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# THE VOICE SEARCH PARADIGM IN CALL CENTERS: JUST SAY IT!

# Voice Search paradigm

- Ask for what you want and get it
  - Flexible wording of response
  - Reduced navigation
  - Relevant and focused result
- Clarify with dialog
  - When request is ambiguous
  - When response would be too voluminous for channel



# Not just voice

- Results in the most appropriate format
  - Audio
  - Text, graphics, or video on devices that support it
  - Multi-channel fulfillment



# Changing the caller's mind set



- Easy and convenient—Like Web search
- Avoiding the “I want an agent” reflex

# Impact of voice search applications on contact centers

- Increased volume of calls driven by network-based voice search
- Differing nature of calls
  - ROI → Customer satisfaction → Proactive marketing
- New insights
  - Audio search of recorded calls
  - Uncover business intelligence, needed enhancements, usability issues



# The main-menu trap

- Review any segmentation driven by touch-tone menu limitations or by previous automation
- Focus on caller objectives and processes



# Natural-language call steering

- “Natural-language”
  - “Just say what you want, for example, ...”
    - Barge-in to interrupt
  - Includes a statistical semantic model as well as a statistical language model
  - Natural language can include defined grammars
    - Lists as “words” (AIRPORT\_NAME)
  - Disambiguate with dialog
    - “Washington Dulles or Washington National?”

# Flexible defined grammars

- Not all applications require the statistical language models used in “natural language” call steering
- “Robust parsing”
  - Identifying information-bearing portions of a word string amid filler words that are relatively insignificant
    - “I want to fly to Chicago Midway Airport”
- Include all the variations by design
  - Usually requires usage-based tuning



# Personalization

- Use caller ID or account number to shorten interaction by using info about caller
- Don't offer options not relevant to caller
- State frequently used choices first when options are offered
- Volunteer information
  - American Airlines
    - Flight status of reserved flight

# Barge-in and shortcuts

- Allowing interruption of prompts eases the tradeoff between the inexperienced and experienced user
- Short-cuts are quick navigation
  - Forward or backward
  - How does caller know they are available?
    - American Airlines example
    - Just say anytime: “AAdvantage,” “flight information,” “reservations,” “upgrades,” “mileage balance,” “mileage credit,” “travel tips”

# Updates

- Easy addition of new offers and up-to-date data
- Busch Entertainment--An example
  - Theme parks
  - Web console allows changing show schedules, etc., in minutes
  - Integrated with call steering



# Other navigation reducing approaches

- One-step correction
  - “*Did you say Austin?*”
  - “No, Boston.”



# Audio Search as a design tool

- Mining recorded calls for business and effectiveness insights
  - Content of audio, not just metadata
- E.g., review calls where callers ask for “main menu,” “agent,” or “real person”



# Voice search is a...

- Voice User Interface design philosophy
- Collection of technical approaches
- Reflection of advances in speech recognition technology
- New user interface and analysis options that have passed the “tipping point”



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