Network Working Group
Internet Draft: draft-crocker-headerset-00.txt
Expiration <4/94>

D. Crocker
Silicon Graphics, Inc.
October 5, 1993

MIME Multipart/Header-Set

STATUS OF THIS MEMO

This document is an Internet Draft. Internet Drafts are working documents of the Internet Engineering Task Force (IETF), its Areas, and its Working Groups. (Note that other groups may also distribute working documents as Internet Drafts).

Internet Drafts are draft documents valid for a maximum of six months. Internet Drafts may be updated, replaced, or obsolete by other documents at any time. It is not appropriate is use Internet Drafts as reference material or to cite them other than as a "working draft" or "work in progress."

Please check the Internet Draft abstract listing contained in the IETF Shadow Directories (cd internet-drafts) to learn the current status of this or any other Internet Draft.

SUMMARY

Data often are aggregated with an initial set of descriptor information, followed by some number of user data portions. This specification formalizes the occurrences of such aggregations as a MIME Multipart Content-type. It is intended that MIME processors which are aware of the Header-Set construct will be able to process the user data portions, even when they do not understand the specific header (or descriptor) information which begins the set.

TABLE OF CONTENTS

1. INTRODUCTION

Data often are aggregated with an initial set of descriptor information, followed by some number of user data portions. Such aggregations derive from a specialized environment, such as a particular operating system file structure, or a tailored communication environment, such as privacy enhanced mail. In particular, one portion of the data contains all of the data special to that environment and the remainder is regular user-data, possibly of a type registered within MIME [BORE92].

This specification formalizes the occurrences of such aggregations as a MIME `Multipart` Content-type. It dictates that the descriptor header information shall occur as the first MIME body-part at the beginning of the `Multipart` set, and is then followed by one or more MIME body-parts containing user data.

It is intended that MIME processors which are aware of the Header-Set construct will be able to process the user data portions, even when they do not understand the specific header (or descriptor) information which begins the set. As an example, a recipient on one operating system may still be able to identify and process the user-data portion(s) even when the specific header descriptor is intended for an entirely different and unrelated operating system. In addition, specifications for MIME usage which conform to this model will not need to define two MIME types, one for the `Multipart` containing "bucket" and one for the specific `Application` label to distinguish the portion containing application-specific data.

2. Header-Set Content-Subtype Usage in MIME

Header-set information is specified by:

MIME type name: `MULTIPART`

MIME subtype name: `HEADER-SET`

Required parameters: Any pertaining to `MULTIPART/Mixed`

Optional parameters: Any pertaining to `MULTIPART/Mixed`

Encoding considerations: none

Security considerations: See separate section in the document .

Published specification: Contained in the following section.

Rationale:

Permits recipients to process user-data even when they cannot process the more specialized header descriptor information. Also, reduces the number of registered MIME Content-types, since those which conform to this model need to register only an Application sub-type and are not also required to register a Multipart subtype.

Contact-info: See Contact section, below.

Detail specific to MIME-based usage:

Provides for a MULTIPART MIME body-part which declares that the first sub-part in the `MULTIPART` shall contain a header which provides descriptive information about the one or more remaining sub-parts in that `MULTIPART`. It is expected that the first sub-part will typically be an `Content-type:Application` sub-type.

3. Header-Set Specification

A MIME `Content-Type:Multipart/Header-Set` body part is a distinct section of a message and contains two, or more, sub-parts within in. The first sub-part is the header and any following sub-parts compose the set of user data associated with that header. Typically, the header sub-part will be a registered `Content-Type:Application` sub-type, but this is not required.

The `Content-Type:Application` subtype will declare the "context" and base of interpretation for processing the `MULTIPART` body-part in its entirety. However, the user data body-parts may also be processed separately, to the extent that the receiver understands the individual MIME subparts.

4. Header-Set Examples

Assume that a user is sending data from the FOO file system, with its file-system specific information registered as `Application/Filesys-FOO`, and the user data containing US-ASCII text:

```
To:
Subject:
From:
Date:
Mime-Version: 1.00
Content-Type: MULTIPART/HEADER-SET; boundary=Boundary-1

--Boundary-1
Content-Type:     APPLICATION/Filesys-FOO

(Descriptive information specific to the FOO file system's storage
of the following user data.)

--Boundary-1
Content-Type:     TEXT/plain

(Regular text user-data)

--Boundary-1--
```

7. REFERENCES

[BORE92] Borenstein, N. & Freed, N., "MIME (Multipurpose Internet Mail Extensions): Mechanisms for specifying and describing the format of Internet Message Bodies. March, 1992, Network Information Center, RFC 1341.

8. SECURITY CONSIDERATIONS

Specific header parts may contain security-related information. To the extent that Header-set facilitates the transmission of operating-system sensitive data, it may open a door for easier relaxation of security rules than is intended either by the sender or the administrator of the sender's system.

9. ACKNOWLEDGMENTS

Header-Set developed from the continuing 882ext working group discussions.

10. CONTACT


```
name:     David H. Crocker;
work      <email: dcrocker@sgi.com;
          org:    Silicon Graphics, Inc.;
          street: 2011 N. Shoreline Blvd.;
          box:    7311;
          geo:    Mountain View / CA / US;       code: 94039-7311;
          phone:  +1 415 390 1804;          fax: +1 415 962 8404>
```