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IFAX service of ENUM

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Abstract

This document describes the functional specification and the definition of the ENUM NAPTR record, for IFax service. IFax is "Facsimile using Internet Mail". For this use, the DNS returns the email address of the referenced IFax system. This mechanism allows email-based fax communication to use telephone numbers, rather than requiring that the sender already know the recipient email address.

1. Functional Specification

An IFax client makes an [ENUMbis] DNS query, using the target

system's telephone number. The returned NAPTR record specifies an email address that is to be used for reaching the target system. The email address is then used in accordance with "Simple Mode of Facsimile using Internet Mail" [RFC2305] or "Extended Facsimile using Internet Mail" [RFC2532]. "Full Mode Fax Profile for Internet Mail" [FFPIM] is applied when it is approved as an Internet standards-track specification.

2. IFax service Registration

Service Name : "E2U+ifax"

Type: "ifax"

Subtype: "mailto"

URI Scheme: "mailto"

The URI Scheme is "mailto" because facsimile is a profile of standard Internet mail and uses standard Internet mail addressing.

Functional Specification: see section 1

Security Considerations: see section 3

Intended usage: COMMON

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3. Security Consideration

DNS, as used by ENUM, is a global, distributed database. Thus any information stored there is visible to anyone anonymously. Whilst this is not qualitatively different from publication in a Telephone Directory, it does open the data subject to having "their" information collected automatically without any indication that this has been done or by whom.

Such data harvesting by third parties is often used to generate lists of targets for unrequested information; in short, they are used to address "spam". Publication of a telephone number in ENUM, especially when it is an associated Internet Fax service, may be used to send "junk faxes" for example.

In the case of electronic mail, users subscribed to mailing lists can have "sacrificial" email accounts. These special-purpose addresses help the user to filter out unrequested email that is sent to them. This is not so easy with published telephone numbers. The PSTN E.164 number assignment process is much more involved and less flexible; usually a single E.164 number (or a fixed range of numbers) is associated with each PSTN access. Thus it is not possible to use a "sacrificial" phone number.

Due to the implications of publishing data on a globally accessible database, as a principle the data subject MUST give their explicit informed consent to data being published in ENUM.

Internet Fax is based on use of existing Internet mail. Developers

and users should also consider the Security Consideration section in [RFC2305] and [RFC2532].

In addition to the specific security considerations given above, the Security Consideration section of [ENUMbis] applies to this document.

4. Example

The following is an example of the use of IFax service in a NAPTR record.

```
$ORIGIN 4.3.2.1.6.7.9.8.6.4.e164.arpa
  IN NAPTR 10 10 "u" "E2U+ifax:mailto"
      "!^.*$!mailto:toyo@example.com!"
```

5. IANA CONSIDERATIONS

This specification creates a DNS NAPTR registration, according to the terms specified in [ENUMbis]

The registration details are contained in section 2, "Fax service Registration", above.

6. REFERENCES

6.1 NORMATIVE REFERENCES

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

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[RFC2305] Toyoda, K., Ohno, H., Murai, J. and D. Wing, "A Simple Mode of Facsimile Using Internet Mail", RFC 2305, March 1998.

[RFC2532] Masinter, L., D. Wing, "Extended Facsimile Using Internet Mail", March 1999

[FFPIM] Crocker, D., G. Klyne, "Full-mode Fax Profile for Internet Mail", DRAFT-IETF-FAX-FFPIM-04(work in progress), June 2004

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