

## HTTP Header Field Registrations

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### Abstract

This document defines the initial contents of a permanent IANA registry for HTTP header fields and a provisional repository for HTTP header fields, per RFC 3864.

### Table of Contents

1. Introduction .....	4
2. Registration Templates .....	4
2.1. Permanent HTTP Header Field Registrations .....	5
2.1.1. Header field: A-IM .....	7
2.1.2. Header field: Accept .....	8
2.1.3. Header field: Accept-Additions .....	8
2.1.4. Header field: Accept-Charset .....	8
2.1.5. Header field: Accept-Encoding .....	9
2.1.6. Header field: Accept-Features .....	9
2.1.7. Header field: Accept-Language .....	9
2.1.8. Header field: Accept-Ranges .....	10
2.1.9. Header field: Age .....	10
2.1.10. Header field: Allow .....	10
2.1.11. Header field: Alternates .....	10
2.1.12. Header field: Authentication-Info .....	11
2.1.13. Header field: Authorization .....	11
2.1.14. Header field: C-Ext .....	11
2.1.15. Header field: C-Man .....	12
2.1.16. Header field: C-Opt .....	12
2.1.17. Header field: C-PEP .....	12
2.1.18. Header field: C-PEP-Info .....	13
2.1.19. Header field: Cache-Control .....	13
2.1.20. Header field: Connection .....	13

2.1.21.	Header field: Content-Base .....	14
2.1.22.	Header field: Content-Disposition .....	14
2.1.23.	Header field: Content-Encoding .....	14
2.1.24.	Header field: Content-ID .....	14
2.1.25.	Header field: Content-Language .....	15
2.1.26.	Header field: Content-Length .....	15
2.1.27.	Header field: Content-Location .....	15
2.1.28.	Header field: Content-MD5 .....	16
2.1.29.	Header field: Content-Range .....	16
2.1.30.	Header field: Content-Script-Type .....	16
2.1.31.	Header field: Content-Style-Type .....	17
2.1.32.	Header field: Content-Type .....	17
2.1.33.	Header field: Content-Version .....	17
2.1.34.	Header field: Cookie .....	17
2.1.35.	Header field: Cookie2 .....	18
2.1.36.	Header field: DAV .....	18
2.1.37.	Header field: Date .....	18
2.1.38.	Header field: Default-Style .....	19
2.1.39.	Header field: Delta-Base .....	19
2.1.40.	Header field: Depth .....	19
2.1.41.	Header field: Derived-From .....	19
2.1.42.	Header field: Destination .....	20
2.1.43.	Header field: Differential-ID .....	20
2.1.44.	Header field: Digest .....	20
2.1.45.	Header field: ETag .....	21
2.1.46.	Header field: Expect .....	21
2.1.47.	Header field: Expires .....	21
2.1.48.	Header field: Ext .....	22
2.1.49.	Header field: From .....	22
2.1.50.	Header field: GetProfile .....	22
2.1.51.	Header field: Host .....	23
2.1.52.	Header field: IM .....	23
2.1.53.	Header field: If .....	23
2.1.54.	Header field: If-Match .....	23
2.1.55.	Header field: If-Modified-Since .....	24
2.1.56.	Header field: If-None-Match .....	24
2.1.57.	Header field: If-Range .....	24
2.1.58.	Header field: If-Unmodified-Since .....	25
2.1.59.	Header field: Keep-Alive .....	25
2.1.60.	Header field: Label .....	25
2.1.61.	Header field: Last-Modified .....	25
2.1.62.	Header field: Link .....	26
2.1.63.	Header field: Location .....	26
2.1.64.	Header field: Lock-Token .....	26
2.1.65.	Header field: MIME-Version .....	27
2.1.66.	Header field: Man .....	27
2.1.67.	Header field: Max-Forwards .....	27
2.1.68.	Header field: Meter .....	27

2.1.69.	Header field: Negotiate .....	28
2.1.70.	Header field: Opt .....	28
2.1.71.	Header field: Ordering-Type .....	28
2.1.72.	Header field: Overwrite .....	29
2.1.73.	Header field: P3P .....	29
2.1.74.	Header field: PEP .....	29
2.1.75.	Header field: PICS-Label .....	30
2.1.76.	Header field: Pep-Info .....	30
2.1.77.	Header field: Position .....	30
2.1.78.	Header field: Pragma .....	31
2.1.79.	Header field: ProfileObject .....	31
2.1.80.	Header field: Protocol .....	31
2.1.81.	Header field: Protocol-Info .....	32
2.1.82.	Header field: Protocol-Query .....	32
2.1.83.	Header field: Protocol-Request .....	32
2.1.84.	Header field: Proxy-Authenticate .....	32
2.1.85.	Header field: Proxy-Authentication-Info .....	33
2.1.86.	Header field: Proxy-Authorization .....	33
2.1.87.	Header field: Proxy-Features .....	33
2.1.88.	Header field: Proxy-Instruction .....	34
2.1.89.	Header field: Public .....	34
2.1.90.	Header field: Range .....	34
2.1.91.	Header field: Referer .....	34
2.1.92.	Header field: Retry-After .....	35
2.1.93.	Header field: Safe .....	35
2.1.94.	Header field: Security-Scheme .....	35
2.1.95.	Header field: Server .....	36
2.1.96.	Header field: Set-Cookie .....	36
2.1.97.	Header field: Set-Cookie2 .....	36
2.1.98.	Header field: SetProfile .....	36
2.1.99.	Header field: SoapAction .....	37
2.1.100.	Header field: Status-URI .....	37
2.1.101.	Header field: Surrogate-Capability .....	38
2.1.102.	Header field: Surrogate-Control .....	38
2.1.103.	Header field: TCN .....	38
2.1.104.	Header field: TE .....	39
2.1.105.	Header field: Timeout .....	39
2.1.106.	Header field: Trailer .....	39
2.1.107.	Header field: Transfer-Encoding .....	39
2.1.108.	Header field: URI .....	40
2.1.109.	Header field: Upgrade .....	40
2.1.110.	Header field: User-Agent .....	40
2.1.111.	Header field: Variant-Vary .....	41
2.1.112.	Header field: Vary .....	41
2.1.113.	Header field: Via .....	41
2.1.114.	Header field: WWW-Authenticate .....	41
2.1.115.	Header field: Want-Digest .....	42
2.1.116.	Header field: Warning .....	42

2.2. Provisional HTTP Header Field Submissions .....	43
2.2.1. Header field: Compliance .....	43
2.2.2. Header field: Content-Transfer-Encoding .....	43
2.2.3. Header field: Cost .....	44
2.2.4. Header field: Message-ID .....	44
2.2.5. Header field: Non-Compliance .....	44
2.2.6. Header field: Optional .....	44
2.2.7. Header field: Resolution-Hint .....	45
2.2.8. Header field: Resolver-Location .....	45
2.2.9. Header field: SubOK .....	46
2.2.10. Header field: Subst .....	46
2.2.11. Header field: Title .....	46
2.2.12. Header field: UA-Color .....	46
2.2.13. Header field: UA-Media .....	47
2.2.14. Header field: UA-Pixels .....	47
2.2.15. Header field: UA-Resolution .....	48
2.2.16. Header field: UA-Windowpixels .....	48
2.2.17. Header field: Version .....	48
3. IANA Considerations .....	49
4. Security Considerations .....	49
5. Acknowledgements .....	49
6. Informative References .....	49

## 1. Introduction

HTTP/1.0 [3] and HTTP/1.1 [11] define protocol constructs (respectively, the HTTP-header and message-header BNF rules) that are used as message headers. These specifications also define a number of HTTP headers themselves, and they provide for extension through the use of new field-names.

This document defines the initial contents of an IANA registry that catalogs permanent HTTP header field-names, and of an IANA repository that catalogs provisional HTTP header field-names. Both are operated according to Registration Procedures for Message Header Fields [1].

Note that neither tracks the syntax or semantics of field-values. Also, while some HTTP headers have different semantics depending on their context (e.g., Cache-Control in requests and responses), both registries consider the HTTP header field-name name space singular.

Also, some contact details listed may no longer be correct.

## 2. Registration Templates

Header field entries are summarized in tabular form for convenience of reference and presented in full in the following sections.

## 2.1. Permanent HTTP Header Field Registrations

Header name	Protocol
-----	-----
A-IM	http
Accept	http
Accept-Additions	http
Accept-Charset	http
Accept-Encoding	http
Accept-Features	http
Accept-Language	http
Accept-Ranges	http
Age	http
Allow	http
Alternates	http
Authentication-Info	http
Authorization	http
C-Ext	http
C-Man	http
C-Opt	http
C-PEP	http
C-PEP-Info	http
Cache-Control	http
Connection	http
Content-Base	http
Content-Disposition	http
Content-Encoding	http
Content-ID	http
Content-Language	http
Content-Length	http
Content-Location	http
Content-MD5	http
Content-Range	http
Content-Script-Type	http
Content-Style-Type	http
Content-Type	http
Content-Version	http
Cookie	http
Cookie2	http
DAV	http
Date	http
Default-Style	http
Delta-Base	http
Depth	http
Derived-From	http
Destination	http
Differential-ID	http
Digest	http

ETag	http
Expect	http
Expires	http
Ext	http
From	http
GetProfile	http
Host	http
IM	http
If	http
If-Match	http
If-Modified-Since	http
If-None-Match	http
If-Range	http
If-Unmodified-Since	http
Keep-Alive	http
Label	http
Last-Modified	http
Link	http
Location	http
Lock-Token	http
MIME-Version	http
Man	http
Max-Forwards	http
Meter	http
Negotiate	http
Opt	http
Ordering-Type	http
Overwrite	http
P3P	http
PEP	http
PICS-Label	http
Pep-Info	http
Position	http
Pragma	http
ProfileObject	http
Protocol	http
Protocol-Info	http
Protocol-Query	http
Protocol-Request	http
Proxy-Authenticate	http
Proxy-Authentication-Info	http
Proxy-Authorization	http
Proxy-Features	http
Proxy-Instruction	http
Public	http
Range	http
Referer	http
Retry-After	http

Safe	http
Security-Scheme	http
Server	http
Set-Cookie	http
Set-Cookie2	http
SetProfile	http
SoapAction	http
Status-URI	http
Surrogate-Capability	http
Surrogate-Control	http
TCN	http
TE	http
Timeout	http
Trailer	http
Transfer-Encoding	http
URI	http
Upgrade	http
User-Agent	http
Variant-Vary	http
Vary	http
Via	http
WWW-Authenticate	http
Want-Digest	http
Warning	http

#### 2.1.1.1. Header field: A-IM

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC3229 [16]

### 2.1.2. Header field: Accept

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

### 2.1.3. Header field: Accept-Additions

Applicable protocol: http [11]

Status: informational

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

Specification document(s):  
RFC2324 [9]

Related information: spoof

### 2.1.4. Header field: Accept-Charset

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]



#### 2.1.5. Header field: Accept-Encoding

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.6. Header field: Accept-Features

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
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Specification document(s):  
RFC2295 [7]

#### 2.1.7. Header field: Accept-Language

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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Internet Engineering Task Force

Specification document(s):  
RFC2616 [11]

#### 2.1.8. Header field: Accept-Ranges

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.9. Header field: Age

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.10. Header field: Allow

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.11. Header field: Alternates

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
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Specification document(s):  
RFC2295 [7]

#### 2.1.12. Header field: Authentication-Info

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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Internet Engineering Task Force

Specification document(s):  
RFC2617 [12]

#### 2.1.13. Header field: Authorization

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.14. Header field: C-Ext

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
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Scott Lawrence (lawrence@agranat.com)

Specification document(s):  
RFC2774 [14]

#### 2.1.15. Header field: C-Man

Applicable protocol: http [11]

Status: experimental

Author/change controller:

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Scott Lawrence (lawrence@agranat.com)

Specification document(s):

RFC2774 [14]

#### 2.1.16. Header field: C-Opt

Applicable protocol: http [11]

Status: experimental

Author/change controller:

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Specification document(s):

RFC2774 [14]

#### 2.1.17. Header field: C-PEP

Applicable protocol: http [11]

Status: deprecated

Author/change controller:

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Specification document(s):

PEP [29]

#### 2.1.18. Header field: C-PEP-Info

Applicable protocol: http [11]

Status: deprecated

Author/change controller:

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Specification document(s):

PEP [29]

#### 2.1.19. Header field: Cache-Control

Applicable protocol: http [11]

Status: standard

Author/change controller:

IETF (iesg@ietf.org)  
Internet Engineering Task Force

Specification document(s):

RFC2616 [11]

#### 2.1.20. Header field: Connection

Applicable protocol: http [11]

Status: standard

Author/change controller:

IETF (iesg@ietf.org)  
Internet Engineering Task Force

Specification document(s):

RFC2616 [11]

#### 2.1.21. Header field: Content-Base

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2068 [4]

#### 2.1.22. Header field: Content-Disposition

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.23. Header field: Content-Encoding

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.24. Header field: Content-ID

Applicable protocol: http [11]

Status: informational

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## Specification document(s):

DRP [20]

## 2.1.25. Header field: Content-Language

Applicable protocol: http [11]

Status: standard

## Author/change controller:

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Internet Engineering Task Force

## Specification document(s):

RFC2616 [11]

## 2.1.26. Header field: Content-Length

Applicable protocol: http [11]

Status: standard

## Author/change controller:

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Internet Engineering Task Force

## Specification document(s):

RFC2616 [11]

## 2.1.27. Header field: Content-Location

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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Internet Engineering Task Force

Specification document(s):  
RFC2616 [11]

#### 2.1.28. Header field: Content-MD5

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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Internet Engineering Task Force

Specification document(s):  
RFC2616 [11]

#### 2.1.29. Header field: Content-Range

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.30. Header field: Content-Script-Type

Applicable protocol: http [11]

Status: standard

Author/change controller:  
W3C (web-human@w3.org)  
World Wide Web Consortium

Specification document(s):  
HTML 4 [21]



### 2.1.31. Header field: Content-Style-Type

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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World Wide Web Consortium

Specification document(s):  
HTML 4 [21]

### 2.1.32. Header field: Content-Type

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

### 2.1.33. Header field: Content-Version

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2068 [4]

### 2.1.34. Header field: Cookie

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2965 [15]

#### 2.1.35. Header field: Cookie2

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2965 [15]

#### 2.1.36. Header field: DAV

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2518 [10]

#### 2.1.37. Header field: Date

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.38. Header field: Default-Style

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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World Wide Web Consortium

Specification document(s):  
HTML 4 [21]

#### 2.1.39. Header field: Delta-Base

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC3229 [16]

#### 2.1.40. Header field: Depth

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2518 [10]

#### 2.1.41. Header field: Derived-From

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2068 [4]

#### 2.1.42. Header field: Destination

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2518 [10]

#### 2.1.43. Header field: Differential-ID

Applicable protocol: http [11]

Status: informational

Author/change controller:  
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Specification document(s):  
DRP [20]

#### 2.1.44. Header field: Digest

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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Internet Engineering Task Force

Specification document(s):  
RFC3230 [17]

#### 2.1.45. Header field: ETag

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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Internet Engineering Task Force

Specification document(s):  
RFC2616 [11]

#### 2.1.46. Header field: Expect

Applicable protocol: http [11]

Status: standard

Author/change controller:  
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Internet Engineering Task Force

Specification document(s):  
RFC2616 [11]

#### 2.1.47. Header field: Expires

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

## 2.1.48. Header field: Ext

Applicable protocol: http [11]

Status: experimental

Author/change controller:

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Specification document(s):

RFC2774 [14]

## 2.1.49. Header field: From

Applicable protocol: http [11]

Status: standard

Author/change controller:

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Internet Engineering Task Force

Specification document(s):

RFC2616 [11]

## 2.1.50. Header field: GetProfile

Applicable protocol: http [11]

Status: informational

Author/change controller:

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Verisign, Inc.

Specification document(s):

OPS over HTTP [22]

## 2.1.51. Header field: Host

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

## 2.1.52. Header field: IM

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC3229 [16]

## 2.1.53. Header field: If

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2518 [10]

## 2.1.54. Header field: If-Match

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.55. Header field: If-Modified-Since

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.56. Header field: If-None-Match

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.57. Header field: If-Range

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]



#### 2.1.58. Header field: If-Unmodified-Since

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.59. Header field: Keep-Alive

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2068 [4]

#### 2.1.60. Header field: Label

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC3253 [18]

#### 2.1.61. Header field: Last-Modified

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.62. Header field: Link

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2068 [4]

#### 2.1.63. Header field: Location

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.64. Header field: Lock-Token

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2518 [10]

#### 2.1.65. Header field: MIME-Version

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.66. Header field: Man

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
Henrik Frystyk Nielsen (frystyk@microsoft.com)  
Paul J. Leach (paulle@microsoft.com)  
Scott Lawrence (lawrence@agranat.com)

Specification document(s):  
RFC2774 [14]

#### 2.1.67. Header field: Max-Forwards

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.68. Header field: Meter

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2227 [6]

#### 2.1.69. Header field: Negotiate

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
Andrew H. Mutz (mutz@hpl.hp.com)  
Koen Holtman (koen@win.tue.nl)

Specification document(s):  
RFC2295 [7]

#### 2.1.70. Header field: Opt

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
Henrik Frystyk Nielsen (frystyk@microsoft.com)  
Paul J. Leach (paulle@microsoft.com)  
Scott Lawrence (lawrence@agranat.com)

Specification document(s):  
RFC2774 [14]

#### 2.1.71. Header field: Ordering-Type

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC3648 [19]

#### 2.1.72. Header field: Overwrite

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2518 [10]

#### 2.1.73. Header field: P3P

Applicable protocol: http [11]

Status: standard

Author/change controller:  
W3C (web-human@w3.org)  
World Wide Web Consortium

Specification document(s):  
P3P [23]

#### 2.1.74. Header field: PEP

Applicable protocol: http [11]

Status: deprecated

Author/change controller:  
Henrik Frystyk Nielsen (frystyk@w3.org)  
World Wide Web Consortium, MIT Laboratory for Computer Science  
Dan Connolly (connolly@w3.org)  
World Wide Web Consortium, MIT Laboratory for Computer Science  
Rohit Khare (khare@w3.org)  
World Wide Web Consortium, MIT Laboratory for Computer Science  
Eric Prud'hommeaux (eric@w3.org)  
World Wide Web Consortium, MIT Laboratory for Computer Science

Specification document(s):  
PEP [29]

#### 2.1.75. Header field: PICS-Label

Applicable protocol: http [11]

Status: standard

Author/change controller:  
W3C (web-human@w3.org)  
World Wide Web Consortium

Specification document(s):  
PICSLabels [24]

#### 2.1.76. Header field: Pep-Info

Applicable protocol: http [11]

Status: deprecated

Author/change controller:  
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World Wide Web Consortium, MIT Laboratory for Computer Science  
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World Wide Web Consortium, MIT Laboratory for Computer Science  
Eric Prud'hommeaux (eric@w3.org)  
World Wide Web Consortium, MIT Laboratory for Computer Science

Specification document(s): PEP [29]

#### 2.1.77. Header field: Position

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC3648 [19]

#### 2.1.78. Header field: Pragma

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.79. Header field: ProfileObject

Applicable protocol: http [11]

Status: informational

Author/change controller:  
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Max Metral (max@firefly.net)  
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Donna Converse (converse@netscape.com)  
Netscape Communications  
Mike Myers (mmyers@verisign.com)  
Verisign, Inc.

Specification document(s):  
OPS over HTTP [22]

#### 2.1.80. Header field: Protocol

Applicable protocol: http [11]

Status: standard

Author/change controller:  
W3C (web-human@w3.org)  
World Wide Web Consortium

Specification document(s):  
PICSLabels [24]

#### 2.1.81. Header field: Protocol-Info

Applicable protocol: http [11]

Status: deprecated

Author/change controller:

Don Eastlake (dee@cybercash.com)

Rohit Khare (khare@w3.org)

Jim Miller (jmilller@w3.org)

Specification document(s):

Selecting Payment Mechanisms [26]

#### 2.1.82. Header field: Protocol-Query

Applicable protocol: http [11]

Status: deprecated

Author/change controller:

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Rohit Khare (khare@w3.org)

Jim Miller (jmilller@w3.org)

Specification document(s):

Selecting Payment Mechanisms [26]

#### 2.1.83. Header field: Protocol-Request

Applicable protocol: http [11]

Status: standard

Author/change controller:

W3C (web-human@w3.org)

World Wide Web Consortium

Specification document(s):

PICSLabels [24]

#### 2.1.84. Header field: Proxy-Authenticate

Applicable protocol: http [11]

Status: standard



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

Specification document(s):  
RFC2616 [11]

#### 2.1.85. Header field: Proxy-Authentication-Info

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2617 [12]

#### 2.1.86. Header field: Proxy-Authorization

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.87. Header field: Proxy-Features

Applicable protocol: http [11]

Status: informational

Author/change controller:  
Phillip M. Hallam-Baker (hallam@w3.org)  
W3C

Specification document(s):  
Proxy Notification [27]

#### 2.1.88. Header field: Proxy-Instruction

Applicable protocol: http [11]

Status: informational

Author/change controller:

Phillip M. Hallam-Baker (hallam@w3.org)  
W3C

Specification document(s):

Proxy Notification [27]

#### 2.1.89. Header field: Public

Applicable protocol: http [11]

Status: standard

Author/change controller:

IETF (iesg@ietf.org)  
Internet Engineering Task Force

Specification document(s):

RFC2068 [4]

#### 2.1.90. Header field: Range

Applicable protocol: http [11]

Status: standard

Author/change controller:

IETF (iesg@ietf.org)  
Internet Engineering Task Force

Specification document(s):

RFC2616 [11]

#### 2.1.91. Header field: Referer

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.92. Header field: Retry-After

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.93. Header field: Safe

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
Koen Holtman (koen@win.tue.nl)

Specification document(s):  
RFC2310 [8]

#### 2.1.94. Header field: Security-Scheme

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
Eric Rescorla (ekr@rtfm.com)  
A. Schiffman (ams@terisa.com)

Specification document(s):  
RFC2660 [13]

#### 2.1.95. Header field: Server

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.96. Header field: Set-Cookie

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2109 [5]

#### 2.1.97. Header field: Set-Cookie2

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2965 [15]

#### 2.1.98. Header field: SetProfile

Applicable protocol: http [11]

Status: informational

## Author/change controller:

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Max Metral (max@firefly.net)  
FireFly Network, Inc.  
Upendra Shardanand (shard@firefly.net)  
FireFly Network, Inc.  
Donna Converse (converse@netscape.com)  
Netscape Communications  
Mike Myers (mmyers@verisign.com)  
Verisign, Inc.

## Specification document(s):

OPS over HTTP [22]

## 2.1.99. Header field: SoapAction

Applicable protocol: http [11]

Status: informational

## Author/change controller:

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IBM  
Gopal Kakivaya (gopalk@microsoft.com)  
Microsoft  
Andrew Layman (andrewl@microsoft.com)  
Microsoft  
Noah Mendelsohn (Noah\_Mendelsohn@lotus.com)  
Lotus Development Corp.  
Hernik Frystyk Nielsen (frystyk@microsoft.com)  
Microsoft  
Satish Thatte (satisht@microsoft.com)  
Microsoft  
Dave Winer (dave@userland.com)  
UserLand Software, Inc.

## Specification document(s):

SOAP [28]

## 2.1.100. Header field: Status-URI

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2518 [10]

#### 2.1.101. Header field: Surrogate-Capability

Applicable protocol: http [11]

Status: informational

Author/change controller:  
Mark Nottingham (mnot@akamai.com)  
Akamai  
Xiang Liu (xiang.liu@oracle.com)  
Oracle

Specification document(s):  
edge-arch [25]

#### 2.1.102. Header field: Surrogate-Control

Applicable protocol: http [11]

Status: informational

Author/change controller:  
Mark Nottingham (mnot@akamai.com)  
Akamai  
Xiang Liu (xiang.liu@oracle.com)  
Oracle

Specification document(s):  
edge-arch [25]

#### 2.1.103. Header field: TCN

Applicable protocol: http [11]

Status: experimental

Author/change controller:  
Andrew H. Mutz (mutz@hpl.hp.com)  
Koen Holtman (koen@win.tue.nl)

Specification document(s):  
RFC2295 [7]

2.1.104. Header field: TE

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

2.1.105. Header field: Timeout

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2518 [10]

2.1.106. Header field: Trailer

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

2.1.107. Header field: Transfer-Encoding

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

2.1.108. Header field: URI

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2068 [4]

2.1.109. Header field: Upgrade

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

2.1.110. Header field: User-Agent

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]



#### 2.1.111. Header field: Variant-Vary

Applicable protocol: http [11]

Status: experimental

Author/change controller:

Andrew H. Mutz (mutz@hpl.hp.com)

Koen Holtman (koen@win.tue.nl)

Specification document(s):

RFC2295 [7]

#### 2.1.112. Header field: Vary

Applicable protocol: http [11]

Status: standard

Author/change controller:

IETF (iesg@ietf.org)

Internet Engineering Task Force

Specification document(s):

RFC2616 [11]

#### 2.1.113. Header field: Via

Applicable protocol: http [11]

Status: standard

Author/change controller:

IETF (iesg@ietf.org)

Internet Engineering Task Force

Specification document(s):

RFC2616 [11]

#### 2.1.114. Header field: WWW-Authenticate

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

#### 2.1.115. Header field: Want-Digest

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC3230 [17]

#### 2.1.116. Header field: Warning

Applicable protocol: http [11]

Status: standard

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

Specification document(s):  
RFC2616 [11]

## 2.2. Provisional HTTP Header Field Submissions

Header name -----	Protocol -----
Compliance	http
Content-Transfer-Encoding	http
Cost	http
Message-ID	http
Non-Compliance	http
Optional	http
Resolution-Hint	http
Resolver-Location	http
SubOK	http
Subst	http
Title	http
UA-Color	http
UA-Media	http
UA-Pixels	http
UA-Resolution	http
UA-Windowpixels	http
Version	http

### 2.2.1. Header field: Compliance

Applicable protocol: http [11]

Status: provisional

Author/change controller: Jeffrey C. Mogul (mogul@wrl.dec.com)  
Western Research Laboratory, Digital Equipment Corporation Josh  
Cohen (josh@netscape.com) Netscape Communications Corporation  
Scott Lawrence (lawrence@agranat.com) Agranat Systems, Inc.

Specification document(s):  
OPTIONS messages [31]

### 2.2.2. Header field: Content-Transfer-Encoding

Applicable protocol: http [11]

Status: provisional

Author/change controller:  
Tim Berners-Lee (timbl@w3.org)  
MIT Laboratory for Computer Science

Specification document(s):  
Object Headers [2]

#### 2.2.3. Header field: Cost

Applicable protocol: http [11]

Status: provisional

Author/change controller:  
Tim Berners-Lee (timbl@w3.org)  
MIT Laboratory for Computer Science

Specification document(s):  
Object Headers [2]

#### 2.2.4. Header field: Message-ID

Applicable protocol: http [11]

Status: provisional

Author/change controller:  
Tim Berners-Lee (timbl@w3.org)  
MIT Laboratory for Computer Science

Specification document(s):  
Object Headers [2]

#### 2.2.5. Header field: Non-Compliance

Applicable protocol: http [11]

Status: provisional

Author/change controller: Jeffrey C. Mogul (mogul@wrl.dec.com)  
Western Research Laboratory, Digital Equipment Corporation Josh  
Cohen (josh@netscape.com) Netscape Communications Corporation  
Scott Lawrence (lawrence@agranat.com) Agranat Systems, Inc.

Specification document(s):  
OPTIONS messages [31]

#### 2.2.6. Header field: Optional

Applicable protocol: http [11]

Status: provisional

## Author/change controller:

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MIT Laboratory for Computer Science  
Henrik Frystyk Nielsen (frystyk@w3.org)  
World Wide Web Consortium

## Specification document(s):

WIRE [32]

## 2.2.7. Header field: Resolution-Hint

Applicable protocol: http [11]

Status: provisional

## Author/change controller:

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Henrik Frystyk Nielsen (frystyk@w3.org)  
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## Specification document(s):

WIRE [32]

## 2.2.8. Header field: Resolver-Location

Applicable protocol: http [11]

Status: provisional

## Author/change controller:

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MIT Laboratory for Computer Science  
Henrik Frystyk Nielsen (frystyk@w3.org)  
World Wide Web Consortium

Specification document(s):  
WIRE [32]

#### 2.2.9. Header field: SubOK

Applicable protocol: http [11]

Status: provisional

Author/change controller: Jeffrey C. Mogul (mogul@wrl.dec.com)  
Western Research Laboratory, Digital Equipment Corporation Arthur  
van Hoff (avh@marimba.com) Marimba, Inc.

Specification document(s):  
Duplicate Suppression [33]

#### 2.2.10. Header field: Subst

Applicable protocol: http [11]

Status: provisional

Author/change controller: Jeffrey C. Mogul (mogul@wrl.dec.com)  
Western Research Laboratory, Digital Equipment Corporation Arthur  
van Hoff (avh@marimba.com) Marimba, Inc.

Specification document(s):  
Duplicate Suppression [33]

#### 2.2.11. Header field: Title

Applicable protocol: http [11]

Status: provisional

Author/change controller:  
Tim Berners-Lee (timbl@w3.org)  
MIT Laboratory for Computer Science

Specification document(s):  
Object Headers [2]

#### 2.2.12. Header field: UA-Color

Applicable protocol: http [11]

Status: provisional

## Author/change controller:

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Lou Montulli (montulli@netscape.com)  
Netscape Communications Corp.  
Andrew H. Mutz (mutz@hpl.hp.com)  
Hewlett-Packard Company

## Specification document(s):

UA Attributes [30]

## 2.2.13. Header field: UA-Media

Applicable protocol: http [11]

Status: provisional

## Author/change controller:

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Netscape Communications Corp.  
Andrew H. Mutz (mutz@hpl.hp.com)  
Hewlett-Packard Company

## Specification document(s):

UA Attributes [30]

## 2.2.14. Header field: UA-Pixels

Applicable protocol: http [11]

Status: provisional

## Author/change controller:

Larry Masinter (LMM@acm.org)  
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Lou Montulli (montulli@netscape.com)  
Netscape Communications Corp.  
Andrew H. Mutz (mutz@hpl.hp.com)  
Hewlett-Packard Company

## Specification document(s):

UA Attributes [31]

#### 2.2.15. Header field: UA-Resolution

Applicable protocol: http [11]

Status: provisional

Author/change controller:

Larry Masinter (LMM@acm.org)  
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Lou Montulli (montulli@netscape.com)  
Netscape Communications Corp.  
Andrew H. Mutz (mutz@hpl.hp.com)  
Hewlett-Packard Company

Specification document(s):

UA Attributes [30]

#### 2.2.16. Header field: UA-Windowpixels

Applicable protocol: http [11]

Status: provisional

Author/change controller:

Larry Masinter (LMM@acm.org)  
Adobe Systems  
Lou Montulli (montulli@netscape.com)  
Netscape Communications Corp.  
Andrew H. Mutz (mutz@hpl.hp.com)  
Hewlett-Packard Company

Specification document(s):

UA Attributes [30]

#### 2.2.17. Header field: Version

Applicable protocol: http [11]

Status: provisional

Author/change controller:

Tim Berners-Lee (timbl@w3.org)  
MIT Laboratory for Computer Science

Specification document(s):

Object Headers [2]



### 3. IANA Considerations

This specification provides initial registrations of HTTP header fields in the "Permanent Message Header Field Registry", defined by Registration Procedures for Message Header Fields [1].

It also provides initial submissions of HTTP header fields in the "Provisional Message Header Field Repository", defined by the same document.

### 4. Security Considerations

No security considerations are introduced by this document beyond those already inherent in use of the HTTP header fields referenced.

### 5. Acknowledgements

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### 6. Informative References

- [1] Klyne, G., Nottingham, M., and J. Mogul, "Registration Procedures for Message Header Fields", BCP 90, RFC 3864, September 2004.
- [2] Berners-Lee, T., "Object Header lines in HTTP", May 1994, <<http://www.w3.org/Protocols/HTTP/Object-Headers.html>>.
- [3] Berners-Lee, T., Fielding, R., and H. Nielsen, "Hypertext Transfer Protocol -- HTTP/1.0", RFC 1945, May 1996.
- [4] Fielding, R., Gettys, J., Mogul, J., Nielsen, H., and T. Berners-Lee, "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2068, January 1997.
- [5] Kristol, D. and L. Montulli, "HTTP State Management Mechanism", RFC 2109, February 1997.
- [6] Mogul, J. and P. Leach, "Simple Hit-Metering and Usage-Limiting for HTTP", RFC 2227, October 1997.
- [7] Holtman, K. and A. Mutz, "Transparent Content Negotiation in HTTP", RFC 2295, March 1998.
- [8] Holtman, K., "The Safe Response Header Field", RFC 2310, April 1998.

- [9] Masinter, L., "Hyper Text Coffee Pot Control Protocol (HTCPCP/1.0)", RFC 2324, April 1998.
- [10] Goland, Y., Whitehead, E., Faizi, A., Carter, S., and D. Jensen, "HTTP Extensions for Distributed Authoring -- WEBDAV", RFC 2518, February 1999.
- [11] Fielding, R., Gettys, J., Mogul, J., Frystyk, H., Masinter, L., Leach, P., and T. Berners-Lee, "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999.
- [12] Franks, J., Hallam-Baker, P., Hostetler, J., Lawrence, S., Leach, P., Luotonen, A., and L. Stewart, "HTTP Authentication: Basic and Digest Access Authentication", RFC 2617, June 1999.
- [13] Rescorla, E. and A. Schiffman, "The Secure HyperText Transfer Protocol", RFC 2660, August 1999.
- [14] Nielsen, H., Leach, P., and S. Lawrence, "An HTTP Extension Framework", RFC 2774, February 2000.
- [15] Kristol, D. and L. Montulli, "HTTP State Management Mechanism", RFC 2965, October 2000.
- [16] Mogul, J., Krishnamurthy, B., Douglass, F., Feldmann, A., Goland, Y., van Hoff, A., and D. Hellerstein, "Delta encoding in HTTP", RFC 3229, January 2002.
- [17] Mogul, J. and A. Van Hoff, "Instance Digests in HTTP", RFC 3230, January 2002.
- [18] Clemm, G., Amsden, J., Ellison, T., Kaler, C., and J. Whitehead, "Versioning Extensions to WebDAV (Web Distributed Authoring and Versioning)", RFC 3253, March 2002.
- [19] Whitehead, J. and J. Reschke, Ed., "Web Distributed Authoring and Versioning (WebDAV) Ordered Collections Protocol", RFC 3648, December 2003.
- [20] Hoff, A., Payne, J., Hapner, M., Carter, S., and M. Medin, "The HTTP Distribution and Replication Protocol", W3C NOTE NOTE-drp-19970825, August 1997.
- [21] Raggett, D., Hors, A., and I. Jacobs, "HTML 4.01 Specification", W3C REC REC-html401-19991224, December 1999.

- [22] Hensley, P., Metral, M., Shardanand, U., Converse, D., and M. Myers, "Implementation of OPS Over HTTP", W3C NOTE NOTE-OPS-OverHTTP, June 1997.
- [23] Marchiori, M., "The Platform for Privacy Preferences 1.0 (P3P1.0) Specification", W3C REC REC-P3P-20020416, April 2002.
- [24] Krauskopf, T., Miller, J., Resnick, P., and W. Treese, "PICS 1.1 Label Distribution -- Label Syntax and Communication Protocols", W3C REC REC-PICS-labels-961031, October 1996.
- [25] Nottingham, M. and X. Liu, "Edge Architecture Specification", W3C NOTE NOTE-edge-arch-20010804, August 2001.
- [26] Chung, E. and D. Dardailler, "White Paper: Joint Electronic Payment Initiative", W3C NOTE NOTE-jepi-970519, May 1997.
- [27] Hallam-Baker, P., "Notification for Proxy Caches", W3C NOTE WD-proxy-960221, February 1996.
- [28] Box, D., Ehnebuske, D., Kakivaya, G., Layman, A., Mendelsohn, N., Nielsen, H., Thatte, S., and D. Winer, "Simple Object Access Protocol (SOAP) 1.1", W3C NOTE NOTE-SOAP-20000508, May 2000.
- [29] Connolly, D., Prod'hommeaux, E., Nielsen, H., and R. Khare, "PEP Specification: an Extension Mechanism for HTTP", Nov 1998, <<http://www.w3.org/TR/WD-http-pep>>.
- [30] Masinter, L., Montulli, L., and A. Mutz, "User-Agent Display Attributes Headers", Work in Progress, November 1996.
- [31] Mogul, J., Cohen, J., and S. Lawrence, "Specification of HTTP/1.1 OPTIONS messages", Work in Progress, August 1997.
- [32] Girod, L., Chen, B., Henrik, H., and J. Mallery, "WIRE - W3 Identifier Resolution Extensions", Work in Progress, March 1998.
- [33] Mogul, J. and A. van Hoff, "Duplicate Suppression in HTTP", Work in Progress, April 1998.

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