

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

T.808

Amendment 4
(05/2010)

SERIES T: TERMINALS FOR TELEMATIC SERVICES
Still-image compression – JPEG 2000

Information technology – JPEG 2000 image coding
system: Interactivity tools, APIs and protocols

Amendment 4: JPIP server and client profiles

Recommendation ITU-T T.808 (2005) – Amendment 4



Documents

Document Sharing Hub

ITU-T T-SERIES RECOMMENDATIONS
TERMINALS FOR TELEMATIC SERVICES

Facsimile – Framework	T.0–T.19
Still-image compression – Test charts	T.20–T.29
Facsimile – Group 3 protocols	T.30–T.39
Colour representation	T.40–T.49
Character coding	T.50–T.59
Facsimile – Group 4 protocols	T.60–T.69
Telematic services – Framework	T.70–T.79
Still-image compression – JPEG-1, Bi-level and JBIG	T.80–T.89
Telematic services – ISDN Terminals and protocols	T.90–T.99
Videotext – Framework	T.100–T.109
Data protocols for multimedia conferencing	T.120–T.149
Telewriting	T.150–T.159
Multimedia and hypermedia framework	T.170–T.189
Cooperative document handling	T.190–T.199
Telematic services – Interworking	T.300–T.399
Open document architecture	T.400–T.429
Document transfer and manipulation	T.430–T.449
Document application profile	T.500–T.509
Communication application profile	T.510–T.559
Telematic services – Equipment characteristics	T.560–T.649
Still-image compression – JPEG 2000	T.800–T.829
Still-image compression – JPEG XR	T.830–T.849
Still-image compression – JPEG-1 extensions	T.850–T.899

For further details, please refer to the list of ITU-T Recommendations.



Information technology – JPEG 2000 image coding system:
Interactivity tools, APIs and protocols

Amendment 4

JPIP server and client profiles

Summary

Amendment 4 to Recommendation ITU-T T.808 (2005) | ISO/IEC 15444-9:2005 defines the framework, concepts and methodology for establishing JPIP interoperability and the criteria to be achieved to claim compliance to Recommendation ITU-T T.808 | ISO/IEC 15444-9. This amendment defines JPIP *profiles* and *variants*. Profiles define the fields that a JPIP server is expected to implement and support beyond parsing and interpretation; profiles also limit the requests a client can expect a server within this profile to support and fully implement. Variants define which features of the JPIP standard are used to request and transmit data between client and server. Servers are classified according to the highest level profile they support, and all the variants they implement. Clients are classified according to all the variants they implement, and according to the highest level profile they support. A new annex is also included in this amendment that defines a methodology for testing compliance within the set of defined profiles and variants. Test data and scripts for JPIP testing are provided as an integral part of this amendment.

This amendment has an electronic attachment containing test data and scripts for JPIP testing. This attachment is also available online from the ITU-T Test Signal Database at <http://itu.int/net/ITU-T/sigdb/speimage/Tseries-s.htm#T.808>.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T T.808	2005-01-08	16
1.1	ITU-T T.808 (2005) Amend. 1	2006-05-29	16
1.2	ITU-T T.808 (2005) Cor. 1	2007-01-13	16
1.3	ITU-T T.808 (2005) Amend. 2	2007-08-29	16
1.4	ITU-T T.808 (2005) Cor. 2	2008-06-13	16
1.5	ITU-T T.808 (2005) Amend. 3	2008-06-13	16
1.6	ITU-T T.808 (2005) Amend. 4	2010-05-22	16

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

© ITU 2010

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

CONTENTS

	<i>Page</i>
1) Clause 2, Normative references.....	1
2) Clause 5.1	1
3) Clause C.2.4	1
4) Clause C.3.2	1
5) Clause L.1.....	1
6) Clause L.2.....	2
7) Clause 6.2.....	3
8) Clause 7.....	3
9) Clause 3.3.....	3
10) Clause 5.1	4
11) Clause 5.2.....	4
12) Clause A.3.6.2	4
13) Clause A.3.6.3	4
14) Clause C.1.1	5
15) Clause C.1.2	5
16) Clause C.2.1	5
17) Clause C.2.3	5
18) Clause C.3.5	6
19) Clause C.4.2	6
20) New clause C.5.2.10.....	6
21) Clause C.6.1	6
22) Clause C.7.1	7
23) Clause C.10.2.1	7
24) Clause C.10.2.2	7
25) Clause C.10.2.3	8
26) Clause C.10.2.4	9
27) New clause C.10.2.8.....	9
28) Clause D.1.2	9
29) Clause D.1.3.5	10
30) New clause D.1.4.....	10
31) Clause D.2.2	10
32) Clause D.2.3	10
33) Clause D.2.6	10
34) Clause D.2.8	11
35) Clause D.2.9	11
36) Clause D.2.10	11
37) Clause D.2.23	11
38) New clause D.2.24.....	11
39) New clause D.2.25.....	11
40) Clause D.3	11
41) New Annex J.....	12



Documents

Document Sharing Hub

Rec. ITU-T T.808 (2005)/Amd.4 (05/2010)

iii

	<i>Page</i>
Annex J – Profiles and variants for interoperability and testing.....	12
J.1 Introduction.....	12
J.2 Definition of variants	12
J.3 Definition of profiles.....	13
J.4 Testing methodology.....	15
42) Bibliography.....	19

Electronic attachment = JPIP test data and scripts

INTERNATIONAL STANDARD
RECOMMENDATION ITU-TInformation technology – JPEG 2000 image coding system:
Interactivity tools, APIs and protocols

Amendment 4

JPIP server and client profiles

1) Clause 2, Normative references

Add the following reference to clause 2:

- Recommendation ITU-T T.803 (2002) | ISO/IEC 15444-4:2004, *Information technology – JPEG 2000 image coding system: Conformance testing.*

2) Clause 5.1

a) Replace the definition of `TOKEN` by:

```
TOKEN      =  1*(ALPHA / DIGIT / "." / "_" / "-")
```

b) Add the following token at the end of the ABNF-rules:

```
IDTOKEN    =  1*(TOKEN / ";" )
```

3) Clause C.2.4

Replace the definition of the `target-id` by the following:

```
target-id = IDTOKEN
```

4) Clause C.3.2

Replace the definition of the `channel-id` by the following:

```
channel-id = IDTOKEN
```

5) Clause L.1

Add to the list of fields in L.1 the following:

```

;=====
; C.4.5 Frame Size for Variable Dimension Data (fvsiz)
;=====
fvsiz = "fvsiz" "=" 1#UINT ["," round-direction]
round-direction = "round-up" / "round-down" / "closest"
;=====
; C.4.7 Offset for Variable Dimension Data (rvoff)
;=====
rvoff = "rvoff" "=" 1#UINT
;=====

```

```
; C.4.8 Region Size for Variable Dimension Data(rvsiz)
;=====
rvsiz = "rvsiz" "=" 1#UINT
```

6) Clause L.2

a) *Replace the list of jpip-response headers by the following:*

```
jpip-response-header =
    / JPIP-tid ; D.2.2
    / JPIP-cnew ; D.2.3
    / JPIP-qid ; D.2.4
    / JPIP-fsiz ; D.2.5
    / JPIP-rsiz ; D.2.6
    / JPIP-roff ; D.2.7
    / JPIP-fvsiz ; D.2.8
    / JPIP-rvsiz ; D.2.9
    / JPIP-rvoff ; D.2.10
    / JPIP-comps ; D.2.11
    / JPIP-stream ; D.2.12
    / JPIP-context ; D.2.13
    / JPIP-roi ; D.2.14
    / JPIP-layers ; D.2.15
    / JPIP-srate ; D.2.16
    / JPIP-metareq ; D.2.17
    / JPIP-len ; D.2.18
    / JPIP-quality ; D.2.19
    / JPIP-type ; D.2.20
    / JPIP-mset ; D.2.21
    / JPIP-cap ; D.2.22
    / JPIP-pref ; D.2.23
    / JPIP-align ; D.2.24
    / JPIP-subtarget ; D.2.25
```

b) *Add respectively the following items to the list of JPIP Response BNF:*

```
;=====
; D.2.8 Frame Size for Variable Dimension Data (JPIP-fvsiz)
;=====
JPIP-fvsiz = "JPIP-fvsiz" ":" LWSP 1#UINT
;=====
; D.2.9 Region Size for Variable Dimension Data(JPIP-rvsiz)
;=====
```

```

JPIP-rvsiz = "JPIP-rvsiz" ":" LWSP 1#UINT
;=====
; D.2.10 Offset for Variable Dimension Data (JPIP-rvoff)
;=====
JPIP-rvoff = "JPIP-rvoff" ":" LWSP 1#UINT
;=====
; D.2.24 Alignment (JPIP-align)
;=====
JPIP-align = "JPIP-align" ":" LWSP "yes" / "no"
;=====
; D.2.25 Subtarget (JPIP-subtarget)
;=====
JPIP-subtarget = "JPIP-subtarget" ":" LWSP byte-range / src-codestream-specs

```

7) Clause 6.2

- a) *Replace the third point of the second paragraph by the following:*
- Annex C defines the client request syntax. The client shall produce compliant requests and the server shall be able to parse, interpret and respond to all compliant requests.
- b) *Add the following to 6.2:*
- Server and client conformance is further structured into profiles and variants. Profiles define which fields servers must support and implement beyond simply parsing and interpreting. Variants define the operating modes and features of the JPIP standard a client and server use to transmit data. Clients and servers must provide a common subset of variants in order to interoperate. See Annex J for details about conformance and testing for conformance.

8) Clause 7

Change clause 7 to:

Conformance with this Recommendation | International Standard by a client means that the client's JPIP requests are well structured, valid and conformant to the JPIP client requests as defined by this Recommendation | International Standard, and that it is able to parse the JPIP responses defined by this Recommendation | International Standard.

Conformance with this Recommendation | International Standard by a server means that the server's JPIP responses are well structured, valid and conformant to the JPIP server response signalling as defined by this Recommendation | International Standard, and is able to parse the JPIP requests defined by this Recommendation | International Standard. Servers shall parse and interpret all normative request types and shall respond to all compliant requests. Compliance to a profile requires servers furthermore to support and implement all mandatory fields within that profile to the extent defined in Annex J.

Conformance, profiles and conformance testing methodologies of this Recommendation | International Standard are defined in Annex J.

It is expected that server applications may reduce efficiency by sending additional data not explicitly requested for or redundant data depending on the network quality-of-service. Such implementation decisions are application specific and provide the JPIP system with high utility.

9) Clause 3.3

Add the following definitions:

3.3.24 profile: Conformance is structured according to profiles; a profile defines the set of request fields that a server is expected to support and implement and a client communicating with a server in this profile may issue expecting the

