ACAP Bookmarks Dataset Class

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A version of this draft document is intended for submission to the
RFC editor as a Proposed Standard for the Internet Community.
Discussion and suggestions for improvement are requested.

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1. Abstract

Storing URLs [URL] for later access has become common in Internet
applications (for example, web browsers, FTP clients); these saved
URLs have become known as bookmarks. It would be desirable to
access one's bookmarks from multiple clients and multiple machines.

The Application Configuration Access Protocol [ACAP] provides an
ideal mechanism for storage of bookmarks, providing for ease of
coordination and synchronization of bookmarks between diverse
applications and systems, as well as for hierarchy, inheritance, and
sharing between users.

This specification defines a standard ACAP dataset class for
bookmarks.

2. 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].

3. Comments

Public comments can be sent to the IETF ACAP mailing list,

<ietf-acap+@andrew.cmu.edu>. To subscribe, send a message to
<ietf-acap-request+@andrew.cmu.edu> with the word SUBSCRIBE as the
body. Private comments should be sent to the author.

4. ACAP Bookmarks Dataset Class

The ACAP Bookmarks dataset class defines a set of attributes for
each bookmark, and provides for bookmark inheritance and hierarchy.

4.1. ACAP Bookmarks Dataset Class Prefix

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

4.2. ACAP Bookmarks Dataset Hierarchy

Each user may have a hierarchical set of bookmarks. Nested or
hierarchical bookmarks (that is, bookmark folders) SHOULD be
represented using the ACAP Hierarchy. Any entry in a bookmarks
dataset can be a hierarchy node by setting the "subdataset"
attribute.

Inheritance is likely to be useful both for inheriting sets of site
or group default bookmarks as well as for inheriting user-specific
bookmarks when using different machines.

5. Recommended ACAP Bookmarks Dataset Attributes

A Bookmarks dataset entry MUST have an "entry" attribute. All other
attributes are OPTIONAL.

Attributes are specified using Augmented Backus-Naur Form [ABNF],
including the Core Rules. All attributes are single-valued and
textual (do not contain binary data) unless otherwise stated.

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.

5.1. Basic Attributes

These attributes are defined in ACAP [ACAP] and have meaning in all
dataset classes. The section describes how they are used in a
bookmarks dataset.

entry
     The "entry" attribute is used to uniquely identify the bookmark.
     The name MUST be unique, but is not expected to be descriptive,
     and generally is not suitable for display to users. It is
     client-defined.

     The "entry" attribute is also used for ordering. When selecting
     the "entry" attribute for a new bookmark, in addition to
     uniqueness, the client selects a string which causes the new
     entry to appear in the desired order, when sorted using the
     "i;ascii-casemap" comparator [ACAP]. For example, to insert an
     entry between "a1" and "a2", "a1a" could be used.

subdataset
     The "subdataset" attribute indicates that there is a subdataset
     of this entry. The value of this attribute specifies the actual
     location of the subdataset, per [ACAP] section 3.1.1. For the
     bookmarks dataset, a value of "." is most commonly used for a
     user's own entries, indicating that the subdataset exists
     directly beneath this one. However, especially when inheriting
     bookmarks from group or site collections, the value of this
     attribute may point to a dataset on the same or a different ACAP
     server.

5.2. Specific Attributes

   These attributes are specific to the Bookmarks dataset class.

   bookmarks.Date.Added
        This contains the date and time of the original creation of this
        entry. The value is expressed in UTC with a timezone offset,
        indicating the user's local time.

        book-date   = datetime ;specified in Common ABNF

   bookmarks.Description
        This contains the user-assigned description of the entry, as a
        series of CRLF-separated lines.

        book-description   = *line ;specified in Common ABNF

        bookmarks.Last.Modified
        This contains the date and time of the most recent modification

of the entry. Modification includes any user-initiated action
(such as editing the description) but not automatic actions
(such as updating the "Last.Visited" attribute). The value is
expressed in UTC, with a timezone offset indicating the user's
local time.

```
book-modtime        = datetime ;specified in Common ABNF
```

bookmarks.Last.Visited
     This contains the date and time of the most recent access of the
     location represented by the entry's URL. The value is expressed
     in UTC, with a timezone offset indicating the user's local time.

```
book-visit          = datetime ;specified in Common ABNF
```

bookmarks.Name
     This specifies a descriptive name for the entry. It does not
     need to be unique.

```
book-name           = 1*(VCHAR / SP)
```

bookmarks.Type
     This contains a token describing the type of the entry. The
     Separator type indicates the entry is separator for display
     purposes. The Folder type is used for a container or folder
     (used with ACAP subdatasets). The Alias type is used for an
     alias entry, in which case the URL is an ACAP URL to an entry in
     an ACAP Bookmarks dataset. The Link type is used to refer to
     any type of object, for example, a web page or a file. The
     Frameset type is used to contain the state of a web page with
     frames. In this case the URL of the main page is contained in
     the 'bookmarks.URL' attribute, and the URLs for other frames are
     contained in subdataset entries.

```
book-type           = "separator" / "link" / "alias" / "folder"
                       "frameset"
```

bookmarks.URL
     This contains the URL of the object referred to by this entry.
     For Link type entries, this can be any type of URL. For Alias
     type entries, this is an ACAP URL. ACAP URLs are specified in
     [ACAP].

```
book-url            = url ;defined in [URL]
```

6. Common ABNF

The following [ABNF] rules are used above.

```
datetime    =    year month day hour minute second timezone
                 ;UTC and offset to local time

day         =    2DIGIT

hour        =    2DIGIT

line        =    *(VCHAR / SP) CRLF

minute      =    2DIGIT

month       =    2DIGIT

second      =    2DIGIT

timezone    =    ("+" / "-") 4DIGIT
```

```
year        =    4DIGIT
```

7. Examples

    /~/bookmarks/

```
entry                       a23gzk
bookmarks.Date.Added        19840101000001+0800
bookmarks.Description       Where I get my worms
bookmarks.Last.Modified     19971114071202+0800
bookmarks.Last.Visited      19980311173545+0800
bookmarks.Name              Fred's Bait and Tackle
bookmarks.Type              link
bookmarks.URL               http://www.fredsbaitandtackle.fog/

entry                       b1799
bookmarks.type              separator

entry                       xyzzy
bookmarks.Date.Added        19770612140004+0500
bookmarks.Description       This really cool site I stumbled
                            on when looking for something
                            else.  It has detailed and easy
                            to follow instructions on how to
                            crush beer cans
bookmarks.Last.Modified     19971231235902+0800
bookmarks.Last.Visited      19980311173510+0800
```

```
bookmarks.Name              Yip Yap's Helpful HowTo Page
bookmarks.Type              link
bookmarks.URL               http://stud.cheesy.edu/~jru/

entry                       zz99
subdataset                  .
bookmarks.Name              Contemporaneous Contemplations
bookmarks.Type              folder
```

/~/bookmarks/zz99/

```
entry                       a1a1
bookmarks.Date.Added        19990401000002+0800
bookmarks.Description       I laughed so hard beer came out my
                            nose and my then my roommate saw
                            and started laughing and choking
bookmarks.Last.Modified     19990401000002+0800
bookmarks.Last.Visited      19990401000001+0800
bookmarks.Name              Why Beer is Better than ...
bookmarks.Type              link
bookmarks.URL               http://trash.example.org/~b1ff/
                            beer.html

entry                       b2b2
```

```
bookmarks.Date.Added        19990401010003+0800
bookmarks.Description       Commencment address delivered by
                            Clinton and Vonnegut to Vassar
bookmarks.Last.Modified     19990401010003+0800
bookmarks.Last.Visited      19990401010000+0800
bookmarks.Name              Clinton and Vonnegut at Vassar
bookmarks.Type              link
bookmarks.URL               http://april.fools.oaf/vassar-mit
```

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9. Security Considerations

As with ACAP datasets in general, it is important that access
controls are set correctly on Bookmarks datasets. Attributes may
contain personal information which should not be disclosed except by
explicit owner request.

10. Acknowledgments

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their help, comments, and suggestions.

11. Author's Address

Randall Gellens   +1 858 651 5115
QUALCOMM Incorporated   randy@qualcomm.com
5775 Morehouse Drive

San Diego, CA 92121-2779
U.S.A.

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