Network Working Group C. Rogers
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Suggested Additional MIME Types for Associating Documents

Status of this Memo

This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

- 1) New MIME Types: Staple and "Paper" Clip
  - 1) indicates the degree of binding of multipart documents: stapled documents should stay together on the desktop, while paper clipped ones should be easily spreadable
  - 2) big paper clips vs small ones; heirarchical assembly
  - 3) big vs small for large documents vs. small ones?
  - 4) warning! the presence of electronic staples or paper clips may break some programs, particularly those designed to do high-speed copying!
- 2) patents on the electronic staple and paper clip
  - 1) use First Virtual to record a charge each time new staples or paper clips are made.
  - 2) to reduce transmission charges, electronic staples should be bought in boxes of 5000. Reference: Apple's "bento" technology?
  - 3) electonic staples should have a standard "size and shape" so a supply of staples could be used be used by several programs.
- 3) recycling electronic staples and paper clips
  - to assure proper accounting, and to detect patent violations (people making their own electronic staples), it may be necessary to attach a certificate to each staple or paper clip.

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- 2) When a file or folder is deleted, a "recycler" program could look inside for staples or paper clips that could be reused or recycled.
  - 1) staples could be reycled for a small credit
  - 2) paper clips could be reused.
- 4) custom-look electronic staples and paper clips
  - 1) when stabled or clipped documents are displayed on the desktop, there should be some icon or visual indicator to show the presence of the (possibly removable) staple or paper clip
  - 2) "color=" and "shape=" attributes in the MIME line should allow senders to customize the appearance of individual staples or paper clips.
    - 1) this could have some significance for office filing systems, for instance: a silver paper clip could trigger one workflow component, while a gold paper clip could trigger another.
  - 3) "src=" would allow the specification of a URL of the image to be shown, for even greater control of appearance.
  - 4) it should be possible to specify 3D modelling of your custom paper clip, for electronic desktops being viewed through virtual reality headsets
- 5) electronic paper clip sculpture
  - 1) instead of discarding or reusing paper clips, it should be possible to "bend" them and display the resulting sculpture on the desktop
    - 1) a morphing interface would be suitable
  - 2) linked chains of paper clips
  - 3) each paper clip should keep track of how many times it has been bent. Above a certain limit, the clip should fail.

- 6) electronic paper clips as page flags
  - 1) in addition to using electronic paper clips to group related documents, it should be possible to attach an electronic paper clip to a single page of a multipage document or collection of documents. This highlights or draws attention to the page.
  - 2) it should be possible to include positioning information with the electronic paper clip, to mark specific paragraphs or sentences
  - 3) combinations of color, shape, size, position, orientation, etc. could have special meaning
- 7) additional safety hazards of electronic paper clips
  - 1) they should not be used on data flines which might end up in the hands of very small children
    - thus, one should consider keeping them in a locked drawer of the electonic desk on home PCs
  - 2) they should not be attached to documents on floppy disks, as they may erase portions of the floppy

## Security Considerations

Security issues are not discussed in this memo.

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