The Role and Benefits of MRCP In Speech Platforms

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Agenda

• What is MRCP?
• What benefits does it provide?
• Platforms
• Summary
MRCP Defined

- **Media Resource Control Protocol**
  - Provides client-server media resource control
  - Supports
    - speech recognition
    - text-to-speech
    - speaker identification
    - recording
  - IETF* proposed standard effort
  - Version 1: November 2001
  - Currently working on version 2 ("MRCPv2")
    - MRCPv2 draft available at
Universally Available Speech Applications

Monolithic, Proprietary Telephony Package
- Presentation
- Application Logic
- Data Store

Separate Web Apps
- Standard Web Servers

Modular, Distributed Architecture
- Communication Server
- Speech Services
- Standard Web Servers

MRCP

Internet Services

Universal Web Solutions Architecture

Traditional Speech IVR Services

SpeechTEKI
Benefits of MRCP

• Vendor independence for implementation
• Expanded deployment options
• Migration strategy from circuit-switched to VoIP
• Speech vendors adopting as only interface
• Close alignment to XML standard
• Designed to complement VoiceXML and other speech protocols like NLSML and EMMA
• Designed to work with standard communication protocols like RTSP and SIP
MRCP

• **Commands and Events**
  – Real Time Streaming Protocol (RTSP) used in V1
  – Session Initiation Protocol (SIP) used in V2
  • V2 also introduces NLSML and EMMA as options for defining the grammar and interpreting results from speech recognition

**Speech Services**
- MRCP Server
- IMS MRFC, MRF or AS

**Communications Server**
- MRCP Client
- VXML Browser (VXML Interpreter)
- IMS MRFP, AS or MRF

**Web Server**
- VXML Client
- IMS AS

**Establish Session**
- Media (RTP)

**Session Status**
- Media (URL)
MRCP-Enabled Interactions

- Audio streamed from Web Server to MRCP Client Via MRCP Server
  - Text-to-speech (TTS)
  - Streaming file play

- Application Logic (VXML Scripts, potentially with NLSML or EMMA Markups) streamed directly to Communication Server

- Audio from MRCP Client
  - Speech Recognition (ASR)
  - Recording
  - Speaker Verification / Authentication
Summary

– MRCP is a powerful standards based interface for speech technologies
  • preferred interface by many of the speech engine providers
– Designed for use with a wide range of speech and communications protocols like RTPS and SIP
– Facilitates distributed architectures for speech platforms and the migration to IP based solutions
For More Information

• MRCP v2 Specifications
  – Includes NLSML

• EMMA
  – http://www.w3.org/TR/emma/
Empowering Your customers and employees with speech technologies

SpeechTEKI 2006 Empower
The Voice Solutions Showcase

Thank You