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Indicating Supported Media Features Using Extensions to DSN and MDN

Status of this Memo

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1. Abstract

There is a need in Internet mail and Internet fax for a recipient to indicate the media features it supports so that messages can be generated by senders without exceeding the recipient’s abilities.

This memo describes a format for generating Message Disposition Notifications [RFC2298] and Delivery Status Notifications [RFC1894] which contain such information. This information can be used by senders to avoid exceeding the recipient’s capabilities when sending subsequent messages.

2. Introduction

The extensions described in this document can be used in Message Disposition Notifications [RFC2298] or Delivery Status Notifications [RFC1894], as appropriate for the implementation.

Note that both DSNs and MDNs have drawbacks: DSNs are not available between all senders and receivers, and MDNs require the receiver to disclose message disposition information (or, if using the "denied" disposition-type, the time the disposition notification was generated).

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].

3. Extensions for use by DSN and MDN

The following extension is available to both DSN [RFC1894] and MDN [RFC2298] messages.

For a DSN message, the following per-recipient fields are defined (section 2.3 of [RFC1894]). For an MDN message, the following extension fields are defined (section 3.1 of [RFC2298]). Using the language of [RFC2234]:

```
extension-field    = media-features CRLF

media-features     = "Media-Accept-Features" ":"
                      media-feature-tags
media-feature-tags = <*text as defined below,
                      with LWSP wrapping>
```

The <media-feature-tags> are defined in separate schema documents which MUST utilize the language described in [SYNTAX]. The schema MUST be registered following the registration requirements of [RFC2506].

3.1. Examples

The following examples assume there is a schema document which defines the tags shown.

3.1.1. Paper-size and Color

Assuming there is a schema document which describes the tags paper-size and color, the following example is valid:

```
Media-Accept-Features: (& (paper-size=a4) (color=binary) )
```

3.1.2. UA-Media, Paper-size, and Color

Assuming there is a schema document which describes the tags paper-size, color, and grey:

```
Media-Accept-Features: (& (| (paper-size=a4) (paper-size=letter) )
  (| (& (color=grey) (dpi=200) (dpi-xyratio=200/100) )
  (& (color=limited) (dpi=200) (dpi-xy=200/100) ) )
```

4. MTA Implmentation Recommendation

If the recipient’s MTA determines that a message cannot be processed, the recipient’s MTA is strongly encouraged to reject the message with a status code of 5.6.1 [RFC1893]. This status code may be returned

in response to the end-of-mail-data indicator if the MTA supports reporting of enhanced error codes [RFC2034], or after message reception by generating a delivery failure DSN ("bounce").

5. Security Considerations

Inaccurate media feature information could cause a denial of service, causing subsequent messages to be sent which the recipient is unable to process.

The media feature information could be inaccurate due to a malicious attack (spoofed DSN or MDN) or misconfiguration.

6. Acknowledgments

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7. References

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[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

[RFC2234] Crocker, D. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF", RFC 2234, November 1997.

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