

## 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. 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:  
IETF (iesg@ietf.org)  
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

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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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Scott Lawrence (lawrence@agranat.com)

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:  
IETF (iesg@ietf.org)  
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:  
IETF (iesg@ietf.org)  
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:  
W3C (web-human@w3.org)  
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:

IETF (iesg@ietf.org)

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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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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FireFly Network, Inc.  
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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:

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Rohit Khare (khare@w3.org)

Jim Miller (jmillier@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 (jmillier@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:

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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

The authors would like to thank Graham Klyne for his work in defining the message header registries, his input and help in preparing this document, and the registry generation software.

### 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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## Acknowledgement

Funding for the RFC Editor function is currently provided by the Internet Society.

