Usability – Keeping it Simple

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Caller Needs/ Enterprise Needs

**Caller**
- Clear & Simple
- Quick

**Enterprise**
- Accurate
- Automated
Focus on Caller

Meeting enterprise goals with caller cooperation: two examples
Gathering Specific Data from Callers
Example 1

- Used for conservation study
- Callers required to report information by phone or in person
- Perspectives
  - Caller’s Needs
    - Simple/Clear
    - Quick
  - Enterprise Needs
    - Accuracy of data
    - Automation
  - VUI Design – Usability principles
Enterprise Mandate
Example 1

- Enterprise: Accuracy is important – confirm everything!
- Pro Services recommendation: forced confirmations is not a good caller experience
Example 1

<Sys> I heard El Paso, is that right?
<Caller> Yes!!!

Conclusions:
Caller input is always confirmed.
However, caller input was *almost never misrecognized*.

Recommendation: Calls would be more efficient, shorter for the callers, and achieve a comparable success rate, if the application only confirmed responses recognized below a certain confidence level.
Tuning Recommendation
Example 1

• Confirming entry only if confidence is below $x$ would streamline the call for 77% of the callers (small grammar)

• Confirming entry only if confidence is below $x$ would streamline the call for 50% of the callers (county grammar)
Results

Example 1

- Change: switched to confidence based confirmation
- Result: higher caller cooperation
- Before: 80% call completion
- After: 86% call completion
Example 1 – Higher Caller Cooperation

**Caller’s Needs**
- Simple/Clear - improved
- Quick - improved

**Enterprise Needs**
- Accuracy of data - maintained
- Automation - improved
Contractors calling in completed jobs
Example 2

- Callers required to report information by phone or in person
- Perspectives
  - Caller’s Needs
    - Simple
    - Very Quick
    - Calling in multiple times a day
  - Enterprise Needs
    - Automation of reporting
  - VUI Design – Usability principles
    - Helpful
    - Smooth transitions
Example 2 – Before

- Customer (enterprise) happy with application but…callers (contractors) would not use
- Took a long time for contractor to make it through the reporting process
- High confidence levels for confirmation increased call length and caller frustration
- Average Call duration 3:00 minutes
Example 2 – Before/After

Before:
- “What’s your four digit facility number?”
- “Next, tell me the call number of the call you wish to clear.”

After
- “Facility number?”
- “Call number?”
Example 2 – After

• Simplified prompts based on unique caller population
• Adjusted confidence levels for confirmation
• Average Call duration 1:12 minutes
Example 2 – Results

**Caller’s Needs**
- Simple - improved
- Very Quick - improved

**Enterprise Needs**
- Automation - *doubled*
Lessons Learned

• Caller cooperation key to meeting enterprise goals
• Usability key to caller cooperation
• Know the caller
Takeaway

• Listen to recommendations of those with experience
• Even if you have the experience – look at caller with fresh eyes
Empowering Your customers and employees with speech technologies

SpeechTEKI 2006
The Voice Solutions Showcase

Empower

Thank You