

Speechsc Protocol Proposal

<http://www.ietf.org/internet-drafts/draft-shanmugham-speechsc-00.txt>

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Protocol Summary

- Based on MRCP messages for ASR and TTS Control.
- Proposes a SIP based framework with ASR and TTS messaging leveraged from MRCP in the initial draft. Leaves SV and SI as TBD.
- Uses SIP/SDP offer/answer model for resource location and session establishment including the setting up of media pipes and a separate speechsc resource control channel.
- This control channel is used by the client to control media processing resources such as ASR and TTS engines using messages based on MRCP.
- Unlike MRCP the SPEECHSC resource control messages would travel on this separate speechsc control channel over TCP or SCTP and not be tunnelled over RTSP.

Advantages

- Leverages the SIP infrastructure in Resource discovery, load balancing, session establishment and session management.
- Uses a separate speechsc control to exchange messages with the media processing resources and does not use Tunneling which is considered kludgy.
- Supports TCP/SCTP while current MRCP does not support SCTP.
- Does not use UDP for the control channel which would require the speechsc exchange to address transport unreliability.
- Allows the sharing of a TCP/SCTP pipe between the client and the server between multiple sessions, which RTSP does not allow.
- Leverages the MRCP messages and state machines which is a well proven mechanism for ASR and TTS control.
- It is more efficient than RTSP tunneled MRCP in terms of the number of messages exchanged between the client and the server.

Open Protocol Issues

- Define SI and SV
- Bryan Wyld – Why use SIP when we can add Session management messages to core MRCP and make it an independent protocol. May be Cut/Paste from RTSP.
- John Potemri - Client and Server terminology should be consistent and other document edits that are tracked by WG email threads.
- Eric Burger – Resource Type and Channel Identifier format.
- Neal Deason - Usage of SDP m=control lines to allocate Resource and establish Channel Identifiers
- Neal Deason - The use of port 0 not consistent with RFC3264.
- Various editorial changes suggested by various folks need to be folded into the next revision of the protocol.