Status of MMUSIC
SDP Capability Negotiation

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Since Last IETF

• Formed Design Team consisting of
  – Roni Even, Robert Gilman, Matt Lepinski, Joerg Ott, Colin Perkins, Thomas Stach, and Flemming Andreasen

• Additional input and feedback from
  – Francois Audet, John Elwell, Cullen Jennings, and Dan Wing

• Weekly conference calls from 12/12/06 to 2/27/07
  – Adopted <draft-andreasen-mmusic-sdp-capability-negotiation-01.txt> as starting point
  – Split document in two
    • Requirements: Initial design team focus
    • Solution document: Based on requirements document
Documents

• Requirements
  – draft-ietf-mmusic-sdp-capability-negotiation-reqts-01.txt
  – Main guiding principles
    • Provide a general purpose capability negotiation mechanism
    • Avoid undue complexity or scope creep for people that need only negotiation of transport protocols and associated attributes
      – [DTLS-]S[Z]RTP/[S]AVP[F] crowd for example
  – Requirements divided into
    • Core: All implementations must support
    • Extensions: Optional to implement

• Ended up with two solution documents per the above
  – SDP Capability Negotiation
    • draft-ietf-mmusic-sdp-capability-negotiation-05.txt
    • Core solution document for transport protocols and attributes
      – Best-effort SRTP for example
  – SDP Media Capabilities Negotiation:
    • draft-ietf-mmusic-sdp-media-capabilities-01.txt
    • Extension for media capabilities
SDP Capability Negotiation (Core)

• Provides two things
  – Backwards compatible capability negotiation for transport protocols and attributes
    • RTP, SRTP, DTLS-SRTP, ZRTP with different profiles (e.g. feedback-based or not – AVP or AVPF), etc.
    • Associated attributes such as “a=crypto”, “a=key-mgmt”, “a=fingerprint”, “a=zrtp-zid”, “a=rtcp-fb”, etc.
  – Extensibility mechanisms to enable capability negotiation for other things
    • Media capabilities for example
      – See draft-ietf-mmusic-sdp-media-capabilities-01.txt
Example SDP for Best-Effort SRTP

\[
v=0 \\
o=- 25678 753849 IN IP4 192.0.2.1 \\
s= \\
c=IN IP4 192.0.2.1 \\
t=0 0 \\
m=audio 53456 RTP/AVP 0 18 \\
a=tcap:1 RTP/SAVP RTP/AVP \\
a=acap:1 a=crypto:1 AES_CM_128_... \\
a=acap:2 a=key-mgmt:mikey AQAFgM0... \\
a=pcfg:1 t=1 a=1 \\
a=pcfg:2 t=1 a=2
\]

Answerer chooses either one of the potential configurations or the actual configuration

Default offer (actual configuration)

Transport protocol capability

Attribute capabilities

Potential configurations (alternative offers) consisting of the referenced transport protocol and attribute capabilities
Status of Core Document

• Have uncovered and addressed a lot of issues since last IETF
  – On 6th iteration of document since last time
  – Believe we have a reasonably mature solution document at this time

• Goal is to issue WGLC shortly after Prague
  – We’ll know better after MMUSIC 😊