture
  - Personal development
- By listening to content
  - Discovery of issues
  - Connecting with peers
  - Inspiration / agency
Research Questions: How to Scale?

1. How to raise awareness at scale
Traveling Dance and Puppetry Troupe to Raise Awareness in Tribal Communities
Incentivizing Viral Spread of Information

• Idea: pay users to learn about something
  [Vashistha, Cutrell, Thies – CSCW 2015]

Lottery Incentives vs. Fixed Incentives

Coming soon: application to awareness on bonded labor
Research Questions: How to Scale?

1. How to raise awareness at scale
2. How to moderate content at scale
Sangeet Swara: A Community-Moderated Voice Forum for Songs, Poems, Jokes, & Cultural Content

[Vashistha, Cutrell, Borriello, Thies - CHI 2015]

Traffic in 1.5 months
- 20,000 calls
- 4,300 posts (by 450 people)
- 110,000 ratings (by 1,320 people)

Quality of Moderation
- Relative to “experts”:
  - 98% agreement on categorizing 50 posts
  - 98% agreement on gender of 50 posts
  - 90% agreement on quality of 10 posts
Emergent Ownership and Use by the Visually Impaired

“I am a blind person so I couldn't get educated. I want to thank you because you enabled all blind persons to get in touch and share. No matter how much I praise, it won't be enough.”

“You are like my father, my god, I want to thank you again and again, this small kid wants to respect you from the bottom of my heart. I want to welcome you again and again.”

Follow-up study in educational context  [DEV 2014]
Research Questions: How to Scale?

1. How to raise awareness at scale
2. How to moderate content at scale
3. How to distribute content at low cost
Using Smart Phones to Reduce Costs and Enrich Content

[D’Silva, Marathe, Vashistha, Borriello, Thies - DEV 2014]

• Benefits:
  – Upload of photos
  – Mobile Internet cheaper than voice
  – Enables offline access
Emergent Peer-to-Peer Sharing via Bluetooth and SD Cards

[CHI 2010]
No handpump in Baiga adivasi village of 25 families, Pls call officers to help...

Naresh Bunkar is visiting Tikarapara mohalla in Mahuamancha village, Bijarakachhar panchayat Lormi block Mungeli district in Chhatisgarh where adivasi women tell him there is no hand pump in their village of 25 Baiga families. They fetch water from river 1.5 km away. People fall ill due to dirty water. Health center is 15 km away. They complained to officials many times but no one listens. Pls call P.H.E officer@8878832200 and collector@9425280067. Naresh Bunkar@8720822286

POSTED ON: SEP 24, 2014. TAGS: NARESH BUNKAR
Research Questions: How to Scale?

1. How to raise awareness at scale
2. How to moderate content at scale
3. How to distribute content at low cost
4. How to enable easy replication
IVR Junction:
Enabling Replication of Voice Forums

Real-Time Monitoring by the Broadcasting Board of Governors
Fadhigii 3aad ee kalfadhiga 22aa ee Golaha Wakiilada Jamhuuriyada ayaa maanta ka furmay
Xarunta Golaha Wakiilada fadhigan oo furmay 10:00 subaxnimyo ayaa waxaa Guudoominayay
Gudoomiyaha G...

Warsaxaafadeed
Golaha Wakiilada
Golaha oo Maanta Dood Adag ka Yeeshay Xeerka Takaaliifta Haruumarinta Wadooyinka

Read More »
A Failed Deployment: Parent/Teacher Discussion Forum
Lesson:
Technology Amplifies Human Intent and Capacity; It Doesn’t Substitute for Them

Kentaro Toyama
Boston Review 2010, iConference 2011
Over 50,000 Voices Heard

http://cgnetswara.org/  http://ivrjunction.org/
Extra Slides
Content Analysis
[First 20 months]

**Content Type**

- Grievance: 30%
- Opinion: 25%
- Information: 15%
- Performance: 10%
- Appeal: 5%
- Interview: 5%

**Subject Domain**

- Governance: 60%
- Politics: 40%
- Payment: 20%
- Living Conditions: 15%
- Health: 10%
- Entertainment: 5%
- Education: 5%
Voice Messages for Healthy Behaviors During Pregnancy

In collaboration with Sion Hospital (Mumbai); Published at ICTD 2013

- Can automated voice reminders improve the adherence of pregnant women to iron pills?
- Randomized controlled trial across 79 women in Mumbai
  - Treatment group: Hb levels increase (0.32 g / dl)
  - Control group: Hb levels decrease (-0.10 g/dl)
- Evolved into DocTalk: doctor broadcasting system
Mobile Tools: Design Space

Input method
- Free-form speech
- Structured speech
- Typing

Output method
- Text
- Audio
- Graphics

[ICTD 2009]
[DEV 2013]
[TOCHI 2011]
[CHI 2013]