



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.994.1

Amendment 2
(06/2004)

SERIES G: TRANSMISSION SYSTEMS AND MEDIA,
DIGITAL SYSTEMS AND NETWORKS

Digital sections and digital line system – Access networks

Handshake procedures for digital subscriber line
(DSL) transceivers

Amendment 2

ITU-T Recommendation G.994.1 (2003) – Amendment 2

ITU-T G-SERIES RECOMMENDATIONS
TRANSMISSION SYSTEMS AND MEDIA, DIGITAL SYSTEMS AND NETWORKS

INTERNATIONAL TELEPHONE CONNECTIONS AND CIRCUITS	G.100–G.199
GENERAL CHARACTERISTICS COMMON TO ALL ANALOGUE CARRIER-TRANSMISSION SYSTEMS	G.200–G.299
INDIVIDUAL CHARACTERISTICS OF INTERNATIONAL CARRIER TELEPHONE SYSTEMS ON METALLIC LINES	G.300–G.399
GENERAL CHARACTERISTICS OF INTERNATIONAL CARRIER TELEPHONE SYSTEMS ON RADIO-RELAY OR SATELLITE LINKS AND INTERCONNECTION WITH METALLIC LINES	G.400–G.449
COORDINATION OF RADIOTELEPHONY AND LINE TELEPHONY	G.450–G.499
TESTING EQUIPMENTS	G.500–G.599
TRANSMISSION MEDIA CHARACTERISTICS	G.600–G.699
DIGITAL TERMINAL EQUIPMENTS	G.700–G.799
DIGITAL NETWORKS	G.800–G.899
DIGITAL SECTIONS AND DIGITAL LINE SYSTEM	G.900–G.999
General	G.900–G.909
Parameters for optical fibre cable systems	G.910–G.919
Digital sections at hierarchical bit rates based on a bit rate of 2048 kbit/s	G.920–G.929
Digital line transmission systems on cable at non-hierarchical bit rates	G.930–G.939
Digital line systems provided by FDM transmission bearers	G.940–G.949
Digital line systems	G.950–G.959
Digital section and digital transmission systems for customer access to ISDN	G.960–G.969
Optical fibre submarine cable systems	G.970–G.979
Optical line systems for local and access networks	G.980–G.989
Access networks	G.990–G.999
QUALITY OF SERVICE AND PERFORMANCE – GENERIC AND USER-RELATED ASPECTS	G.1000–G.1999
TRANSMISSION MEDIA CHARACTERISTICS	G.6000–G.6999
DIGITAL TERMINAL EQUIPMENTS	G.7000–G.7999
DIGITAL NETWORKS	G.8000–G.8999

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

ITU-T Recommendation G.994.1

Handshake procedures for digital subscriber line (DSL) transceivers

Amendment 2

Summary

This amendment adds the following functionalities to ITU-T Rec. G.994.1:

- Parameters to support ITU-T Rec. G.993.1 (2004).
- Carrier sets to support ITU-T Rec. G.993.1 (2004).
- Change of parameter names for T1E1.
- Parameters for the corrigendum to G.992.1 Amendment 1.
- Parameters to support Annex C/G.992.3.
- Parameters to resolve G.991.2 Regenerator Target Margin Problem.
- Parameters for TDIM and Ethernet bonding (D-1063, SS-091R1), and parameters for ATM bonding.
- Parameters to extend the amplitude range of B43 and J43 tonesets.
- Parameters to support new INP_min values of 4, 8 and 16 in ITU-T Rec. G.992.3.
- Parameters to support new TU-12 TPS-TC in ITU-T Rec. G.991.2.

Source

Amendment 2 to ITU-T Recommendation G.994.1 (2003) was approved on 13 June 2004 by ITU-T Study Group 15 (2001-2004) under the ITU-T Recommendation A.8 procedure.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. 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 received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

© ITU 2004

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

ITU-T Recommendation G.994.1

Handshake procedures for digital subscriber line (DSL) transceivers

Amendment 2

- 1) To support G.993.1 – 2004, and reference to ANSI and T1E1 documents, add the following parameters:

Table 11.0.4/G.994.1 – Standard information field – SPar(1) coding – Octet 5

Bits								SPar(1)s – Octet 5
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	G.992.5 – Annex M
x	x	x	x	x	x	1	x	<u>G.993.1/ANSI T1.424</u> Reserved for allocation by the ITU-T
x	x	x	x	x	1	x	x	<u>G.993.1 – Annex I/T1E1 TRQ 12</u> Reserved for allocation by the ITU-T
x	x	x	x	1	x	x	x	<u>Reserved for allocation by the ITU-T</u> <u>Variable Silence Period (Note)</u>
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	1	x	x	x	x	x	x	Reserved for allocation by the ITU-T
x	0	0	0	0	0	0	0	No parameters in this octet

NOTE – Setting the bit to binary ONE in an MS message requests a silence period of 10-640 seconds long, as specified by the Variable Silence Period length field. The station that has invoked the silence period by transmitting MS may terminate the silence period prior to the requested length, by restarting the handshake session (sending activation tones).

Table 11.59/G.994.1 – Standard information field – G.993.1 NPar(2) coding

Bits								G.993.1 NPar(2)s
8	7	6	5	4	3	2	1	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Upstream use of optional band (OptUp)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Downstream use of optional band (OptDn)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>PSD reduction (PSDRed)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>PTM</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>ATM</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.997.1 – Clear EOC OAM</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.60/G.994.1 – Standard information field – G.993.1 SPar(2) coding

<u>Bits</u>		<u>G.993.1 SPar(2)s</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

NOTE – The length of the corresponding NPar(3) field is variable and is a multiple of 4 octets. The length depends on the total number of bands "j" to be specified. "j" is the band index (starting from 1).

**Table 11.60.2.4j-4/G.994.1 – Standard information field – G.993.1
Used bands in upstream NPar(3) coding – Octet 4j – 3 (j = 1, 2)**

<u>Bits</u>		<u>G.993.1 Used bands in upstream NPar(3)s – Octet 4j – 3 (j = 1, 2)</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

End tone index of band j (bits 12 to 7)

**Table 11.60.2.4j-3/G.994.1 – Standard information field – G.993.1
Used bands in upstream NPar(3) coding – Octet 4j – 2 (j = 1, 2)**

<u>Bits</u>		<u>G.993.1 Used bands in upstream NPar(3)s – Octet 4j – 2 (j = 1, 2)</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

End tone index of band j (bits 6 to 1)

**Table 11.60.2.4j-2/G.994.1 – Standard information field – G.993.1
Used bands in upstream NPar(3) coding – Octet 4j – 1 (j = 1, 2)**

<u>Bits</u>		<u>G.993.1 Used bands in upstream NPar(3)s – Octet 4j – 1 (j = 1, 2)</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

Start tone index of band j (bits 12 to 7)

**Table 11.60.2.4j-1/G.994.1 – Standard information field – G.993.1
Used bands in upstream NPar(3) coding – Octet 4j (j = 1, 2)**

<u>Bits</u>		<u>G.993.1 Used bands in upstream NPar(3)s – Octet 4j (j = 1, 2)</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

Start tone index of band j (bits 6 to 1)

**Table 11.60.3.4j-4/G.994.1 – Standard information field – G.993.1
Used bands in downstream NPar(3) coding – Octet 4j – 3 (j = 1, 2)**

<u>Bits</u>		<u>G.993.1 Used bands in downstream NPar(3)s – Octet 4j – 3 (j = 1, 2)</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

End tone index of band j (bits 12 to 7)

Table 11.60.3.4j-3/G.994.1 – Standard information field – G.993.1
Used bands in downstream NPar(3) coding – Octet 4j – 2 (j = 1, 2)

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.993.1 Used bands in downstream NPar(3)s – Octet 4j – 2 (j = 1, 2)</u>
								<u>End tone index of band j (bits 6 to 1)</u>

Table 11.60.3.4j-2/G.994.1 – Standard information field – G.993.1
Used bands in downstream NPar(3) coding – Octet 4j – 1 (j = 1, 2)

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.993.1 Used bands in downstream NPar(3)s – Octet 4j – 1 (j = 1, 2)</u>
								<u>Start tone index of band j (bits 12 to 7)</u>

Table 11.60.3.4j-1/G.994.1 – Standard information field – G.993.1
Used bands in downstream NPar(3) coding – Octet 4j (j = 1, 2)

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.993.1 Used bands in downstream NPar(3)s – Octet 4j (j = 1, 2)</u>
								<u>Start tone index of band j (bits 6 to 1)</u>

Table 11.60.4/G.994.1 – Standard information field – G.993.1 IDFT/DFT
size NPar(3) coding

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.993.1 IDFT/DFT size NPar(3)s</u>
								<u>IDFT/DFT size (bits 6 to 1 × 256 points)</u>

Table 11.60.5/G.994.1 – Standard information field – G.993.1
Initial length of CE NPar(3) coding – Octet 1

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.993.1 Initial length of CE NPar(3)s – Octet 1</u>
								<u>Initial sample length of cyclic extension (bits 12 to 7)</u>

Table 11.60.5.1/G.994.1 – Standard information field – G.993.1
Initial length of CE NPar(3) coding – Octet 2

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.993.1 Initial length of CE NPar(3)s – Octet 2</u>
								<u>Initial sample length of cyclic extension (bits 6 to 1)</u>

Table 11.60.6.4j-4/G.994.1 – Standard information field – G.993.1
RFI bands NPar(3) coding – Octet 4j – 3 (j = 1, 2, 3, 4, 5)

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.993.1 RFI bands NPar(3)s – Octet 4j – 3 (j = 1, 2, 3, 4, 5)</u>
								<u>End tone index of band j (bits 12 to 7)</u>

Table 11.60.6.4j-3/G.994.1 – Standard information field – G.993.1
RFI bands NPar(3) coding – Octet 4j – 2 (j = 1, 2, 3, 4, 5)

<u>Bits</u>								<u>G.993.1 RFI bands NPar(3)s – Octet 4j – 2 (j = 1, 2, 3, 4, 5)</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>End tone index of band j (bits 6 to 1)</u>	

Table 11.60.6.4j-2/G.994.1 – Standard information field – G.993.1
RFI bands NPar(3) coding – Octet 4j – 1 (j = 1, 2, 3, 4, 5)

<u>Bits</u>								<u>G.993.1 RFI bands NPar(3)s – Octet 4j – 1 (j = 1, 2, 3, 4, 5)</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Start tone index of band j (bits 12 to 7)</u>	

Table 11.60.6.4j-1/G.994.1 – Standard information field – G.993.1
RFI bands NPar(3) coding – Octet 4j (j = 1, 2, 3, 4, 5)

<u>Bits</u>								<u>G.993.1 RFI bands NPar(3)s – Octet 4j (j = 1, 2, 3, 4, 5)</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Start tone index of band j (bits 6 to 1)</u>	

Table 11.61/G.994.1 – Standard information field – G.993.1 – Annex I NPar(2) coding

<u>Bits</u>								<u>G.993.1 – Annex I NPar(2)s</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Upstream use of optional band (OptUp)</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Downstream use of optional band (OptDn)</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>PSD reduction (PSDRed)</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>PTM</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>ATM</u>	
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>G.997.1 – Clear EOC OAM</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>	

Table 11.62/G.994.1 – Standard information field – G.993.1 – Annex I SPar(2) coding

<u>Bits</u>								<u>G.993.1 – Annex I SPar(2)s</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>DF_STP</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Reserved for use by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for use by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for use by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for use by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for use by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>	

Table 11.62.1/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 1

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1D symbol rate profile *s* (bits 10 to 7)

Table 11.62.1.1/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 2

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1D symbol rate profile *s* (bits 6 to 1)

Table 11.62.1.2/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 3

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1D Center frequency profile *k* (bits 11 to 7)

Table 11.62.1.3/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 4

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1D Center frequency profile *k* (bits 6 to 1)

Table 11.62.1.4/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 5

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1D Constellation size *M* (bits 4 to 1)

Table 11.62.1.5/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 6

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>

1D PSD Level (bits 8 to 7)

Table 11.62.1.6/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 7

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1D PSD Level (bits 6 to 1)

Table 11.62.1.7/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 8

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1U symbol rate profile *s* (bits 10 to 7)

Table 11.62.1.8/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 9

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1U symbol rate profile *s* (bits 6 to 1)

Table 11.62.1.9/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 10

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1U Center frequency profile *k* (bits 11 to 7)

Table 11.62.1.10/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 11

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1U Center frequency profile *k* (bits 6 to 1)

Table 11.62.1.11/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 12

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1U Constellation size *M* (bits 4 to 1)

Table 11.62.1.12/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 13

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>

1U PSD Level (bits 8 to 7)

Table 11.62.1.13/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 14

<u>Bits</u>		<u>G.993.1 – Annex I DF STP</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>

1U PSD Level (bits 6 to 1)

Table 11.62.1.14/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 15

<u>Bits</u>								<u>G.993.1 – Annex I DF STP</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
x	x	0	0	0	0	x	x	STARTUP PSD REF (bits 8 to 7)

Table 11.62.1.15/G.994.1 – Standard information field – G.993.1 – Annex I
DF STP NPar(3) coding – Octet 16

<u>Bits</u>								<u>G.993.1 – Annex I DF STP</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	STARTUP PSD REF (bits 6 to 1)

Table 11.63/G.994.1 – Standard Information field – Variable Silence Period NPar(2) coding

<u>Bits</u>								<u>Variable Silence Period NPar(2)s</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
x	x	x	x	x	x	x	x	Variable Silence Period Length (n+1) × 10 seconds, n = 0 to 63.

2) *Revise Tables 1 and 2 in 6.1.1 (4.3125 kHz signalling family) as follows:*

Table 1/G.994.1 – Carrier sets for the 4.3125 kHz signalling family

Carrier set designation	Upstream carrier sets		Downstream carrier sets		Transmission mode
	Frequency indices (N)	Maximum power level/carrier (dBm)	Frequency indices (N)	Maximum power level/carrier (dBm)	
A43	9 17 25	–1.65	40 56 64	–3.65	duplex only
A43c (Note 1)	9 17 25	–1.65	257 293 337	–3.65	duplex only
B43	37 45 53	–1.65	72 88 96	–3.65	duplex only
C43	7 9	–1.65	12 14 64	–3.65	duplex only
J43	9 17 25	–1.65	72 88 96	–3.65	duplex only
V43 (Notes 1, 2)	<u>944 972 999</u> <u>37–53</u>	–1 <u>6.65</u>	<u>257 383</u> <u>511–64</u> <u>88</u>	–3.65	duplex only
V43P (Note 1)	<u>9 17 25</u>	–1 <u>65</u>	<u>257 383</u> <u>511</u>	– <u>3.65</u>	<u>duplex only</u>
V43I (Note 1)	<u>37 45 53</u>	–1 <u>65</u>	<u>257 383</u> <u>511</u>	– <u>3.65</u>	<u>duplex only</u>
V43-S (Notes 1, 2)	<u>944 999</u>	–1 <u>6.65</u>	<u>257 383</u>	– <u>3.65</u>	<u>duplex only</u>

Table 1/G.994.1 – Carrier sets for the 4.3125 kHz signalling family

Carrier set designation	Upstream carrier sets		Downstream carrier sets		Transmission mode
	Frequency indices (N)	Maximum power level/carrier (dBm)	Frequency indices (N)	Maximum power level/carrier (dBm)	
<u>V43P-S</u> (Note 1)	<u>17 25</u>	<u>–1.65</u>	<u>257 383</u>	<u>–3.65</u>	<u>duplex only</u>
<u>V43I-S</u> (Note 1)	<u>45 53</u>	<u>–1.65</u>	<u>257 383</u>	<u>–3.65</u>	<u>duplex only</u>
NOTE 1 – In some jurisdictions it may be necessary to limit the maximum <u>downstream</u> power level, for example –23.65 dBm/carrier where the PSD is limited to –60 dBm/Hz.					
NOTE 2 – It is expected that sufficient power back-off is applied to the upstream tones of short lines to avoid excessive crosstalk into adjacent pairs during G.994.1.					

Table 2/G.994.1 – Mandatory carrier sets

xDSL Recommendation(s)	Carrier set designation
G.992.1 – Annex A, G.992.2 – Annexes A/B, G.992.3 – Annexes A/I/L, G.992.4 – Annexes A/I G.992.5 – Annexes A/I	A43
G.992.5 – Annexes A/I (Note)	A43c
G.992.1 – Annex B, G.992.3 – Annex B G.992.5 – Annex B	B43
G.992.1 – Annexes C/H/I, G.992.2 – Annex C	C43
G.992.3 – Annexes J/M, G.992.5 – Annexes J/M	J43
<u>G.993.1 – Using multi-carrier modulation (except Annex C)</u>	<u>V43</u>
<u>G.993.1 – Annex C using multi-carrier modulation, over POTS</u>	<u>V43P</u>
<u>G.993.1 – Annex C using multi-carrier modulation, over ISDN-BA</u>	<u>V43I</u>
<u>G.993.1 – Using single-carrier modulation, over POTS</u>	<u>V43P-S</u>
<u>G.993.1 – Using single-carrier modulation, over ISDN-BA</u>	<u>V43I-S</u>
<u>G.993.1 – Using single-carrier modulation, over TCM-ISDN</u>	<u>V43-S</u>
NOTE – To be used where spectrum management forbids use of <u>the downstream carrier set</u> one set A43, typically where G.992.5 is deployed from a cabinet.	

- 3) To reference ANSI and T1E1 documents, revise Table 11.0.1 as follows:

Table 11.0.1/G.994.1 – Standard information field – SPar(1) coding – Octet 2

Bits								SPar(1)s – Octet 2
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	G.991.2 – Annexes A/F
x	x	x	x	x	x	1	x	G.991.2 – Annex B
x	x	x	x	x	1	x	x	T1E1 Trial-use Committee T1 MCM VDSL (Note 1)
x	x	x	x	1	x	x	x	T1E1 Trial-use Committee T1 SCM VDSL (Note 2)
x	x	x	1	x	x	x	x	ETSI MCM VDSL (Note 3)
x	x	1	x	x	x	x	x	ETSI SCM VDSL (Note 3)
x	1	x	x	x	x	x	x	Committee T1* enhanced SHDSL
x	0	0	0	0	0	0	0	No parameters in this octet

NOTE 1 – Use of this bit is defined in "Draft Trial-Use Standard For Telecommunication – Interface Between Networks and Customer Installation – Very High Bit-rate Digital Subscriber Line (VDSL) Metallic Interface – Part 3: Technical Specification for Multi-Carrier Modulation (MCM) Transceivers".

NOTE 2 – Use of this bit is defined in "Draft Trial-Use Standard For Telecommunication – Interface Between Networks and Customer Installation – Very High Bit-rate Digital Subscriber Line (VDSL) Metallic Interface – Part 2: Technical Specification for Single-Carrier Modulation (SCM) Transceivers".

NOTE 3 – Use of this bit is defined in ETSI TS 101270-2.

- 4) To support the corrigendum to G.992.1 Amendment 1, add the following parameters:

**Table 11.13.1/G.994.1 – Standard information field – G.992.1
Annex I NPar(2) coding – Octet 2**

Bits								G.992.1 Annex I NPar(2)s – Octet 2
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	Spectral shaping downstream #1 (shaped ssvi)
x	x	x	x	x	x	1	x	Spectral shaping downstream #2 (flat ssvi)
x	x	x	x	x	1	x	x	Reserved for allocation by the ITU-T Spectrum shaping downstream #3 (ATU-C selected ssvi)
x	x	x	x	1	x	x	x	Reserved for allocation by the ITU-T
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	x	0	0	0	0	0	0	No parameters in this octet

* T1 standards are maintained since November 2003 b ATIS.

Table 11.14/G.994.1 – Standard information field – G.992.1 Annex I SPar(2) coding

		Bits						G.992.1 Annex I SPar(2)s
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	Sub-channel information
x	x	x	x	x	x	1	x	Spectrum frequency upstream
x	x	x	x	x	1	x	x	Spectrum frequency downstream
x	x	x	x	1	x	x	x	C-PILOT
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T Spectrum shaping downstream
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	x	0	0	0	0	0	0	No parameters in this octet

Table 11.14.5/G.994.1 – Standard information field – G.992.1 Annex I Spectrum shaping downstream NPar(3) coding – Octet 1

		Bits						G.992.1 Annex I Spectrum shaping downstream NPar(3)s – Octet 1
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"First" subcarrier index i (bits 12 to 7)

Table 11.14.5.1/G.994.1 – Standard information field – G.992.1 Annex I Spectrum shaping downstream NPar(3) coding – Octet 2

		Bits						G.992.1 Annex I Spectrum shaping downstream NPar(3)s – Octet 2
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"First" subcarrier index i (bits 6 to 1)

Table 11.14.5.2/G.994.1 – Standard information field – G.992.1 Annex I Spectrum shaping downstream NPar(3) coding – Octet 3

		Bits						G.992.1 Annex I Spectrum shaping downstream NPar(3)s – Octet 3
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	"First" log ₂ ssv _i (bit 7)

Table 11.14.5.3/G.994.1 – Standard information field – G.992.1 Annex I Spectrum shaping downstream NPar(3) coding – Octet 4

		Bits						G.992.1 Annex I Spectrum shaping downstream NPar(3)s – Octet 4
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"First" log ₂ ssv _i (bits 6 to 1)

Table 11.14.5.4*(j-1)/G.994.1 – Standard information field – G.992.1 Annex I Spectrum shaping downstream NPar(3) coding – Octet 4*(j-1)+1

		Bits						G.992.1 Annex I Spectrum shaping downstream NPar(3)s – Octet 4*(j-1)+1
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"Last" subcarrier index i (bits 12 to 7)

NOTE – j is the number of subcarrier indices used to specify the spectral shape.

Table 11.14.5.4*(j-1)+1/G.994.1 – Standard information field – G.992.1 Annex I
Spectrum shaping downstream NPar(3) coding – Octet 4*(j-1)+2

<u>Bits</u>								<u>G.992.1 Annex I Spectrum shaping downstream NPar(3)s – Octet 4*(j-1)+2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"Last" subcarrier index i (bits 6 to 1)</u>	

NOTE – j is the number of subcarrier indices used to specify the spectral shape.

Table 11.14.5.4*(j-1)+2/G.994.1 – Standard information field – G.992.1 Annex I
Spectrum shaping downstream NPar(3) coding – Octet 4*(j-1)+3

<u>Bits</u>								<u>G.992.1 Annex I Spectrum shaping downstream NPar(3)s – Octet 4*(j-1)+3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>"Last" log₂ssv_i (bit 7)</u>	

NOTE – j is the number of subcarrier indices used to specify the spectral shape.

Table 11.14.5.4*(j-1)+3/G.994.1 – Standard information field – G.992.1 Annex I
Spectrum shaping downstream NPar(3) coding – Octet 4*(j-1)+4

<u>Bits</u>								<u>G.992.1 Annex I Spectrum shaping downstream NPar(3)s – Octet 4*(j-1)+4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"Last" log₂ssv_i (bits 6 to 1)</u>	

- 5) *To support G.992.3 Annex C, add the following parameters (shown as Annex A parameters marked up with revision marks to show changes):*

Table 11.41/G.994.1 – Standard information field – G.992.3 Annex C NPar(2) coding

<u>Bits</u>								<u>G.992.3 Annex C NPar(2)s</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>NTR</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Diagnostics mode</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>	

Table 11.41.1/G.994.1 – Standard information field – G.992.3
Annex C NPar(2) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C NPar(2)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Profile 1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Profile 2</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Profile 3</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Profile 4</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Profile 5</u>	
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Profile 6</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>	

Table 11.42/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 1

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Spectrum bounds upstream</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Spectrum shaping upstream</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Spectrum bounds downstream</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Spectrum shaping downstream</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Transmit signal images above the Nyquist frequency</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.1/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 2

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Downstream overhead data rate</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Upstream overhead data rate</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Maximum number of downstream TPS-TC functions of each type</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Maximum number of upstream TPS-TC functions of each type</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.2/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 3

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Downstream ATM TPS-TC #0</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Upstream ATM TPS-TC #0</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Downstream PTM TPS-TC #0</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Upstream PTM TPS-TC #0</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.3/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 4

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Downstream PMS-TC latency path #0 supported</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Upstream PMS-TC latency path #0 supported</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.4/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 5

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Downstream ATM TPS-TC #1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Upstream ATM TPS-TC #1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Downstream PTM TPS-TC #1</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Upstream PTM TPS-TC #1</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.5/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 6

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Downstream PMS-TC latency path #1 supported</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Upstream PMS-TC latency path #1 supported</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.6/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 7

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 7</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Downstream ATM TPS-TC #2</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Upstream ATM TPS-TC #2</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Downstream PTM TPS-TC #2</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Upstream PTM TPS-TC #2</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.7/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 8

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 8</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Downstream PMS-TC latency path #2 supported</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Upstream PMS-TC latency path #2 supported</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.8/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 9

		<u>Bits</u>						<u>G.992.3 Annex C SPar(2)s – Octet 9</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Downstream ATM TPS-TC #3</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Upstream ATM TPS-TC #3</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Downstream PTM TPS-TC #3</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Upstream PTM TPS-TC #3</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.0.9/G.994.1 – Standard information field – G.992.3
Annex C SPar(2) coding – Octet 10

<u>Bits</u>								<u>G.992.3 Annex C SPar(2)s – Octet 10</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Downstream PMS-TC latency path #3 supported</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Upstream PMS-TC latency path #3 supported</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

Table 11.42.1/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds upstream NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C Spectrum bounds upstream NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>NOMPSDus (bits 9 to 7)</u>

Table 11.42.1.1/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds upstream NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C Spectrum bounds upstream NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>NOMPSDus (bits 6 to 1)</u>

Table 11.42.1.2/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds upstream NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C Spectrum bounds upstream NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>MAXNOMPSDus (bits 9 to 7)</u>

Table 11.42.1.3/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds upstream NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C Spectrum bounds upstream NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>MAXNOMPSDus (bits 6 to 1)</u>

Table 11.42.1.4/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds upstream NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C Spectrum bounds upstream NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>MAXNOMATPus (bits 9 to 7)</u>

Table 11.42.1.5/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds upstream NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C Spectrum bounds upstream NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>MAXNOMATPus (bits 6 to 1)</u>

Table 11.42.2/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping upstream NPar(3) coding – Octet 1

<u>Bits</u>							<u>G.992.3 Annex C Spectrum shaping upstream NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"First" subcarrier index i (bits 12 to 7)</u>

Table 11.42.2.1/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping upstream NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C Spectrum shaping upstream NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"First" subcarrier index i (bits 6 to 1)</u>

Table 11.42.2.2/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping upstream NPar(3) coding – Octet 3

<u>Bits</u>								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>G.992.3 Annex C Spectrum shaping upstream NPar(3)s – Octet 3</u>
		<u>x</u>						<u>"First" subcarrier in supported set</u>
<u>x</u>	<u>x</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>"First" log₂ tss_i (bit 7)</u>

Table 11.42.2.3/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping upstream NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C Spectrum shaping upstream NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"First" log₂ tss_i (bits 6 to 1)</u>

Table 11.42.2.4*(j-1)/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping upstream NPar(3) coding – Octet 4*(j-1)+1

<u>Bits</u>								<u>G.992.3 Annex C Spectrum shaping upstream NPar(3)s – Octet 4*(j-1)+1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"Last" subcarrier index i (bits 12 to 7)</u>
NOTE – j is the number of subcarrier indices used to specify the spectral shape.								

Table 11.42.2.4*(j-1)+1/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping upstream NPar(3) coding – Octet 4*(j-1)+2

Bits								G.992.3 Annex C Spectrum shaping upstream NPar(3)s – Octet 4*(j-1)+2
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"Last" subcarrier index i (bits 6 to 1)

NOTE – j is the number of subcarrier indices used to specify the spectral shape.

Table 11.42.2.4*(j-1)+2/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping upstream NPar(3) coding – Octet 4*(j-1)+3

Bits								G.992.3 Annex C Spectrum shaping upstream NPar(3)s – Octet 4*(j-1)+3
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"Last" subcarrier in supported set
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	"Last" log ₂ tss _i (bit 7)

NOTE – j is the number of subcarrier indices used to specify the spectral shape.

Table 11.42.2.4*(j-1)+3/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping upstream NPar(3) coding – Octet 4*(j-1)+4

Bits								G.992.3 Annex C Spectrum shaping upstream NPar(3)s – Octet 4*(j-1)+4
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"Last" log ₂ tss _i (bits 6 to 1)

NOTE – j is the number of subcarrier indices used to specify the spectral shape.

Table 11.42.3/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds downstream NPar(3) coding – Octet 1

Bits								G.992.3 Annex C Spectrum bounds downstream NPar(3)s – Octet 1
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	NOMPSDs (bits 9 to 7)

Table 11.42.3.1/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds downstream NPar(3) coding – Octet 2

Bits								G.992.3 Annex C Spectrum bounds downstream NPar(3)s – Octet 2
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	NOMPSDs (bits 6 to 1)

Table 11.42.3.2/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds downstream NPar(3) coding – Octet 3

Bits								G.992.3 Annex C Spectrum bounds downstream NPar(3)s – Octet 3
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	MAXNOMPSDs (bits 9 to 7)

Table 11.42.3.3/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds downstream NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C Spectrum bounds downstream NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>MAXNOMPSDs (bits 6 to 1)</u>

Table 11.42.3.4/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds downstream NPar(3) coding – Octet 5

Bits								<u>G.992.3 Annex C Spectrum bounds downstream NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>MAXNOMATPs (bits 9 to 7)</u>

Table 11.42.3.5/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum bounds downstream NPar(3) coding – Octet 6

Bits								<u>G.992.3 Annex C Spectrum bounds downstream NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>MAXNOMATPs (bits 6 to 1)</u>

Table 11.42.4/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping downstream NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C Spectrum shaping downstream NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"First" subcarrier index i (bits 12 to 7)</u>

Table 11.42.4.1/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping downstream NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C Spectrum shaping downstream NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"First" subcarrier index i (bits 6 to 1)</u>

Table 11.42.4.2/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping downstream NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C Spectrum shaping downstream NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>"First" subcarrier in supported set</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>"First" log₂ tss_i (bit 7)</u>

Table 11.42.4.3/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping downstream NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C Spectrum shaping downstream NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>"First" log₂ tss_i (bits 6 to 1)</u>

Table 11.42.4.4*(j-1)/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping downstream NPar(3) coding – Octet 4*(j-1)+1

Bits								<u>G.992.3 Annex C Spectrum shaping downstream NPar(3)s – Octet 4*(j-1)+1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"Last" subcarrier index i (bits 12 to 7)
NOTE – j is the number of subcarrier indices used to specify the spectral shape.								

Table 11.42.4.4*(j-1)+1/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping downstream NPar(3) coding – Octet 4*(j-1)+2

Bits								<u>G.992.3 Annex C Spectrum shaping downstream NPar(3)s – Octet 4*(j-1)+2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"Last" subcarrier index i (bits 6 to 1)
NOTE – j is the number of subcarrier indices used to specify the spectral shape.								

Table 11.42.4.4*(j-1)+2/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping downstream NPar(3) coding – Octet 4*(j-1)+3

Bits								<u>G.992.3 Annex C Spectrum shaping downstream NPar(3)s – Octet 4*(j-1)+3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"Last" subcarrier in supported set
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x</u>	<u>x</u>	"Last" log ₂ tss _i (bit 7)
NOTE – j is the number of subcarrier indices used to specify the spectral shape.								

Table 11.42.4.4*(j-1)+3/G.994.1 – Standard information field – G.992.3 Annex C
Spectrum shaping downstream NPar(3) coding – Octet 4*(j-1)+4

Bits								<u>G.992.3 Annex C Spectrum shaping downstream NPar(3)s – Octet 4*(j-1)+4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	"Last" log ₂ tss _i (bits 6 to 1)
NOTE – j is the number of subcarrier indices used to specify the spectral shape.								

Table 11.42.5/G.994.1 – Standard information field – G.992.3 Annex C
Transmit signal images above the Nyquist frequency NPar(3) coding

Bits								<u>G.992.3 Annex C transmit signal images above the Nyquist frequency NPar(3)s</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	IDFT size N
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	IFFT fill

Table 11.42.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream overhead data rate NPar(3) coding

Bits								<u>G.992.3 Annex C downstream overhead data rate NPar(3)s</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	Minimum overhead data rate ((n+1) × 1 kbit/s, n = 3 to 63)

Table 11.42.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream overhead data rate NPar(3) coding

<u>Bits</u>								<u>G.992.3 Annex C upstream overhead data rate NPar(3)s</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Minimum overhead data rate ((n+1) × 1 kbit/s, n = 3 to 63)</u>	

Table 11.42.9/G.994.1 – Standard information field – G.992.3 Annex C
Maximum number of downstream TPS-TC functions of each
type NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C Maximum number of downstream TPS-TC functions of each type NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				<u>Maximum number of downstream ATM TPS-TCs (n = 0 to 4)</u>	

Table 11.42.9.1/G.994.1 – Standard information field – G.992.3 Annex C
Maximum number of downstream TPS-TC functions of
each type NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C Maximum number of downstream TPS-TC functions of each type NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>	<u>Maximum number of downstream PTM TPS-TCs (n = 0 to 4)</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				<u>Reserved for allocation by the ITU-T</u>	

Table 11.42.10/G.994.1 – Standard information field – G.992.3 Annex C
Maximum number of upstream TPS-TC functions of
each type NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C Maximum number of upstream TPS-TC functions of each type NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				<u>Maximum number of upstream ATM TPS-TCs (n = 0 to 4)</u>	

Table 11.42.10.1/G.994.1 – Standard information field – G.992.3 Annex C
Maximum number of upstream TPS-TC functions of
each type NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C Maximum number of upstream TPS-TC functions of each type NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>	<u>Maximum number of upstream PTM TPS-TCs (n = 0 to 4)</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				<u>Reserved for allocation by the ITU-T</u>	

Table 11.42.15/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min (minimum net data rate, bits 12 to 7)</u>	

Table 11.42.15.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 2

<u>Bits</u>							<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)

Table 11.42.15.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 3

<u>Bits</u>							<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max (Maximum net data rate, bits 12 to 7)</u>

Table 11.42.15.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.15.4/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)

Table 11.42.15.5/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)

Table 11.42.15.6/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 7

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 7</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max (Maximum delay) (n milliseconds, n = 0 to 63)</u>

Table 11.42.15.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 8

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 8</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)
<u>x</u>	<u>x</u>		<u>x</u>					<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>						<u>IMA_flag</u>

Table 11.42.15.8/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>	

Table 11.42.15.9/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 10

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #0 NPar(3)s – Octet 10</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>		<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Jitter_max</u> (maximum jitter) (n symbols, n = 0 to 31)	
<u>x</u>	<u>x</u>	<u>x</u>						<u>Reserved for allocation by the ITU-T</u>	

Table 11.42.16/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)	

Table 11.42.16.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)	

Table 11.42.16.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)	

Table 11.42.16.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)	

Table 11.42.16.4/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 5</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)	

Table 11.42.16.5/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 6</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)	

Table 11.42.16.6/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 7

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 7</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)	

Table 11.42.16.7/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 8

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 8</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)	
<u>x</u>	<u>x</u>		<u>x</u>					<u>Reserved for allocation by the ITU-T</u>	
<u>x</u>	<u>x</u>	<u>x</u>						<u>IMA_flag</u>	

Table 11.42.16.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #0 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				<u>Reserved for allocation by the ITU-T</u>	

Table 11.42.17/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #0 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)	

Table 11.42.17.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #0 NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)	

Table 11.42.17.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 3

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.17.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 4

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.17.4/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 5

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)

Table 11.42.17.5/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 6

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)

Table 11.42.17.6/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 7

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)

Table 11.42.17.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 8

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

Table 11.42.17.8/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #0 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>	

Table 11.42.18/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #0 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)	

Table 11.42.18.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #0 NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)	

Table 11.42.18.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #0 NPar(3)s – Octet 3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)	

Table 11.42.18.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #0 NPar(3)s – Octet 4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)	

Table 11.42.18.4/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #0 NPar(3)s – Octet 5</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)	

Table 11.42.18.5/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #0 NPar(3)s – Octet 6</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)	

Table 11.42.18.6/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 7

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)

Table 11.42.18.7/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 8

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

Table 11.42.18.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 9

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T

Table 11.42.19/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #0 NPar(3) coding – Octet 1

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.19.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #0 NPar(3) coding – Octet 2

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.20/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #0 NPar(3) coding – Octet 1

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.20.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #0 NPar(3) coding – Octet 2

<u>Bits</u>							<u>G.992.3 Annex C upstream PMS-TC latency path #0 NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>		<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>		<u>x</u>
								<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.27/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 1

<u>Bits</u>							<u>G.992.3 Annex C downstream ATM TPS-TC #1 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)

Table 11.42.27.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #1 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)

Table 11.42.27.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 3

<u>Bits</u>							<u>G.992.3 Annex C downstream ATM TPS-TC #1 NPar(3)s – Octet 3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.27.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #1 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.27.4/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #1 NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve (Minimum reserved net data rate, bits 12 to 7)</u>

Table 11.42.27.5/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #1 NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)

Table 11.42.27.6/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 7

<u>Bits</u>								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)

Table 11.42.27.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 8

<u>Bits</u>								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						<u>IMA_flag</u>

Table 11.42.27.8/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 9

<u>Bits</u>								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T

Table 11.42.27.9/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 10

<u>Bits</u>								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>		<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Jitter_max</u> (maximum jitter) (n symbols, n = 0 to 31)
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

Table 11.42.28/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 1

<u>Bits</u>								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)

Table 11.42.28.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 2

<u>Bits</u>								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)

Table 11.42.28.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #1 NPar(3)s – Octet 3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)	

Table 11.42.28.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #1 NPar(3)s – Octet 4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)	

Table 11.42.28.4/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #1 NPar(3)s – Octet 5</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)	

Table 11.42.28.5/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #1 NPar(3)s – Octet 6</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)	

Table 11.42.28.6/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 7

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #1 NPar(3)s – Octet 7</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)	

Table 11.42.28.7/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 8

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #1 NPar(3)s – Octet 8</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)	
<u>x</u>	<u>x</u>		<u>x</u>					<u>Reserved</u> for allocation by the ITU-T	
<u>x</u>	<u>x</u>	<u>x</u>						<u>IMA_flag</u>	

Table 11.42.28.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 9

Bits								<u>G.992.3 Annex C upstream ATM TPS-TC #1 NPar(3)s – Octet 9</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

Table 11.42.29/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min (minimum net data rate, bits 12 to 7)</u>

Table 11.42.29.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min (minimum net data rate, bits 6 to 1)</u>

Table 11.42.29.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max (Maximum net data rate, bits 12 to 7)</u>

Table 11.42.29.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max (Maximum net data rate, bits 6 to 1)</u>

Table 11.42.29.4/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 5

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve (Minimum reserved net data rate, bits 12 to 7)</u>

Table 11.42.29.5/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 6

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve (Minimum reserved net data rate, bits 6 to 1)</u>

Table 11.42.29.6/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 7

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 7</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)

Table 11.42.29.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 8

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 8</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

Table 11.42.29.8/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #1 NPar(3)s – Octet 9</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T

Table 11.42.30/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)

Table 11.42.30.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)

Table 11.42.30.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.30.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)	

Table 11.42.30.4/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 5</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)	

Table 11.42.30.5/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 6</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)	

Table 11.42.30.6/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 7

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 7</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)	

Table 11.42.30.7/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 8

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 8</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)	
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T	
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T	

Table 11.42.30.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #1 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T	

Table 11.42.31/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #1 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #1 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
								<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.31.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #1 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #1 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
								<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.31.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #1 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #1 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>					<u>R_{l max}</u> value (2 × n, n = 0 to 15)
								<u>Reserved for allocation by the ITU-T</u>

Table 11.42.31.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #1 NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #1 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>					<u>D_{l max}</u> value (2^n , $n = 0$ to 7)
								Reserved for allocation by the ITU-T

Table 11.42.32/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #1 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #1 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
								<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.32.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #1 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #1 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
								<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.32.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #1 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #1 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>R_{l max}</u> value ($2 \times n$, $n = 0$ to 15)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>					<u>Reserved for allocation by the ITU-T</u>

Table 11.42.32.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #1 NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #1 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>	<u>D_{l max}</u> value (2^n , $n = 0$ to 7)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				<u>Reserved for allocation by the ITU-T</u>

Table 11.42.39/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_{min}</u> (minimum net data rate, bits 12 to 7)

Table 11.42.39.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_{min}</u> (minimum net data rate, bits 6 to 1)

Table 11.42.39.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_{max}</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.39.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_{max}</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.39.4/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 5

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_{reserve}</u> (Minimum reserved net data rate, bits 12 to 7)

Table 11.42.39.5/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 6

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)

Table 11.42.39.6/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 7

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 7</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)

Table 11.42.39.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 8

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 8</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						<u>IMA_flag</u>

Table 11.42.39.8/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 9

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 9</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T

Table 11.42.39.9/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 10

Bits								<u>G.992.3 Annex C downstream ATM TPS-TC #2 NPar(3)s – Octet 10</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>		<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Jitter_max</u> (maximum jitter) (n symbols, n = 0 to 31)
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

Table 11.42.40/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)

Table 11.42.40.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)

Table 11.42.40.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.40.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.40.4/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)

Table 11.42.40.5/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)

Table 11.42.40.6/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 7

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 7</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)

Table 11.42.40.7/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 8

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 8</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)
<u>x</u>	<u>x</u>		<u>x</u>					<u>Reserved</u> for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						<u>IMA_flag</u>

Table 11.42.40.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #2 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>	

Table 11.42.41/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min (minimum net data rate, bits 12 to 7)</u>	

Table 11.42.41.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min (minimum net data rate, bits 6 to 1)</u>	

Table 11.42.41.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max (Maximum net data rate, bits 12 to 7)</u>	

Table 11.42.41.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max (Maximum net data rate, bits 6 to 1)</u>	

Table 11.42.41.4/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 5</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve (Minimum reserved net data rate, bits 12 to 7)</u>	

Table 11.42.41.5/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 6</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve (Minimum reserved net data rate, bits 6 to 1)</u>	

Table 11.42.41.6/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 7

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 7</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)

Table 11.42.41.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 8

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 8</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

Table 11.42.41.8/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 9

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #2 NPar(3)s – Octet 9</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T

Table 11.42.42/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)

Table 11.42.42.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)

Table 11.42.42.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.42.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)	

Table 11.42.42.4/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 5</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)	

Table 11.42.42.5/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 6</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)	

Table 11.42.42.6/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 7

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 7</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)	

Table 11.42.42.7/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 8

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 8</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)	
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T	
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T	

Table 11.42.42.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C upstream PTM TPS-TC #2 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T	

Table 11.42.43/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #2 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #2 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.43.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #2 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #2 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.43.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #2 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #2 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>R_{2_max}</u> value ($2 \times n$, $n = 0$ to 15)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>					Reserved for allocation by the ITU-T

Table 11.42.43.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #2 NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #2 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>	<u>D_{2_max}</u> value (2^n , $n = 0$ to 7)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>					Reserved for allocation by the ITU-T

Table 11.42.44/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #2 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #2 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.44.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #2 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #2 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.44.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #2 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #2 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>R_{2_max}</u> value ($2 \times n$, $n = 0$ to 15)
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>					Reserved for allocation by the ITU-T

Table 11.42.44.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #2 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C upstream PMS-TC latency path #2 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>	<u>D_{2 max} value (2ⁿ, n = 0 to 7)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				<u>Reserved for allocation by the ITU-T</u>

Table 11.42.51/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 1

<u>Bits</u>							<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min (minimum net data rate, bits 12 to 7)</u>

Table 11.42.51.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)

Table 11.42.51.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.51.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.51.4/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)

Table 11.42.51.5/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)

Table 11.42.51.6/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 7

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 7</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)	

Table 11.42.51.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 8

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 8</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)	
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T	
<u>x</u>	<u>x</u>	<u>x</u>						<u>IMA_flag</u>	

Table 11.42.51.8/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T	

Table 11.42.51.9/G.994.1 – Standard information field – G.992.3 Annex C
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 10

<u>Bits</u>								<u>G.992.3 Annex C downstream ATM TPS-TC #3 NPar(3)s – Octet 10</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>		<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Jitter_max</u> (maximum jitter) (n symbols, n = 0 to 31)	
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T	

Table 11.42.52/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)	

Table 11.42.52.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)	

Table 11.42.52.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)	

Table 11.42.52.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)	

Table 11.42.52.4/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 5

Bits								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 5</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)	

Table 11.42.52.5/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 6

Bits								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 6</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)	

Table 11.42.52.6/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 7

Bits								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 7</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)	

Table 11.42.52.7/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 8

Bits								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 8</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)	
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T	
<u>x</u>	<u>x</u>	<u>x</u>						<u>IMA_flag</u>	

Table 11.42.52.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 9

<u>Bits</u>								<u>G.992.3 Annex C upstream ATM TPS-TC #3 NPar(3)s – Octet 9</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

Table 11.42.53/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 1

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min (minimum net data rate, bits 12 to 7)</u>

Table 11.42.53.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 2

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min (minimum net data rate, bits 6 to 1)</u>

Table 11.42.53.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max (Maximum net data rate, bits 12 to 7)</u>

Table 11.42.53.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 4

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 4</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max (Maximum net data rate, bits 6 to 1)</u>

Table 11.42.53.4/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 5

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 5</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve (Minimum reserved net data rate, bits 12 to 7)</u>

Table 11.42.53.5/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 6

<u>Bits</u>								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 6</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve (Minimum reserved net data rate, bits 6 to 1)</u>

Table 11.42.53.6/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 7

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 7</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)	

Table 11.42.53.7/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 8

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 8</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)	
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T	
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T	

Table 11.42.53.8/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 9

Bits								<u>G.992.3 Annex C downstream PTM TPS-TC #3 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T	

Table 11.42.54/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 1</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 12 to 7)	

Table 11.42.54.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 2</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_min</u> (minimum net data rate, bits 6 to 1)	

Table 11.42.54.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 3

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 3</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 12 to 7)	

Table 11.42.54.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 4

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 4</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_max</u> (Maximum net data rate, bits 6 to 1)	

Table 11.42.54.4/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 5

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 5</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 12 to 7)	

Table 11.42.54.5/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 6

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 6</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Net_reserve</u> (Minimum reserved net data rate, bits 6 to 1)	

Table 11.42.54.6/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 7

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 7</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Delay_max</u> (Maximum delay) (n milliseconds, n = 0 to 63)	

Table 11.42.54.7/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 8

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 8</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>Error_max</u> (Maximum bit error ratio)	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 2 & 1)	
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T	
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T	

Table 11.42.54.8/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 9

Bits								<u>G.992.3 Annex C upstream PTM TPS-TC #3 NPar(3)s – Octet 9</u>	
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>		
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min</u> (Minimum Impulse Noise Protection) (bits 4 & 3)	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>				Reserved for allocation by the ITU-T	

Table 11.42.55/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #3 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #3 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
								<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.55.1/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #3 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C downstream PMS-TC latency path #3 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
								<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.55.2/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #3 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C downstream PMS-TC latency path #3 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>					<u>R_{3 max}</u> value (2 × n, n = 0 to 15)
								Reserved for allocation by the ITU-T

Table 11.42.55.3/G.994.1 – Standard information field – G.992.3 Annex C
Downstream PMS-TC latency path #3 NPar(3) coding – Octet 4

Bits								G.992.3 Annex C downstream PMS-TC latency path #3 NPar(3)s – Octet 4
8	7	6	5	4	3	2	1	
x	x				x	x	x	
x	x	x	x	x				D _{3 max} value (2 ⁿ , n = 0 to 7)
								Reserved for allocation by the ITU-T

Table 11.42.56/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #3 NPar(3) coding – Octet 1

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #3 NPar(3)s – Octet 1</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
								<u>Net_max</u> (Maximum net data rate, bits 12 to 7)

Table 11.42.56.1/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #3 NPar(3) coding – Octet 2

Bits								<u>G.992.3 Annex C upstream PMS-TC latency path #3 NPar(3)s – Octet 2</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
								<u>Net_max</u> (Maximum net data rate, bits 6 to 1)

Table 11.42.56.2/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #3 NPar(3) coding – Octet 3

<u>Bits</u>								<u>G.992.3 Annex C upstream PMS-TC latency path #3 NPar(3)s – Octet 3</u>
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>					<u>R_{3 max}</u> value (2 × n, n = 0 to 15)
								Reserved for allocation by the ITU-T

**Table 11.42.56.3/G.994.1 – Standard information field – G.992.3 Annex C
Upstream PMS-TC latency path #3 NPar(3) coding – Octet 4**

Bits		G.992.3 Annex C upstream PMS-TC latency path #3 NPar(3)s – Octet 4					
8	7	6	5	4	3	2	1
<u>x</u>	<u>x</u>				<u>x</u>	<u>x</u>	<u>x</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			
		<u>D_{3 max} value (2ⁿ, n = 0 to 7)</u>					
		<u>Reserved for allocation by the ITU-T</u>					

- 6) *To resolve the regenerator target margin problem in G.991.2, add the following parameters:*

**Table 11.15.1/G.994.1 – Standard information field – G.991.2
Annex A – NPar(2) coding – Octet 2**

Bits		G.991.2 Annex A NPar(2)s – Octet 2					
8	7	6	5	4	3	2	1
x	x	x	x	x	x	x	1
x	x	x	x	x	x	1	x
x	x	x	x	x	1	x	x
x	x	x	x	1	x	x	x
x	x	x	1	x	x	x	x
x	x	1	x	x	x	x	x
x	x	0	0	0	0	0	0
		No parameters in this octet					

**Table 11.17.1/G.994.1 – Standard information field – G.991.2
Annex B – NPar(2) coding – Octet 2**

Bits		G.991.2 Annex B NPar(2)s – Octet 2					
8	7	6	5	4	3	2	1
x	x	x	x	x	x	x	1
x	x	x	x	x	x	1	x
x	x	x	x	x	1	x	x
x	x	x	x	1	x	x	x
x	x	x	1	x	x	x	x
x	x	1	x	x	x	x	x
x	x	0	0	0	0	0	0
		No parameters in this octet					

- 7) To support TDIM, Ethernet, and ATM bonding, add the following parameters:

Table 9.0.2/G.994.1 – Identification field – SPar(1) coding – Octet 3

Bits								SPar(1)s – Octet 3
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	Relative power level/carrier for upstream carrier set A4 (Note)
x	x	x	x	x	x	1	x	Relative power level/carrier for downstream carrier set A4 (Note)
x	x	x	x	x	1	x	x	Relative power level/carrier for upstream carrier set A43c (Note)
x	x	x	x	1	x	x	x	Relative power level/carrier for downstream carrier set A43c (Note)
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T <u>Bonding</u>
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	1	x	x	x	x	x	x	Reserved for allocation by the ITU-T
x	0	0	0	0	0	0	0	No parameters in this octet

NOTE – The relative power level/carrier reported in a CLR, CL, MP, or MS message indicates the level used during the current G.994.1 session, including the start-up and cleardown procedures. It does not imply any requirements on the transmit power in this or future sessions.

Table 9.37/G.994.1 – Identification field – Bonding – NPar(2) coding

Bits								Bonding NPar(2)s
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	<u>Ethernet bonding</u>
x	x	x	x	x	x	1	x	<u>TDIM bonding</u>
x	x	x	x	x	1	x	x	<u>ATM bonding</u>
x	x	x	x	1	x	x	x	Reserved for allocation by the ITU-T
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	x	0	0	0	0	0	0	<u>No parameters in this octet</u>

Table 9.38/G.994.1 – Identification field – Bonding – SPar(2) coding – Octet 1 – Ethernet/TDIM

Bits								Ethernet/TDIM Bonding SPar(2)s
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	<u>PME Aggregation Discovery</u>
x	x	x	x	x	x	1	x	<u>PME Aggregation</u>
x	x	x	x	x	1	x	x	Reserved for allocation by the ITU-T
x	x	x	x	1	x	x	x	Reserved for allocation by the ITU-T
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	x	0	0	0	0	0	0	<u>No parameters in this octet</u>

**Table 9.38.0.1/G.994.1 – Identification field – Bonding – SPar(2)
coding – Octet 2 – ATM Bonding**

		Bits						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>ATM Bonding SPar(2)s</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>PHY Layer Training Parameters</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

**Table 9.38.1/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 1**

		Bits						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>Clear if same</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>No parameters in this octet</u>

**Table 9.38.1.1/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 2**

		Bits						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 2</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Remote discovery register, bits 47 to 42</u>

**Table 9.38.1.2/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 3**

		Bits						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 3</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Remote discovery register, bits 41 to 36</u>

**Table 9.38.1.3/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 4**

		Bits						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 4</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>Remote discovery register, bits 35 to 30</u>

**Table 9.38.1.4/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 5**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 5</u>
								<u>Remote discovery register, bits 29 to 24</u>

**Table 9.38.1.5/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 6**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 6</u>
								<u>Remote discovery register, bits 23 to 18</u>

**Table 9.38.1.6/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 7**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 7</u>
								<u>Remote discovery register, bits 17 to 12</u>

**Table 9.38.1.7/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 8</u>
								<u>Remote discovery register, bits 11 to 6</u>

**Table 9.38.1.8/G.994.1 – Identification field – Bonding – PME Aggregation
Discovery – NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation Discovery NPar(3)s – Octet 9</u>
								<u>Remote discovery register, bits 5 to 0</u>

**Table 9.38.2/G.994.1 – Identification field – Bonding – PME Aggregation –
NPar(3) coding – Octet 1**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	<u>Bonding PME Aggregation NPar(3)s – Octet 1</u>
x	x	x	x	x	1			<u>PME Aggregate register, bits 31-30 (Octet 1, bits 2 and 1)</u>
x	x	x	x	1	x			<u>Reserved for allocation by the ITU-T</u>
x	x	x	1	x	x			<u>Reserved for allocation by the ITU-T</u>
x	x	1	x	x	x			<u>Reserved for allocation by the ITU-T</u>
x	x	0	0	0	0			<u>Reserved for allocation by the ITU-T</u>
x	x							<u>No parameters in this octet</u>

**Table 9.38.2.1/G.994.1 – Identification field – Bonding – PME
Aggregation – NPar(3) coding – Octet 2**

Bits								
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation NPar(3)s – Octet 2</u>
								<u>PME_Aggregate_register, bits 29 to 24</u>

**Table 9.38.2.2/G.994.1 – Identification field – Bonding – PME
Aggregation – NPar(3) coding – Octet 3**

Bits								
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation NPar(3)s – Octet 3</u>
								<u>PME_Aggregate_register, bits 23 to 18</u>

**Table 9.38.2.3/G.994.1 – Identification field – Bonding – PME
Aggregation – NPar(3) coding – Octet 4**

Bits								
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation NPar(3)s – Octet 4</u>
								<u>PME_Aggregate_register, bits 17 to 12</u>

**Table 9.38.2.4/G.994.1 – Identification field – Bonding – PME
Aggregation – NPar(3) coding – Octet 5**

Bits								
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation NPar(3)s – Octet 5</u>
								<u>PME_Aggregate_register, bits 11 to 6</u>

**Table 9.38.2.5/G.994.1 – Identification field – Bonding – PME
Aggregation – NPar(3) coding – Octet 6**

Bits								
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Bonding PME Aggregation NPar(3)s – Octet 6</u>
								<u>PME_Aggregate_register, bits 5 to 0</u>

**Table 9.38.7/G.994.1 – Identification field – ATM Bonding PHY Layer
Training Parameters – NPar(3) coding – Octet 1**

Bits								
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>ATM Bonding PHY Layer Training NPar(3)s – Octet 1</u>
								<u>Maximum downstream differential delay between members of an ATM bonding group (bits 6 to 1 × 1 ms)</u>

- 8) To support a larger range of power level for B43 and J43 tonesets, add/modify the following parameters:

Table 9.0.2/G.994.1 – Identification field – SPar(1) coding – Octet 3

Bits								SPar(1)s – Octet 3
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	Relative power level/carrier for upstream carrier set A4 (Note)
x	x	x	x	x	x	1	x	Relative power level/carrier for downstream carrier set A4 (Note)
x	x	x	x	x	1	x	x	Relative power level/carrier for upstream carrier set A43c (Note)
x	x	x	x	1	x	x	x	Relative power level/carrier for downstream carrier set A43c (Note)
x	x	x	1	x	x	x	x	Bonding
x	x	1	x	x	x	x	x	Relative power level/carrier for upstream carrier set J43 (Note) Reserved for allocation by the ITU-T
x	1	x	x	x	x	x	x	Relative power level/carrier for downstream carrier set J43 (Note) Reserved for allocation by the ITU-T
x	0	0	0	0	0	0	0	No parameters in this octet

NOTE – The relative power level/carrier reported in a CLR, CL, MP, or MS message indicates the level used during the current G.994.1 session, including the start-up and clear-down procedures. It does not imply any requirements on the transmit power in this or future sessions.

Table 9.21/G.994.1 – Identification field – Relative power level/carrier for downstream carrier set B43 – NPar(2) coding – Octet 1

Bits								Relative power level/carrier for downstream carrier set B43 Npar(2)s – Octet 1
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Clipped</u> Attenuation in G.994.1 Transmit Power per Carrier Relative to Maximum Power (bits 6 to 1 $\times$ 0.5 dB) for downstream carrier set B43 (Note).

NOTE – All carriers in the carrier set shall be transmitted at the same power level.

Table 9.21.1/G.994.1 – Identification field – Relative power level/carrier for downstream carrier set B43 – NPar(2) coding – Octet 2

Bits								Relative power level/carrier for downstream carrier set B43 Npar(2)s – Octet 2
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	Remainder of Attenuation in G.994.1 Transmit Power per Carrier Relative to Maximum Power (bits 6 to 1 $\times$ 0.5 dB) for downstream carrier set B43 (Note).

NOTE – All carriers in the carrier set shall be transmitted at the same power level.

Table 9.39/G.994.1 – Identification field – Relative power level/carrier for upstream carrier set J43 – NPar(2) coding

Bits								Relative power level/carrier for upstream carrier set J43 Npar(2)s
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	x	<u>Attenuation in G.994.1 Transmit Power per Carrier Relative to Maximum Power (bits 6 to 1 $\times$ 0.5 dB) for upstream carrier set J43 (Note).</u>

NOTE – All carriers in the carrier set shall be transmitted at the same power level.

Table 9.41/G.994.1 – Identification field – Relative power level/carrier for downstream carrier set J43 – NPar(2) coding – Octet 1

<u>Bits</u>		<u>Relative power level/carrier for downstream carrier set J43 Npar(2)s – Octet 1</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>Clipped Attenuation in G.994.1 Transmit Power per Carrier Relative to Maximum Power (bits 6 to 1 × 0.5 dB) for downstream carrier set J43 (Note).</u>							
<u>NOTE – All carriers in the carrier set shall be transmitted at the same power level.</u>							

Table 9.41.1/G.994.1 – Identification field – Relative power level/carrier for downstream carrier set J43 – NPar(2) coding – Octet 2

<u>Bits</u>		<u>Relative power level/carrier for downstream carrier set J43 Npar(2)s – Octet 2</u>					
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
<u>Remainder of Attenuation in G.994.1 Transmit Power per Carrier Relative to Maximum Power (bits 6 to 1 × 0.5 dB) for downstream carrier set J43 (Note).</u>							
<u>NOTE – All carriers in the carrier set shall be transmitted at the same power level.</u>							

- 9) *To support a larger range of power level for B43 and J43 tonesets, add the following text to clause 13:*

13.1.3 GHS B43 and J43 Toneset Maximum PSD level in downstream (GHS BJ43 MAXPSDds)

The parameter GHS BJ43 MAXPSDds is defined as the maximum transmit PSD level for each individual G.hs tone of the B43 and J43 tonesets in the downstream direction. The PSD level (in dBm/Hz) is calculated as the tone power averaged over a 4.3125 kHz bandwidth. The mandatory range to be supported by the HSTU-C is from –80 to –40 dBm/Hz, with 0.5 dB steps. If the value is set to the value –99, then the HSTU-C shall not transmit this toneset.

The value of the Attenuation in G.994.1 Transmit Power per Carrier for carrier set B43 as combined from the NPar(2) in Tables 9.21 and 9.21.1 shall comply with the following constraint:

$$\underline{-3.65 - \textit{Attenuation_B43} - 36.35 \leq \textit{GHS_BJ43_MAXPSDds}}$$

The value of the Attenuation in G.994.1 Transmit Power per Carrier for carrier set B43 as conveyed in the NPar(2) in Table 9.21 shall correspond with the actual attenuation clipped to a range of 31.5 dB as follows:

$$\underline{\textit{Attenuation_B43_clipped} = \min(31.5, \textit{Attenuation_B43})}$$

The value of the Attenuation in G.994.1 Transmit Power per Carrier for carrier set B43 as conveyed in the NPar(2) in Table 9.21.1 shall correspond with the remainder of the actual attenuation as follows:

$$\underline{\textit{Attenuation_B43_remainder} = \textit{Attenuation_B43} - \textit{Attenuation_B43_clipped}}$$

The value of the Attenuation in G.994.1 Transmit Power per Carrier for carrier set J43 as combined from the NPar(2) in Tables 9.41 and 9.41.1 shall comply with the following constraint:

$$\underline{-3.65 - \textit{Attenuation_J43} - 36.35 \leq \textit{GHS_BJ43_MAXPSDds}}$$

The value of the Attenuation in G.994.1 Transmit Power per Carrier for carrier set J43 as conveyed in the NPar(2) in Table 9.41 shall correspond with the actual attenuation clipped to a range of 31.5 dB as follows:

$$\underline{\textit{Attenuation_J43_clipped} = \min(31.5, \textit{Attenuation_J43})}$$

The value of the Attenuation in G.994.1 Transmit Power per Carrier for carrier set J43 as conveyed in the NPar(2) in Table 9.41.1 shall correspond with the remainder of the actual attenuation as follows:

$$\text{Attenuation_J43_remainder} = \text{Attenuation_J43} - \text{Attenuation_J43_clipped}$$

10) To support the optional values of INP_min in G.992.3, modify the following parameters:

**Table 11.30.13.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream STM TPS-TC #0 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.13.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream STM TPS-TC #0 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)
x	x	x	x	x	x			Reserved for allocation by the ITU-T

**Table 11.30.14.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream STM TPS-TC #0 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.14.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream STM TPS-TC #0 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)
x	x	x	x	x	x			Reserved for allocation by the ITU-T

**Table 11.30.15.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						IMA_flag

**Table 11.30.15.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream ATM TPS-TC #0 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.16.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						IMA_flag

**Table 11.30.16.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream ATM TPS-TC #0 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.17.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.17.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream PTM TPS-TC #0 NPar(3) coding – Octet 9**

		<u>Bits</u>						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>G.992.3 Annex A downstream PTM TPS-TC #0 NPar(3)s – Octet 9</u>
<u>x</u>	<u>x</u>							<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.18.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 8**

		<u>Bits</u>						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>G.992.3 Annex A upstream PTM TPS-TC #0 NPar(3)s – Octet 8</u>
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>Error_max (Maximum bit error ratio)</u>
<u>x</u>	<u>x</u>							<u>INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)</u>
<u>x</u>	<u>x</u>		<u>x</u>					<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>						<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.18.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream PTM TPS-TC #0 NPar(3) coding – Octet 9**

		<u>Bits</u>						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>G.992.3 Annex A upstream PTM TPS-TC #0 NPar(3)s – Octet 9</u>
<u>x</u>	<u>x</u>							<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.21.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream STM TPS-TC #1 NPar(3) coding – Octet 8**

		<u>Bits</u>						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>G.992.3 Annex A downstream STM TPS-TC #1 NPar(3)s – Octet 8</u>
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>Error_max (Maximum bit error ratio)</u>
<u>x</u>	<u>x</u>							<u>INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)</u>
<u>x</u>	<u>x</u>		<u>x</u>					<u>Reserved for allocation by the ITU-T</u>
<u>x</u>	<u>x</u>	<u>x</u>						<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.21.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream STM TPS-TC #1 NPar(3) coding – Octet 9**

		<u>Bits</u>						
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>G.992.3 Annex A downstream STM TPS-TC #1 NPar(3)s – Octet 9</u>
<u>x</u>	<u>x</u>							<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.22.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream STM TPS-TC #1 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.22.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream STM TPS-TC #1 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.23.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						IMA_flag

**Table 11.30.23.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream ATM TPS-TC #1 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.24.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						IMA_flag

**Table 11.30.24.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream ATM TPS-TC #1 NPar(3) coding – Octet 9**

Bits								G.992.3 Annex A upstream ATM TPS-TC #1 NPar(3)s – Octet 9
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.25.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 8**

Bits								G.992.3 Annex A downstream PTM TPS-TC #1 NPar(3)s – Octet 8
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	Error_max (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)</u>
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

**Table 11.30.25.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream PTM TPS-TC #1 NPar(3) coding – Octet 9**

Bits								G.992.3 Annex A downstream PTM TPS-TC #1 NPar(3)s – Octet 9
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.26.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 8**

Bits								G.992.3 Annex A upstream PTM TPS-TC #1 NPar(3)s – Octet 8
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	Error_max (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)</u>
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

**Table 11.30.26.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream PTM TPS-TC #1 NPar(3) coding – Octet 9**

Bits								G.992.3 Annex A upstream PTM TPS-TC #1 NPar(3)s – Octet 9
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.29.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream STM TPS-TC #2 NPar(3) coding – Octet 8**

Bits								
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.29.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream STM TPS-TC #2 NPar(3) coding – Octet 9**

Bits								
8	7	6	5	4	3	2	1	
x	x					x	x	INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)
x	x	x	x	x	x			Reserved for allocation by the ITU-T

**Table 11.30.30.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream STM TPS-TC #2 NPar(3) coding – Octet 8**

Bits								
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.30.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream STM TPS-TC #2 NPar(3) coding – Octet 9**

Bits								
8	7	6	5	4	3	2	1	
x	x					x	x	INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)
x	x	x	x	x	x			Reserved for allocation by the ITU-T

**Table 11.30.31.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 8**

Bits								
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						IMA_flag

**Table 11.30.31.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream ATM TPS-TC #2 NPar(3) coding – Octet 9**

Bits								G.992.3 Annex A downstream ATM TPS-TC #2 NPar(3)s – Octet 9
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.32.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 8**

Bits								G.992.3 Annex A upstream ATM TPS-TC #2 NPar(3)s – Octet 8
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	Error_max (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)</u>
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						IMA_flag

**Table 11.30.32.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream ATM TPS-TC #2 NPar(3) coding – Octet 9**

Bits								G.992.3 Annex A upstream ATM TPS-TC #2 NPar(3)s – Octet 9
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.33.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 8**

Bits								G.992.3 Annex A downstream PTM TPS-TC #2 NPar(3)s – Octet 8
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	Error_max (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			<u>INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)</u>
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						Reserved for allocation by the ITU-T

**Table 11.30.33.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream PTM TPS-TC #2 NPar(3) coding – Octet 9**

Bits								G.992.3 Annex A downstream PTM TPS-TC #2 NPar(3)s – Octet 9
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.34.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.34.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream PTM TPS-TC #2 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)
x	x	x	x	x	x			Reserved for allocation by the ITU-T

**Table 11.30.37.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream STM TPS-TC #3 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.37.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream STM TPS-TC #3 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)
x	x	x	x	x	x			Reserved for allocation by the ITU-T

**Table 11.30.38.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream STM TPS-TC #3 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.38.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream STM TPS-TC #3 NPar(3) coding – Octet 9**

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.39.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 8**

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	Error_max (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			INP_min (Minimum Impulse Noise Protection) <u>(bits 2 & 1)</u>
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						IMA_flag

**Table 11.30.39.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream ATM TPS-TC #3 NPar(3) coding – Octet 9**

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.40.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 8**

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	Error_max (Maximum bit error ratio)
<u>x</u>	<u>x</u>			<u>x</u>	<u>x</u>			INP_min (Minimum Impulse Noise Protection) <u>(bits 2 & 1)</u>
<u>x</u>	<u>x</u>		<u>x</u>					Reserved for allocation by the ITU-T
<u>x</u>	<u>x</u>	<u>x</u>						IMA_flag

**Table 11.30.40.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream ATM TPS-TC #3 NPar(3) coding – Octet 9**

Bits								
<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.41.7/G.994.1 – Standard information field – G.992.3 Annex A
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.41.8/G.994.1 – Standard information field – G.992.3 Annex A
Downstream PTM TPS-TC #3 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

**Table 11.30.42.7/G.994.1 – Standard information field – G.992.3 Annex A
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 8**

		Bits						
8	7	6	5	4	3	2	1	
x	x					x	x	Error_max (Maximum bit error ratio)
x	x			x	x			INP_min (Minimum Impulse Noise Protection) (bits 2 & 1)
x	x		x					Reserved for allocation by the ITU-T
x	x	x						Reserved for allocation by the ITU-T

**Table 11.30.42.8/G.994.1 – Standard information field – G.992.3 Annex A
Upstream PTM TPS-TC #3 NPar(3) coding – Octet 9**

		Bits						
8	7	6	5	4	3	2	1	
<u>x</u>	<u>x</u>					<u>x</u>	<u>x</u>	<u>INP_min (Minimum Impulse Noise Protection) (bits 4 & 3)</u>
<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>			<u>Reserved for allocation by the ITU-T</u>

11) To support the new TU-12 TPS-TC in G.991.2, add the following parameters:

**Table 11.16.5.3/G.994.1 – Standard information field – G.991.2 Annex A
TPS-TC parameters – NPar(3) coding – Octet 4**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	PTM
x	x	x	x	x	1	x	x	STM with DSC
x	x	x	x	1	x	x	x	LAPV5 Enveloped POTS or ISDN
x	x	x	x	1	x	x	x	<u>Reserved for allocation by the ITU-T</u>
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	x	0	0	0	0	0	0	No parameters in this octet

**Table 11.16.8.6/G.994.1 – Standard information field – G.991.2 Annex A
Dual Mode TPS-TC parameters – NPar(3) coding – Octet 7**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	Type 1 – TPS-TC _a : ISDN BRA
x	x	x	x	x	x	1	x	Type 1 – TPS-TC _a : STM with DSC
x	x	x	x	x	1	x	x	Type 1 – TPS-TC _a : LAPV5 Enveloped POTS or ISDN
x	x	x	x	1	x	x	x	Type 1 – TPS-TC _a : TU-12
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	x	0	0	0	0	0	0	No parameters in this octet

**Table 11.18.5.2/G.994.1 – Standard information field – G.991.2 Annex B
TPS-TC parameters – NPar(3) coding – Octet 3**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	Synchronous ISDN-BRA
x	x	x	x	x	x	1	x	PTM
x	x	x	x	x	1	x	x	STM with DSC
x	x	x	x	1	x	x	x	LAPV5 Enveloped POTS or ISDN
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	x	0	0	0	0	0	0	No parameters in this octet

**Table 11.18.8.6/G.994.1 – Standard information field – G.991.2 Annex B
Dual Mode TPS-TC parameters – NPar(3) coding – Octet 7**

		Bits						
8	7	6	5	4	3	2	1	
x	x	x	x	x	x	x	1	Type 1 – TPS-TC _b : PTM
x	x	x	x	x	x	1	x	Type 1 – TPS-TC _a : STM with DSC
x	x	x	x	x	1	x	x	Type 1 – TPS-TC _a : LAPV5 Enveloped POTS or ISDN
x	x	x	x	1	x	x	x	Type 1 – TPS-TC _a : TU-12
x	x	x	1	x	x	x	x	Reserved for allocation by the ITU-T
x	x	1	x	x	x	x	x	Reserved for allocation by the ITU-T
x	x	0	0	0	0	0	0	No parameters in this octet

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks and open system communications
Series Y	Global information infrastructure, Internet protocol aspects and Next Generation Networks
Series Z	Languages and general software aspects for telecommunication systems