Network Working Group   E. Wilde
Internet-Draft   EMC Corporation
Intended status: Standards Track   March 26, 2012
Expires: September 27, 2012

                    The 'profile' Link Relation Type
                      draft-wilde-profile-link-00

Abstract

   This specification defines the 'profile' link relation type that
   allows resource representations to indicate that they are following
   one or more profiles. A profile is defined to not alter the
   semantics of the resource representation itself, but to allow clients
   to learn about additional semantics that are associated with the
   resource in addition to those defined by the media type and possibly
   other mechanisms.

Status of this Memo

   This Internet-Draft is submitted in full conformance with the
   provisions of BCP 78 and BCP 79.

   Internet-Drafts are working documents of the Internet Engineering
   Task Force (IETF). Note that other groups may also distribute
   working documents as Internet-Drafts. The list of current Internet-
   Drafts is at http://datatracker.ietf.org/drafts/current/.

   Internet-Drafts are draft documents valid for a maximum of six months
   and may be updated, replaced, or obsoleted by other documents at any
   time. It is inappropriate to use Internet-Drafts as reference
   material or to cite them other than as "work in progress."

   This Internet-Draft will expire on September 27, 2012.

Copyright Notice

Table of Contents

1. Introduction

One of the foundations of the Internet and Web Architecture is the
fact that resource representations communicated through protocols
such as SMTP or HTTP are labeled with a 'media type', which allows a
client to understand at run time what 'type' of resource
representation it is handling. Sometimes, it would be useful for
servers and clients to include additional information about the
nature of the resource, so that a client understanding this
additional information could react in a way specific to that
specialization of the resource. HTML 4 [3] has such a mechanism
built into the language, which is the 'profile' attribute of the
'head' element. This mechanism, however, is specific to HTML alone,
and it seems as if HTML 5 will drop support for this mechanism
entirely.

This specification registers a 'profile' link relation type according
to the rules of RFC 5988 [1]. This link relation type is independent
of the resource representation it is used in (but the representation
must support types links for this mechanism to work) and independent
of the target of the linked URI. In fact, for the purpose of this
specification, the URI does not necessarily have to link to a
dereferencable resource, and clients can treat the occurrence of a
specific URI in the same sense as a namespace URI and invoke specific
behavior based on the assumption that a specific profile URI signals
that a resource follows a specific profile. Note that at the same
time, it is possible for profile URIs to use referencable URIs and
use a media type (which is outside the scope of this specification)
which represents the information about the profile in a human- or
machine-readable way.

As one example, consider the case of podcasts, a specific kind of
feed using additional fields for media-related metadata. Using a
'profile' link, it would be possible for a client to understand that
a specific feed is supposed to be a podcast feed, and that it may
contain entries using podcast-specific fields. This may allow a
client to behave differently when handling such a feed (such as
rendering a UI), even when the current set of entries in the feed may
not contain any podcast entries.

2. Terminology

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 RFC 2119 [2].

3. Resource Profiles

   The concept of a resource profile has no strict definition on the
   Internet or within the Web. For the purpose of this specification, a
   resource profile are additional semantics that can be used to process
   a resource. These semantics SHOULD be independent of specific
   representations of both the resources using them, and a of a specific
   profile representation (if it exists), so that a profile URI can be
   reused across media types. Furthermore, a profile MUST NOT change
   the semantics of the resource when processed without profile
   knowledge, so that clients both with and without knowledge of a
   profiled resource can safely use the same representation.

   Profiles can be combined, meaning that a single resource can conform
   to zero or any number of profiles. Depending on the profile support
   of clients it is this possible that the same resource, when linked to
   a number of profiles, can be processed with very different sets of
   processing rules, based on the profile knowledge of the clients.

   Profiles are identified by URI, but as with for example XML namespace
   URIs, the URI in this case first and foremost serves as an
   identifier, meaning that the presence of a certain URI can be
   sufficient for a client to assert that a resource conforms to a
   profile. However, in some settings it may be desirable to allow
   profiles to change at runtime, in which case it is necessary for
   clients to dereference links to profiles and interpret the profile
   representation they retrieve. In such a scenario, a media type for
   profile representation is required, but both the scenario and the
   required media type are outside of the scope of this specification.

4. IANA Considerations

   The link relation type below has been registered by IANA per Section
   6.2.1 of RFC 5988 [1]:

      Relation Name: profile

      Description: Identifying that a resource conforms to a certain
      profile, without affecting the non-profile semantics of the
      resource.

      Reference: RFC xxxx (this draft's eventual RFC number)

      Notes: Profile URIs are primarily intended to be used as
      identifiers, and thus clients SHOULD NOT indiscriminately access
      profile URIs.

5. Security Considerations

   The 'profile' relation type is truly believed not to raise any new
   security issues which are not discussed in RFC 5988 [1] for generic
   use of Web linking mechanism.

6. Change Log

   Note to RFC Editor: Please remove this section before publication.

7. References

7.1. Normative References

   [1] Nottingham, M., "Web Linking", RFC 5988, October 2010.

   [2] Bradner, S., "Key words for use in RFCs to Indicate Requirement
        Levels", RFC 2119, March 1997.

7.2. Informative References

   [3] Hors, A., Raggett, D., and I. Jacobs, "HTML 4.01 Specification",
        World Wide Web Consortium Recommendation REC-html401-19991224,
        December 1999, <http://www.w3.org/TR/1999/REC-html401-19991224>.

Appendix A. Acknowledgements

   Thanks for comments and suggestions provided by ...

Author's Address

   Erik Wilde
   EMC Corporation
   6801 Koll Center Parkway
   Pleasanton, CA 94566
   U.S.A.

   Phone: +1-925-6006244
   Email: erik.wilde@emc.com
   URI: http://dret.net/netdret/