

Network Working Group
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ACAP Personal Addressbook Dataset Class

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Abstract

IMAP [[IMAP4](#)] allows nomadic users to access their mailstore from any client, but it does not support storage of personal addressbooks. Application Configuration Access Protocol [[ACAP](#)] provides an ideal mechanism for storage of personal addressbooks. While ACAP permits the definition of vendor specific solutions to this problem, having a standard addressbook dataset class permits clients from different vendors to interoperably share the same personal addressbooks. This specification defines a standard dataset class for personal addressbooks.

Personal addressbooks differ from white pages services because all the attributes and entries are controlled by the user who owns the addressbook rather than a directory administrator. The user or the clients he uses may add new attributes at any time and some of these attributes are not suitable for a white pages service.

Table of Contents

Status of this memo	<u>i</u>
Abstract	<u>i</u>
<u>0.5.</u> Open Issues	<u>1</u>
<u>1.</u> Conventions Used in this Document	<u>1</u>
<u>2.</u> ACAP Personal Addressbooks	<u>1</u>
<u>2.1.</u> ACAP Addressbook Dataset Class	<u>1</u>
<u>2.2.</u> ACAP Addressbook Capability	<u>1</u>
<u>2.3.</u> ACAP Addressbook Hierarchy	<u>1</u>
<u>3.</u> Recommended ACAP Attributes	<u>1</u>
<u>3.1.</u> Basic Attributes	<u>2</u>
<u>3.2.</u> Naming Attributes	<u>3</u>
<u>3.3.</u> Reference Attribute	<u>4</u>
<u>3.4.</u> Computer Communication Attributes	<u>4</u>
<u>3.5.</u> Telephone Number Attributes	<u>6</u>
<u>3.6.</u> Postal Address Attributes	<u>7</u>
<u>3.7.</u> Commentary Attributes	<u>7</u>
<u>3.8.</u> Locational Attributes	<u>8</u>
<u>4.</u> Examples	<u>9</u>
<u>5.</u> References	<u>10</u>
<u>6.</u> Security Considerations	<u>11</u>
<u>7.</u> Authors' Addresses	<u>11</u>
Appendix	<u>12</u>
<u>A.</u> Attribute Index	<u>12</u>

0.5. Open Issues

- 1) add addressbook.Source to refer to a directory (or other source) from which the entry was imported?
- 2) Certificates?
- 3) Interaction with vCard?

1. Conventions Used in this Document

The key words "MUST", "MUST NOT", "SHOULD", "SHOULD NOT", and "MAY" in this document are to be interpreted as defined in "Key words for use in RFCs to Indicate Requirement Levels" [[KEYWORDS](#)].

The attribute syntax specifications use the Augmented Backus-Naur Form (ABNF) notation as specified in [[IMAIL](#)].

When UTF-8 [[UTF8](#)] is referred to in this document, it refers to Unicode version 2.0, and not Unicode version 1.1.

2. ACAP Personal Addressbooks

2.1. ACAP Addressbook Dataset Class

Datasets whose names begin with "/addressbook" are assumed to contain addressbook entries as defined in this specification.

2.2. ACAP Addressbook Capability

The "addressbook.Expand.Address" and "addressbook.Expand.Complete" attributes require active client or server support. The attribute "capability.addressbook.expand" in the "/capability/~addressbook" entry is non-NIL if they are supported.

2.3. ACAP Addressbook Hierarchy

Hierarchical addressbooks SHOULD be represented using ACAP hierarchy. Any entry in an addressbook can also be a hierarchy node by setting the "subdataset" attribute. This structure is used to represent both sub-addressbooks and mailing lists.

3. Recommended ACAP Attributes

The following attributes MAY be used in an ACAP addressbook entry. An addressbook entry MUST have an "entry" attribute, and one or more of "addressbook.Alias", "addressbook.CommonName" and "addressbook.Email" attributes. The purpose of this rule is to

make it possible to easily select an attribute which can be displayed to a user.

An addressbook entry MUST have at most one of the attributes "addressbook.List", "addressbook.Reference", and "addressbook.Email". The purpose of this rule is to force each entry to be either a regular addressbook entry with an Email address, a pointer to another addressbook entry, or a distribution list. In order to resolve ambiguities, if there is an "addressbook.List" attribute, both "addressbook.Email" and "addressbook.Reference" attributes MUST be ignored. If there is no "addressbook.List" attribute but there is an "addressbook.Email" attribute, then the "addressbook.Reference" attribute MUST be ignored. Beyond these rule, clients MAY choose any subset of these attributes as well as using registered private attributes. Clients are encouraged to provide a way to view all textual attributes in an entry regardless of whether the client knows the special semantics associated with them.

The ABNF defines the content of the attribute values prior to their encoding as an ACAP string. Clients MUST conform to the syntax when generating these attributes, but MUST NOT assume that the attribute values will conform to this syntax on access. Servers MUST NOT enforce the syntax.

Unless otherwise stated, all attributes in this specification are single-valued and textual.

3.1. Basic Attributes

These attributes are defined in ACAP [[ACAP](#)] and have meaning in all dataset classes. This section describes how they are used in an addressbook dataset.

entry

The "entry" attribute is a unique string used to refer to an addressbook entry within an addressbook dataset. It is client defined and may not be suitable for display to users.

subdataset

The "subdataset" attribute is used both for addressbook hierarchy and for addressbook distribution lists. It indicates there is another addressbook dataset underneath this entry. If there is also an "addressbook.List" attribute, then this entry is an email distribution list and the subdataset contains the members of that list. If "subdataset" exists, then any "addressbook.Email" or "addressbook.Reference" attributes SHOULD be ignored.

3.2. Naming Attributes

These attributes contain information about the name of the person or entity to which the entry refers.

addressbook.CommonName

The "addressbook.CommonName" attribute holds the full common name of the person or entity to which the addressbook entry refers. If a person has multiple names, they may be stored in the "addressbook.AlternateNames" attribute.

abook-common-name = 1*TEXT-UTF8-CHAR

addressbook.GivenName

The "addressbook.GivenName" attribute holds the given name of the person to which the addressbook entry refers.

abook-given-name = 1*TEXT-UTF8-CHAR

addressbook.Surname

The "addressbook.Surname" attribute holds the surname (or family name) of the person to which the addressbook entry refers.

abook-surname = 1*TEXT-UTF8-CHAR

addressbook.AlternateNames

This is a multi-value attribute containing a list of alternate names for the entry.

abook-alt-name = 1*TEXT-UTF8-CHAR
;; multi-valued

addressbook.Alias

A shorthand way to refer to this entry (e.g. a nickname). Clients MUST NOT store characters which fall into the class of "white-space" or "specials" as defined in Internet Message Format [[IMAIL](#)] with the exception of period ("."). The alias is typically used by clients as a way for users to quickly refer to a particular addressbook entry via a type-in field. For this to work best, clients are encouraged to avoid using the same alias in multiple entries within a dataset.

abook-alias = 1*("<." or any TEXT-UTF8-CHAR except
white-space or specials as defined in [[IMAIL](#)])>

addressbook.CommonName.MIME

This contains the CommonName encoded as a US-ASCII string according to the rules in MIME Headers [MIME-HDRS]. This is set when a personal addressbook entry is created from an Internet Mail Address [IMAIL] which uses MIME Header encoding for the common name portion of the address. This is the preferred attribute to use for the phrase portion of the Internet Mail Address as it preserves the sender's preferred character set. Otherwise, the phrase is constructed from the "addressbook.CommonName" field with all non US-ASCII characters encoded according to MIME headers using UTF-8. This attribute SHOULD be NIL if the CommonName is made up of only US-ASCII characters or the sender's preferred character set is UTF-8.

```
abook-mime-hdr      = phrase
                    ;; as defined in [IMAIL]
```

3.3. Reference Attribute**addressbook.Reference**

This addressbook entry is a reference to another ACAP addressbook entry, or an LDAP white pages entry. The reference is in the form of a relative URL. Clients SHOULD support this attribute for the local ACAP server and MAY support it for other ACAP or LDAP servers.

```
abook-reference      = relativeURL
                    ;; as defined in [REL-URL]
                    ;; ACAP relative URL is defined in [ACAP]
```

3.4. Computer Communication Attributes

These attributes are related to computer communication. The format for email addresses MUST be canonicalized so it is suitable for use in both [IMAIL] and [SMTP]. This restricts the format for an addr-spec as follows. This uses terminals from [IMAIL], except that free insertion of linear-white-space is not permitted.

```
canon-addr-spec      = canon-local-part "@" domain
```

```
canon-local-part     = quoted-string / (atom *("." atom))
```


addressbook.Email

The primary email address for contacting this entry. Alternate email addresses may be indicated by appending an appropriate qualifier to the end of the attribute name, such as ".work" for a work-related email address, ".personal" for a personal email address, or ".alt" for a multi-valued list of alternate email addresses of equal weight.

abook-email = canon-addr-spec

addressbook.List

If both this attribute and the "subdataset" attribute exist then this entry is an email distribution list. The entries in the subdataset are the members of the list. When this attribute exists, then any "addressbook.Email" or "addressbook.Reference" attributes should be ignored. If this attribute exists but no "subdataset" attribute exists, then this attribute should be ignored.

abook-list = "1"

addressbook.Expand.Address

This is an operational attribute which is present if the ACAP server announces the ADDRESSBOOK capability. It's value is computed by the ACAP server. The result is a CRLF-separated list of all the addr-spec from the addressbook.Email attributes of this entry, any entry referred to by "addressbook.Reference" on the local server, and any entries contained in the "subdataset" on this server. This expansion is recursive.

abook-expand-addr = canon-addr-spec *(CRLF canon-addr-spec)

addressbook.Expand.Complete

This is an operational attribute which is present if the ACAP server announces the ADDRESSBOOK capability. It's value is computed by the ACAP server. The result is a CRLF-separated list of all the Internet Mail Addresses as computed from the addressbook.Email, addressbook.CommonName, and addressbook.CommonName.MIME attributes. The entry itself, any entry referred to by "addressbook.Reference" on the local server, and any entries contained in the "subdataset" on the local server are expanded. This expansion is recursive.

abook-expand-compl = mailbox *(CRLF mailbox)
;; mailbox defined in [\[IMAIL\]](#) without folding

addressbook.RequestAddress

If the entry refers to a mailing list address rather than a person, then this attribute may be used to store the address used to subscribe or unsubscribe from the mailing list. If not present, clients should default the value to the standard request address defined in [[MBOX-NAMES](#)].

abook-request = canon-addr-spec

addressbook.Subscribed

If this attribute is non-NIL, then the entry refers to a mailing list address to which the addressbook's owner is currently subscribed.

abook-subscribed = "1"

addressbook.PreferredTextFormat

This attribute contains the media type and parameters for the preferred text format of for the mailbox referred to by the "addressbook.Email" attribute. The syntax does not permit free insertion of linear white space as defined in [[IMAIL](#)]. Values can include "text/enriched", "text/html", "text/plain", "multipart/alternative". There is no defined default value, although clients should be aware that the only format all recipients support is "text/plain; charset=us-ascii".

abook-text-format = type "/" subtype *(";" SPACE parameter)
;; as defined in [[MIME-TYPES](#)]

addressbook.HomePage

This contains the URL [[BASIC-URL](#)] to the home page describing the person or entity to which the addressbook entry refers.

abook-home-page = url
;; as defined in [[BASIC-URL](#)]

[3.5. Telephone Number Attributes](#)

Telephone numbers all have the syntax "1*TEXT-UTF8-CHAR". Fully qualified international form is preferred:

+1 555 555 1234 ext 54

but as these are likely to be human-entered any form is permitted.

addressbook.TelephoneNumber

This is the preferred telephone number for the person referred to by the entry. A suffix such as ".work" or ".home" can be

added to indicate alternate numbers.

addressbook.Fax

This is the preferred fax number for the person or entity referred to by the entry. A suffix such as ".work" or ".home" can be added to indicate alternate numbers.

addressbook.MobilePhone

This is the preferred mobile phone number for the person referred to by the entry. A suffix such as ".work" or ".home" can be added to indicate alternate numbers.

addressbook.PagerNumber

This is the preferred pager number for the person or entity referred to by the entry. A suffix such as ".work" or ".home" can be added to indicate alternate numbers.

3.6. Postal Address Attributes

Postal addresses should be in the same format that they appear on an envelope, preferably fully qualified. The multiple lines are CRLF separated within the attribute.

addressbook.PostalAddress

This contains the preferred postal address for the person or entity referred to by the entry. A suffix such as ".work" or ".home" can be added to indicate alternate addresses.

abook-postal = 1*TEXT-UTF8-CHAR *(CRLF *TEXT-UTF8-CHAR)

3.7. Commentary Attributes

These are free-form text attributes used to store commentary about the entry.

addressbook.Comment

This is a freeform comment field where the owner of the addressbook may put comments about the person or entity referred to by the entry.

abook-comment = 1*UTF8-CHAR

addressbook.Description

This is a freeform comment field for a self-description of the person or entity referred to by the entry. It is primarily used when an entry is imported from a remote directory.

abook-description = 1*UTF8-CHAR

3.8. Locational Attributes

These contain information about the location of the person or entity referred to by this entry.

addressbook.Organization

This is the name of the organization with which the person or entity is associated.

abook-organization = 1*TEXT-UTF8-CHAR

addressbook.Title

This is the title of the person referred to by the entry.

abook-title = 1*TEXT-UTF8-CHAR

addressbook.Locality

This is the name of the locality where the person or entity is normally located.

abook-locality = 1*TEXT-UTF8-CHAR

addressbook.Country

This is the ISO 3166 country code where the person or entity is normally located.

abook-country = 2*3ALPHA

addressbook.LanguageSpoken

This is the [RFC 1766](#) language code for the language which the person or entity prefers to speak.

abook-language = Language-Tag
;; as defined in [RFC 1766](#)

4. Examples

Some sample entries:

In addressbook /addressbook/user/hubert

attribute name	value
-----	-----
entry	ABC123
addressbook.CommonName	Patrik Faltstrom
addressbook.GivenName	Patrik
addressbook.Surname	Faltstrom
addressbook.Email	paf@swip.net
addressbook.CommonName.MIME	=?ISO-8859-1?Q?Patrik_F=E4ltstr=F6m?=<paf@swip.net>
addressbook.Expand.Address	paf@swip.net
addressbook.Expand.Complete	

entry	ABC567
addressbook.CommonName	Terry Gray
addressbook.GivenName	Terry
addressbook.Surname	Gray
addressbook.Alias	teg
addressbook.Email	gray@cac.washington.edu
addressbook.Expand.Address	gray@cac.washington.edu
addressbook.Expand.Complete	Terry Gray <gray@cac.washington.edu>

entry	defghi
subdataset	.
addressbook.List	"1"
addressbook.CommonName	List of Two
addressbook.CommonName.MIME	List of Two
addressbook.Expand.Address	paf@swip.net
	gray@cac.washington.edu
	fred@bedrock.com
addressbook.Expand.Complete	

=?ISO-8859-1?Q?Patrik_F=E4ltstr=F6m?=<paf@swip.net>
 Terry Gray <gray@cac.washington.edu>
 Fred Flintstone <fred@bedrock.com>

In dataset /addressbook/user/hubert/defghi

entry	xyz1
addressbook.Reference	../ABC123
addressbook.Expand.Address	paf@swip.net
addressbook.Expand.Complete	

=?ISO-8859-1?Q?Patrik_F=E4ltstr=F6m?=<paf@swip.net>


```
entry                xyz2
addressbook.Reference ../ABC567
addressbook.Expand.Address gray@cac.washington.edu
addressbook.Expand.Complete Terry Gray <gray@cac.washington.edu>

entry                z2t
addressbook.CommonName Fred Flintstone
addressbook.GivenName Fred
addressbook.Surname   Flintstone
addressbook.Email     fred@bedrock.com
addressbook.CommonName.MIME Fred Flintstone
addressbook.Expand.Address fred@bedrock.com
addressbook.Expand.Complete Fred Flintstone <fred@bedrock.com>
```

5. References

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[UTF8] Yergeau, "UTF-8, a transformation format of Unicode and ISO 10646", [RFC 2044](#), Alis Technologies, October 1996.

<<ftp://ds.internic.net/rfc/rfc2044.txt>>

6. Security Considerations

It is important to make sure that access controls are set correctly on personal addressbooks. One should be careful of sharing information which might contain personal comments.

This specification does not address storing certificates for entries in the addressbook. This may be added to a future version of this specification when more experimentation has been done.

7. Authors' Addresses

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Appendix

[A.](#) Attribute Index

addressbook.Alias	3
addressbook.AlternateNames	3
addressbook.Comment	7
addressbook.CommonName	3
addressbook.CommonName.MIME	4
addressbook.Country	8
addressbook.Description	8
addressbook.Email	5
addressbook.Expand.Address	5
addressbook.Expand.Complete	5
addressbook.Fax	7
addressbook.GivenName	3
addressbook.HomePage	6
addressbook.LanguageSpoken	8
addressbook.List	5
addressbook.Locality	8
addressbook.MobilePhone	7
addressbook.Organization	8
addressbook.PagerNumber	7
addressbook.PostalAddress	7
addressbook.PreferredTextFormat	6
addressbook.Reference	4
addressbook.RequestAddress	6
addressbook.Subscribed	6
addressbook.Surname	3
addressbook.TelephoneNumber	6
addressbook.Title	8
entry	2
subdataset	2

