VUI Design Principles

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Discussion Topics

• What is good design?
• Elements of good design
• The responsibilities of the designer
• The final test – do they like it?
What is good design?
What is good design?

• It is creating a product that appeals to the target audience or end user
• It enables the user to readily accomplish their goal or task
• It is transparent and easy to use
• It’s about adding subtleties to the end product that don’t distract from its primary purpose
• It brands the product and makes it memorable
  – In a good way ☺
• It is something to be proud of
What’s involved in good design?

• It’s gathering complete and comprehensive requirements
• Researching and understanding the domain of the industry the product serves
• It’s meeting the company’s needs without sacrificing the needs of the end user
• Researching and understanding the end user – Creating the product with them in mind
• Following a proven implementation methodology
Sample Implementation Methodology

Design Phase

- Requirements Gathering
- Requirements Analysis
- Functional Requirements Document Creation & Approval
- Sample Call - Conversations
- Voice Talent Selection
- Full Design Specification
  - VUI
  - Business Logic
  - Data Interaction
- Customer Specification Sign-off
- Development
- Testing
- Usability Testing
- Tuning
- Post-Production Tuning
Elements of good design
Elements of good design

• Meets end users needs
• Intuitive to use
• Keep it simple
• Honest
• Smart and responsive
• Accommodating - helpful
• Subtle brand reinforcement
Meets the end users needs

• Know what they want to do
• Design with the end user in mind
  – Create representative end users for each population group
  – WOZ with a design buddy to ensure the VUI meets the needs
• Encourage the customer to always keep that in mind
  – Ask for information using caller lingo not business lingo
    “What’s the contact number associated with your account?”
    “Tell me your phone number, area code first or enter it now.”
• Meeting this element is the best step towards creating a successful application
Group Discussion

• What are some ways to find out who the end user is?
• How can you find out what callers really want to do when they call?
• Creating User Profiles
  – Reference hand-out
• Interactive role play
  – Reference hand-out
Discussion

• How to blend customer needs with end user needs
  – Know how to choose your battles
    • When to push to gain acceptance of your design
    • And when not to
Intuitive to use

• End users shouldn’t have to hesitate after hearing a prompt because they are wondering what to do
  – Prompts should enable the caller to know what to say and when

• Voice recording, pauses / prosody can help deliver the message quickly and easily
Discussion

• Identify which prompts are problematic
  – Reference hand-out

• What can be done to improve them?
Keep it simple

- Cognitive load plays a huge factor in application success
- The majority of callers are not power users
  - Reprompts and error messages try to be helpful
  - Often they end up irritating
- Choose Clarity or Natural and keep it simple!

“What’s the expiration date?”

“Say or enter the expiration date, month and year”
Discussion

• Of the two sample scripts which one seems to keep it simple?
  – Reference hand-out

• What can be done to simplify the one that appears verbose?
Honest

• Honesty can go too far
  – We’re Sorry
    • I’m sorry – I didn’t get that / I’m sorry I didn’t hear you
    • I’m sorry – I still didn’t get that / I’m sorry I still didn’t hear you
    • I’m sorry, I’m sorry, I’m sorry, I’m sorry….
  – Use care when creating the persona and writing the prompts
  – Honesty is useful in the situation where the caller has given us their information, but we for some reason can validate all or part of it
    • In these cases inform the caller about what specifically you need them to do over
  – The IVR should always take responsibility for a mistake
    • Never let the caller feel bad about what they said or done
Smart and Responsive

- End users have a perception of the system even after a single use
- Make systems smart by writing prompts that are helpful, clear and to the point
  - Don’t use the same wording over and over
    - Make prompts, error messages and timeout messages unique
  - Use speech specialists to help you create smart grammars
  - It’s okay to limit prompting to one or two times total
    - Send the end user to a representative instead of continually prompting over and over again
  - Use your n-best list and limit confirmation
Discussion

• Review the sample dialog prompt, reprompt, timeout, error and help message
  – Reference hand-out

• Can they be improved?
Accommodating - Helpful

• Upfront instruction is often too much too early
  – Examples:
    • “Just speak your answers naturally”
    • “Interrupt me at anytime”
      – What the caller doesn’t know is its only at specific times (not really *ALL THE TIME*)
  – Use education when its appropriate
    • Such as how to say a zip code in Canada
    • Or where to find your account number on a rarely seen bill
Discussion

• Are help prompts really helpful?
Subtle brand reinforcement

• **Brand Reinforcement**
  – Identifying Brand Upfront
    • Appropriate Voice and Verbiage
    • Focus on Customer DELIGHT
  – Customers may not intend on the application being an extension of their brand, but it is
    • Every time the caller is annoyed by a chatty, stupid, or unresponsive speech application it reflects poorly on the customer’s business
  – Collaborate with the customer care team, IT and Marketing to get this right
Strong Brand Statements

**VOLVO**
- Safety

**Apple Computer**
- Easy to use,
  Good Design

**FedEx**
- Absolutely,
  positively,
  has to be there...
Summary

• Strive to make every initial prompt clear and successful?
  – Reprompts are safety nets
  – Initial prompts contain every element a caller needs to:
    • Know what they’re being asked to provide, and
    • How to provide it
Example...

- Traditional prompt example:
  
  Initial  "What’s the height?"
  
  Retry1  "Tell me the approximate height, in inches"
  
  Retry 2  "Please tell me the height, rounding to the nearest inch"

- Or consider this:
  
  Initial  "Rounding to the nearest inch, tell me the height of the package"
  
  Retry 1  "Please say or enter the height, rounding to the nearest inch."
  
  Retry 2  "Using the keypad, and rounding to the nearest inch, please enter the height"
Responsibilities of a good designer
Responsibilities of the Designer

- Provide the customer with the product they purchased
- Protect the needs of the end user
- Understand the industry and the end users
- Get a second opinion
  - Two heads are often better than one
- Listen to advice
- Don’t take it personally
- Attend usability testing and watch users interact with the application
  - Fix all rough spots
- Listen to live production calls
  - No matter what precautions you took to get to this point with your good design – the true test is the end users
TOP 5 DESIGN MUST!

1) Allow callers access to your agents/operator/reps
   A request for “help” should actually transfer to a “live person”

2) Automate what caller’s want!

3) Keep it simple
   Make prompts clear
   Avoid complex and rarely utilized functionality
   Strive for short and sweet

4) Only tell the caller what they’ve asked for
   Limit pushed information

5) Limit confirmation
   Rarely if ever use implicit confirmation
Avoid frustration

• Callers want to have choices
  – They’ll use the automated system if they don’t feel frustrated by the interface
  – And if it’s by their choice - not forced on them
• Change a few key things in the application
• Don’t hide access to Agents
• Watch your Customer Satisfaction climb!!

• “Good Design” is not the only factor
The final test – do they like it?
Does the end user like it?

• Listen to live production calls
• Note anywhere callers have issues
• Fix them!
Discussion

• What were some of the problems the caller encountered?
  – How can they be fixed?
Summary

• No application is ever perfect
  – There is always room for improvement
• Usability testing is an excellent way to validate design ideas
• It's not the “end all, be all”
• Listen to production calls – lots of them
  – You’ll be surprised at what you hear 😊
Empowering Your customers and employees with speech technologies

SpeechTEKI 2006
The Voice Solutions Showcase

Thank You