

SDP offer/answer for file transfer

Miguel A. Garcia

draft-garcia-mmusic-file-transfer-mech-01.txt

IETF 67, MMUSIC WG

November 2006

e-mail: Miguel.An.Garcia@nokia.com

Summary

- Mechanism that allows to pull or push a file to a remote endpoint.
- Based on SDP offer answer
 - Allows the SDP answerer to accept or to reject the offer before the actual transfer starts.
- SDP extensions to describe files
- Uses MSRP to do the actual transfer. MSRP messages carry the usual MIME container describing the file to be transferred.
- Mimics similar functionality in commercial presence and instant messaging systems.

Changes in version -01

- Discussed the usage of message/external-body MIME type, but discarded due to complexity and demanding behavior in SBCs.
- Compacted the SDP attributes
 - Introduced the *file-selector* attribute that includes the previous four filename, filetype, filesize, and hash.
 - Introduced the *file-date* attribute that includes the previous three creation, modification, and read.
- Added a new *byte-range* attribute (to be renamed *file-range* in the next version). Allows to start sending a file from offset different than 0.
- Allowed to described a file with more than one hash algorithm (e.g., SHA-1 and SHA-256).

Example

v=0

o=alice 2890844526 2890844526 IN IP4 pc.example.com

s=

c=IN IP4 alicepc.example.com

t=0 0

m=message 7654 TCP/MSRP *

i=This is my latest picture

a=sendonly

a=accept-types:*

a=path:msrp://pc.example.com:7654/jshA7we;tcp

a=file-selector:name:"My cool picture.jpg"

type:image/jpeg size:32349

hash:SHA:72245FE8653DDAF371362F86D471913EE4A2CE2E

a=disposition:inline

a=file-date:creation:"Mon, 15 May 2006 15:01:31 +03:00"

a=icon:cid:id2@alicepc.example.com

a=byte-range:1-32349

Open Issue: Non-printable characters

- Handling of non printable characters in the file name
 - NUL, CR, and LF are below ASCII characters 0-127, so they are represented as one byte. They can be present in the file name.
- The SDP file name is meant for human user consumption, so characters should be printable.
- Is it safe to say that non-printable characters are not allowed?

Open Issue: Byte-range

- *byte-range* attribute is misleading
- It is not related to the Byte-Range header in MSRP
- Suggestion: rename it to *file-range* and explain it is not connected to the MSRP Byte-Range

Open Issue: Disposition Type

- Need to differentiate between:
 1. “This is a file I want you to see on your screen”
 2. “This is a file you may want to save”
- The draft defines a *disposition* attribute and says:

Possible values are the one listed in the IANA registry for Mail Content Disposition Values, although most likely only the "inline" and "attachment" values are significant for file transfer applications.
- Are *inline* and *attachment* the correct values?
 - Perhaps *render* is the value for point 1 above
 - No existing value apparently fits point 2 above.

Open Issue: Several hashes

- Ability to declare hashes in several algorithms (SHA-1, SHA-256, etc.).
- The text makes an effort to indicate that:
 - Offerers MAY include hashes computed with different algorithms
 - Answers take one hashing algorithm to compute the hash.
- Example:
a=file-selector:hash:SHA:fe92c84994dea8e44ec47c8f78bb11e689ad204c
hash:SHA2-256:9ac340a51117f79b5e08542f31ffe4c478232b506871359745e385990470a3c4
- Please verify the wording and comment