The Future of IVR Systems in the Mobile Environment

Jim Larson
Larson Technical Services
Beaverton OR 97006
(503) 645-3598
VoiceXML—Workhorse of IVR Applications

• Works on a variety of devices
VoiceXML—Workhorse of IVR Applications

• Coming soon...
VoiceXML—Workhorse of IVR Applications

• Pros
  – Replaced static user guides & instructions
  – Automated much of the work of human agents in call centers

• Cons
  – Limited to scripted prompts and responses
  – Many customers consider IVR interactions slow and tedious
Alternatives to VoiceXML Applications

• Internet
  – FAQ pages, blogs
  – Web-based interactive application
  – Web-based text hat
  – Social media

• Smart phone applications
  – User-directed apps using graphical and touch input
  – Multimodal apps
  – Intelligent virtual agents
VoiceXML Applications

• Will not disappear!
• Still many customers who don’t have smart phones
• Enterprise application not installed on the smart phone
New life for VoiceXML applications

• Type and read chat
• Speak and listen chat
• Speak and listen chat with an avatar
• Visual IVR
Text Chat

• Widely used on desktops, laptops, and mobile devices

• User may
  – Type and read
  – Speak and read
  – Speak and listen
Type and Read Chat

<field name="PIN" type="digits">
    <prompt>
        To order please enter your PIN for identification
    </prompt>
</field>

$menu>
    <prompt> Customer Self Service <prompt>
    <choice next = "SPM"> Service plan manager</choice>
    <choice next = "CD"> Customer Data</choice>
    <choice next = "Billing"> Billing</choice>
    <choice next = "Support"> Support</choice>
</menu>

Agent: To order please enter your PIN for identification

User: 513

Agent: Customer self service:
Service plan manager, Customer data, Billing, Support

User: Support
Speak and Listen Chat

To order please enter your PIN for identification

Customer self service: Service plan manager, Customer data, Billing, Support

894

Support
Jacada

IVR SYSTEM

VXML Applications driving voice and speech

IVR Server

VXML Applications

Route to Agent or Skill

Visual IVR Server

VXML Application converted to Visual IVR

Visual IVR System Interface on Smartphone

Traditional IVR Audio prompts on phone

Call

122-1473
<field name="PIN" type="digits">
   <prompt>
     To order please enter your PIN for identification
   </prompt>
</field>

<menu>
   <prompt> Customer Self Service </prompt>
   <choice next = "SPM"> Service plan manager</choice>
   <choice next = "CD"> Customer Data</choice>
   <choice next = "Billing"> Billing</choice>
   <choice next = "Support"> Support</choice>
</menu>
Multimodal
(Multiple input modes)

• Interactive Voice and Video Response (IVVR)
  – Including PDF, pictures, maps, illustrations and animations
• VoiceXML field -> text field

    <field name="PIN" type="digits">
        <prompt>
            To order please enter your PIN for identification
        </prompt>
    </field>
• VoiceXML Menu -> List Menu

<menu>
  <prompt> Customer Self Service <prompt>
  <choice next = “SPM”> Service plan manager</choice>
  <choice next = “CD”> Customer Data</choice>
  <choice next = “Billing”> Billing</choice>
  <choice next = “Support”> Support</choice>
</menu>
Potential Problems

• Phrase changes required by visual IV
  – Introduce <alt> element

• Incorporate smart phone functions such as GPS, device orientation, QR codes, etc.
  – Introduce specialized <object> elements

Avoid multiple versions of code
Issue: Speed vs. availability

• VoiceXML is accessible on all phones
  – Slower but universal
• Android and IOS native code only works on vendor-specific devices
  – Fast but not portable
Issue: Remote vs. Local

- **Server**
  - **Shared Data**
  - **Application Code**

- **Application code**
  - Fast but possibly out of date
  - Slow but always up to date
Multichannel
(Multiple communication channels)

• Use channel appropriate for information
• Switch without losing context
Summary

• IVR systems will not go away
• IVR systems will be augmented to provide
  – Chat
  – Multimodal (including Visual IVR)
  – Multi channel IVR
Thanks for your attention

Questions?