INTERNATIONAL TELECOMMUNICATION UNION

ITU-T G.709/Y.1331

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Corrigendum 1
(10/2012)

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

Digital terminal equipments – General

SERIES Y: GLOBAL INFORMATION INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS AND NEXT-GENERATION NETWORKS

Internet protocol aspects – Transport

Interfaces for the Optical Transport Network (OTN)

Corrigendum 1

CAUTION !

PREPUBLISHED RECOMMENDATION

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Corrigendum 1 to Recommendation ITU-T G.709/Y.1331 (2012)

Interfaces for the Optical Transport Network (OTN): Corrigendum 1

Summary

Corrigendum 1 to Recommendation ITU-T G.709/Y.1331 (2012) corrects some editorial mistakes in clauses 17.4, 17.7.1.2, 17.7.2.1, 17.9.1, 19.6.1, 19.6.2, E.3 and Appendix VIII.

Corrigendum 1 to Recommendation ITU-T G.709/Y.1331 (2012)

Interfaces for the Optical Transport Network (OTN): Corrigendum 1

1) Clause 17.4: Mapping of GFP frames into OPUk

Modify the first paragraph and header as follows:

17.4 Mapping of GFP frames into OPUk (k=0,1,2,3,4,flex)

The mapping of generic framing procedure (GFP) frames is performed by aligning the byte structure of every GFP frame with the byte structure of the OPUk payload (see Figure 17-7). Since the GFP frames are of variable length (the mapping does not impose any restrictions on the maximum frame length), a frame may cross the OPUk (k=0,1,2,3,4,flex) frame boundary.

2) Clause 17.7.1.2: FC-100

Delete the last sentence of the first paragraph:

During a signal fail condition of the incoming FC-100 signal (e.g.,in the case of a loss of input signal), this failed incoming FC-100 signal is replaced by a NOS primitive sequence as specified in [b-INCITS 470: FC-FS-3]. ~~This replacement signal is then applied to the transcoding process.~~

3) Clause 17.7.2.1: FC-200

Delete the last sentence of the first paragraph:

During a signal fail condition of the incoming FC-200 signal (e.g., in the case of a loss of input signal), this failed incoming FC-200 signal is replaced by a NOS primitive sequence as specified in [b-INCITS 470: FC-FS-3]. ~~This replacement signal is then applied to the transcoding process.~~

4) Clause 17.9.1: FC-400 and FC-800

Delete the last sentence of the first paragraph:

During a signal fail condition of the incoming FC-400/FC-800 signal (e.g., in the case of a loss of input signal), this failed incoming FC-400/FC-800 signal is replaced by a NOS primitive sequence as specified in [b-INCITS 470: FC-FS-3]. ~~This replacement signal is then applied to the transcoding process.~~

5) Clause 19.6.1: Mapping ODUj into ODTU2.M

Modify Table 19-8 as follows:

Table 19-8 – C_m and C_n (n=8) for ODUj into ODTU2.M

ODUj signal	M	m=8×M	Floor $C_{m,min}$ (note)	Minimum c_m	Nominal c_m	Maximum c_m	Ceiling $C_{m,max}$ (note)
ODU0	1	8	15167	15167.393	15168.000	15168.607	15169
ODUflex(GFP), n=1..8	n	8 × n	ODUflex(GFP) rate dependent				
ODUflex(CBR)	ODUflex(CBR) dependent						
- ODUflex(IB SDR)	3	24	10200	10200.928	10202.152	10203.376	10204
- ODUflex(IB DDR)	5	40	12241	12241.113	12242.582	12244.051	12245
- ODUflex(FC-400)	4	32	13006	13006.183	13007.744	13009.305	13010
- ODUflex(FC-800)	7	56	14864	14864.209	14865.993	14867.777	14868
			Floor $C_{8,min}$ (note)	**Minimum c_8**	**Nominal c_8**	**Maximum c_8**	**Ceiling $C_{8,max}$** (note)
ODU0	1	8	15167	15167.393	15168.000	15168.607	15169
ODUflex(GFP), n=1..8	n	8 × n	ODUflex(GFP) rate dependent				
ODUflex(CBR)	ODUflex(CBR) dependent						
- ODUflex(IB SDR)	3	24	30602	30602.783	30606.456	30610.128	30611
- ODUflex(IB DDR)	5	40	61205	61205.566	61212.911	61220.257	61221
- ODUflex(FC-400)	4	32	52024	52024.731	52030.974	52037.218	52038
- ODUflex(FC-800)	7	56	104049	104049.462	104061.949	104074.437	104075

NOTE – Floor $C_{m,min}$, Floor $C_{n,min}$ (n=8), Ceiling $C_{m,max}$ and Ceiling $C_{n,max}$ (n=8) values represent the boundaries of ODUj/ODTU2.M ppm offset combinations (i.e. min. ODUj/max. ODTU and max. ODUj/min. ODTU). In steady state, given instances of ODUj/ODTU offset combinations should not result in generated C_n and C_m values throughout this range but rather should be within as small a range as possible. Under transient ppm offset conditions (e.g. AIS to normal signal), it is possible that C_n and C_m values outside the range $C_{n,min}$ to $C_{n,max}$ and $C_{m,min}$ to $C_{m,max}$ may be generated and a GMP demapper should be tolerant of such occurrences. Refer to Annex D for a general description of the GMP principles.

6) Clause 19.6.2: Mapping ODUj into ODTU3.M

Modify Table 19-8 as follows:

Table 19-9 – C_m and C_n (n=8) for ODUj into ODTU3.M

ODUj signal	M	m=8×M	Floor $C_{m,min}$ (note)	Minimum c_m	Nominal c_m	Maximum c_m	Ceiling $C_{m,max}$ (note)
ODU0	1	8	15103	15103.396	15104.000	15104.604	15105
ODU2e	9	72	14026	14026.026	14027.709	14029.392	14030
ODUflex(GFP), n=1..32	n	8 × n	ODUflex(GFP) rate dependent				
ODUflex(CBR)	ODUflex(CBR) dependent						
~~- ODUflex(IB SDR)~~	~~3~~	~~24~~	~~10200~~	~~10200.928~~	~~10202.152~~	~~10203.376~~	~~10204~~
~~- ODUflex(IB DDR)~~	~~5~~	~~40~~	~~12241~~	~~12241.113~~	~~12242.582~~	~~12244.051~~	~~12245~~
~~- ODUflex(FC-400)~~	~~4~~	~~32~~	~~13006~~	~~13006.183~~	~~13007.744~~	~~13009.305~~	~~13010~~
~~- ODUflex(FC-800)~~	~~7~~	~~56~~	~~14864~~	~~14864.209~~	~~14865.993~~	~~14867.777~~	~~14868~~
- ODUflex(IB SDR)	3	24	10157	10157.886	10159.105	10160.324	10161
- ODUflex(IB DDR)	5	40	12189	12189.463	12190.926	12192.389	12193
- ODUflex(IB QDR)	9	72	13543	13543.848	13545.473	13547.099	13548
- ODUflex(FC-400)	4	32	12951	12951.304	12952.859	12954.413	12955
- ODUflex(FC-800)	7	56	14801	14801.491	14803.267	14805.043	14806
			Floor $C_{8,min}$ (note)	**Minimum c_8**	**Nominal c_8**	**Maximum c_8**	**Ceiling $C_{8,max}$** (note)
ODU0	1	8	15103	15103.396	15104.000	15104.604	15105
ODU2e	9	72	126234	126234.232	126249.381	126264.532	126265
ODUflex(GFP), n=1..32	n	8 × n	ODUflex(GFP) rate dependent				
ODUflex(CBR)	ODUflex(CBR) dependent						
~~- ODUflex(IB SDR)~~	~~3~~	~~24~~	~~30602~~	~~30602.783~~	~~30606.456~~	~~30610.128~~	~~30611~~
~~- ODUflex(IB DDR)~~	~~5~~	~~40~~	~~61205~~	~~61205.566~~	~~61212.911~~	~~61220.257~~	~~61221~~
~~- ODUflex(FC-400)~~	~~4~~	~~32~~	~~52024~~	~~52024.731~~	~~52030.974~~	~~52037.218~~	~~52038~~
~~- ODUflex(FC-800)~~	~~7~~	~~56~~	~~104049~~	~~104049.462~~	~~104061.949~~	~~104074.437~~	~~104075~~
- ODUflex(IB SDR)	3	24	30473	30473.657	30477.314	30480.972	30481
- ODUflex(IB DDR)	5	40	60947	60947.314	60954.629	60961.943	60962
- ODUflex(IB QDR)	9	72	121894	121894.629	121909.258	121923.887	121924
- ODUflex(FC-400)	4	32	51805	51805.217	51811.434	51817.652	51818
- ODUflex(FC-800)	7	56	103610	103610.434	103622.869	103635.304	103636

NOTE – Floor $C_{m,min}$, Floor $C_{n,min}$ (n=8), Ceiling $C_{m,max}$ and Ceiling $C_{n,max}$ (n=8) values represent the boundaries of ODUj/ODTU3.M ppm offset combinations (i.e. min. ODUj/max. ODTU and max. ODUj/min. ODTU). In steady state, given instances of ODUj/ODTU offset combinations should not result in generated C_n and C_m values throughout this range but rather should be within as small a range as possible. Under transient ppm offset conditions (e.g. AIS to normal signal), it is possible that C_n and C_m values outside the range $C_{n,min}$ to $C_{n,max}$ and $C_{m,min}$ to $C_{m,max}$ may be generated and a GMP demapper should be tolerant of such occurrences. Refer to Annex D for a general description of the GMP principles.

7) Clause E.3: Client frame recovery

Replace Figure E.1 by the following figure:

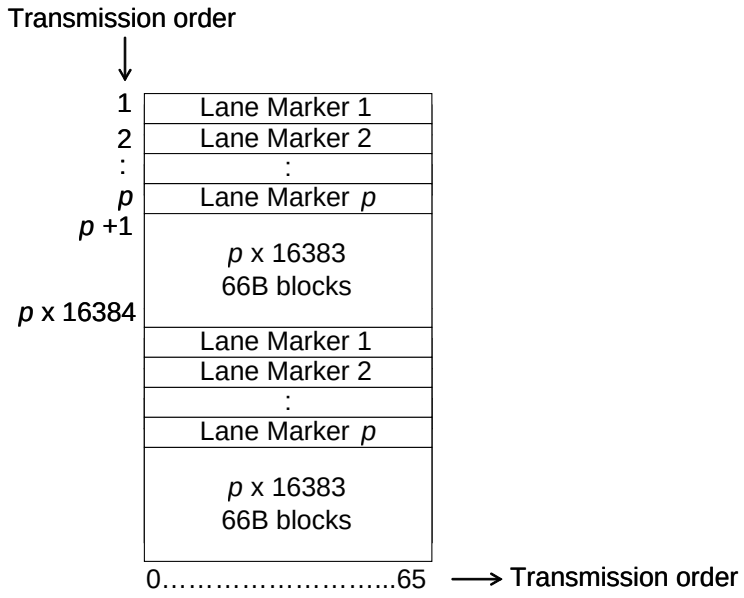

Figure E.1 – Deskewed/serialized stream of 66B blocks

8) Appendix VIII: CPRI into LO ODU mapping

Modify Table VIII.6 as follows:

Table VIII.6 – C_m and C_n (n=8) for ODUj into ODTU2.M

ODUj signal	M	m=8×M	Floor $C_{m,min}$	Minimum c_m	Nominal c_m	Maximum c_m	Ceiling $C_{m,max}$
ODUflex(CBR)	ODUflex(CBR) dependent						
- ODUflex(CPRI 4)	3	24	12534	12534.900	12536.404	12537.909	12538
- ODUflex(CPRI 5)	4	32	15041	15041.880	15043.685	15045.490	15046
- ODUflex(CPRI 6)	5	40	15041	15041.880	15043.685	15045.490	15046
			Floor $C_{8,min}$	**Minimum c_8**	**Nominal c_8**	**Maximum c_8**	**Ceiling $C_{8,max}$**
ODUflex(CBR)	ODUflex(CBR) dependent						
- ODUflex(CPRI 4)	3	24	~~37525~~ 37604	~~37525.698~~ 37604.700	~~37530.202~~ 37609.213	~~37534.705~~ 37613.726	~~37535~~ 38614
- ODUflex(CPRI 5)	4	32	~~60041~~ 60167	~~60041.117~~ 60167.519	~~60048.323~~ 60174.740	~~60055.529~~ 60181.961	~~60056~~ 60182
- ODUflex(CPRI 6)	5	40	~~75051~~ 75209	~~75051.396~~ 75209.399	~~75060.403~~ 75218.425	~~75069.411~~ 75227.452	~~75070~~ 75228