

**Procedures for Formalizing, Evolving, and Maintaining
the Internet X.500 Directory Schema**

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1. Status of this Memo

The goal of the X.500 schema working group is to specify a set of procedures for reviewing, publicizing, and maintaining schema elements for use in Internet applications using OSI Directory Services (X.500).

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This Internet Draft expires December 25th, 1994.

Distribution of this memo is unlimited. Comments and critiques of this document, and new or updated schema definitions should be sent to x500-schema@internic.net. Discussion about the Internet X.500 schema should be carried out on the OSI-DS mailing list (osi-ds@cs.ucl.ac.uk).

2. Abstract

The IETF Schema Working Group proposes a set of procedures for

reviewing, publicizing, and maintaining schema elements for use in Internet applications using OSI Directory Services (X.500).

3. Goals of the Internet Schema Procedures

The goals embodied in the procedures documented in this memo are four-fold:

- To identify a repository and appropriate useful formats for publicizing and distributing schema elements (object classes and attributes) to the Internet community.
- To facilitate broad-based experimentation with new applications of X.500 by publicizing experimental schema elements.
- To maintain a stable production schema for the Internet, including definitions both for common core of elements and application-specific subschemas
- To avoid the overlap of schema element functionality where possible.

4. Collection of Schema Elements

The Internet Directory Schema will evolve from the status quo as represented in a forthcoming [Internet Draft | RFC] documenting the current "baseline" schema elements. This baseline is expected to include both those object classes and attributes with applicability to a wide variety of applications (the Core Schema), and certain elements arising from specific applications (subschemas), some of which have been developed in other IETF WGs.

In general, within the IETF, the X.500 schema group will concern itself with evolving the Core schema while encouraging application-specific subschemas to be developed by experts in the respective applications.

The schema group aims to align schema element definitions where appropriate between the Internet schema and others within the Directory community. The publicizing of the Internet schema for external consumption is one avenue for this, and consideration of schema elements documented in external sources is another. Two such external sources are:

- Standing documents of the North American Directory Forum
- "F" series International Standard Profiles (ISPs) for use of the Directory, developed by the Regional Workshops (AOW, EWOS, OIW) and published in ISO/IEC 10616.

5. Publication of Schema Elements

The schema group recognizes short-term and long-term mechanisms for distributing definitions of Internet schema elements. Both mechanisms involve the use of the InterNIC Directory and Database Services as a repository:

Short-term:

Element definitions will be made available for anonymous FTP from the InterNIC in <ftp://ds.internic.net/pub/src/x500/schema>, and via Gopher (`gopher://ds.internic.net/1pub/src/x500/schema`). The FTP archive will include ASN.1 definitions accompanied by text describing the semantics and use of each object class or attribute. In addition, native formats for widely deployed X.500 implementations, particularly the QUIPU OID Table format, will be included where practical.

Long-term:

When 1993 schema publication extensions to the Directory standard are implemented widely in the Internet, these facilities will be used to distribute element definitions from the InterNIC DSA. If slow progress of deployment of schema publication extensions impedes this transition, consideration will be given to defining a 1988-compatible directory schema for interim publication of schema elements. In this case, a migration path to the 1993 format for schema publication operational attributes will be a priority.

In addition to on-line publicizing of schema elements, an informational RFC documenting the Internet schema will be issued on a six-month update cycle. This RFC will reflect the state of the InterNIC schema repository at the time of publication.

Subschemas defined by other IETF WGs or external groups in the Directory community but accepted by the schema group as stable will not be reproduced in the regularly updated schema RFC. Rather, the schema RFC will contain pointers to documents produced by these other groups which include the definitions.

Wherever possible, external groups will be encouraged to submit documents containing their subschemas for publication as RFCs, in order to allow interested parties to derive the Internet schema entirely from a reading of the X.500 standard and selected RFCs.

6. Procedures for Expanding the Internet Schema

The schema group will make available a template for submission of schema elements for publication and consideration. The template, to be defined in a later edition of this document, will request a definition for the

syntax of the object class or attribute, sufficient details on the schema elements including information about the submitter, date of submission, mailing-list where discussion is being held, status of the schema segment, etc. The template will be simple and will be processed to produce an ASN.1 definition for the elements.

The completed template will be submitted by e-mail to the alias "x500-schema@internic.net".

Advancement of an experimental schema element to production status will follow a period of experimentation and acceptance by the submitting WG, and acceptance by the schema group. In particular, authors who submit new schema elements (initially assigned experimental classification) will be expected to make a good faith effort to progress the schema using appropriate working-groups and other standards procedures towards an Internet standard. Results from the period of experimentation, schema group and WG consensus will be the basis for decisions on advancement of candidate subschemas.

If it becomes apparent that there is no active experimentation with an experimental status schema element and/or no efforts to progress them as Internet standards, the schema elements may be retired after appropriate notification.

In some circumstances, more than one subschema aimed at addressing the requirements of the same application may be developed. The schema group will accept and publicize such overlapping subschemas as experimental. However, only one competing schema proposal for an application will be advanced by the schema group to production status. As with decisions on advancement to production status, results from the period of experimentation, schema group and WG consensus will be the basis for identifying the preferred among competing subschemas.

7. Object Identifiers

The schema group does not aim to align all Internet schema elements under a single OID arc. It is appropriate for other groups already having registered attributes and object classes under their own respective OID arcs to retain ownership of those definitions, and advancement of schema elements from experimental to production status does not imply a change of OID. The schema group will advance the registration process under an Internet arc for elements defined by external groups not wishing to maintain OIDs in the long term.

8. Security Considerations

Security considerations are not discussed in this memo.

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