Interactive Voice Response: Its Growing Role in Agricultural Extension Services

April 14, 2016

Speakers:
- Rikin Gandhi, Digital Green
- David McAfee, HNI
- Neil Patel, Awaaz.De

Moderator:
- Judy Payne, USAID Bureau for Food Security

Facilitator:
- Dana James, Feed the Future Knowledge-Driven Agricultural Development Project
Judy Payne

Judy Payne is USAID’s ICT Advisor for Agriculture, where she helps USAID Missions and their projects around the world use information and communications technologies as a tool for economic growth and agriculture development. Her work includes helping USAID’s implementing partners find ways to use ICT-enabled approaches to increase their projects’ success in sustainable and scalable ways.
Rikin Gandhi is the Chief Executive Officer of Digital Green. He studied the use of technology for agricultural development in Microsoft Research’s Technology for Emerging Markets group. He has a master's degree in aeronautical and astronautical engineering from MIT and a bachelor's degree in computer science from Carnegie Mellon University.
David McAfee

David McAfee is the President and CEO of Human Network International, a non-profit organization he co-founded in 2007. HNI’s mission is to provide organizations and individuals the opportunity to use information and communication technology in innovative, productive and sustainable ways. In 2010 HNI launched the 321 Service, a search engine where there is no Internet. HNI is currently scaling up the 321 Service in 15 African and Asian countries. Mr. McAfee has over 25 years of development experience beginning in Peace Corps in Gabon. Mr. McAfee was the PSI Director in Rwanda and Madagascar and Regional Director for southern Africa.
Neil Patel

Neil Patel is the Co-Founder and CEO of Awaaz.De. Patel holds bachelor's degrees in computer science and business from UC Berkeley, and a doctorate in computer science from Stanford University. He completed his dissertation on a mobile voice-based social platform for small farmers in India to access and share agricultural advice. The system was a success, and organizations across India (agriculture, health, education, women's empowerment, labor, microfinance) asked him to help apply the same technology to their own information dissemination and communication needs. Working with his advisor, UC Berkeley Professor Tapan Parikh, led Patel to the founding of Awaaz.De.
Interactive Voice Response

Interactive & targeted knowledge exchange

- Voice Based
- Interactive
- Broadcast
- Targeted
- Data
- Voice Recordings
- Programmable
- Call Center
IVR for Agricultural Extension

Interactive & targeted knowledge exchange

Broadcast  Call Center  Reminders & Surveys  Q&A  Peer Forum

Performance Management

Usage Patterns & Data  Amplify & Reinforce

Farming Community  Extension Systems  Digital Technology
IVR providers offer functionality to support common use cases but differ in target audience, geographies, and advanced features.

<table>
<thead>
<tr>
<th>Feature</th>
<th>exotel™</th>
<th>awaaz.de</th>
<th>VOTO</th>
<th>SPARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcast</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call Schedule</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call Back</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice Recording</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMS</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice &amp; Touchtone</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-level Call Menu</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Web UI</td>
<td>Basic</td>
<td>Advanced</td>
<td>Advanced</td>
<td>Advanced</td>
</tr>
<tr>
<td>Built-in Analytics</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>API</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Customizability</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>Transfer to Agent</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Target Users</td>
<td>Techies</td>
<td>Both</td>
<td>Both</td>
<td>Non-techies</td>
</tr>
<tr>
<td># of Countries</td>
<td>Low</td>
<td>Moderate</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>
Interactive Voice Response: Its Growing Role in Agricultural Extension Services
How does it work?

Callers dial 3-2-1 and listen to public service information in the local language anytime, anywhere, free of charge.

Thank you for calling the 321 Service, a new service that provides you with useful information. You can call this phone number for free, 10 times each month. After the 10th call, you pay just $0.04 for each call.

You have 8 choices. Listen closely to these subjects, then make your choice. Would you like to know about:

- Gender: Press 1
- Health: Press 2
- Agriculture: Press 3
- Micro finance: Press 4
- Water and Sanitation: Press 5
- Land Title: Press 6
- Family Planning: Press 7
- Emergency Preparedness: Press 8

If you have questions, comments, or suggestions about the 3-2-1 service, please call the free number 033 65 00 321. If you want to hear your choices again, press the # button.
**Real-time Analytics**

### Multiple Choice Question

**321 Welcome message**

Voice 3259008  SMS 8045  USSD 97699

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health</td>
<td>14%</td>
<td>360621</td>
</tr>
<tr>
<td>2. Agriculture</td>
<td>11%</td>
<td>278721</td>
</tr>
<tr>
<td>3. Nutrition</td>
<td>8%</td>
<td>206216</td>
</tr>
<tr>
<td>4. Gender</td>
<td>7%</td>
<td>166674</td>
</tr>
<tr>
<td>5. Weather</td>
<td>59%</td>
<td>1490608</td>
</tr>
<tr>
<td>6. Registration</td>
<td>1%</td>
<td>20182</td>
</tr>
</tbody>
</table>

**Total Responses**  2523022
Who owns the 321 Service?

The telecom does…and they promote it
Who pays for the 3-2-1 Service?

**Content**

- B to B model
- HNI Sells Space Sponsorships

  **Motivation:**
  
  Making their messages available on simple mobile phones

**Marketing**

- airtel

  **Motivation:**
  
  Reduce churn rate, Generate revenue, Educate new users, CSR

**Traffic**

- airtel
Why would Airtel give away +40 years of airtime?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease in Churn</td>
<td>16% - 20%</td>
</tr>
<tr>
<td>Increase in ARPU</td>
<td>5%</td>
</tr>
<tr>
<td>Increase in Outgoing Voice</td>
<td>9%</td>
</tr>
<tr>
<td>Increase in Outgoing SMS</td>
<td>28%</td>
</tr>
<tr>
<td>Subscriber Base Penetration</td>
<td>7% - 10%</td>
</tr>
</tbody>
</table>
3-2-1 Expansion Plans and MNO Partners
Translation:
“Give voice.”

Neil Patel
neil@awaaz.de

Photo: http://assets.knowledge.allianz.com/
About Awaaz.De

Mission: Enable social change in underserved communities through inclusive mobile solutions and services.

5M phone calls to 600,000+ users for 180+ clients across 23 Indian states and 6 countries

Awards & Accolades

- GSBI Accelerator 2016
- Gates Foundation Grand Challenges Exploration Award 2015
- Sankalp Artha Grand Prize 2013
- Mashable Startups for Good 2012
- Action for India Growth Prize 2013
- Tech Awards Laureate 2011
Awaaz.De for Agriculture
# Awaaz.De for Ag Extension

<table>
<thead>
<tr>
<th>Client/Service</th>
<th>Service</th>
<th>Location</th>
<th>Number of Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jatan Trust - Sajiv Kheti Samvaad</td>
<td>Discussion Forum</td>
<td>Gujarat, India</td>
<td>9,200</td>
</tr>
<tr>
<td>Khedut Saathi</td>
<td>Push Messaging</td>
<td>Gujarat, India</td>
<td>17,000</td>
</tr>
<tr>
<td>Ethiopia ATA</td>
<td>Question and Answer</td>
<td>Ethiopia</td>
<td>1.2M</td>
</tr>
</tbody>
</table>
Sajiv Kheti Samvaad

- “Organic Farming Conversation”
- General Information (FAQ, announcements)
- Farmer-to-farmer discussion
- Buyer-seller marketplace (347 messages)
- Launched Jan 2011
  - 266 questions, 286 responses
  - 1100 broadcasted announcements (500 replies)
Khedut Saathi

• “Farmer’s Friend”
• Crop-specific push content
• Peer content preferred to “Expert” content
• Forward-to-friend
• Advertising campaigns
• Launched Sep 2013
  – 17K farmers subscribed
  – Highly sticky: 70%+ pickup rate, ~4% opt-out
  – Forward-to-friend used by 4,800 subscribers
Ethiopia ATA 8028

- AD connected to ATA through DG/USAID Consortium
- Was static IVR + profile collection, added Q&A
- Pilot 16 woredas March-May (80K farmers)
- Till date
  - 2400 questions, 2021 “Accidental Entry”
  - 150 “legit” questions (unverified)
- ATA wants to add FAQ, Surveys
IVR For Extension - Key Challenges

• Country-specific technical setup
• Awareness
• Interactivity
• Cost
Thank you!
TOP TAKE-AWAYS

1. IVR: Not plain vanilla anymore!
   Many think of IVR as a simple, static tool for delivering ag information, and less helpful to farmers. We’ve now learned how IVR can be versatile, compelling, and can "push" info tailored to farmers.

2. IVR magnifies human intent & capability.
   Successful use of IVR requires support from well-intentioned, competent people and organizations.

3. IVR's limitations:
   Hard to navigate, technically challenging to implement, and expensive at scale.

4. IVR's key advantages:
   Overcomes language and literacy, and there is a low barrier for user-generated content.

5. Content is king!
   IVR is only as useful as the content you deliver through it.
Questions and Answers
JOIN THE DISCUSSION
agrilinks.org

Contact: jmaccartee@usaid.gov or zbaquet@usaid.gov

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