SAP: Session Announcement Protocol

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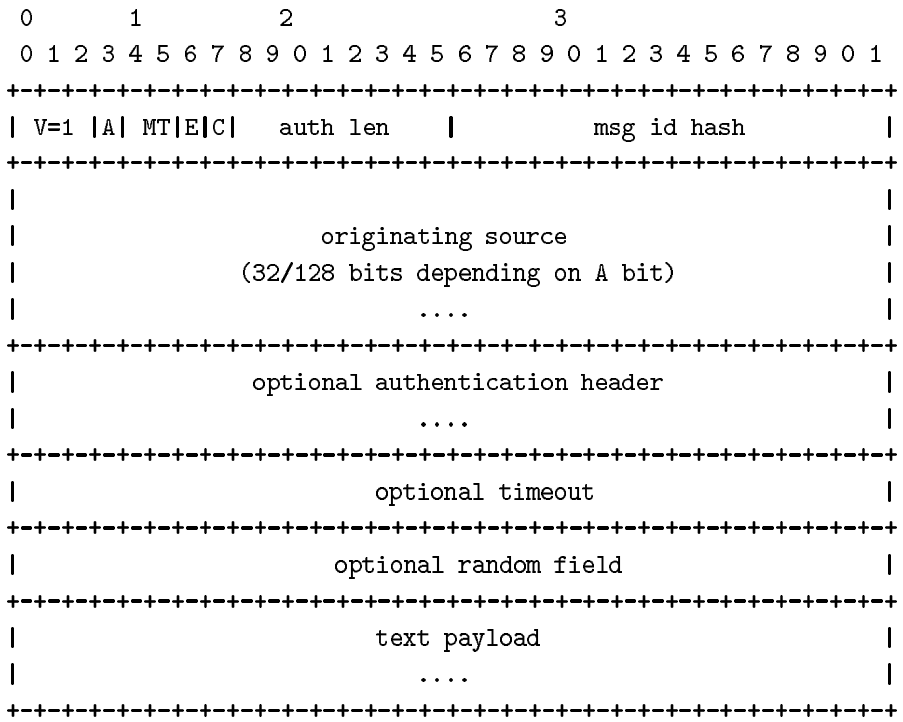
Overview

Extensions to SAP...

- IPv6 addresses
- IPv6 scoping
- MIME type
- SAP URL

Announcing IPv6 addresses

Reuse one bit from the MT field as an address type bit



IPv6 Scope Fields

- The IPv6 SAP address is FF0X:0:0:0:0:0:2:7FFE, where X is the 4-bit scope value.
- The following scope values are defined in IPv6:

Value	Scope	Recommended Bandwidth
0x1	Node-local	n/a
0x2	Link-local	20 Kbps
0x5	Site-local	10 Kbps
0x8	Organization-local	1 Kbps
0xE	Global	200 bps

MIME Type

- Add a MIME Content-Type header to the start of the payload:

```
Content-Type: application/sdp

v=0
o=...
```

- Allows for non-SDP payloads (SMIL?)
- Allows for fragmentation (message/partial)?
- May hinder interoperability

SAP URLs

Example: video "broadcast" using IP multicast, want to join from a web page. How do we do this?

- Reference an SDP file directly with an http URL
- Problem: the receiver may be out of scope of the multicast session, but has no way of knowing this.
- Solution: reference the *announcement* with a URL, if the receiver can see the announcement, it can see the media streams
  - Web browser has to implement SAP, must figure out how long to wait if the announcement isn't the the cache, etc...

SAP URLs

- Each announcement has originating source and message ID fields
- The combination of these is unique per announcement
- Derive a URL from this...

  `sap://128.16.64.45/1234`
  `sap:1234@128.16.64.45`

- ...maybe?