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                        Operational Guidelines for
                             Fax over SMTP

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Abstract

   This document describes operational guidelines for devices and
   software which implement fax-over-SMTP [SERVICE].

   An device which implements [SERVICE] and this document will be able
   to exchange capabilities, confirm message receipt, perform immediate
   delivery, and determine the length of a call.

   Additionally, some guidelines are introduced to allow for new
   functions to be added without breaking older implementations.

1. Table of Contents

2. Introduction

   This document describes how implementations that are compliant with
   [SERVICE] can be implemented to also permit full functionality with
   EIFax implementations.

   Companion documents are:

      [FAXREQ] "Requirements for Internet Fax", defines the basic
                terminology and goals for the Extended Internet Facsimile
                service of Fax over the Internet.

      [SERVICE] "A Simple Mode of Facsimile Using Internet Mail"

      [EIFAX]   "Extended Internet Facsimile using Internet Mail",
                capabilities exchange and delivery confirmation

2.1. Requirements notation

   The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT",
   "SHOULD", SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this
   document are to be interpreted as described in [RFC2119].

   The intent in designing this specification is to require ("MUST")
   those items that are required to insure interoperability with
   devices that implement [EIFAX], and strongly recommend ("SHOULD")
   those items that are important for satisfying the user requirements
   for facsimile over the Internet.

3. Message Headers

   Internet Mail and MIME messages contain header fields. These headers
   supply, information such as the sender, the list of recipients, the
   date of the message, the type of content, a list of mailers that
   have relayed the message, and other information.

 [[Except for specialized gateway and mailing list cases,
    headers do not indicate delivery options for the transport of
    messages.]]

   Internet mailing list software and mail redirection systems might
   modify, and will often add to the headers of messages that pass
   through them; for this reason, EIFax systems MUST be able to accept
   and (at a minimum) ignore headers that are not defined here.

Header information should be preserved in some manner to allow
debugging and determining a where a message originated from. See
section 4 for details.

3.1 From

In Internet mail, the From header indicates the originator's (fully
qualified) email address. The From address is likely to be used for
replies by email users. All EIFax mail MUST be identified with a From
field which indicates the source of the message.

For the benefit of text mail users, the From field generated by an
onramp SHOULD include some text identification of the fact that the
user is a fax service, e.g.,

    From: Fax'R'Us Service <fax=+16508124333@fax.xerox.com>

3.2 Sender

In Internet mail, the Sender header contains the actual address of
the originator if the message is sent by an agent on behalf of the
author indicated in the From: field.

3.3 To, Cc

In Internet mail, the To and CC headers contain the recipient's
fully-qualified domain address.

    Examples:

        To: fax=+12145551213@mycompany.com
        To: fax=+12145551213@mycompany.com, dwing@cisco.com

Note that the "To" address may not be the same as the delivery
address of the recipient(s); this might happen for messages that are
forwarded, sent through aliases, processed by mailing lists or
mail gateways, or blind carbon copied.

3.4 Date

In Internet mail, the Date header contains the date, time, and time
zone in which the message was sent by the originator. An EIFax
sender system MUST include the Date header.

If an EIFax sender cannot provide a Date header (because it lacks a
clock and isn't running NTP [RFC1305] or SNTP [RFC2030]), the Date
header can be generated using [SUBMIT].

3.6 Subject

In Internet mail, the Subject field is often provided as an
indication of the content of the message.

Fax onramps and IFax senders SHOULD insert a useful subject header, for the benefit of text-capable recipients.

Fax offramps and IFax recipients MAY include a printed representation of the subject line in the generated cover sheet of a message.

2. **Addressing**

   In addition to the requirements in [SERVICE], the following additional requirements for addressing are included.

2.1 **Special domain addresses for EIFax mail domains**

   Several special email addresses are required or recommended for Internet mail domains [RFC2142]. This section points out the requirements for supporting special email addresses and the application to EIFax.

   An EIFax sender supplies a return address or an origin address for messages it sends. For example, an EIFax onramp might supply a "From" address of "fax=+nnnnnnn@domain". If "domain" is supported entirely by the same EIFax service ("offramp"), there are additionaly requirements for supporting special email addresses in EIFax devices:

       address   requirement

     postmaster   MUST
     abuse, noc, security   SHOULD
     non-mail-user   SHOULD (if appropriate)

   These are explained below.

   "Support" for such special addresses will vary depending on the physical implementation of the EIFax device. Support means that mail sent to the address isn't lost and is handled appropriately, which usually means making the message, in its entirety, available to a human recipient by printing the message on the fax machine's printer, forwarding it to a human's mailbox, or dialing a local fax machine to print the message.

2.1.1 **postmaster@domain**

   [RFC822] requires special mailbox named "postmaster" MUST exist on all systems. For a fax offramp,   This mailbox is particularly likely to receive text messages (non-MIME, and multipart/report).

2.1.2 **abuse@domain, noc@domain, security@domain**

   Fax offramp services which support an entire domain SHOULD support

these addresses as defined in [RFC2142].

2.2 Source Address for Fax Onramps

An EIFax sender MUST supply a valid MAIL FROM address for errors, and that address MUST be able to process non-MIME messages and the MIME types text/plain and multipart/report.

Fax onramps that serve multiple users or locations MUST synthesize a valid source address, to allow the recipient of a fax to identify the sender and possibly to reply. If generating a valid "From" address based on the fax sender is impossible (caller-ID unavailable), the mailing address of the administrator or service provider MAY be used.

3. Cover Sheet Generation

Some of the message headers, such as From, To, CC, Subject, and Data, is intended for presentation to the user. Other headers, such as Received, Content-Type, and Return-Path, are not normally presented to the user and are only useful during troubleshooting or to track abuse.

It can often be impossible to determine if a cover page is already included in the message body, so such cover page generation MAY be in addition to any cover page included in the document body.

Fax offramps SHOULD use the contents of the user-presentation headers (such as From, Subject, To, CC, possibly others) and the RCPT TO (if available) to generate a cover page.

A From: address that includes a telephone number in standard form [FAXADDR] with a canonical telephone number might be able to use that telephone number as the "telphone number of the sender or of the sending fax machine", as is required by some legal authorities.

3.1. Received: headers

EIFax recipients MUST provide a mechanism to allow the display of mail headers, including "Received:" header fields, as a way of diagnosing misdirected mail or tracing the source of unwanted fax messages. Such display need not occur on the cover page, but should be available in some manner to a system administrator.

It can be problematic for an offramp to include the Received: headers on the cover page. In an interactive Internet mail environment, it is common for the Mail User Agent to hide all but the 'normal' headers, but to offer the ability to display the rest of the mail headers when requested.However, for an offramp or IFax device, once the message has been printed or faxed, it is gone, and the value of these headers for tracking is lost. It is unlikely that users will find configuring options convenient.

3.2. Disclosing dial-access strings

Including the RCPT TO, and possible the To: header, on the cover page
can cause unintentional disclosure of long-distance dial access
strings. To prevent such disclosure, the cover page should only
contain telephone numbers that conform to [FAXADDR].

3.3. Date

Note that, for a message that is stored and forwarded through one or
more Internet mail transfer agents, the time the message was sent by
the message will be different than the time the message is received.
An EIFax offramp SHOULD identify the time of fax transmission over
the PSTN in addition to, or instead of, the time of origin, in order
to satisfy the legal requirement of identifying the date of
transmission.

4. Content-Types

MIME defines a general mechanism by which many kinds of message
bodies may be sent over Internet mail. The content type of a message
body is indicated by the "Content-Type" header. A content type label
consists of a top level type ("image", "text", "application", etc.),
a subtype, and an optional set of parameters and parameter values.
New content-types may be registered. Some content types within
"message", "multipart" have a special role as structural designators.

[SERVICE] defines a minimum level of conformance for Facsimile using
Internet Mail. This section lays out the message content types that
are required or optional for EIFax over and above those required by
[SERVICE], and describes the contexts in which these formats might be
sent. The following summary is explained in subsequent sections.

```
   Type                    Sender                 Recipient
image/tiff (minimum F)    SHOULD                  MUST
image/tiff (beyond min)   SHOULD NOT              MAY
multipart/mixed           MAY                     MUST
multipart/alternative     MAY                     MUST
message/rfc822            SHOULD NOT              SHOULD
multipart/signed          MAY                     MUST accept,
                                                   SHOULD verify
multipart/encrypted       MAY                     MAY
message/delivery-status   SHOULD (when requested) MUST (return address)
message/disposition-notification
                          SHOULD (as appropriate) MUST (return address)
multipart/report          MAY (when appropriate)  MUST (return address)
text/plain                SHOULD NOT              MUST (return address)
any other file type       MAY (when appropriate)  MAY
```

These requirements apply to all EIFax senders and recipients. Note

that some 'recipient' requirements apply to the 'return address'
supplied by an EIFax sender rather than to all EIFax recipients.

4.1 Image data: image/tiff

[SERVICE] requires that all senders accept the minimum subset of the
"F" profile of TIFF for Fax [TIFF]. In addition, EIFax recipients
SHOULD support the entire range of the "F" profile, and MAY accept
other profiles.

EIFax senders MUST use the minimum subset of the "F" profile when the
capabilities of the recipient are unknown.

EIFax senders MAY use other applications of [TIFF] if the
capabilities of the recipient are known to include the handling of
those applications. See [EIFAX] for a description of how
capabilities of the remote system can be learned.

4.2 multipart/mixed

EIFax recipients MUST accept multiple message bodies to be
concatenated together on display using multipart/mixed. EIFax senders
MAY send such messages, as needed; it is allowable for individual
pages to be sent as separate image/tiff images within
multipart/mixed, although such use is not recommended.

Note that unregonized multipart messages, such as multipart/signed,
are interpreted as if they were multipart/mixed.

4.3 text/plain

EIFax senders SHOULD NOT send plain text messages. That is, EIFax is
not intended as a replacement for text messaging. However, in the
normal email environment, the prevalence of
"text/plain;charset=US-ASCII" as the baseline format for Internet
mail means that recipients that reject simple text messages would not
be able to properly function.

An EIFax recipient MUST accept plain text messages. It might convert
the text into the proper format for forwarding (via a text-to-fax
converter) or might operate by forward text messages on to another
recipient that is more capable, but in all cases, text messages MUST
be processed.

4.4 message/rfc822

In Internet mail, a message is often stored, saved, and later forward
to another email address. To support the ability to forward EIFax
messages to other EIFax recipients, EIFax recipients MUST accept
message/rfc822 encapsulated messages, and process them appropriately.

4.5 multipart/alternative

In Internet mail, the "multipart/alternative" [RFC2046] construct
allows for a sender to send a document in more than one format,
within the same message, in the case where the capabilities of the
recipient are not known and cannot be discovered. It is inefficient,
since the content is repeated multiple times, and is used sparingly.

In order to allow for the upgrade of facsimile messages to different
capabilities EIFax recipients MUST accept messages using
"multipart/alternative",as long as _one_ of the parts is acceptable,
and choose (from the enclosed content) one of the alternatives to
display or print. While [RFC 2046] specifies that systems SHOULD
chose the "best" type, based on the local environment and references,
limited memory EIFax recipients MAY handle "multipart/alternative" by
interpreting the _first_ acceptable type.

An EIFax sender MAY send a "multipart/alternative" that contains
any media types intermixed, as long as one of the parts is
allowable; the alternatives SHOULD appear in an order of _increasing_
faithfulness to the original content, as specified in [RFC2046].

4.6 multipart/signed, multipart/encrypted

In order to promote the use of authentication technology, EIFax
recipients MUST accept signed messages, and SHOULD attempt to verify
the signature, and indicate success or failure.

In order to promote the use of message security, EIFax recipients
SHOULD accept encrypted messages. Senders SHOULD be capable of
sending encrypted messages to those recipients for which encryption
is available.

See section 9 (Security)

4.7 message/delivery-status, message/disposition-notification, multipart/report

The details of EIFax confirmation are contained in section 7
(Confirmation). Note that section 8 (Capabilities) defines an
extension to message/disposition-notifications that allows recording
of the recipient's capabilities. Any EIFax sender (or, more
accurately, the return address specified by an EIFax sender) MUST be
able to accept and automatically process a "multipart/report"
message.

4.8 Other Internet Media types

EIFax recipients MAY also conditionally accept messages in other
formats. That is, there is no restriction that EIFax only be used for
TIFF or other MIME types. An EIFax sender SHOULD NOT send media that
it does not have some reliable indication that the recipient can
accept, but, using capabilities statements, it is possible for an

EIFax recipient (Internet mail user, IFax device, offramp) to accept
other media types, including "application/postscript",
"application/pdf", "image/jpeg", or (if properly labeled) media with
proprietary or vendor-specific information, using any registered type
[RFC2046].

5. Transport and Confirmation

Data transfer in EIFax is achieved using any acceptable Internet mail
transfer mechanism. The typical choice is SMTP, especially between
organizations across the Internet.

Section 6.1 discusses the various configurations for EIFax senders
and recipients. Section 6.2 discusses the use of standard SMTP for
Fax. Section 6.3 describes some ESMTP extensions that are recommended
for direct SMTP participants, and section 6.4 describes other
transport protocols that may be used for fax messaging.

5.1 EIFax configurations

EIFax senders (of all types) MAY use simple SMTP with no extensions,
deliverying store and forward messages directly to a 'mail drop'.
The protocol in [SUBMIT] is an alternative protocol. In addition,
EIFax senders of all types MAY directly connect to the final Mail
Transfer Agent of the recipient, looking up the recipient's MX DNS
entry [RFC974].

EIFax recipients (of all types) MAY be simple Internet mail user
agents. The using protocols such as POP [RFC1939] or IMAP [RFC2060].
Alternatively, an EIFax offramp or IFax device with a permanent
Internet connection MAY operate as a SMTP server.

For delivery to classic fax devices via an offramp (gateway),
Internet mail delivery refers to transport to the EIFax offramp,
rather than transport to the final, classic fax device.

The special case of "direct connection" provides additional
opportunities for optimization: the phrase "direct connection" will
be used to refer to the case where

   (a) the EIFax sender implements full mail routing [RFC 874]

   (b) the recipient is an EIFax offramp or IFax device which
       implements SMTP

   (c) a direct connection between the sender and recipient is
       available (e.g., both on the same local Intranet or both on the
       public Internet)

5.2 Standard SMTP protocol elements

[[I think SERVICE covered this sufficiently?

   The elements of SMTP are defined in RFC 821. This section points out
   appropriate use of these elements in EIFax.

5.2.1 MAIL FROM

   The MAIL FROM address indicates where errors (bounces) are to be
   sent. It may not have a relationship to the "From:" or "Sender:"
   mail headers.

The MAIL FROM address is converted to a Return-Path header by the
final delivering SMTP server. If the Return-Path is present, it
contains the address from the MAIL FROM parameter of the SMTP exchange
to which error messages MUST be sent (see [RFC1891] for additional
details).

5.2.2 RCPT TO

This is the actual recipient. Note that this doesn't necessarily
have any relationship to the "To:" or "CC:" message headers.

]]

5.3 SMTP extensions

   EIFax makes no mandatory requirements for additions or enhancements
   to the standard Internet Mail environment.

   However, there are some enhancements to SMTP delivery of mail which
   provide additional desirable functionality. These enhancements are
   available as SMTP extensions, as defined in [RFC1869].

```
     SMTP client
     -----------
       Extension                          recommendation
       ---------------                    -----------
       [RFC1891] Delivery notifications   SHOULD
       [RFC1830] Binary MIME              MAY
       [CAPS] Capabilities request/response SHOULD
       [SESSION] Immediate delivery       SHOULD
       [RFC2197] Pipelining               MAY
       [RFC1870] Size estimates           MAY
       [RFC1845] Checkpoint/Restart       MAY
       [RFC2034] Enhanced Error Codes     MAY

     SMTP server
     -----------
       Extension                          recommendation
       ---------------                    -----------
       [RFC1891] Delivery notifications   SHOULD
       [RFC1830] Binary MIME              MAY
```

```
        [CAPS] Capabilities request/response SHOULD
        [SESSION] Immediate delivery       MAY
        [RFC2197] Pipelining               SHOULD
        [RFC1870] Size estimates           MAY
        [RFC1845] Checkpoint/Restart       MAY
        [RFC2034] Enhanced Error Codes     SHOULD
```

   Each of these is explained below.

5.3.1 Delivery notifications

   This is a standard part of the Internet Mail environment [RFC1891].
   The requirements for delivery status notifications in EIFax are
   discussed in [EIFAX].

5.3.2 Binary MIME

   This is an experimental protocol for Internet Mail.[RFC1830] Its use
   would eliminate the overhead otherwise entailed by the required
   base64 encoding of the binary image data.

   The application of Binary MIME is RECOMMENDED for the "direct
   connect" case, but support of direct connect itself is OPTIONAL.

5.3.3 Capability request

   This extension is RECOMMENDED only for the "direct connect" case.

   The capability extensions in [CAPS] allow a SMTP server to tell the
   sending SMTP implementation about the format capabilities of various
   recipients. This allows efficient transfer of appropriate data. It is
   only useful when the ESMTP server is able to access direct and
   up-to-date information about the recipient; its use is recommended in
   that situation. If senders are able to generate documents in
   multiple formats, senders SHOULD implement this option.

5.3.3 Immediate delivery

   This extension is recommended for the "direct connect" case.

   The SESSION extension allows for immediate delivery end-to-end when
   there are live connections between sender and recipient. It is most
   appropriate when sender and recipient are both connected directly to
   the Internet. Based on user preferences (for immediate or delayed
   delivery, for example) EIFax senders MAY attempt to perform immediate
   delivery, and EIFax recipients SHOULD support immediate delivery.

5.3.4 Pipelining

   This extension is RECOMMENDED for any SMTP sender or recipient.

The pipelining feature reduces the total number of necessary round
trip delays in an SMTP transaction. This is especially useful in
high-latency networks. Senders SHOULD use pipelining if the
recipient supports it, and recipients SHOULD support pipelining.

5.3.5 Size estimates

The use of the [RFC1870] extension is recommended as a way of
avoiding sending a message that is too large through a mail gateway.
The conventional means of splitting large messages into smaller
message/partial components seems to be not as useful for Internet
Fax. The sending application might instead split a single fax into
multiple messages.

An onramp, which is unable to determine how many pages are in a fax,
is unable to utilize SIZE.

5.3.6 Checkpoint/Restart

The checkpoint/restart features of ESMTP would help onramps keep
connections alive. The utility of this feature for fax
onramp/offramps is uncertain.

5.3.7 Enhanced Error Codes

This extension is recommended for any SMTP participant. This allows
more useful status information to be returned to the sender.

5.4 Other transport mechanisms

The use of client/server desktop mailbox protocols like IMAP or POP
to retrieve EIFax messages from a message store is possible without
any special modifications to this specification. Email clients (and
web browsers) typically have a table for mapping from MIME type to
displaying application. The image/tiff and content can be configured
so that they invoke the correct viewer for rendering.

6. Operational Requirements and Limitations

This section describes operational requirements for several elements
and agents, and the limitations expected for such devices.

6.1 Onramp requirements

A fax onramp provides a service of accepting a PSTN fax telephone
call, and forwarding the fax via the (E)SMTP protocol, as outlined
herein. In order to meet the timeouts of PSTN fax, it is necessary
either that the onramp be able to store and guarantee complete
delivery of the message at a later time, or else that the next hop
SMTP server provide a positive response of message receipt within the
timeout interval.

In practice, this requirement means that the onramp's next hop must respond to the end-of-mail data (which is "." if using normal DATA, or BDAT LAST if using BDAT from [CHUNK]) within the nominal T.30 timeouts [T.30], believed to be 30 seconds.

6.2 Offramp requirements

<<this section should summarize requirements for offramps, it is incomplete>>

Fax offramps SHOULD support [RFC1891], [MDN], and [FAXDSN]. MAY generate cover pages based on message headers. Fax offramps MAY be capable of accepting higher resolution images and converting them into representations that can be accepted by the fax terminals that they are forwarding the message to. Fax offramps MAY support other message formats, such as "application/postscript".

[[also see section 6.3, smtp service extensions]]

6.3 IFax sender limitations

Internet fax machines usually act as an integrated Message User Agent, often only collecting telephone numbers from the user, but sometimes having a full alphanumeric keypad allowing entering usernames (looked up in a database) or a normal email address;

Internet fax machines are not expected to contain a disk drive or sufficient memory to buffer many pages of document images, e.g., to hold the document until confirmation is available.

IFax machines must either be capable of accepting text/plain messages, or forwarding them to a user's system which *is* capable of accepting such messages.

6.4 Limitations of Internet Mail

The following are limitations of Internet Mail agents that were considered in designing this protocol.

6.4.1 number of recipients

Some Internet Mail implementations may limit the number of recipients allowed for a single message; a redistribution agent for Internet Fax may not be able to queue a large number of outgoing fax messages, with the limit even possibly being a single recipient. However, ESMTP currently does not provide a mechanism for indicating the number of supported recipients.

If an SMTP server has reached its limit for maximum number of recipients, it should respond with a 4xx reply code which allows the SMTP client to retry sending later.

6.4.2 limitations on message size

   Some Internet Mail transfer agents may have a limit on the maximum
   message length, and may be unable to transfer long documents. This
   protocol does not limit the maximum message length. Implementers
   should understand that some mailers will be unable to accept
   excessively long messages.

6.4.3 Limitations on quick delivery and confirmation

   In many configurations of Internet Mail, the SMTP server does not
   handle final delivery to the recipient, but delivers the message to a
   message repository.

   SMTP delivery is usually not immediate, and confirmation of delivery
   (if any) is also not immediate. SMTP cannot, in general, guarantee
   to provide confirmation or non-confirmation of delivery. (Extensions
   to SMTP may allow immediate delivery.)

   In this case, "delivery" does not indicate that the message has been
   printed, but only that it is in a repository under the control of the
   recipient. If the ultimate EIFax recipient then subsequently
   retrieves and prints the message, the sender's expectation of
   "confirmation" may not correspond.

   There is no mechanism to regenerate lost confirmation messages, even
   when such facilities are deployed.

   Full functionality, such as reliable error messages and binary
   transport, will require careful selection of gateways (e.g., via MX
   records) to be used as forwarding agents. Nothing in this document
   precludes use of a general purpose MIME email packages (such as
   Eudora, Navigator, Internet Explorer) to read and compose EIFax
   messages.

7. Security Considerations

   The requirements for security in Internet Fax are enumerated in
   [FAXREQ].

   Security threats and their countermeasures are described in
   [SERVICE].

   Additional security threats created by new features are described in
   [EIFAX].

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A. Appendix A - Examples

A.1 Full fax message

The following message is a full-featured, all-options-enabled message addressed to two recipients.

<< not supplied yet >>

[A.2](#) **Example disposition notification (with capabilities)**

```
Date: Wed, 20 Dec 1997 00:19:00 (EDT) -0400
From: Fax +1 650 812 4333 <fax=+1-650-812-4333@offramp.xerox.com>
Message-Id: <199509200019.12345@offramp.xerox.com>
Subject: Disposition notification
To: Fax +1 555 555 1212 <fax=+1-555-555-1212@spammer.com>
MIME-Version: 1.0
Content-Type: multipart/report; report-type=disposition-notification;
        boundary="RAA14128.773615765"

--RAA14128.773615765

The message sent on 19 Dec 1997 11:55:00 (EDT) -0400 to
<fax=+1-650-812-4333@offramp.xerox.com> was successfully forward
to the telephone-based fax number <+1-650-812-4333>.

--RAA14128.773615765
content-type: message/disposition-notification

Reporting-UA: offramp.xerox.com; Offramp Megabucks Software
Original-Recipient: rfc822;fax=+1-650-812-4333@offramp.xerox.com
Final-Recipient: fax;+1-650-812-4333
Original-Message-ID: <199509192301.12345@spammer.com>
Disposition: automatic-action/MDN-sent-automatically; forwarded
Capabilities: tiff=M

--RAA14128.773615765
```

[A.3](#) **Failure to display**

```
Date: Wed, 20 Dec 1997 00:19:00 (EDT) -0400
From: Fax +1 650 812 4333 <fax=+1-650-812-4333@offramp.xerox.com>
Message-Id: <199509200019.12345@offramp.xerox.com>
Subject: Fax failure
To: Fax +1 555 555 1212 <fax=+1-555-555-1212@spammer.com>
MIME-Version: 1.0
Content-Type: multipart/report; report-type=disposition-notification;
        boundary="RAA14128.773615767"

--RAA14128.773615767

The message sent on 19 Dec 1997 11:50:00 (EDT) -0400 to
<fax=+1-650-812-4333@offramp.xerox.com> failed to forward
to the telephone-based fax number <+1-650-812-4333>.

--RAA14128.773615765
content-type: message/disposition-notification

Reporting-UA: offramp.xerox.com; Offramp Megabucks Software
Original-Recipient: rfc822;fax=+1-650-812-4333@offramp.xerox.com
Final-Recipient: fax;+1-650-812-4333
```

```
        Original-Message-ID: <199509192301.12347@spammer.com>
        Disposition: automatic-action/MDN-sent-automatically; processed, error
        capabilities="tiff=f,tiff=s,itut=0x1AEEF"

        --RAA14128.773615765
```

[A.4](#) multipart/alternative

[A.5](#) ...