

Internet Draft
Expires in six months

Glenn Parsons
Nortel Networks

Document: <[draft-ema-vpim-address-01.txt](#)>

March 10, 2000

VPIM Addressing

<[draft-ema-vpim-address-01.txt](#)>

Status of this Memo

This document is an Internet-Draft and is in full conformance with all provisions of [Section 10 of RFC2026](#).

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 valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet Drafts as reference material or to cite them other than as a "work in progress".

The list of current Internet-Drafts can be accessed at
<http://www.ietf.org/ietf/1id-abstracts.txt>

The list of Internet-Draft Shadow Directories can be accessed at
<http://www.ietf.org/shadow.html>

Copyright Notice

Copyright (C) The Internet Society (2000). All Rights Reserved.

Overview

This document lists the various VPIM email addresses that are currently in common use and defines several new address formats for special case usage. This draft is a part of the charter of the IETF VPIM BOF/WG.

The VPIM WG home page is: <http://www.ema.org/vpim>

Table of Contents

1. Abstract
2. Introduction
3. VPIM v2 Addressing
4. VPIM v3 Addressing
 - 4.1 VPIM v3 Submission LHS
 - 4.1.1 The VPIM Address
 - 4.1.2 The Voice Address
 - 4.1.3 The AMIS Address
 - 4.1.4 The Fax Address
 - 4.2 VPIM v3 Submission Addresses
 - 4.2.1 The vpim-email
 - 4.2.2 The voice-email
 - 4.2.3 The amis-email
 - 4.2.4 The fax-email
5. References
6. Security Considerations
7. Author's Address
8. Full Copyright Statement
9. [Appendix A](#): IANA Registration form for new value of GSTN address service-selector "VPIM"
10. [Appendix A](#): IANA Registration form for new value of GSTN address service-selector "VOICE"
11. [Appendix A](#): IANA Registration form for new value of GSTN address service-selector "AMIS"
12. [Appendix D](#): IANA Registration form for new value of GSTN address qualit-type1 keyword and value "SYSNUM"

1. Abstract

This document lists the various VPIM email addresses that are currently in common use and defines several new address formats for special case usage.

2. Introduction

[VPIM2] does not place any restrictions on the email address format. However, it does suggest to use a numeric LHS since many legacy voice mail systems only use digits to identify mailboxes. Further, it suggests a structure to handle private, international and extensions. The private format has become deployed in most existing VPIM v2 systems, further some systems will only accept messages from addresses with a numeric LHS.

[VPIM3] does not describe addressing at all. The LHS format is left to the discretion of the mailbox owner. However, it is

useful in some cases (like submission or tunneling) to specify a

Parsons

Expires 10/09/00

[Page 2]

LHS format. A format based on GSTN Addressing [[GSTN](#)] is presented.

3. VPIM v2 Addressing

[RFC 822](#) addresses are based on the domain name system. This naming system has two components: the local part, used for username or mailbox identification; and the host part, used for global machine identification.

The local part of the email address shall be a US-ASCII string uniquely identifying a mailbox on a destination system. For voice messaging, the local part is a printable string containing the mailbox ID of the originator or recipient. While alpha characters and long mailbox identifiers are permitted, most voice mail networks rely on numeric mailbox identifiers to retain compatibility with the limited 10 digit telephone keypad. As a result, many voice messaging systems may only be able to handle a numeric local part. The reception of alphanumeric local parts on these systems may result in: the address being mapped to some locally unique (but confusing to the recipient) number, the address being deleted (but still delivered), or in the worst case the entire message being rejected. Additionally, it may be difficult to create messages on these systems with an alphanumeric local part without complex key sequences or some form of directory lookup.

In the absence of a global directory, specification of the local part is expected to conform to international or private telephone numbering plans. It is likely that private numbering plans will prevail and these are left for local definition. However, it is recommended that public telephone numbers be noted according to the international numbering plan described in [E.164]. The indication that the local part is a public telephone number is given by a preceding '+' (the '+' would not be entered from a telephone keypad, it is added by the system as a flag). Since the primary information in the numeric scheme is contained by the digits, other character separators (e.g. '-') may be ignored (i.e. to allow parsing of the numeric local mailbox) or may be used to recognize distinct portions of the telephone number (e.g. country code). The specification of the local part of a VPIM address can be split into the four groups described below:

- 1) mailbox number
 - for use as a private numbering plan (any number of digits)
 - e.g. 2722@lucent.com
- 2) mailbox number+extension
 - for use as a private numbering plan with extensions
 - any number of digits, use of '+' as separator

- e.g. 2722+111@lucent.com
- 3) +international number
 - for international telephone numbers conforming to E.164

Parsons

Expires 10/09/00

[Page 3]

- maximum of 15 digits
 - e.g. +16137637582@nortelnetworks.com
- 4) +international number+extension
- for international telephone numbers conforming to E.164 maximum of 15 digits, with an extension (e.g. behind a PBX) that has a maximum of 15 digits.
 - e.g. +17035245550+230@ema.org

Deployed VPIM v2 systems typically support the first group, that is mailbox number on the LHS. Note that in many case the mailbox is simply the local number (e.g., in North America the 10-digit NANP number is used).

4. VPIM v3 Addressing

VPIM Version 3 places no restrictions on the form of the Internet address. VPIM Version 3 systems must be capable of receiving an arbitrary email address and generating a reply to that address. No inferences about the structure of the local part (LHS) should be necessary.

Recipients email addresses must be created in a form compatible with the recipients system and consistent with the address entry capabilities of a telephone user interface.

4.1.1 VPIM v3 Submission LHS

Limited capability voice mail machines may send messages by default to an external message submission gateway. These gateways will convert the unresolved telephone number of the recipient into a legitimate email address. Messages requiring address resolution must be sent to a submission system which will convert the submitted address into the route-able email address.

Additionally, limited capability email systems may send messages to a VPIM onramp system indicated on the RHS. The LHS would indicate that the message is to be sent as a VPIM message to the telephone number indicated. In this case, address and message translation is performed by the gateway.

Telephone numbers sent in a VPIM Version 3 submission mode MUST be sent in one of the following forms.

This is based on the format defined in [[PSTN-ADDR](#)].

The VPIM address

For voice messages that are intended to be sent as VPIM messages the service-selector element is defined to be

vpim-service-selector = "VPIM"

Parsons

Expires 10/09/00

[Page 4]

The resultant vpim-address and vpim-mbox are formally

```
vpim-address = vpim-mbox
               [ pstn-recipient ]

vpim-mbox = [ "VPIM=" ] ( global-phone / local-phone )
             [ sub-addr-spec ext-addr-spec ]

ext-addr-spec = [ ext-sep sub-addr ]
ext-sep = ( "/"EXT=" / "+" )
           ; note that "/EXT=" is case INSENSITIVE
           ; "+" is used for compatibility with current
           ; VPIM addressing
```

For clarity, here is an example of a very simple vpim-mbox:

```
VPIM=6137637582
```

4.1.2 The Voice address

For voice messages that are intended to be sent as a voice outdialing at the destination system, the service-selector element is defined to be

```
voice-service-selector = "VOICE"
```

The resultant voice-address and voice-mbox are formally

```
voice-address = voice-mbox
               [ pstn-recipient ]

voice-mbox = "VOICE=" ( global-phone / local-phone )
              [ sub-addr spec ] [post
                                -
                                -sep post-dial]
```

For more clarity, here is an example of a very simple voice-mbox:

```
VOICE=+3940226338
```

4.1.3 The AMIS address

For voice messages that are intended to be sent as AMIS (Audio Messaging Interchange Specification) voice mail messages, the service-selector element is defined to be

```
amis-service-selector = "AMIS"
```

The resultant amis-address and amis-mbox are formally

amis-address = amis-mbox

Parsons

Expires 10/09/00

[Page 5]

```
amis-mbox = "AMIS=" amis-mailbox
           [ "/SYSNUM=" amis-sysnum ]
           ; note that "/SYSNUM=" is case INSENSITIVE

amis-mailbox = ( amis-a / amis-d )

amis-a = amis-a-number

amis-d = [ amis-mailbox-numberplan ][ "+" ] amis-mailbox-id
         [ "+" ] [ amis-mailbox-extension ]
         ; The "+" separators are used to be compatible
         ; the X.400 AMIS-D mailbox definition --
         ; if more than one element is present, both
         ; "+" must appear. Note also that the total
         ; length of this field is restricted to 32
         ; characters by AMIS-D.

amis-mailbox-numberplan = 1*VCHAR

amis-mailbox-id = 1*16(VCHAR)

amis-mailbox-extension = 1*VCHAR

amis-sysnum = amis-a-number

amis-a-number = ( amis-PSTN-number / amis-private-number )

amis-PSTN-number = int-country-code "+"
                  area-code "+"
                  local-number "+"
                  ; This is in agreement with ITU E.164 [12]
                  ; specification and per [AMISA] - the
                  ; maximum length is 15 numeric digits.
                  ; The "+" separators are used to be
                  ; compatible with the X.400 AMIS-D
                  ; mailbox definition and replace the '#'
                  ; separators of AMIS-A

amis-private-number = "0++" local-number "+"
                    ; [AMISA] indicates that maximum permitted
                    ; length of the private number is 14
                    ; digits

int-country-code = 1*4(DIGIT)

area-code = 1*(DIGIT)

local-number = 1*(DIGIT)
```


For more clarity, here is an example of a simple AMIS-A amis-mbox:

```
AMIS=+1/401+3278144+/SYSNUM=1+401+3279542+
```

4.1.4 The fax address

As defined in [[FAX-ADDR](#)]

4.2 VPIM v3 Submission Addresses

Based on [RFC2303](#), these are the resultant email addresses for the LHS presented above. VPIM v3 systems that support submission MUST accept, translate (if necessary), and forward messages sent to these addresses.

4.2.1 The vpim-email

The vpim-email element is a specific version of pstn-email for VPIM over the Internet e-mail transport system, where the service-selector distinction is set to "VPIM".

```
vpim-email = ["/"] vpim-address ["/"] "@" mta-I-pstn
```

In this case the mta-I-pstn will usually point to a VPIM capable messaging system where the attached message will be delivered properly.

4.2.2 The voice-email

The voice-email element is a specific version of pstn-email for the voice outdialing over the Internet e-mail transport system, where the service-selector distinction is set to "VOICE".

```
voice-email = ["/"] voice-address ["/"] "@" mta-I-pstn
```

In this case the mta-I-pstn will usually point to a device that will perform an outdial, that is for example, make a telephone call to the specified number and play a voice attachment.

4.2.3 The amis-email

The amis-email element is a specific version of pstn-email for the AMIS over the Internet e-mail transport system, where the service-selector distinction is set to "AMIS".

amis-email = ["/"] amis-address ["/"] "@" mta-I-pstn

Parsons

Expires 10/09/00

[Page 7]

In this case the mta-I-pstn will usually point to a device that acts as a gateway to an AMIS network where the attached voice message will be delivered properly.

4.2.4 The fax-email

As defined in [[FAX-ADDR](#)]

5. References

[AMIS-A] Audio Messaging Interchange Specifications (AMIS) - Analog Protocol Version 1, Issue 2, February 1992.

[AMIS-D] Audio Messaging Interchange Specifications (AMIS) - Digital Protocol Version 1, Issue 3 August 1993.

[E164] CCITT Recommendation E.164 (1991), Telephone Network and ISDN Operation, Numbering, Routing and Mobile Service - Numbering Plan for the ISDN Era.

[GSTN] Allocchio, C., "GSTN Address Element Extensions in e-mail Services", <[draft-ietf-fax-fulladdr-06.txt](#)>, Work In Progress

[RFC822] Crocker, D., "Standard for the Format of ARPA Internet Text Messages", STD 11, [RFC 822](#), UDEL, August 1982.

[VPIM2] Vaudreuil, Greg, Parsons, Glenn, "Voice Profile for Internet Mail, Version 2", [RFC 2421](#), September 1998.

[VPIM3] Vaudreuil, Greg, Parsons, Glenn, "Voice Profile for Internet Mail, Version 3", <[draft-ema-vpimv3-00.txt](#)>, Work in progress.

[FAX-ADDR] Allocchio, C., "Minimal FAX address format in Internet Mail", [RFC 2304](#), March 1998.

[PSTN-ADDR] Allocchio, C., "Minimal PSTN address format in Internet Mail", [RFC 2303](#), March 1998.

6. Security Considerations

None beyond those already identified in [[VPIM2](#)] and [[VPIM3](#)].

7. Author's Address

Glenn W. Parsons
Nortel Networks
P.O. Box 3511, Station C
Ottawa, ON K1Y 4H7
Phone: +1-613-763-7582
Fax : +1-613-763-4461
Email: gparsons@nortelnetworks.com

8. Full Copyright Statement

"Copyright (C) The Internet Society (2000). All Rights Reserved.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this paragraph are included on all such copies and derivative works. However, this document itself may not be modified in any way, such as by removing the copyright notice or references to the Internet Society or other Internet organizations, except as needed for the purpose of developing Internet standards in which case the procedures for copyrights defined in the Internet Standards process must be followed, or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by the Internet Society or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and THE INTERNET SOCIETY AND THE INTERNET ENGINEERING TASK FORCE DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE."

9. [Appendix A](#): IANA Registration form for new value of GSTN address service-selector "VPIM"

To: IANA@isi.edu

Subject: Registration of new values for the GSTN address service-selector specifier "VPIM"

service-selector name:

VPIM

Description of Use:

VPIM - specify that the GSTN address refers to a voice mailbox that is intended to accept a VPIM message.

For a complete description refer to "VPIM Addressing", [draft-ema-vpim-address-01.txt](#).

Security Considerations:

See the Security Consideration section of "VPIM Addressing", [draft-ema-vpim-address-01.txt](#).

Person & email address to contact for further information:

Glenn W. Parsons
Nortel Networks
P.O. Box 3511 Station C
Ottawa, On K1Y 4H7
Canada
Phone: +1-613-763-7582
Fax : +1-613-4461
Email: gparsons@nortelnetworks.com

10. [Appendix B](#): IANA Registration form for new value of GSTN address service-selector "VOICE"

To: IANA@isi.edu

Subject: Registration of new values for the GSTN address service-selector specifier "VOICE"

service-selector name:

VOICE

Description of Use:

VOICE - specify that the GSTN address refers to a voice device that is intended to be sent a voice message via an 'outdialing'.

For a complete description refer to "VPIM Addressing", [draft-ema-vpim-address-01.txt](#).

Security Considerations:

See the Security Consideration section of "VPIM Addressing", [draft-ema-vpim-address-01.txt](#).

Person & email address to contact for further information:

Glenn W. Parsons
Nortel Networks
P.O. Box 3511 Station C
Ottawa, On K1Y 4H7
Canada
Phone: +1-613-763-7582
Fax : +1-613-4461
Email: gparsons@nortelnetworks.com

11. [Appendix C](#): IANA Registration form for new value of GSTN address service-selector "AMIS"

To: IANA@isi.edu

Subject: Registration of new values for the GSTN address service-selector specifier "AMIS"

service-selector name:

AMIS

Description of Use:

AMIS - specify that the GSTN address refers to a voice mailbox that is intended to be sent an AMIS (Audio Messaging Interchange Specification) voice mail message.

For a complete description refer to "VPIM Addressing", [draft-ema-vpim-address-01.txt](#).

Security Considerations:

See the Security Consideration section of "VPIM Addressing", [draft-ema-vpim-address-01.txt](#).

Person & email address to contact for further information:

Glenn W. Parsons
Nortel Networks
P.O. Box 3511 Station C
Ottawa, On K1Y 4H7
Canada
Phone: +1-613-763-7582
Fax : +1-613-4461
Email: gparsons@nortelnetworks.com

12. [Appendix D](#): IANA Registration form for new value of GSTN address qualif-type1 keyword and value "SYSNUM"

To: IANA@isi.edu

Subject: Registration of new values for the GSTN address
qualif-type1 element "sysnum"

qualif-type1 "keyword" name:

sysnum

qualif-type1 "value" ABNF definition:

sysnum = 1*(DIGIT / "+")

Description of Use:

sysnum is used to specify the numeric optional AMIS sub-address element as described in "VPIM Addressing", [draft-ema-vpim-address-01.txt](#).

Use Restriction:

The use of "SYSNUM" is restricted to "AMIS" service-selector, is it has no meaning outside the AMIS service.

Security Considerations:

See the Security Consideration section of "VPIM Addressing", [draft-ema-vpim-address-01.txt](#).

Person & email address to contact for further information:

Glenn W. Parsons
Nortel Networks
P.O. Box 3511 Station C
Ottawa, On K1Y 4H7
Canada
Phone: +1-613-763-7582
Fax : +1-613-4461
Email: gparsons@nortelnetworks.com

