[MS-PICSL]:

Internet Explorer PICS Label Distribution and Syntax Standards Support Document

Revision Summary

Date	Revision History	Revision Class	Comments
3/17/2010	0.1	New	Released new document.
3/26/2010	1.0	None	Introduced no new technical or language changes.
5/26/2010	1.2	None	Introduced no new technical or language changes.
9/8/2010	1.3	Major	Significantly changed the technical content.
10/13/2010	1.4	Minor	Clarified the meaning of the technical content.
2/10/2011	2.0	None	Introduced no new technical or language changes.
2/22/2012	3.0	Major	Significantly changed the technical content.
7/25/2012	3.1	Minor	Clarified the meaning of the technical content.
6/26/2013	4.0	Major	Significantly changed the technical content.
3/31/2014	4.0	None	No changes to the meaning, language, or formatting of the technical content.
1/22/2015	5.0	Major	Updated for new product version.
7/7/2015	5.1	Minor	Clarified the meaning of the technical content.
11/2/2015	5.1	None	No changes to the meaning, language, or formatting of the technical content.
3/22/2016	5.1	None	No changes to the meaning, language, or formatting of the technical content.
11/2/2016	5.1	None	No changes to the meaning, language, or formatting of the technical content.
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10/3/2017	5.1	None	No changes to the meaning, language, or formatting of the technical content.
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3/23/2018	5.1	None	No changes to the meaning, language, or formatting of the technical content.
8/28/2018	5.1	None	No changes to the meaning, language, or formatting of the technical content.

Table of Contents

1   Introduction

This document describes the level of support provided by Microsoft web browsers for the *PICS Label Distribution Label Syntax and Communication Protocols, Version 1.1* [W3C-PICS-Labels], W3C Recommendation 31 October 1996, Revised 24 November 2009. Internet Explorer displays webpages written in HTML.

The [W3C-PICS-Labels] specification may contain guidance for authors of webpages and browser users, in addition to user agents (browser applications). Statements found in this document apply only to normative requirements in the specification targeted to user agents, not those targeted to authors.

1.1   Glossary

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as defined in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2   References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the Errata.

1.2.1   Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, http://www.rfc-editor.org/rfc/rfc2119.txt

[W3C-PICS-Labels] World Wide Web Consortium, "PICS Label Distribution Label Syntax and Communication Protocols Version 1.1", W3C Recommendation 31-October-96, http://www.w3.org/TR/REC-PICS-labels-961031

1.2.2   Informative References

None.

1.3   Microsoft Implementations

The following Microsoft web browser versions implement some portion of [W3C-PICS-Labels]:

- Windows Internet Explorer 7

- Windows Internet Explorer 8

- Windows Internet Explorer 9

- Windows Internet Explorer 10

- Internet Explorer 11

- Internet Explorer 11 for Windows 10

Each browser version may implement multiple document rendering modes. The modes vary from one another in support of the standard. The following table lists the document modes supported by each browser version.

Browser Version	Document Modes Supported
Internet Explorer 8	Quirks Mode IE7 Mode IE8 Mode
Internet Explorer 9	Quirks Mode IE7 Mode IE8 Mode IE9 Mode
Internet Explorer 10	Quirks Mode IE7 Mode IE8 Mode IE9 Mode IE10 Mode
Internet Explorer 11	Quirks Mode IE7 Mode IE8 Mode IE9 Mode IE10 Mode IE11 Mode
Internet Explorer 11 for Windows 10	Quirks Mode IE7 Mode IE8 Mode IE9 Mode IE10 Mode IE11 Mode

For each variation presented in this document there is a list of the document modes and browser versions that exhibit the behavior described by the variation. All combinations of modes and versions that are not listed conform to the specification. For example, the following list for a variation indicates that the variation exists in three document modes in all browser versions that support these modes:

Quirks Mode, IE7 Mode, and IE8 Mode (All Versions)

Note: "Standards Mode" in Internet Explorer 7 and "IE7 Mode" in Internet Explorer 8 refer to the same document mode. "IE7 Mode" is the preferred way of referring to this document mode across all versions of the browser.

1.4   Standards Support Requirements

To conform to [W3C-PICS-Labels] a user agent must implement all required portions of the specification. Any optional portions that have been implemented must also be implemented as described by the specification. Normative language is usually used to define both required and optional portions. (For more information, see [RFC2119].)

The following table lists the sections of [W3C-PICS-Labels] and whether they are considered normative or informative.

Sections	Normative/Informative
Overview	Informative
General Format	Normative
Detailed Syntax	Normative
Semantics of PICS Labels and Label Lists	Normative
Embedding Labels in HyperText Markup Language (HTML)	Normative
Using HTTP to Request Labels With A Document	Normative
Requesting Labels Separately	Normative
MICs and Digital Signatures	Normative
Appendix A-B	Informative

1.5   Notation

The following notations are used in this document to differentiate between notes of clarification, variation from the specification, and extension points.

Notation	Explanation
C####	This identifies a clarification of ambiguity in the target specification. This includes imprecise statements, omitted information, discrepancies, and errata. This does not include data formatting clarifications.
V####	This identifies an intended point of variability in the target specification such as the use of MAY, SHOULD, or RECOMMENDED. (See [RFC2119].) This does not include extensibility points.
E####	Because the use of extensibility points (such as optional implementation-specific data) can impair interoperability, this profile identifies such points in the target specification.

For document mode and browser version notation, see also section 1.3.

2 Standards Support Statements

This section contains all variations and clarifications for the Microsoft implementation of [W3C-PICS-Labels].

- Section 2.1 describes normative variations from the MUST requirements of the specification.

- Section 2.2 describes clarifications of the MAY and SHOULD requirements.

- Section 2.3 considers error handling aspects of the implementation.

- Section 2.4 considers security aspects of the implementation.

2.1 Normative Variations

There are no normative variations from the MUST requirements of [W3C-PICS-Labels].

2.2 Clarifications

The following subsections describe clarifications of the MAY and SHOULD requirements of [W3C-PICS-Labels].

2.2.1 [W3C-PICS-Labels] General Format

V0001:

The specification states:

```
A rating service may provide a generic label for any or all prefixes of a given
URL, but should provide only one specific label for that URL. When the specific
label for a document can be found, it should be used in preference to any generic
label. Lacking a specific label, any generic label may be substituted, but
preference should be given to the generic label which has the longest string. Some
PICS client software may impose restrictions on the use of generic labels. For
example, a client may choose to ignore a generic label that applies to a node in
the URL tree more than two levels above the node where the document is located.
```

All Document Modes (All Versions)

The generic label option of an initial webpage is supported, but generic label options for any subdomains are not.

V0002:

The specification states:

```
Information about the document that is labeled. at quoted-ISO-date The last
modification date of the item to which this rating applies, at the time the rating
was assigned. This can serve as a less expensive, but less reliable, alternative to
the message integrity check (MIC) options. MIC-md5 "Base64-string" -or- md5
"Base64-string" A message integrity check (MIC) of the item being rated. The MD5
Message Digest Algorithm (see RFC1321) is used to compute the MIC. One way to
create this message digest is to use the RSAREF (version 2.0) software available
for this purpose at no charge from RSA Laboratories. See MICs and Digital
Signatures below.
```

All Document Modes (All Versions)

The syntax or validity of the actual quoted-ISO-date is not checked. The `'at'` option is supported but its value is ignored.

Any "Base64-string" for a label passes through PICS rules processing normally.

V0003:

The specification states:

```
Information about the label itself.

until quoted-ISO-date
-or- exp quoted-ISO-date
The date on which this rating expires.
```

All Document Modes (All Versions)

The "`until`" clause in labels is not supported.

V0004:

The specification states:

```
Other information.

comment quotedname
Information for humans who may see the label; no associated semantics.

complete-label quotedURL
-or- full quotedURL
Dereferencing this URL returns a complete label that can be used in place of the
current one. The complete label has values for as many attributes as possible. This
is used when a short label is transmitted for performance purposes but additional
information is also available. When the URL is dereferenced it returns an item of
type application/pics-labels that contains a labellist with exactly one label.
extension (optional quotedURL data*)

-or- extension (mandatory quotedURL data*)
Future extension mechanism. To avoid duplication of extension names, each extension
is identified by a quotedURL. The URL can be dereferenced to get a human-readable
description of the extension. If the extension is optional then software which does
not understand the extension can simply ignore it; if the extension is mandatory
then software which does not understand the extension should act as though no label
had been supplied. Each item of data must be one of a fixed set of simple-to-parse
data types as specified in the detailed syntax below. See
http://w3.org/PICS/extensions/ to find out what extensions are currently in use.
```

All Document Modes (All Versions)

The `data*` value is supported. But if `data*` is enclosed in parentheses, only a single data value is supported within an extension. If more than a single value is supplied, a syntax error for the entire PICS label is returned.

C0001:

The specification states:

```
Transmit-names and quoted strings are case sensitive. Option names and other tokens
in the BNF grammar are case insensitive.
```

All Document Modes (Internet Explorer 7)

Whenever transmit-name labels for a webpage do not match the label in the ratings file, an error message stating "Either the rating label on this page is invalid, or your settings have been tampered with" is returned.

All Document Modes (Internet Explorer 8 and Internet Explorer 9)

Whenever transmit-name labels for a webpage do not match the label in the ratings file, an error message stating "The rating was obtained from the webpage" is returned.

V0005:

The specification states:

```
Numbers in PICS labels may be integers or fractions with no greater range or
precision than that provided by IEEE single-precision floating point numbers.
Implementors concerned about the vagaries of floating point comparisons may choose
to represent numbers internally as ASCII strings.
```

All Document Modes (Internet Explorer 7)

Numbers with a greater range or precision than that provided by IEEE single-precision floating-point numbers are supported and compared.

V0006:

The specification states:

```
The multi-value syntax must be used when there is more than one value for a
particular category. This syntax may be used when there is exactly one value, but
the more compact version may also be used in that case. When there is no value, the
category may be omitted entirely or transmitted using the multi-value syntax.
```

All Document Modes (All Versions)

The multi-value syntax is recognized, but does not support multiple values for a given category. The multi-value syntax is not supported when only a single value is present. The more compact version should be used when there is only a single value.

V0007:

The specification states:

```
For parsing purposes, notice that a label ends with either "ratings" or "r"
followed by a parenthesized list of categories and values. If this does not end the
label list, it is followed by either another label (possibly starting with
options), a new service URL (recognizable because it must be surrounded by
quotation marks), or an error (starting with the word "error").
```

All Document Modes (All Versions)

Labels can end with something other than another label, service URL, or the word "error".

V0008:

The specification states:

```
Note that the content attribute uses single quotes, because the PICS label syntax
uses double quotes. Any of the following characters appearing within the content
must be escaped using SGML entities:
        '       &#39;           /* single quote */
        &       &amp;           /* ampersand   */
        >       &gt;            /* greater than */
```

All Document Modes (All Versions)

Ratings service names that contain an escaped ampersand (&) value are not supported.

V0009:

The specification states:

```
A request for a minimal label asks that all options be omitted, unless a generic
label is returned, in which case the generic and for options must also be included
in the label. A short label includes everything that is included in a minimal
label, plus additional options that the server deems appropriate. A request for a
full label asks that as much information as possible should be sent back in the
label, either directly or through the use of a complete-label (or full) option, but
no signature-RSA-MD5 option is needed.
```

All Document Modes (All Versions)

Requests for labels from HTTP servers are not issued, although the labels embedded within the response header from the server are properly parsed.

V0010:

The specification states:

```
The query asks the label bureau http://www.labels.org/Ratings to send a single
label that applies to everything in the images hierarchy at site
www.questionable.org. The desired label should have been created by the service
http://www.gcf.org/v2.5. Notice the use of %3A to represent a ":" and %2F for "/."
This is required for encoding characters within a URL. See RFC-1738.
```

All Document Modes (All Versions)

Label bureaus are not supported.

V0011:

The specification states:

```
MIC-md5 or md5
If the label is intended to apply only to the data that was actually rated, then a
form of checksum (called a "message digest") can be applied to the data when the
label is created. The message digest is converted into US-ASCII characters using
MIME base-64 encoding and stored in the MIC-md5 (also called md5) field. When the
document is later retrieved, the same algorithm can be used to recompute the
message digest and the two digests can be compared. The MD5 algorithm is designed
so that it is extremely unlikely that the two digests will be the same if the
document has been tampered with in any way.
This technique is well-known in the cryptographic community and has been adopted by
the electronic mail community, where it is part of the MOSS specification. For use
with electronic mail, an elaborate technique is required to assure that the two
message digests will match, since electronic mail gateways can modify the data
before it is delivered (by wrapping lines, for example). We have chosen not to
```

```
adopt MOSS directly for PICS, largely because of this complexity.
Instead, we recommend the direct use of the MD5 algorithm on the source document
and conversion of the result to base64 encoding. This resulting string is included
directly in the mic-md5 (md5) label option. The MD5 algorithm and the conversion of
the result into US-ASCII characters is provided by the RSAREF (version 2.0) software.
Because PICS labels can be embedded inside of the documents they label, care must
be taken to ensure that the message digest is computed excluding all PICS labels in
the document. For HTML documents, this means that the digest must be computed after
removing all META elements that include PICS labels (and any whitespace immediately
following the end of each of these meta elements).
```

All Document Modes (All Versions)

The **md5** label option is not supported. When this option is specified, the contents of the option are ignored.

V0012:

The specification states:

```
When the client receives a label and wants to verify the signature it takes the
label it received and converts it back into the same special form in which it was
originally signed. The client recomputes the message digest on this special form.
It also takes the contents of the signature-rsa-md5 option, combines all of the
lines back into a single string of US-ASCII characters, converts these from base64
into their original (binary) form, and decrypts them using the service's public
key. If the result isn't the same as the message digest it computed the signature
is invalid. (RSAREF contains routines to do all of this work except for the
combining of the lines into a long string.)
```

All Document Modes (All Versions)

The **signature-rsa-md5** label option is not supported. When this option is specified, an error that the document does not have a rating is returned.

2.3   Error Handling

There are no additional error handling considerations.

2.4   Security

There are no additional security considerations.

3   Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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