

IETF Speech Services Control (speechsc)

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Roadmap

- Who is speechsc?
- What is speechsc?
- Where is speechsc?
- When Will It be Ready?

Participation

- IETF Protocol Work Is Open to All Interested *Individuals*
- All Work Done or Ratified on Mail List
- No Fees, Membership, Corporate Sponsorship, etc.
 - Only Exception is Requirement to Adhere to RFC 2026 (IPR Rules)

Past F2F Meetings

- IETF Holds F2F Meetings 3x/yr
- March 2002 BOF at IETF 53 (Minneapolis)
- July 2002 at IETF 54 (Yokohama)
 - Finalize on Charter
 - Start Work on Requirements
- November 2002 at IETF 55 (Atlanta)
 - Finalize Requirements
 - Preliminary Results of Protocol Survey

Future F2F Meetings

- March 2003 in San Francisco
- July 2003 in Vienna, Austria
- November 2003

All Work Done or Ratified on Mail List

List Information

- **To Subscribe:** speechsc-request@ietf.org
In Body: `subscribe`
- **General Discussion:** speechsc@ietf.org
- **Archive:**
<http://www.ietf.org/mail-archive/working-groups/speechsc/current/maillist.html>
- **PLEASE PARTICIPATE!!!**

IETF and speechsc

- Chartered Work Group
- Chairs
 - Eric Burger eburger@snowshore.com
 - Dave Oran oran@cisco.com
- Work Group Area Director
 - Scott Bradner sob@harvard.edu
- Contact Any of Us or List for Questions, Comments, Liaison, Thoughts, etc.

General Information

- Charter Page

<http://www.ietf.org/html.charters/speechsc-charter.html>

- Supplemental Page

<http://flyingfox.snowshore.com/i-d/speechsc>

- Jabber (like IRC) Archive

<http://www.jabber.com/chatbot/logs/conference.ietf.jabber.com/speechsc>

What Is speechsc?

- Describes Protocols for the Distributed Control of Speech Resources
- Charter Keywords
 - Protocols: May Be a Single Protocol or Multiple Protocols
 - Control: Focus on Control; Codecs, Markups, API's out-of-scope
 - Speech Resources: ASR, TTS, Speaker Identification or Verification (SI/SV)

Other Needs

- Envisioned to Have Application Functionality at Endpoints
- High Latency / Low Bandwidth
- May Dictate Ugliness Like Binary Messages
- May Not be Possible due to Latency Issues
- Standard Compression of Standard Protocols May Help Here

History

- Media-Rich VoIP Gateways Wanted to Offer Speech Services
- IP-Connected Media Servers Wanted to Offer Advanced Speech Services
- Cisco, Nuance, SpeechWorks Developed MRCP

MRCP

- Speech Resource Primitives
 - TTS
 - ASR
- Existing Session Establishment Protocols
 - SIP
 - RTSP
- Chose to Not Create New Establishment Protocol
- MRCP Sends Messages Embedded in Carrying Protocol

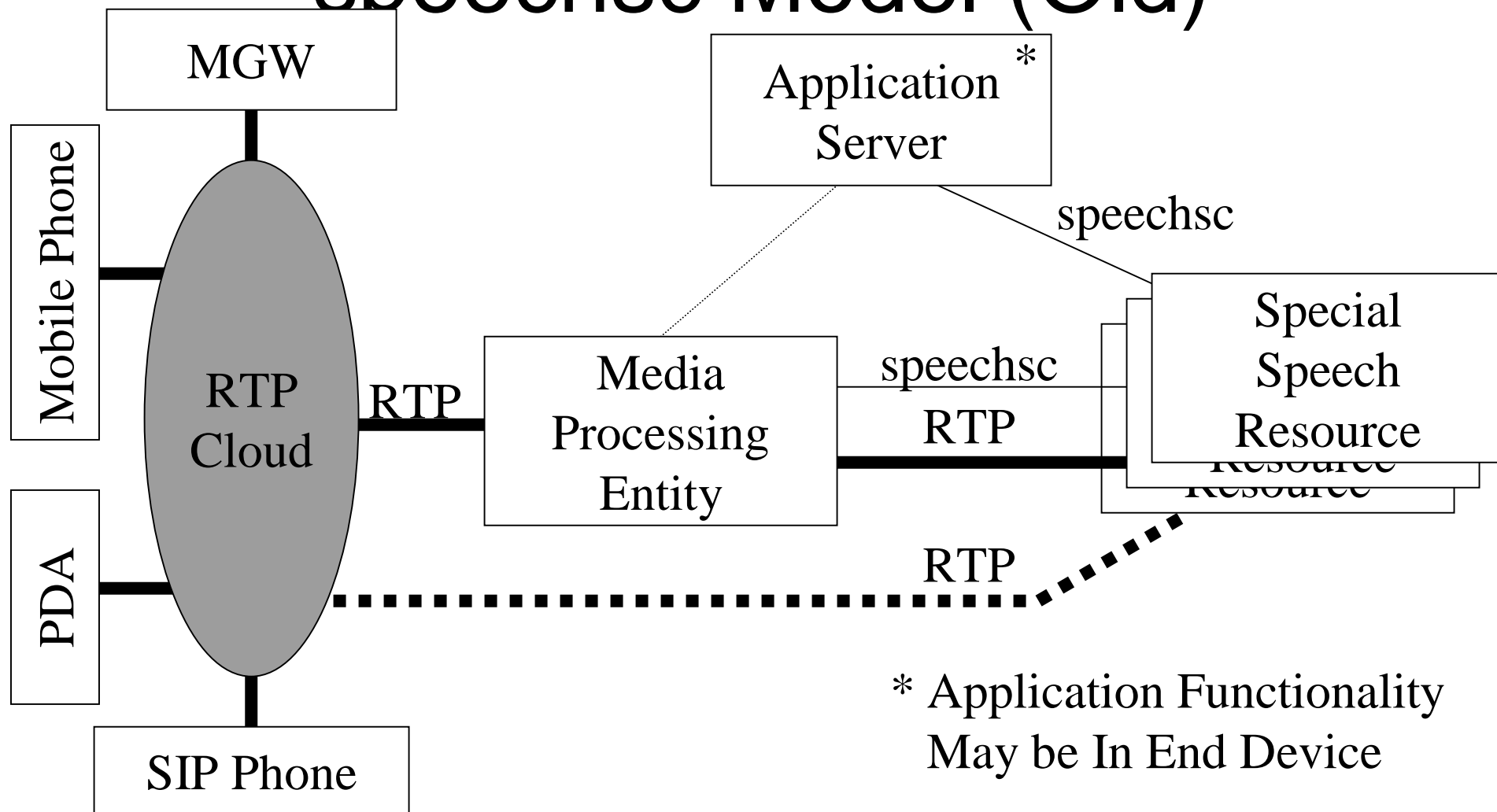
Problems With MRCP Approach

- Only RTSP Implementation Gained Acceptance
- SIP Proposal Highlighted Problems With Embedded Approach
 - RTSP Natural Choice for TTS
 - “Embedded Goal” Meant TTS Could Not Use RTSP Controls
- Neither Protocol Well Suited for Barge, Training, etc.

What MRCP Brings

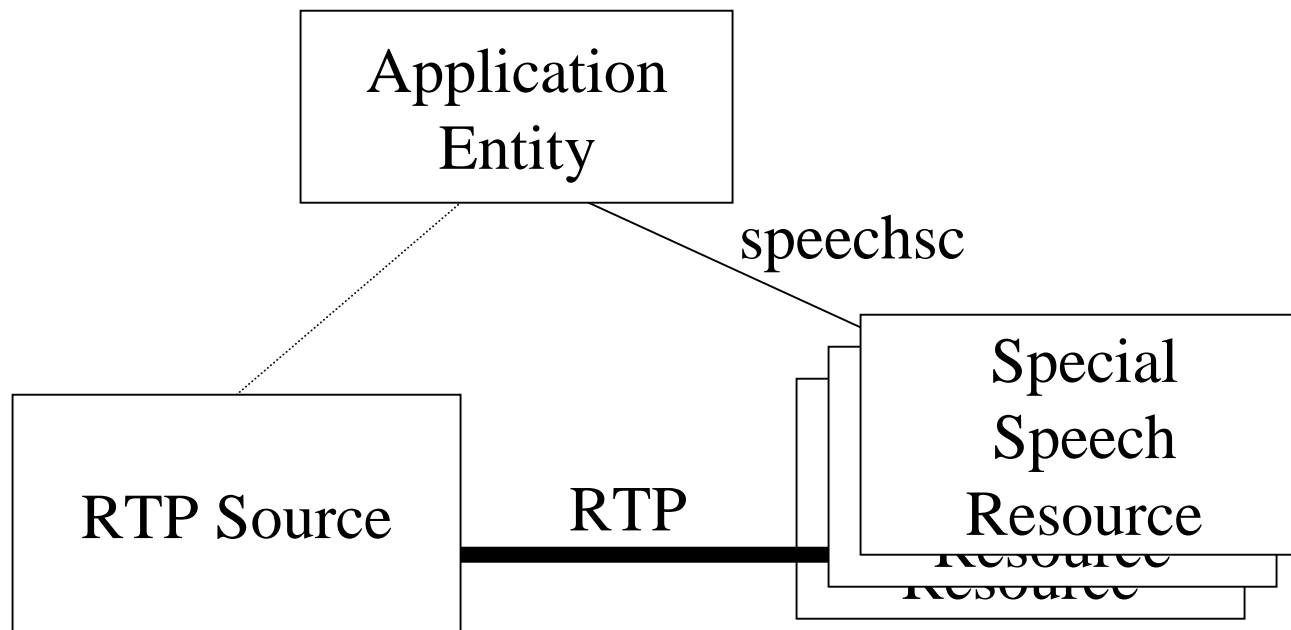
- Real Experience Deploying Interoperable Protocol
- Workable Decomposition Model
- Protocol Performance Experience

speechsc Model (Old)



speechsc Model (Current)

- Application Entity May be In End Device, In the Network, or Any Combination



Salient Features of Model

- Control Signaling Is Independent of Media Transport
- First Embodiments Media Server-Centric
 - In Network
 - Controlled Device
 - High Bandwidth / Low Latency

Examining Existing Protocols and Frameworks

- Protocols
 - MRCP
 - RTSP
 - SIP
- Frameworks
 - Web Services
 - SIP
 - Beep

RTSP

- Extend RTSP to “Play” Text
- All RTSP Semantics Held Intact
- Doesn't Really Work for ASR or SI/SV

SIP

- Good At Establishing Session
- Poor At Tunneling Protocols
- Easily Abused; Not Using Key SIP Features
 - Location
 - Routing

Web Services

- Good Framework Candidate
 - Brings Lots of Existing Value
 - Promise of Future Development, e.g.,
Transparent, Compressed Messages
- Many Think Web Transactions are Too Heavy
 - Memory, Processing Power Required
 - Reality or Education Issue?

Current speechsc Status

- Requirements Will Have One More Revision Based on IESG Review
 - Internet Engineering Steering Group
- Protocol Evaluation only a Rough Draft
 - Will Have a Real Draft Soon
 - Will Have Reviews

Moving Forward

- Create Design Team
- Propose Protocol Design
- Published & Reviewed
- Always Open Review
- Always Open for Individual Submissions

Revised Plan

Old	New	Milestone
SEP 02	NOV 02	Requirements ID submitted to IESG for publication (informational)
DEC 02	DEC 02	Submit Internet Draft(s) Analyzing Existing Protocols (informational)
DEC 02	MAR 03	Submit Internet Draft Describing New Protocol (standards track)
MAR 03	MAY 03	Submit Drafts to IESG for publication

Thank You!

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In Body: `subscribe`
- General Discussion: speechsc@ietf.org
- PLEASE PARTICIPATE!!!

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