Network Working Group	J. Snell	
Internet-Draft	October 27, 2007	
Intended status: Experimental		
Expires: April 29, 2008		

Atom Publishing Protocol Feature Discovery
draft-snell-atompub-feature-12.txt

Status of this Memo

Abstract

This document introduces extensions to the Atom Publishing Protocol Service Document format for expressing metadata about the behaviors, functions and capabilities supported by an Atom Publishing Protocol collection.

Table of Contents

---

1. Introduction   [TOC](#)

This document introduces an extension to the Atom Publishing Protocol
(Atompub) service document [RFC5023] (Gregorio, J. and B. de hOra, "The
Atom Publishing Protocol," October 2007.) format that allows for the
documentation and discovery of behaviors, functions or capabilities
supported by an Atompub collection. Examples of such capabilities can
include the preservation of certain kinds of content, support for draft
entries, support for the scheduled publication of entries, use of a
particular set of Atom format extensions, and so on.
Describing features using the mechanisms defined in this specification
is currently considered to be largely experimental. While there are
examples of such mechanisms being put to practical use in deployed
applications, there is currently not enough collective implementation
experience to determine whether the mechanism defined here is
sufficient to fully address the general needs of Atom Publishing
Protocol client and server implementations. Implementations and
feedback are encouraged.

---

2. Notational Conventions   [TOC](#)

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT",
"SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this
document are to be interpreted as described in BCP 14, [RFC2119]
(Bradner, S., "Key words for use in RFCs to Indicate Requirement
Levels," March 1997.).
This specification uses XML Namespaces [W3C.REC-xml-names-20060816]
(Hollander, D., Layman, A., and T. Bray, "Namespaces in XML 1.0 (Second
Edition)," August 2006.) to uniquely identify XML element names. It
uses the following namespace prefix for the indicated namespace URI;

        "f": "http://purl.org/atompub/features/1.0"

This specification uses terms from the XML Infoset [W3C.REC-xml-infoset-20040204] (Tobin, R. and J. Cowan, "XML Information Set (Second Edition)," February 2004.). However, this specification uses a shorthand; the phrase "Information Item" is omitted when naming Element Information Items. Therefore, when this specification uses the terms "element" and "attribute" it is referring, respectively, to the Element and Attribute Information Items in Infoset terms.

This specification uses the terms "atomUri" and "atomCommonAttributes" from the non-normative RELAX NG Compact schema included in [RFC4287] (Nottingham, M., Ed. and R. Sayre, Ed., "The Atom Syndication Format," December 2005.). Where used, these serve the same purpose and have the same meaning as their use in [RFC4287] (Nottingham, M., Ed. and R. Sayre, Ed., "The Atom Syndication Format," December 2005.).

Atom allows the use of IRIs [RFC3987] (Duerst, M. and M. Suignard, "Internationalized Resource Identifiers (IRIs)," January 2005.). Every URI [RFC3986] (Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifier (URI): Generic Syntax," January 2005.) is also an IRI, so a URI may be used wherever below an IRI is named. There are two special considerations: (1) when an IRI that is not also a URI is given for dereferencing, it MUST be mapped to a URI using the steps in Section 3.1 of [RFC3987] (Duerst, M. and M. Suignard, "Internationalized Resource Identifiers (IRIs)," January 2005.) and (2) when an IRI is serving as an identifier, it MUST NOT be so mapped.

Any element defined by this specification MAY have an xml:base attribute [W3C.REC-xmlbase-20010627] (Marsh, J., "XML Base," June 2001.). When xml:base is used, it serves the function described in section 5.1.1 of [RFC3986] (Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifier (URI): Generic Syntax," January 2005.), establishing the base URI (or IRI) for resolving any relative references found within the effective scope of the xml:base attribute.

Any element defined by this specification MAY have an xml:lang attribute, whose content indicates the natural language for the element and its descendents. The language context is only significant for elements and attributes declared to be "Language-Sensitive". Requirements regarding the content and interpretation of xml:lang are specified in XML 1.0 [W3C.REC-xml-20060816] (Bray, T., Paoli, J., Yergeau, F., Maler, E., and C. Sperberg-McQueen, "Extensible Markup Language (XML) 1.0 (Fourth Edition)," August 2006.), Section 2.12.

---

3. The f:features Element

The f:features element is used in an app:collection element or as the root element of a Features Document as a container for zero or more f:feature elements.

An f:features element MAY contain any number of f:feature elements but
MUST NOT contain more than one with the same ref attribute value. The
order in which f:feature elements appear within the f:features element
is insignificant.
An app:collection element MUST NOT contain more than one f:features
element.

```
      inlineFeatures =
        element f:features {
          (feature*,
           undefinedContent)
        }

      outOfLineFeatures =
        element f:features {
          attribute href { atomURI }
        }

      features = inlineFeatures | outOfLineFeatures
```

When used within an app:collection element, the f:features element MAY
contain an "href" attribute, whose value MUST be an IRI reference
identifying a Features Document. If the "href" attribute is provided,
the f:features element MUST be empty.

---

4. The f:feature element

The f:feature element is used within an f:features element to declare a
collection's support for a feature.

```
      feature = element f:feature {
        atomCommonAttributes,
        attribute ref    { atomUri },
        attribute href   { atomUri }?,
        attribute label  { text }?,
        (anyElement)*
      }

      anyElement = element * - f:feature {
        (attribute * { text }
           | text
           | anyElement)*
      }
```

The ref attribute specifies a globally unique IRI identifying a
feature. The value of the ref attribute MUST be compared on a case-
sensitive, character-by-character basis. Relative references MUST NOT

be used. The IRI is used strictly for identification and cannot be assumed to be dereferenceable.

An optional href attribute MAY be used to specify a dereferenceable IRI of a human-readable description of the feature. Relative references MAY be used.

The optional label attribute MAY be used to specify a human-readable label for the feature. The value of the label attribute is Language-Sensitive as defined by Section 2 of [RFC4287] (Nottingham, M., Ed. and R. Sayre, Ed., "The Atom Syndication Format," December 2005.).

The f:feature element MAY contain a mix of text and any number of child elements and attributes from any XML namespace, with the exception of the f:feature element itself. Such markup is considered to be metadata applicable to the feature identified. Software agents MUST NOT stop processing or signal an error or change their behavior as a result of encountering such markup.

The presence of a f:feature element is an indication that the collection supports the feature identified. The lack of a f:feature element identifying a particular feature indicates that support for that feature is unspecified. This does not mean that the feature is not supported, only that the server has not explicitly declared support. There are no means by which a server can indicate that a given feature is unsupported.

4.1. Example

The following is an example of a collection using the f:feature element to indicate its support for the app:draft element as defined by [RFC5023] (Gregorio, J. and B. de hOra, "The Atom Publishing Protocol," October 2007.).

```
<service
  xmlns="http://www.w3.org/2007/app"
  xmlns:atom="http://www.w3.org/2005/Atom"
  xmlns:f="http://purl.org/atompub/features/1.0">
  <workspace>
    <atom:title>My Workspace</atom:title>
    <collection href="...">
      <atom:title>My Atom Collection</atom:title>
      <accept>application/atom+xml;type=entry</accept>
      <f:features>
        <f:feature
          ref="http://purl.org/atompub/features/1.0/supportsDraft" />
      </f:features>
    </collection>
  </workspace>
</service>
```

5. Feature Documents

A Feature Document contains a listing of f:feature elements that can be referenced by multiple app:collection elements. Separating the list of f:features out into a separate document enables and promotes the reuse of features across multiple collections.
The root of a Feature Document is the f:features element. The f:features element MUST NOT contain an href atribute. Feature documents are identified with the "application/atomfeature+xml" media type (see Section 9.1).

5.1. Example

```
<?xml version="1.0?>
<features xmlns="http://purl.org/atompub/features/1.0">
  <feature ref="http://purl.org/atompub/features/1.0/supportsDraft" />
  <feature ref="http://example.org/foo/supportsFoo" />
</features>
```

This Feature Document indicates support for the app:draft publishing control and a hypothetical extension.
The following is an example of a collection using the f:features element to reference a Feature Document.

```
<service
  xmlns="http://www.w3.org/2007/app"
  xmlns:atom="http://www.w3.org/2005/Atom"
  xmlns:f="http://purl.org/atompub/features/1.0">
  <workspace>
    <atom:title>My Workspace</atom:title>
    <collection href="...">
      <atom:title>My Atom Collection</atom:title>
      <accept>application/atom+xml;type=entry</accept>
      <f:features href="http://example.org/features.xml" />
    </collection>
  </workspace>
</service>
```

---

6. The "supportsDraft" Feature TOC

The "supportsDraft" feature is used to indicate that a collection
supports the use of the app:draft control element as defined by Section
13.1.1 of [RFC5023] (Gregorio, J. and B. de hOra, "The Atom Publishing
Protocol," October 2007.). The IRI of the "supportsDraft" feature is:

        http://purl.org/atompub/features/1.0/supportsDraft

---

7. The "ignoresDraft" Feature TOC

The "ignoresDraft" feature is used to indicate that a collection will
ignore the use of the app:draft control element as defined by Section
13.1.1 of [RFC5023] (Gregorio, J. and B. de hOra, "The Atom Publishing
Protocol," October 2007.). The IRI of the "ignoresDraft" feature is:

        http://purl.org/atompub/features/1.0/ignoresDraft

A server MUST NOT declare support for both the "supportsDraft" and
"ignoresDraft" features within the a single app:collection element.

---

8. Security Considerations TOC

Specific features supported by a collection may introduce security
considerations and concerns beyond those discussed by the Atom

Publishing Protocol and Atom Syndication Format specifications.
Implementors must refer to the specifications and description of each
feature to determine the security considerations relevant to each.
Implementations of this specification handle URIs and IRIs. See Section
7 of [RFC3986] (Berners-Lee, T., Fielding, R., and L. Masinter,
"Uniform Resource Identifier (URI): Generic Syntax," January 2005.) and
Section 8 of [RFC3987] (Duerst, M. and M. Suignard, "Internationalized
Resource Identifiers (IRIs)," January 2005.) for security
considerations related to their handling and use.

---

9. IANA Considerations   TOC

This specification uses a new media type that conforms to the registry
mechanism described in [RFC4288] (Freed, N. and J. Klensin, "Media Type
Specifications and Registration Procedures," December 2005.).

9.1. Content-type registration for 'application/   TOC
atomfeature+xml'

A Feature Document, when serialized as XML 1.0, can be identified with
the following media type:

MIME media type name: application

MIME subtype name: atomfeature+xml

Mandatory parameters: None.

Optional parameters:

> **"charset":** This parameter has identical semantics to the
> charset parameter of the "application/xml" media type as
> specified in [RFC3023] (Murata, M., St. Laurent, S., and D.
> Kohn, "XML Media Types," January 2001.).

Encoding considerations: Identical to those of "application/xml" as
described in [RFC3023] (Murata, M., St. Laurent, S., and D. Kohn,
"XML Media Types," January 2001.), section 3.2.

Security considerations: As defined in this specification.

In addition, as this media type uses the "+xml" convention, it
shares the same security considerations as described in [RFC3023]

[(Murata, M., St. Laurent, S., and D. Kohn, "XML Media Types," January 2001.)](), section 10.

Interoperability considerations: There are no known interoperability issues.

Published specification: This specification.

Applications that use this media type: No known applications currently use this media type.

Additional information:

Magic number(s): As specified for "application/xml" in [[RFC3023] (Murata, M., St. Laurent, S., and D. Kohn, "XML Media Types," January 2001.)](), section 3.2.

File extension: .atomfeature

Fragment identifiers: As specified for "application/xml" in [[RFC3023] (Murata, M., St. Laurent, S., and D. Kohn, "XML Media Types," January 2001.)](), section 5.

Base URI: As specified in [[RFC3023] (Murata, M., St. Laurent, S., and D. Kohn, "XML Media Types," January 2001.)](), section 6.

Macintosh File Type code: TEXT

Person and email address to contact for further information: James Snell <jasnell@gmail.com>

Intended usage: COMMON

Author/Change controller: IETF (iesg@ietf.org) Internet Engineering Task Force

---

10. Normative References

[RFC2119]	[Bradner, S.](), "[Key words for use in RFCs to Indicate Requirement Levels]()," BCP 14, RFC 2119, March 1997 ([TXT](), [HTML](), [XML]()).
[RFC3023]	Murata, M., St. Laurent, S., and D. Kohn, "[XML Media Types](https://)," RFC 3023, January 2001 ([TXT]()).
[RFC3986]	[Berners-Lee, T.](), [Fielding, R.](), and [L. Masinter](), "[Uniform Resource Identifier (URI): Generic Syntax](http://)," STD 66, RFC 3986, January 2005 ([TXT](), [HTML](), [XML]()).

[RFC3987]	Duerst, M. and M. Suignard, "Internationalized Resource Identifiers (IRIs)," RFC 3987, January 2005 (TXT).
[RFC4287]	Nottingham, M., Ed. and R. Sayre, Ed., "The Atom Syndication Format," RFC 4287, December 2005 (TXT, HTML, XML).
[RFC4288]	Freed, N. and J. Klensin, "Media Type Specifications and Registration Procedures," BCP 13, RFC 4288, December 2005 (TXT).
[RFC5023]	Gregorio, J. and B. de hOra, "The Atom Publishing Protocol," RFC 5023, October 2007 (TXT).
[W3C.REC-xml-20060816]	Bray, T., Paoli, J., Yergeau, F., Maler, E., and C. Sperberg-McQueen, "Extensible Markup Language (XML) 1.0 (Fourth Edition)," World Wide Web Consortium FirstEdition REC-xml-20060816, August 2006 (HTML).
[W3C.REC-xml-infoset-20040204]	Tobin, R. and J. Cowan, "XML Information Set (Second Edition)," World Wide Web Consortium Recommendation REC-xml-infoset-20040204, February 2004 (HTML).
[W3C.REC-xml-names-20060816]	Hollander, D., Layman, A., and T. Bray, "Namespaces in XML 1.0 (Second Edition)," World Wide Web Consortium FirstEdition REC-xml-names-20060816, August 2006 (HTML).
[W3C.REC-xmlbase-20010627]	Marsh, J., "XML Base," World Wide Web Consortium FirstEdition REC-xmlbase-20010627, June 2001 (HTML).

Appendix A. Acknowledgements   TOC

The author acknowledges the feedback from the other members of the IETF Atom Publishing working group during the development of this specification.

Author's Address
TOC

	James M Snell
Phone:	
Email:	jasnell@gmail.com
URI:	http://snellspace.com

Full Copyright Statement

Intellectual Property