

Global Citizenship

COGS 230 / CSE 216

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The case for Technology in Developing Regions

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Learning goals

- Socio-economical
 - Technology improves quality of life
 - Technology enables economic growth
 - Walk the Walk
- Technological
 - Moore's law impact
 - Advanced low cost networks
 - Voice UI much more usable input than keyboard and mouse

Avaaj Otalo

A Field Study of an Interactive Voice Forum for Small Farmers in Rural India. ○ By Niel Patel, Stanford HCI group, 2010





[Video link](#)

Learning goals

1. Adapt technology to the user
2. Need for moderated open spaces
3. Use voice as input wisely

Motivation

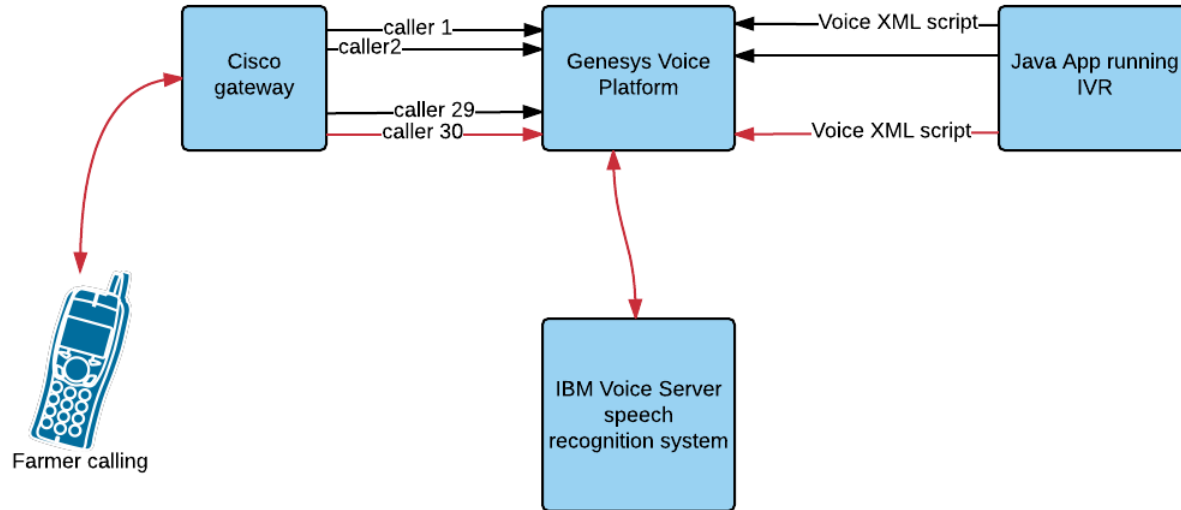
- In India more than 50% of population are farmers
- They face many challenges with pests and diseases, water shortages and climate change
- Government support projects not fruitful
- Cell phone widespread among rural population

What is Aavaaj Otalo

Voice application where farmers can :

- ask questions and find answers
- access to general information and announcements
- listen for past episodes of favorite radio show

Implementation



Group discussion

In groups of 2-3 discuss what additional features would be beneficial to add to Avaaj Otalo and why?

Example: Avaaj Otalo features are:

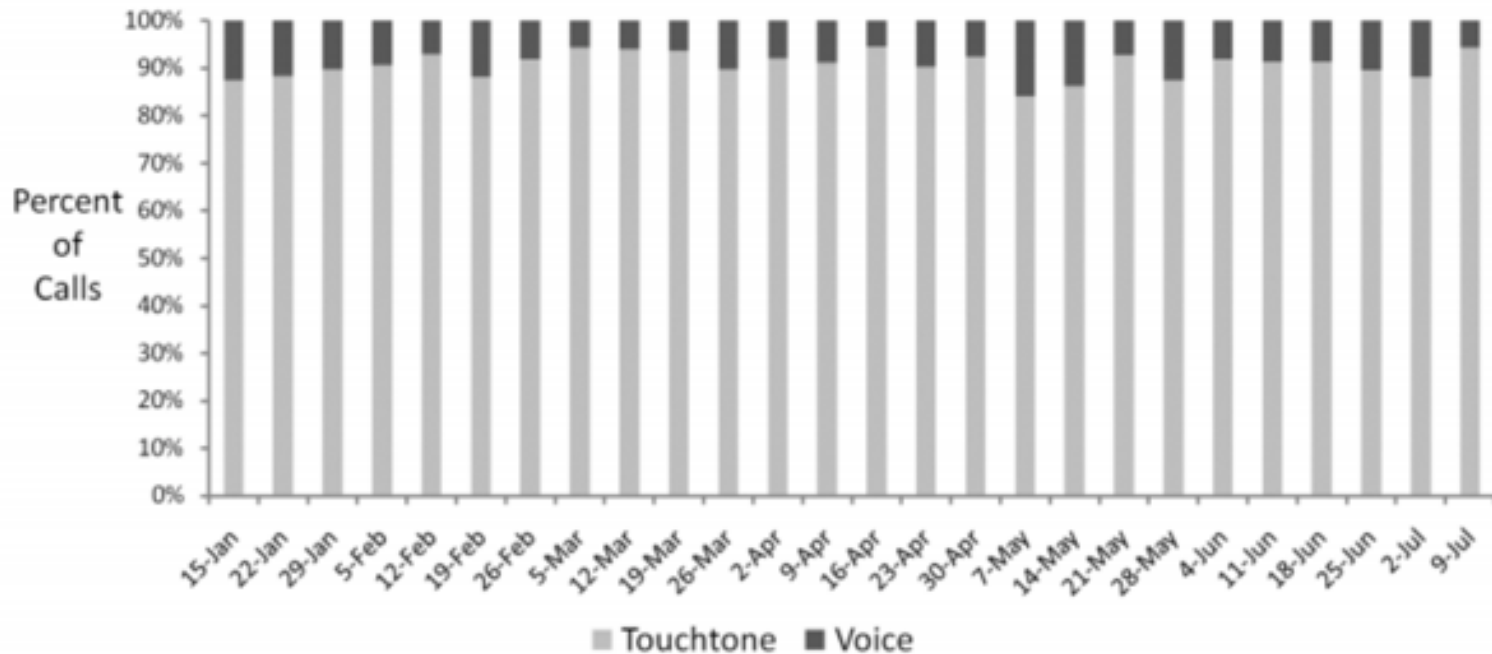
- Q&A forum,
- General Announcements,
- Radio archive

2-3 minutes

One aspect of this paper that I enjoyed is the ecological validity of this work. To me, this research is a great example of a group that went *out* into the world, understood the really problems at play through an in depth understanding of the culture, and then started need finding and looking to build solutions.

Yasmine Kotouri

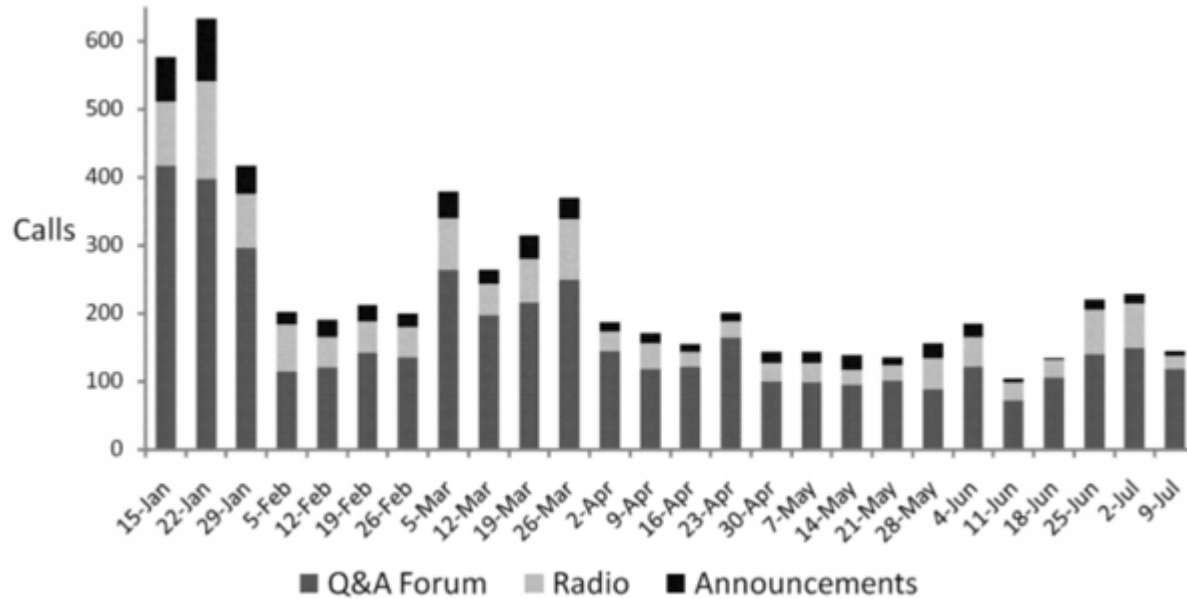
Usability



Another topic of the paper that I found valuable was the importance of structure in systems with highly variable interaction. The permutations of what we can produce vocally are incredibly immense, so it's no surprise that interaction through voice only is a very difficult thing to process. Without structure, a user could end up for prolonged periods of time either trying to figure out how to prompt the next action or phrase the next action in a manner that would yield the best connectivity to the rest of the people on the system.

Jesse Qin

Features



Group discussion

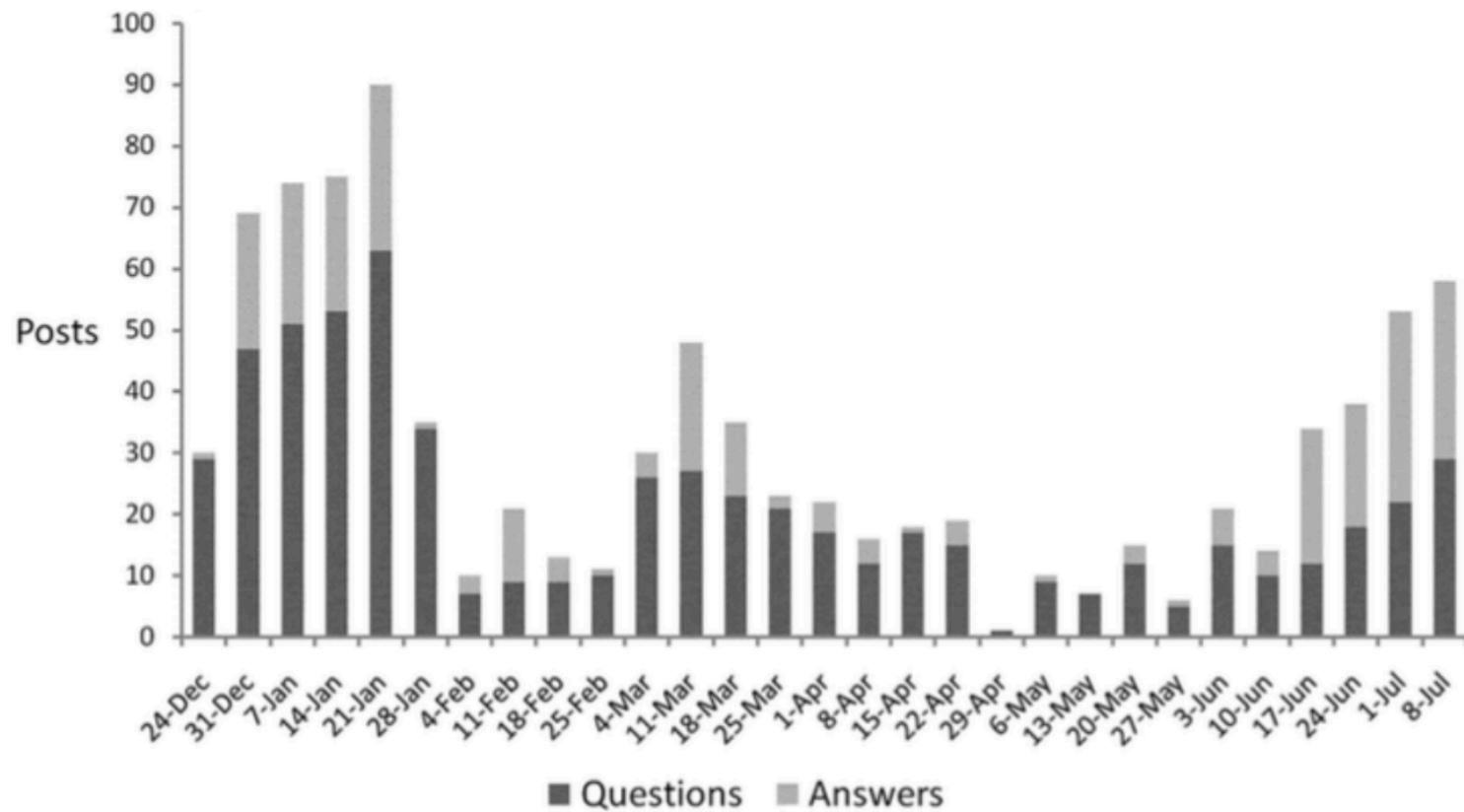
In small groups (2-3) discuss possible reasons why such a ubiquitous input modality as speech recognition fails to be adopted for IVR applications as oppose to touch tone?

2-3 minutes

Group discussion

Discuss other appropriate usage patterns for speech recognition as an input modality in voice forums?

2-3 minutes



Interesting norms emerged

- New Social Norms emerged
- AO power users were recognized gaining recognition in their communities
- Business, Consulting and Advertising

Group discussion

Discuss in groups of 2-3 what ingredients are necessary for Avaaj Otalo system to work ?

2-3 min

Thank you for an awesome class