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E. Wilde
EMC Corporation

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The 'describes' Link Relation Type

Abstract

This specification defines the 'describes' link relation type that allows resource representations to indicate that they are describing another resource. In contexts where applications want to associate described resources and description resources, and want to build services based on these associations, the 'describes' link relation type provides the opposite direction of the 'describedby' link relation type, which already is a registered link relation type.

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1. Introduction

Resources on the web can be identified by any (registered) URI scheme and can be represented by any (registered) media type. In many cases, applications establish specific (i.e., typed) relations between the resources they are concerned with, which can either be under their control or controlled by another authority. A common usage pattern for associating resources is to have resources that are descriptions of other resources. This specification registers the 'describes' link relation, which allows applications to represent the fact that one resource is a description of another resource.

RFC 5988 [1] "defines a framework for typed links that isn't specific to a particular serialisation or application. It does so by redefining the link relation registry established by Atom to have a broader domain, and adding to it the relations that are defined by HTML". This registration request intends to augment the link relation registry with a link relation that is the inverse of the already registered 'describedby' relation, so that links between described resources and describing resources can be represented in both directions.

2. Resource Descriptions

Associating resources with descriptions of these resources is a recurring pattern on the web. The IANA "Link Relations" registry established by RFC 5988 [1] currently contains a 'describedby' link relation type, which has been registered by POWDER [2]. The definition given in the reference document for that registration is as follows: "The relationship A 'describedby' B asserts that resource B provides a description of resource A. There are no constraints on the format or representation of either A or B, neither are there any further constraints on either resource".

Since many scenarios using resource descriptions need to represent the fact that some resource describes another resource (the opposite of the 'describedby' relation), this document registers a 'describes' link relation type. Establishing a link A 'describes' B asserts that the resource identified by A is a description of the resource identified by B, without constraining in any way the identifiers being used for A and B, and the media types for the representations being provided when those identifiers are dereferenced. Specifically, it is possible that identifiers A and/or B have no associated interaction method (they could be URNs, for example), but it still is valid to establish the A 'describes' B link.

Another design freedom is to use "chains" of 'describes' (or 'describedby') links, so that one resource is a description of another resource, which in turn is a description of yet another resource. The "levels" of descriptions can go as deep as required by an application and are not constrained by this specification.

3. Use Case

Beginning with the POWDER document [2], which specifies the 'describedby' link relation, the use case for the 'describedby' link relation is that a described resource, such as an HTML web page, can specify a link where clients can find a description of this resource. While the 'describedby' link relation is defined to be independent of specific formats and representations, within the context of POWDER, the assumption is that the linked resources most often will provide a description based on the Resource Description Framework (RDF), for example, to provide metadata about a document's author and other provenance information.

The 'describes' link relation allows servers hosting description resources to associate those description resources with the resources that they are describing. In the RDF-oriented scenario of POWDER, this means that a service managing description resources would use 'describes' links to represent the fact that the description resources it exposes provide some description of the described resource, very likely in some RDF representation. However, since link relations are independent of resource formats or representations, such an association could also be made in other formats such as XML or JavaScript Object Notation (JSON), allowing servers to use a single and consistent link relation to associate description resources with described resources.

Generally speaking, the idea of the 'describes' relation is the same as the idea of the 'describedby' relation; to be independent of specific formats and representations of both described resources and description resources. The 'describes' link relation (together with

the already registered 'describedby' link relation) thus serves as a general foundation of how described resources and description resources can be associated.

4. IANA Considerations

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

> Relation Name: describes
>
> Description: The relationship A 'describes' B asserts that resource A provides a description of resource B. There are no constraints on the format or representation of either A or B, neither are there any further constraints on either resource.
>
> Reference: [RFC6892]
>
> Notes: This link relation type is the inverse of the 'describedby' relation type. While 'describedby' establishes a relation from the described resource back to the resource that describes it, 'describes' established a relation from the describing resource to the resource it describes. If B is 'describedby' A, then A 'describes' B.

5. Security Considerations

Resource descriptions should never be treated as authoritative or exclusive without relying on additional mechanisms for trust and security. Resources can have many (possibly conflicting) descriptions, and the 'describes' link relation type makes no claim whatsoever about the authority of the party providing the association between the two resources, or about the authority of the party providing the description resource. Before making any assumptions about the authority of the description resource (both the accuracy of the description contained in the description resource, and the authority to provide a description of the described resource), clients need a context that allows them to understand both the authority of the description itself, and the authority to establish the 'describes' relation. Nobody can stop clients from providing misleading unauthorized and/or descriptions, and clients need to have both a security and trust framework to allow them to choose between trusted and untrusted descriptions.

6. Acknowledgements

Thanks for comments and suggestions provided by Mark Nottingham.

7. References

7.1. Normative References

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

7.2. Informative References

[2] Archer, P., Smith, K., and A. Perego, "Protocol for Web Description Resources (POWDER): Description Resources", World Wide Web Consortium Recommendation REC-powder-dr-20090901, September 2009, <http://www.w3.org/TR/2009/REC-powder-dr-20090901/>.

Author's Address

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

Phone: +1-925-600-6244
EMail: erik.wilde@emc.com
URI: http://dret.net/netdret/