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Mapping between X.400 and RFC 822 for a closed RFC 822 Community

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Abstract
This document proposes a modification of the X.400/RFC 822 mapping described in RFC 1327, for a specific type of application.

This document will be submitted to the IETF X.400 OPS WG for suggested progress as a standards track RFC.

1 Problem Statement

An organisation may choose to have all external mail access using X.400 [MHS88]. **Reasons for this include:**

- Policy

- Choosing a single access mechanism to ensure coherency

- Security and traceability reasons

Such an organisation may wish to run RFC 822 user agents internally, as there are a number of sound products available. Mapping between RFC 822 and X.400 according to RFC 1327 requires the use of a globally unique mapping. Maintenance of this mapping is a significant overhead [Cro82, Kil92].
The reason for maintenance of the globally unique mapping is to maintain coherency between gateways. For a closed community, there is no fundamental requirement for this consistency. This document proposes a modification of RFC 1327 which does not utilise a globally unique mapping. This results in the generation of addresses which follow RFC 822 syntax, but have local semantics.

2 Mechanism

2.1 Use with private tables

The basic mechanism is to follow RFC 1327, but use a private mapping common to all of the gateways in the community. The mappings should be defined to produce addresses which are convenient to the community. Typically, the tables will be simple, and lead to addresses which are algorithmically related to the X.400 address. Mappings may be defined to make local addresses short and convenient.

WARNING: This specification should not be used where there is or may in the future be a direct RFC 822 connection into the global RFC 822 community.

2.2 Use without tables

A special variant is to perform the mapping without any mapping tables. In this case, all the RFC 822 addresses will have a full LHS encoding, and the domain is set according to one of two variants.

1. **Where there is no external RFC 822 connection.** Here the domain is

set to MHS.

2. **Where there is an external RFC 822 connection, the domain should be set to the local RFC 822 domain. This will lead to inefficient** RFC 822 routing, and so should be avoided if there is extensive external RFC 822 traffic.

2.3 Domain Defined Attributes

When mapping from X.400 to RFC 822, it is important that any RFC-822 DDA is not interpreted as a locale RFC 822 address (as allowed in the note on page 55 of RFC 1327). Rather, it should be encoded on the LHS, so that a replyable address is generated.

The closed RFC 822 community should, if possible, be set up so that all local RFC 822 addresses are mapped to X.400 addresses without DDAs. If a DDA must be generated, the values CLD-822, CLD822C1, CLD822C2, and CLD822C2 shall be used instead of the usual RFC 1327 Domain Defined Attributes. This will prevent a remote RFC 1327 gateway from interpreting a local RFC 822 address as if it had global semantics.

References

[Cro82] D.H. Crocker. Standard of the format of ARPA internet text messages. Request for Comments 822, University of Delaware, August 1982.

[Kil92] S.E. Kille. Mapping between X.400(1988) / ISO 10021 and RFC 822. Request for Comments 1327, Department of Computer Science, University College London, May 1992.

[MHS88] CCITT recommendations X.400 / ISO 10021, April 1988. CCITT SG 5/VII / ISO/IEC JTC1, Message Handling: System and Service Overview.