International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.798

Amendment 1

(07/2011)

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

Digital terminal equipments – Other terminal equipment

Characteristics of optical transport network hierarchy equipment functional blocks

Amendment 1

Recommendation ITU-T G.798 (2010) – Amendment 1

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Recommendation ITU-T G.798

Characteristics of optical transport network hierarchy equipment functional blocks

Amendment 1

Summary

Amendment 1 to Recommendation ITU-T G.798 (2010) contains text additions to complete the correct specification of the mapping of Ethernet rates (40GBE and 100GBE into ODU3 and ODU4, respectively) as well as additional management information needed for ODU PT21 multiplexing. Also missing functions and text for the support of multilane interfaces is added to the Scope and the OPS layer functions. An AIS generator for pre-emption of extra traffic is added to the ODU connection functions.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T G.798	2002-01-06	15
1.1	ITU-T G.798 (2002) Amd. 1	2002-06-13	15
2.0	ITU-T G.798	2004-06-13	15
3.0	ITU-T G.798	2006-12-14	15
3.1	ITU-T G.798 (2006) Amd. 1	2008-12-12	15
3.2	ITU-T G.798 (2006) Cor.1	2009-01-13	15
4.0	ITU-T G.798	2010-10-22	15
4.1	ITU-T G.798 (2010) Cor. 1	2011-04-13	15
4.2	ITU-T G.798 (2010) Amd. 1	2011-07-22	15
4.3	ITU-T G.798 (2010) Cor. 2	2012-02-13	15

FOREWORD

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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, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

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Recommendation ITU-T G.798

Characteristics of optical transport network hierarchy equipment functional blocks

Amendment 1

1) Scope

This amendment contains modified text to be added to Recommendation ITU-T G.798, *Characteristics of optical transport network hierarchy equipment functional blocks*.

2) Clause 2, References

Add the following reference to clause 2:

[ITU-T G.7041] Recommendation ITU-T G.7041/Y.1303 (2011), *Generic framing procedure*.

3) Text modification for Recommendation ITU-T G.798

Text modifications to be added to Recommendation ITU-T G.798.

3.1) Modifications in clause 1, Scope

Modify Figure 1-1 in clause 1 as follows:

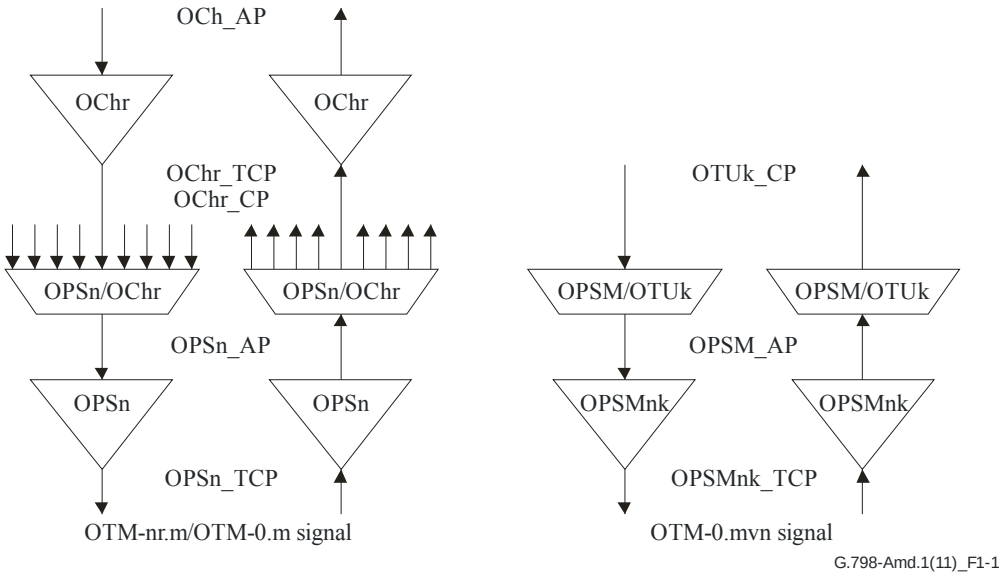

Figure 1-1 – OTN atomic functions specific for the reduced functionality OTM-nr.m/OTM-0.m and OTM-0.mvn interface

3.2) Modifications in clause 11

Modify the text and Figure 11-1 in clause 11 as below:

11 Optical physical section (OPS) layer functions

Figure 11-1 illustrates the OPS layer network and client layer adaptation functions. The information crossing the OPSn termination connection point (OPSn_TCP) is referred to as the OPSn characteristic information (OPSn_CI). The information crossing the OPSMnk termination connection point (OPSMnk_TCP) is referred to as the OPSMnk characteristic information (OPSMnk_CI). The information crossing the OPSn access point (OPSn_AP) is referred to as the OPSn adapted information (OPSn_AI). The information crossing the OPSMnk access point (OPSM_AP) is referred to as the OPSM adapted information (OPSM_AI).

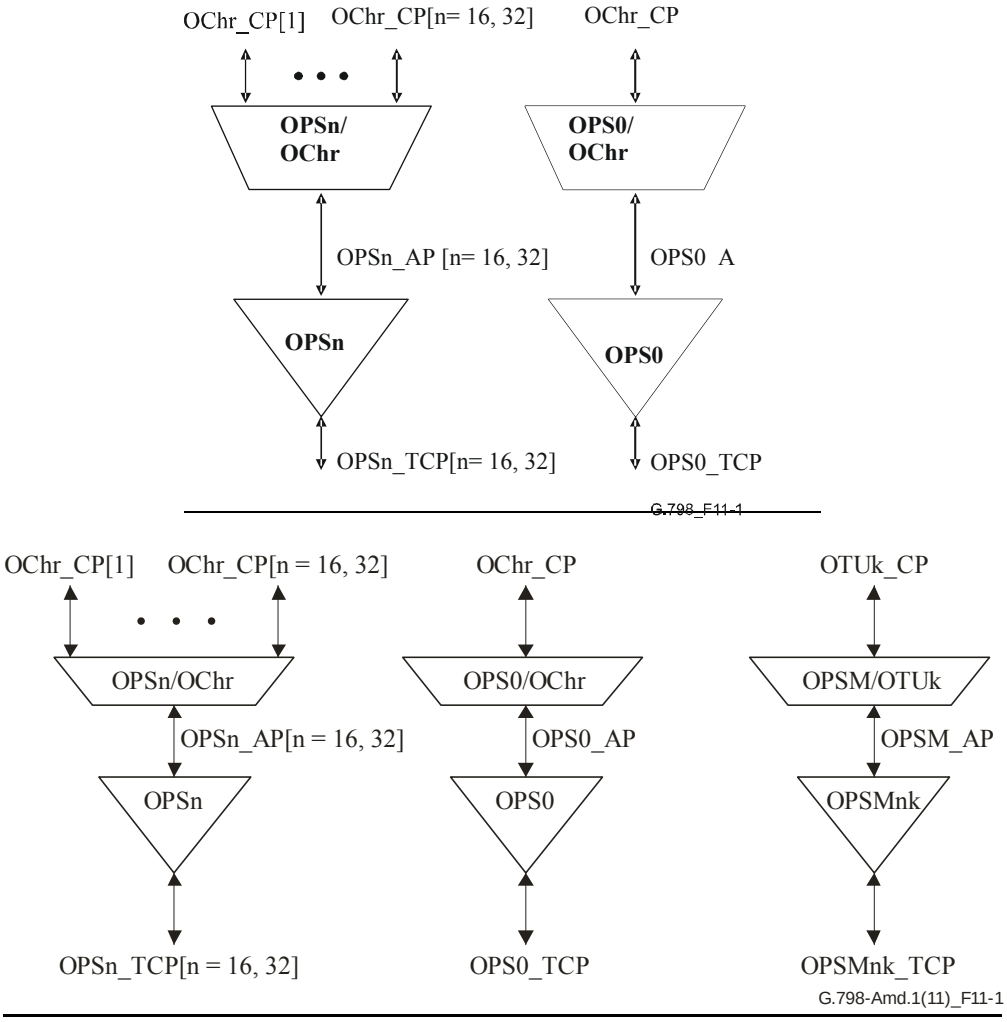

Figure 11-1 – OPSn/OPSMnk layer network and client layer adaptation functions

The OPSn characteristic information (OPSn_CI) is a physical optical signal consisting of the n multiplexed traffic wavelengths for n ≥ 1 and a single optical signal for n = 0.

The OPSn adapted information (OPSn_AI) consists of the OPSn adapted information payload (OTSn_AI_PLD), which are the n multiplexed traffic wavelengths for n ≥ 1 and a single optical signal for n = 0.

The OPSMnk characteristic information (OPSMnk_CI) is a physical optical signal consisting of the n multilanes using wavelength division multiplexing for n = 4 and containing one OTUk (k = 3, 4) signal.

The OPSM adapted information (OPSM_AI) consists of the single OPSM data signal (OPSM_AI_D), which is an OTUk (k = 3, 4) signal as defined in [ITU-T G.709].

Replace Figure 11-10A in clause 11 with the following:

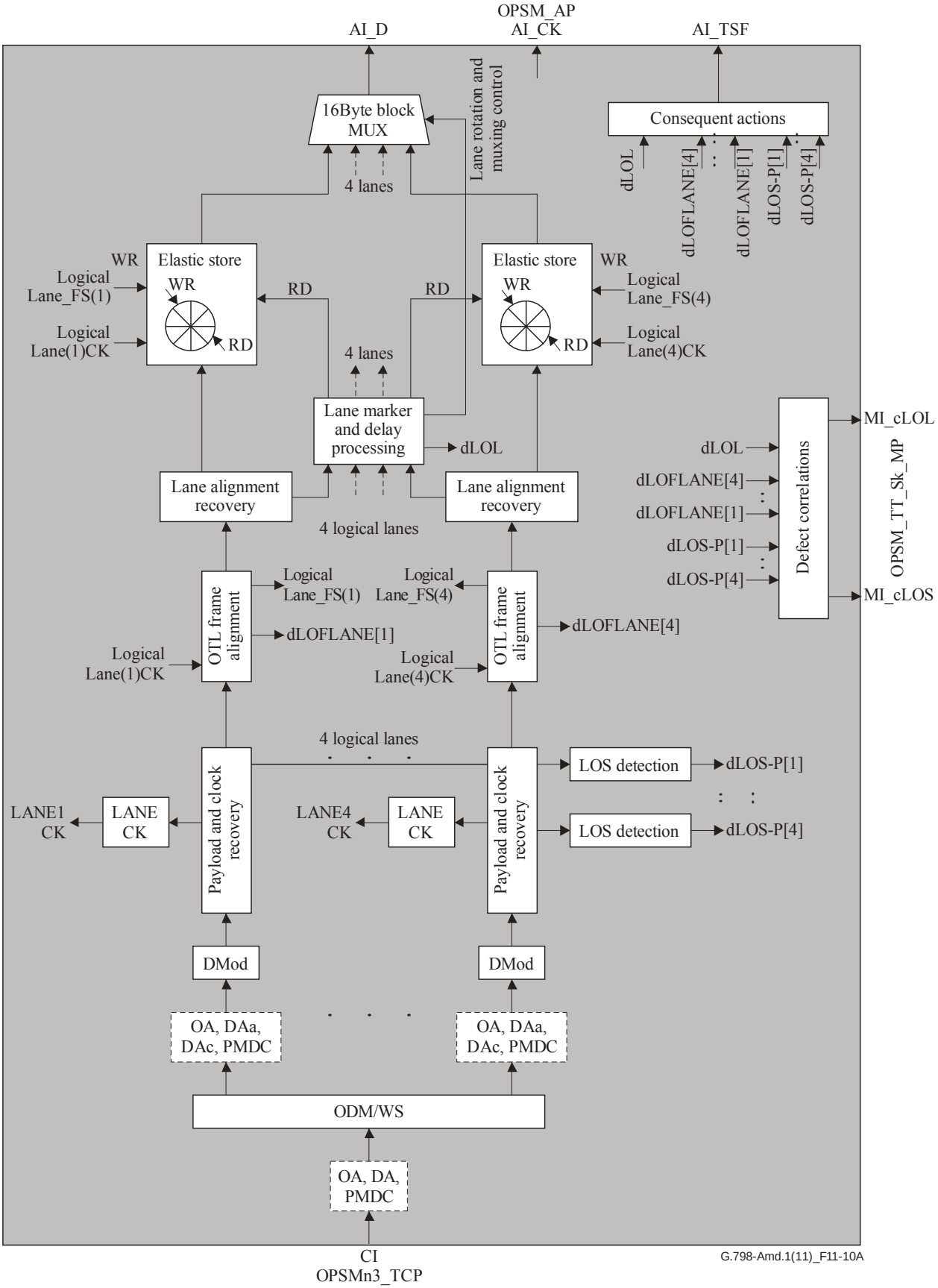

Figure 11-10A – OPSMn3_TT_Sk processes; n = 4

Replace Figure 11-10B in clause 11 with the following:

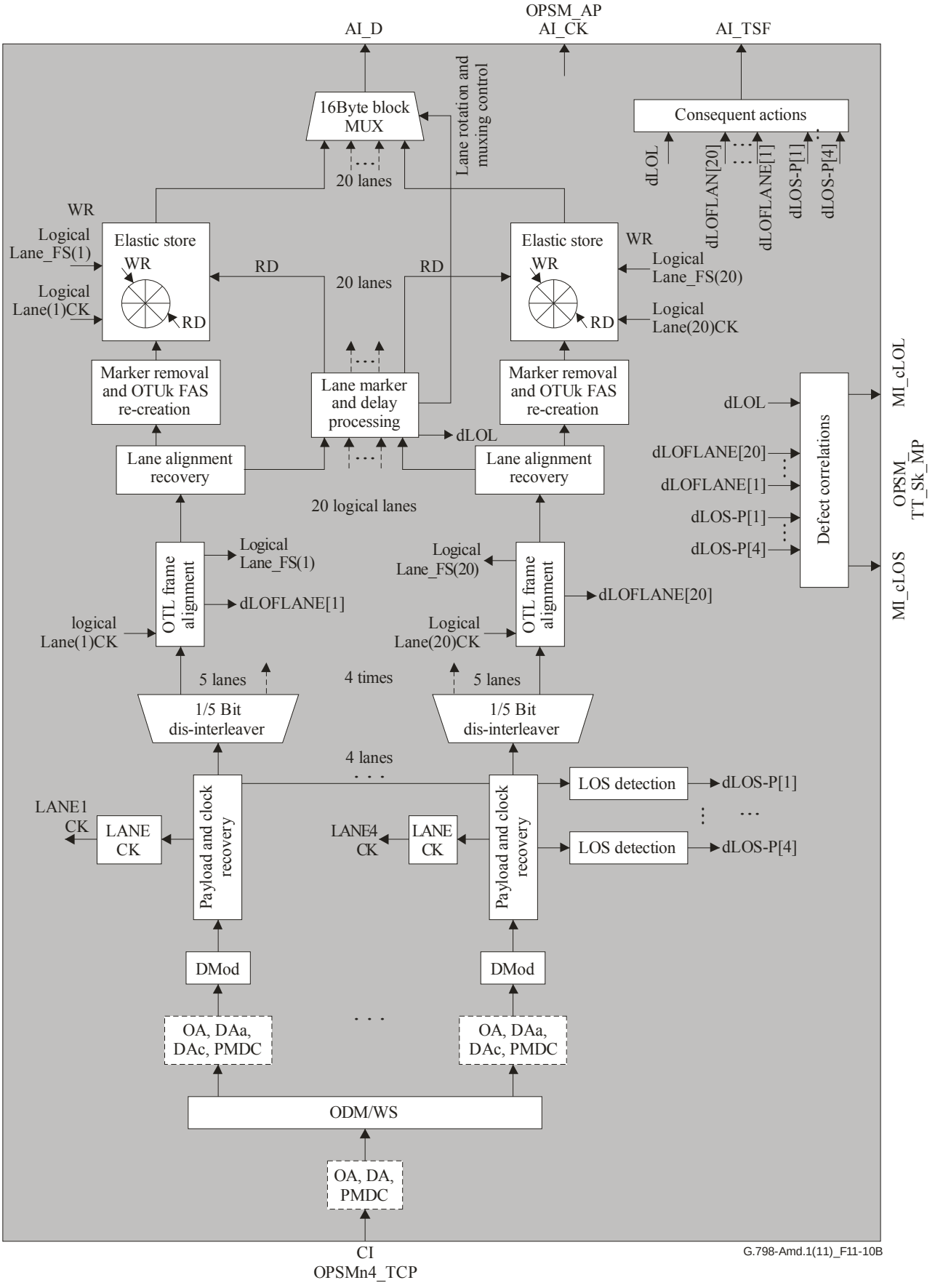

Figure 11-10B – OPSMn4_TT_Sk processes; n = 4

3.3) Modifications to clause 14.1.1, ODUk connection function (ODU_C)

Replace Figure 14-5 with the figure below, adding AIS generator:

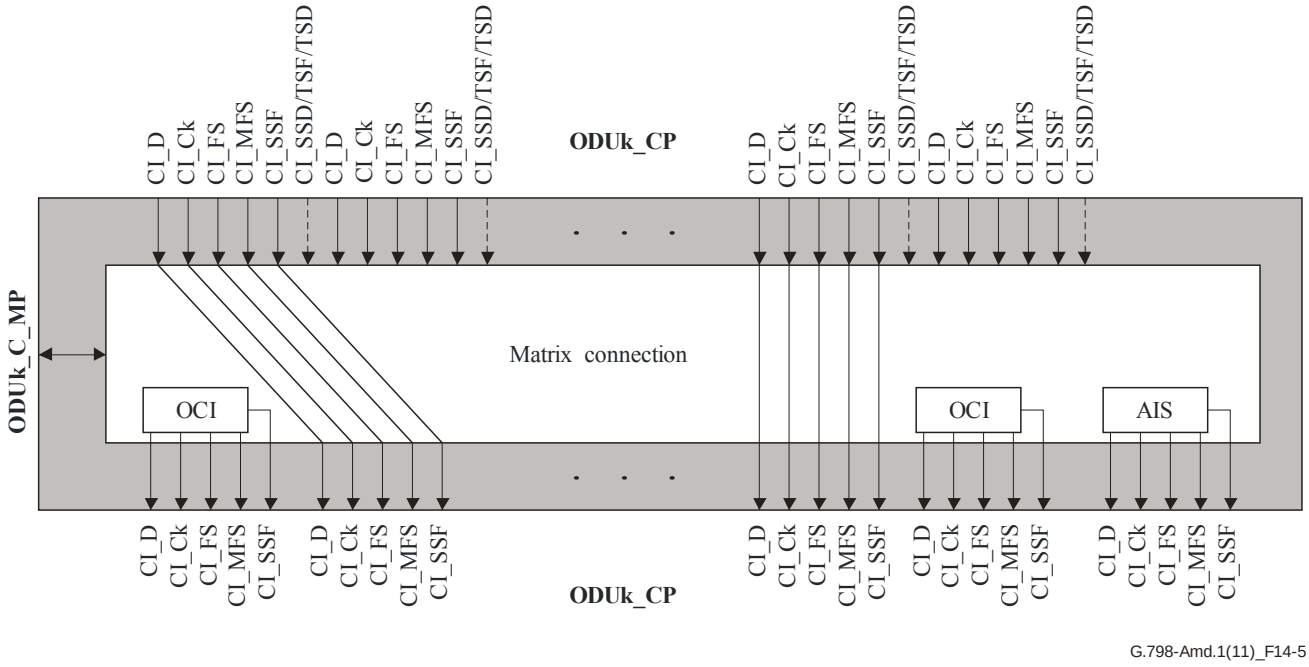

Figure 14-5 – ODU_C function processes

3.4) Modifications to clause 14.1.1.1, Subnetwork connection protection process

Replace Figures 14-9 to 14-13 with the figures below:

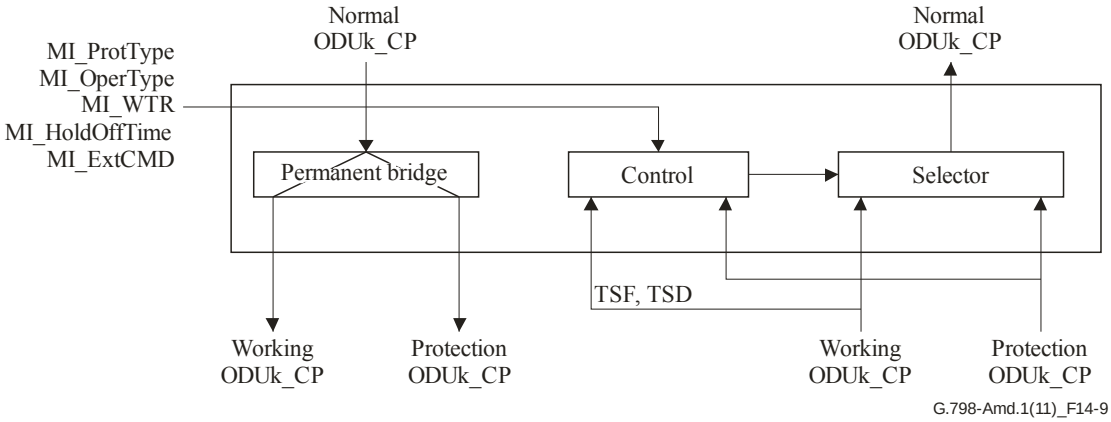

Figure 14-9 – 1+1 unidirectional SNC/N protection process without APS protocol

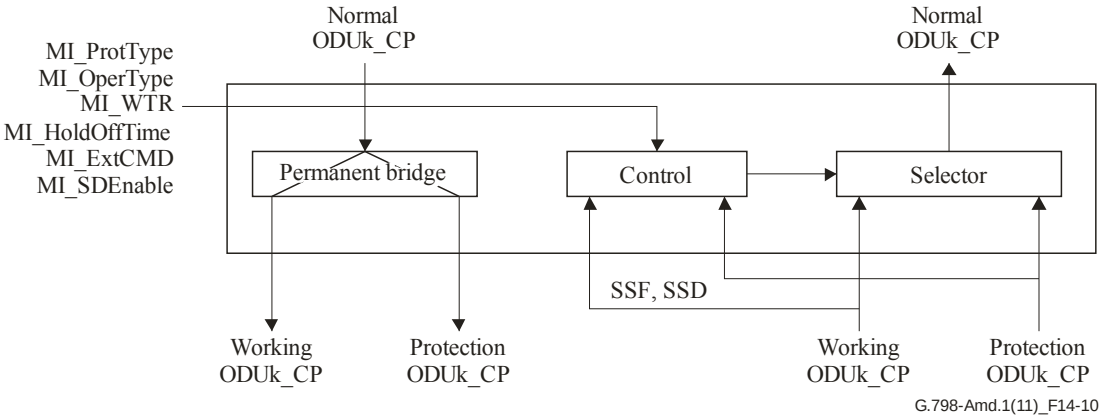

Figure 14-10 – 1+1 unidirectional SNC/S and SNC/I protection process without APS protocol

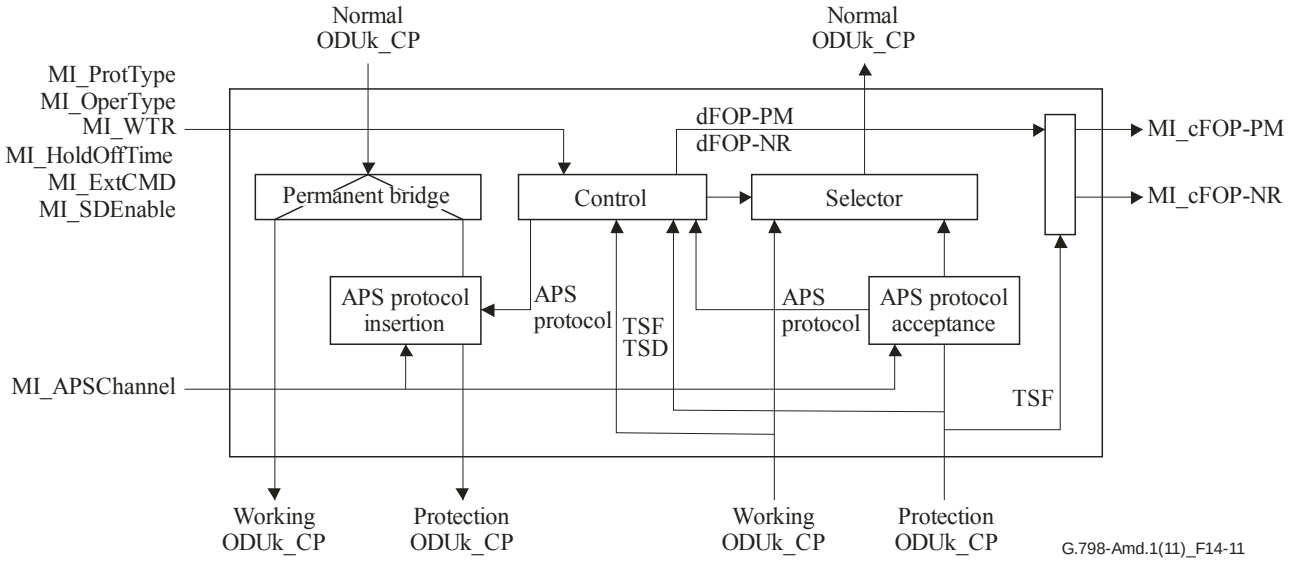

Figure 14-11 – 1+1 SNC/N protection process with APS protocol

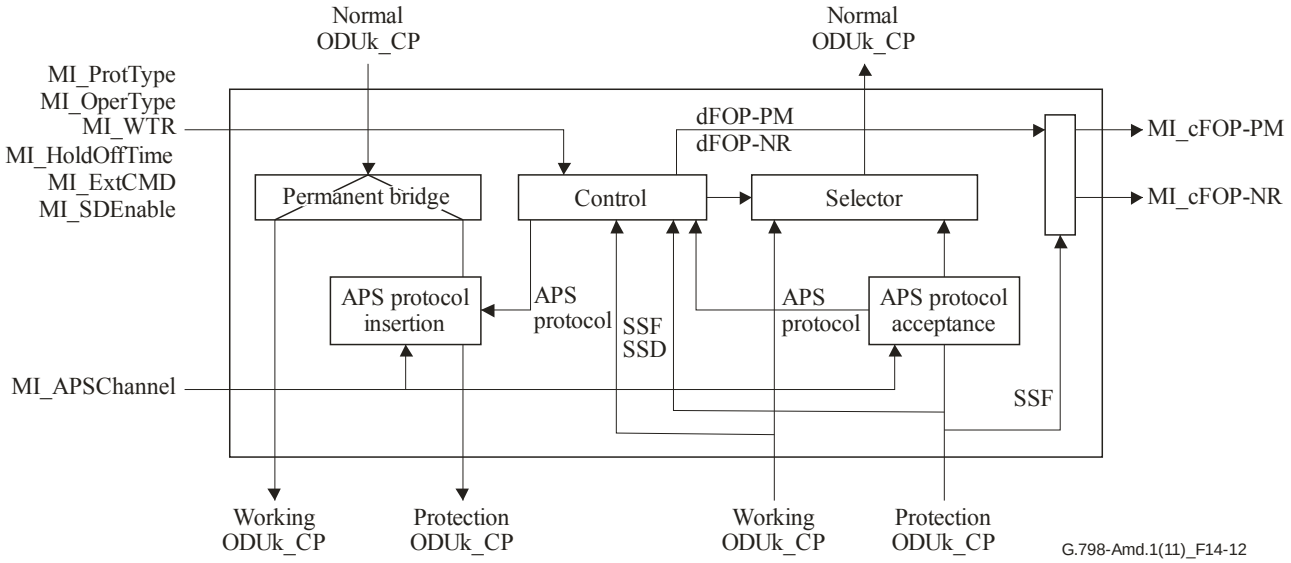

Figure 14-12 – 1+1 SNC/S and SNC/I protection process with APS protocol

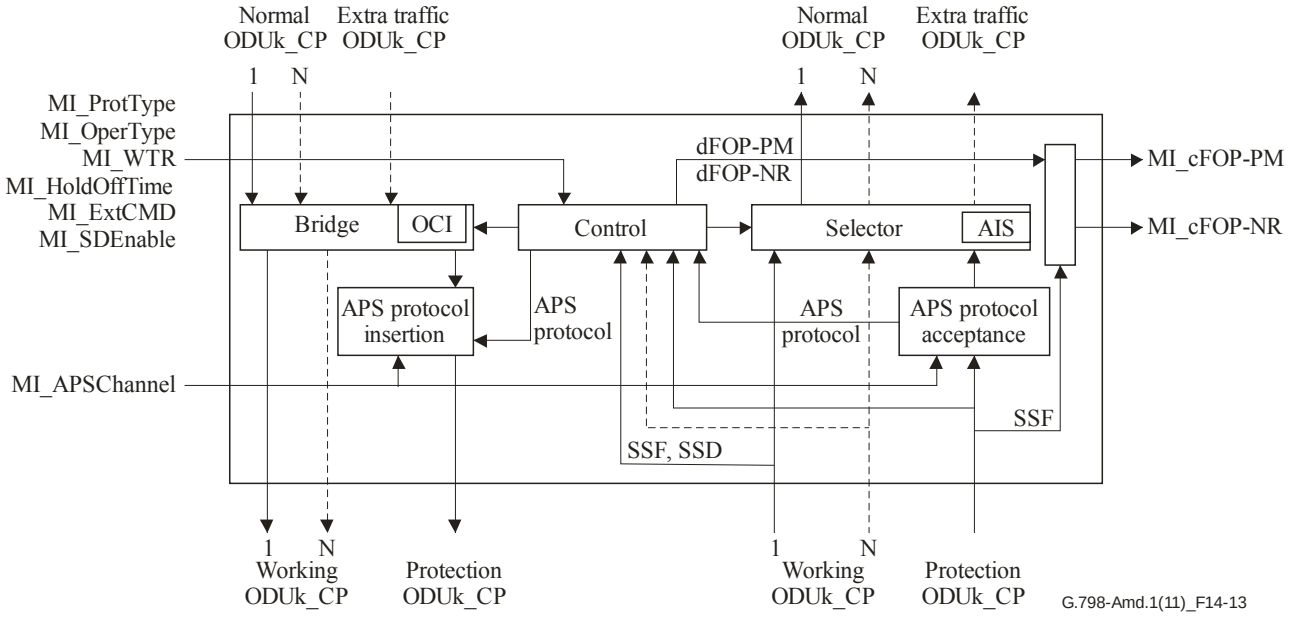

Figure 14-13 – 1:N SNC/S and SNC/I protection process with APS protocol

Modify the text in clause 14.1.1 of the paragraph after Figure 14-13 as follows:

A permanent bridge, as defined in [ITU-T G.808.1], shall be used for the 1+1 protection. A broadcast bridge, as defined in [ITU-T G.808.1], shall be used for the 1:N protection. It permanently connects the normal traffic signal to the working transport entity. In case no normal or extra traffic signal is connected to the protection transport entity, an ODUk-OCI signal, as defined in clause 16.5 of [ITU-T G.709], is generated for the protection transport entity. The clock of the OCI signal has to be within the minimum and maximum frequencies of the specified ODU signal in Table 14-2. The jitter and wander requirements, as defined in Annex A of [ITU-T G.8251] (ODCa clock), apply. CI_SSF is false. In the case that the extra traffic signal of a 1:N protection configuration carried by the protection entity is pre-empted by a protection switch, an ODU-AIS signal is to be connected to the extra traffic ODU_CP output. The clock of the ODU-AIS signal has to be within the minimum and maximum frequencies of the specified ODU signal in Table 14-2. The jitter and wander requirements, as defined in Annex A of [ITU-T G.8251] (ODCa clock), apply.

A selective selector, as defined in [ITU-T G.808.1], shall be used.

3.5) Modifications in clause 14.3.7

Modify clause 14.3.7 as follows:

14.3.7 ODU0P to Client adaptation function (ODU0P/CBRx_A) (0 ≤ x ≤ 1.25G)

The ODU0P to CBRx adaptation functions perform the adaptation between the ODU0P layer adapted information and the characteristic information of a CBRx signal.

The parameter x defines the bit rate or bit-rate range of the CBR signal. The value of x can range between 0 kbit/s and the OPU0 payload rate of 1 238 954 kbit/s (±20 ppm). In the case of the 1.25 Gbit/s 1000BASE-X Ethernet signal, as described in clause 17.7.1 of [ITU-T G.709], a timing transparent adaptation into GFP-T is used to produce a CBR signal with a rate of approximately 1 171 875 kbit/s that is mapped into the OPU0. In this case, the CBRx signal is an ETC3 signal. The values for which x is defined are listed in Table 14-20.

Table 14-20 – Defined values for x for ODU0 clients

x	PTI	Maximum buffer hysteresis	Bit rate	Clock range
155M	Hex code 0A	1 byte	155 520 kbit/s ± 20 ppm	155 520 kHz ± 20 ppm
622M	Hex code 0B	1 byte	622 080 kbit/s ± 20 ppm	622 080 kHz ± 20 ppm
1G25 [note] ETC3	Hex code 07	1 byte	1 171 875 kbit/s ± 100 ppm	1 171 875 kHz ± 100 ppm
FC100	Hex code 0C	1 byte	1 062 500 kbit/s ± 100 ppm	1 062 500 kHz ± 100 ppm
NOTE – The original bit rate and clock range of the associated 1000BASE-X Ethernet client signal is 1 250 000 kbit/s ± 100 ppm. The bit rate and clock range in this table are for the CBR stream that is produced after mapping the client signal into a GFP-T.				

The ODU0P/CBRx_A source function always provides asynchronous mapping.

3.6) Modifications in clause 14.3.7.1

Modify Table 14-21 as follows:

Table 14-21 – ODU0P/Client_A_So inputs and outputs

Input(s)	Output(s)
CBRx_CP: CBRx_CI_CK CBRx_CI_D CBRx_CI_SF **ODU0P/CBRx_A_So_MP**: ODU0P/CBRx_A_So_MI_Active	**ODU0P_AP**: ODU0P_AI_CK ODU0P_AI_D ODU0P_AI_FS ODU0P_AI_MFS
NOTE – In the case of 1000BASE-X client, the CBRx_CI_D signal is ETC3_CI_Data_Control and ETC3_CI_Control_Ind, the CBRx_CI_CK signal is ETC3_CI_Clock, and the CBRx_CI_SF signal is ETC3_CI_SSF.	

Modify the processes as shown below.

Replace Figure 14-50 with the following figure:

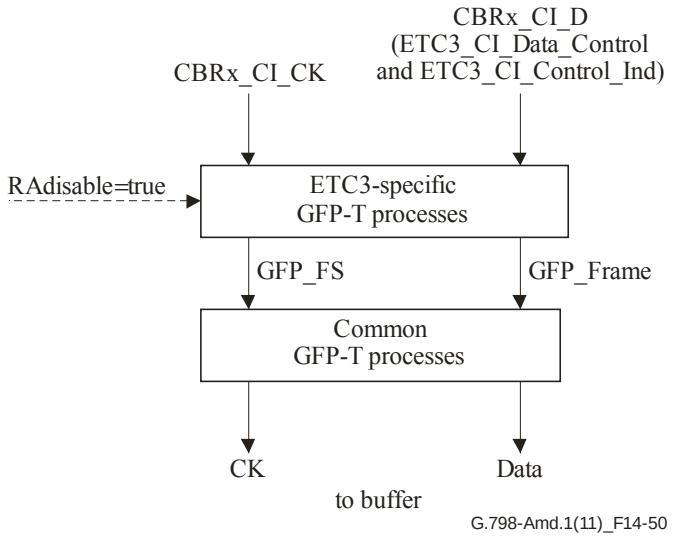

Figure 14-50 – Timing transparent transcoding process for 1000BASE-X clients

Add the following text to the processes part:

ETC3-specific GFP-T source processes

See clause 8.5.4.2.1 of [ITU-T G.806]. 65B_PAD insertion is disabled (RAdisable=true). GFP pFCS generation is disabled (FCSenable=false). The UPI value for transparent gigabit Ethernet shall be inserted (Table 6-3 of [ITU-T G.7041]). The Ethernet codeword information is inserted into the client payload information field of the GFP-T frames according to clause 8 of [ITU-T G.7041].

Common GFP-T source processes

See clause 8.5.3.1 of [ITU-T G.806]. GFP channel multiplexing is not supported (CMuxActive=false).

3.7) Modifications in clause 14.3.7.2, ODU0P to CBRx adaptation sink function (ODU0P/CBRx_A_Sk) (0 ≤ x ≤ 1.25G)

Modify Table 14-23 as follows:

Table 14-23 – ODU0P/Client_A_Sk inputs and outputs

Input(s)	Output(s)
ODU0P_AP: ODU0P_AI_CK ODU0P_AI_D ODU0P_AI_FS ODU0P_AI_MFS ODU0P_AI_TSF **ODU0P/CBRx_A_Sk_MP**: ODU0P/CBRx_A_Sk_MI_Active	**CBRx_CP**: CBRx_CI_CK CBRx_CI_D CBRx_CI_SSF **ODU0P/CBRx_A_Sk_MP**: ODU0P/CBRx_A_Sk_MI_cPLM ODU0P/CBRx_A_Sk_MI_AcPT
NOTE – In the case of 1000BASE-X client, the CBRx_CI_D signal is ETC3_CI_Data_Control and ETC3_CI_Control_Ind, the CBRx_CI_CK signal is ETC3_CI_Clock, and the CBRx_CI_SF signal is ETC3_CI_SSF.	

Modify the processes part as shown below.

Replace Figure 14-53 with the following figure:

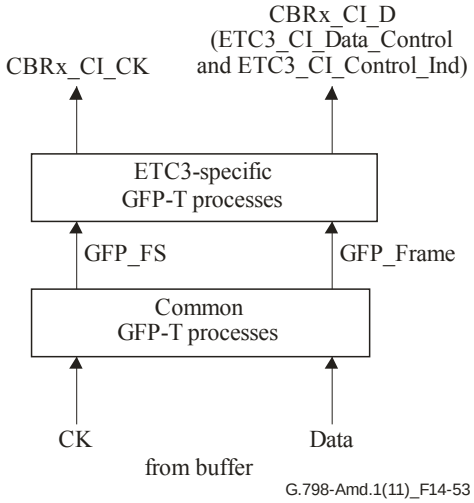

Figure 14-53 – Timing transparent transcoding process for 1000BASE-X clients

Add the following text to the processes part:

ETC3-specific GFP-T source processes

See clause 8.5.4.2.2 of [ITU-T G.806]. GFP pFCS checking and GFP p_FCSError are not supported (FCSdiscard=false). The UPI value for transparent gigabit Ethernet shall be expected (Table 6-3 of [ITU-T G.7041]). GFP performance monitoring (p_FDis, p_CRC16Error) is not supported. The Ethernet codeword information is extracted from the client payload information field of the GFP-T frames according to clause 8 of [ITU-T G.7041].

Common GFP-T source processes

See clause 8.5.3.2 of [ITU-T G.806]. GFP channel multiplexing is not supported (CMuxActive=false). GFP performance monitoring (p_FDis) is not supported.

3.8) Text modifications in clause 14.3.8.1, ODUkP to CBRx adaptation source function using GMP (ODUkP/CBRx-g_A_So)

Modify Table 14-25 as shown below:

Table 14-25 – ODUkP/CBRx-g_A_So inputs and outputs

Input(s)	Output(s)
CBRx_CP: CBRx_CI_CK CBRx_CI_D CBRx_CI_SSF CBRx_CI_Blockstart CBRx_CI_Lanestart **ODUkP/CBRx-g_A_So_MP**: ODUkP/CBRx-g_A_So_MI_Active	**ODUkP_AP**: ODUkP_AI_CK ODUkP_AI_D ODUkP_AI_FS ODUkP_AI_MFS **ODUkP/CBRx-g_A_So_MP**: ODUkP/CBRx-g_A_So_MI_ pN_PCS_BIP

Modify in the processes list in the ***Incoming PCS BIP monitoring and mask insertion and OTN Section BIP generation*** *item the bullet list text for 40 gigabit and 100 gigabit Ethernet as follows:*

- For 40 gigabit Ethernet multilane interfaces an error mask is to be calculated over the PCSL BIP of the incoming signal. For the OTN section a BIP has to be calculated on the descrambled datastream and after error control block insertion. The "OTN BIP" and the error mask will be transmitted together in the transcoded lane marker. See Annex E of [ITU-T G.709] and Figure 14-56.
- For 100 gigabit Ethernet multilane interfaces, the incoming PCSL BIP will be: transparently transmitted, errored 66B blocks will not be replaced with error control blocks and the scrambled PCS data will be passed through transparently. See Annex E of [ITU-T G.709] and Figure 14-56.

Add the following text for PCS BIP monitoring to the Processes part:

PCS BIP monitoring: The BIP violations of the PCS lanes shall be counted and presented to the management interface

Process: Figure 14-55 is to be replaced by the following figure:

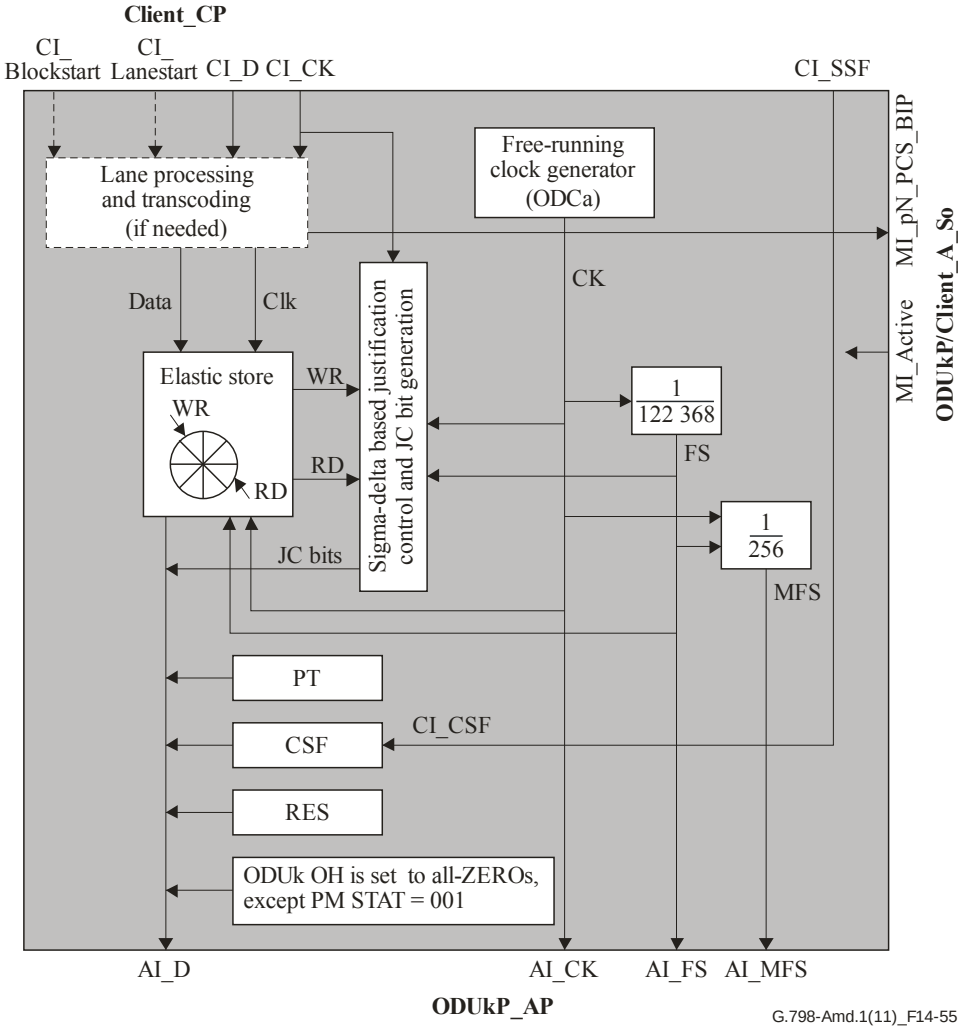

Figure 14-55 – ODUkP/CBRx-g_A_So function

PCS sub-process: Replace Figure 14-56 by the following figure:

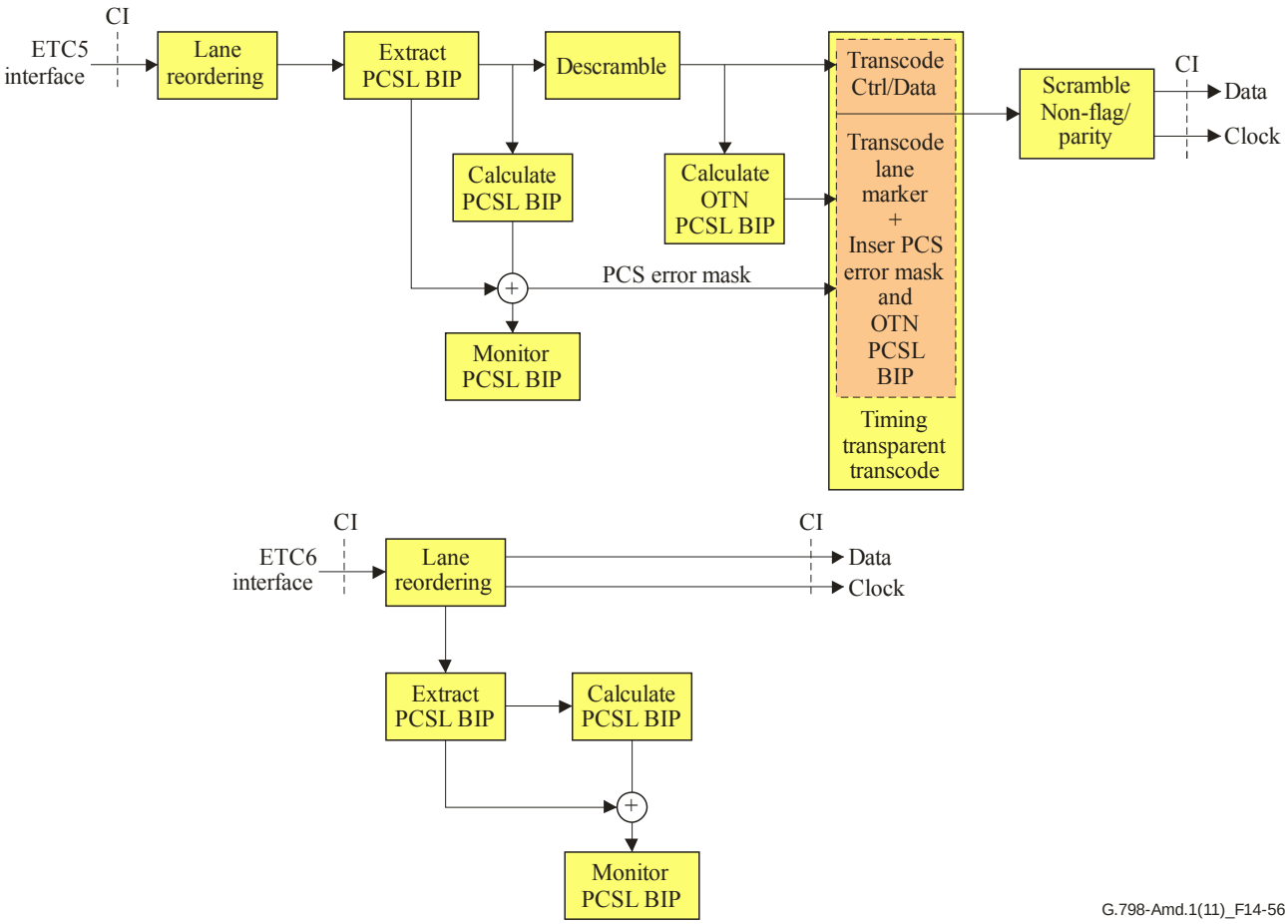

Figure 14-56 – Lane processing and timing transparent process of the ODUkP/CBRx-g_A_So function for ETC5 and ETC6 clients

Add the following text for Performance monitoring after Defect correlations:

Performance monitoring

The function shall perform the following performance monitoring primitives processing (see clause 6.5 of [ITU-T G.806]). The performance monitoring primitives shall be reported to the EMF.

pN_PCS_BIP BIP ← ∑nPCSL_BIP

3.9) Text modifications in clause 14.3.8.2, ODUkP to CBRx adaptation sink function using GMP (ODUkP/CBRx-g_A_Sk)

Modify Table 14-27 as shown below:

Table 14-27 – ODUkP/CBRx-g_A_Sk inputs and outputs

Input(s)	Output(s)
ODUkP_AP: ODUkP_AI_CK ODUkP_AI_D ODUkP_AI_FS ODUkP_AI_MFS ODUkP_AI_TSF **ODUkP/CBRx-g_A_Sk_MP**: ODUkP/CBRx-g_A_Sk_MI_Active ~~ODUkP/CBRx_A_Sk_MI_Enable_PCSL_Section_Mon~~	**CBRx_CP**: CBRx_CI_CK CBRx_CI_D CBRx_CI_SSF **ODUkP/CBRx-g_A_Sk_MP**: ODUkP/CBRx-g_A_Sk_MI_cPLM ODUkP/CBRx-g_A_Sk_MI_AcPT ODUkP/CBRx-g_A_Sk_MI_cCSF ODUkP/CBRx-g_A_Sk_MI_pN_PCS_BIP

Replace the text in the BIP correction with the following text:

BIP correction

– For 40 gigabit Ethernet multilane interfaces, the PCSL BIP error mask is to be extracted and a OTN BIP error mask is calculated before scrambling. Both error masks are used for calculating an adjusted PCSL BIP which will be inserted. See Annex E of [ITU-T G.709] and Figure 14-59.

– For 100 gigabit Ethernet multilane interfaces, the incoming PCSL BIP will be transparently transmitted. See Annex E of [ITU-T G.709] and Figure 14-59.

Process: Replace Figure 14-58 by the following figure:

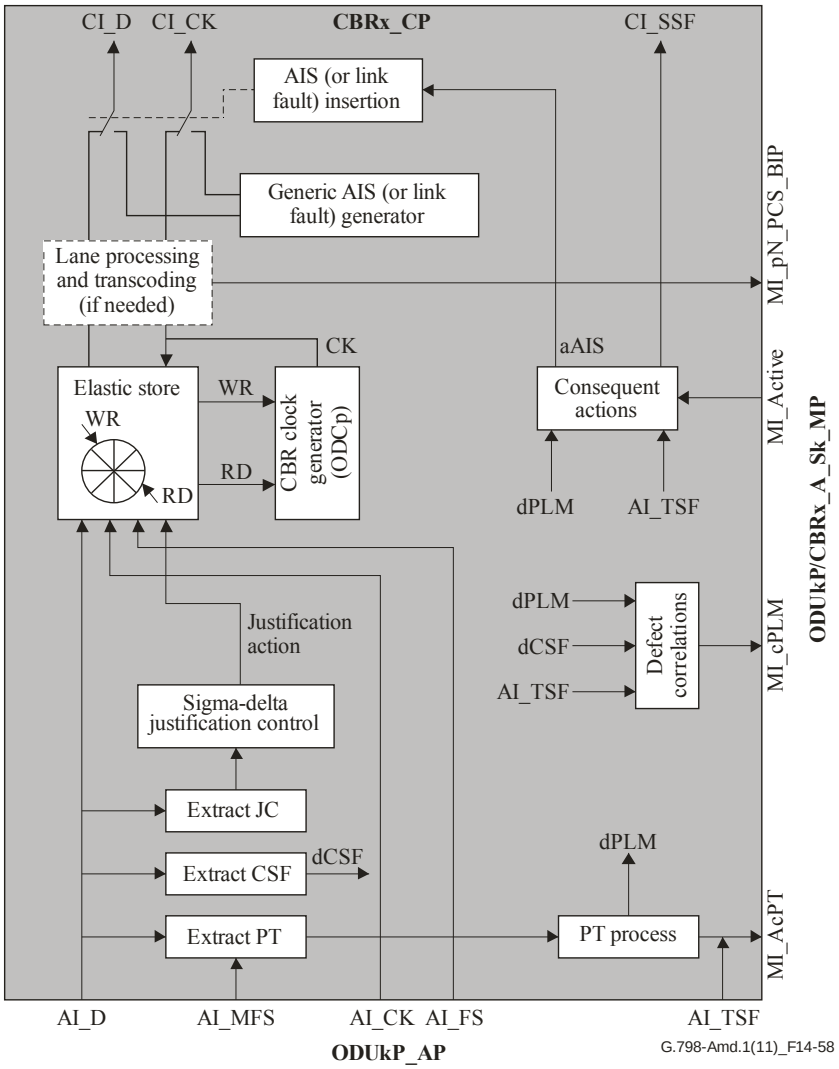

Figure 14-58 – ODUkP/CBRx-g_A_Sk processes

PCS sub-process: Replace Figure 14-59 by the following:

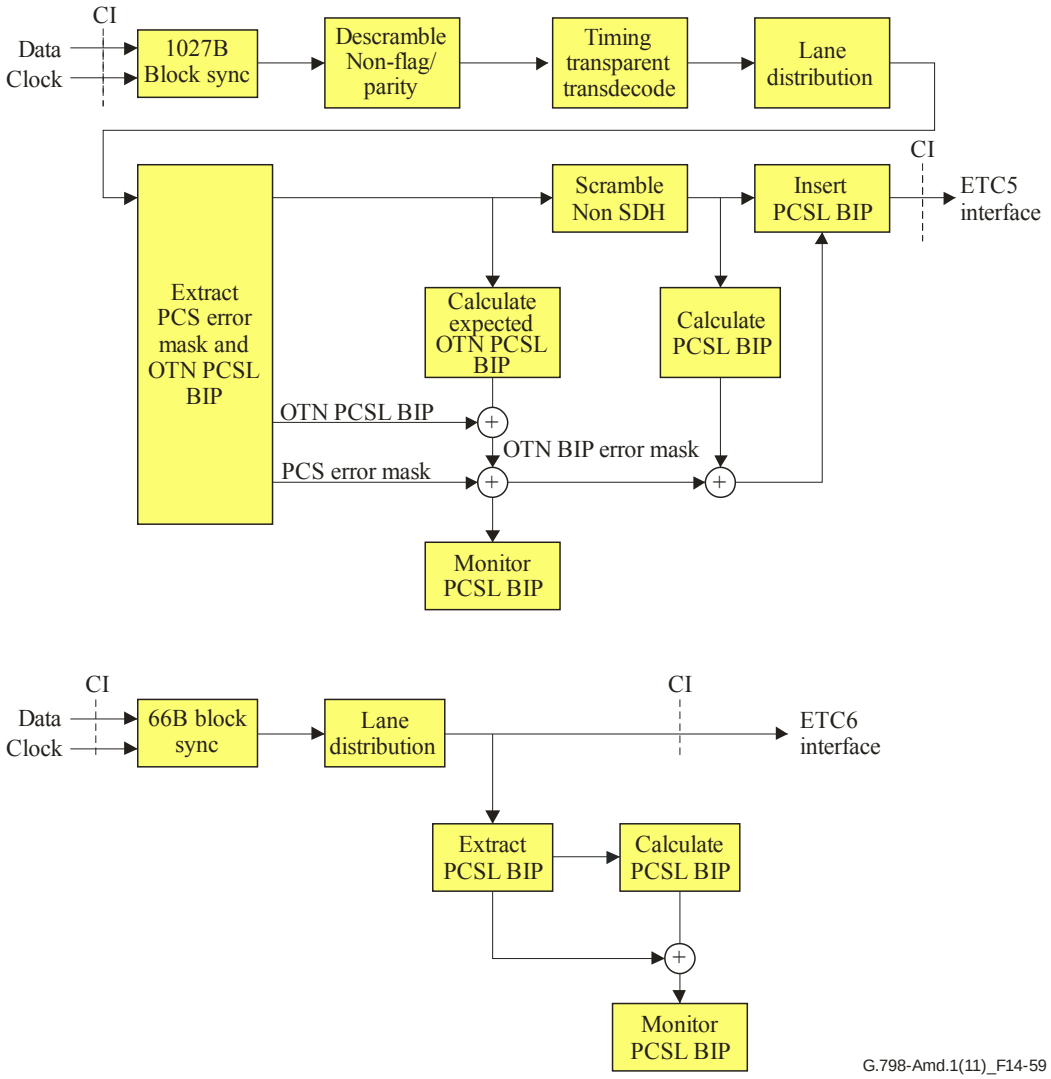

Figure 14-59 – Lane processing and timing transparent process of the ODUkP/CBRx-g_A_Sk function for ETC5 and ETC6 clients

Add the following text for Performance monitoring after Defect correlations:

Performance monitoring

The function shall perform the following performance monitoring primitives processing (see clause 6.5 of [ITU-T G.806]). The performance monitoring primitives shall be reported to the EMF.

pN_PCS_BIP ← ∑nPCSL_BIP

3.10) Text modifications in clause 14.3.10

3.10.1) Text modifications in clause 14.3.10.1, ODUkP to ODUj payload type 21 adaptation source function (ODUkP/ODUj-21_A_So)

In clause 14.3.10.1, ODUkP to ODUj payload type 21 adaptation source function (ODUkP/ODUj-21_A_So), add in Table 14-34 the Management interface ODUkP/ODUj-21_A_So_MI_ODUType_Rate[i]:

Table 14-34 – ODUkP/ODUj-21_A_So inputs and outputs

Input(s)	Output(s)
n × ODUj_CP: ODUj_CI_CK ODUj_CI_D ODUj_CI_FS ODUj_CI_MFS **ODUk_PP**: ODUk_PI_APS **ODUkP/ODUj-21_A_So_MP**: ODUkP/ODUj-21_A_So_MI_Active ODUkP/ODUj-21_A_So_MI_TxMSI ODUkP/ODUj-21_A_So_MI_AUTOpayloadtype ODUkP/ODUj-21_A_So_MI_ODUType_Rate[i] ODUkP/ODUj_A_So_MI_AdminState[n] **ODUkP/ODUj-21_A_So_RP**: ODUkP/ODUj-21_A_So_RI_AcPT	**ODUkP_AP**: ODUkP_AI_CK ODUkP_AI_D ODUkP_AI_FS ODUkP_AI_MFS **ODUkP/ODUj-21_A_So_RP:** ODUkP/ODUj-21_A_So_RI_TrPT **ODUkP/ODUj-21_A_So_MP**: ODUkP/ODUj-21_A_So_MI_TrPT

In the specific processes list in this clause, add the following text with respect to the additional MI as shown below:

Mapping, frequency justification and bit-rate adaptation: The function shall provide an elastic store (buffer) process for the ODUj client signal. The data signal ODUj_CI shall be written into the buffer under control of the associated input clock.

Two justification methods as described below are provided, AMP (ODTUjk) and GMP (ODTUk.M). The ODU type and rate, as configured via the ODUkP/ODUj-21_A-So_MI_ODUType_Rate[i] input for the related trib port, determine the mapping method and, in the case of GMP mapping, the base value and ranges for the parameters Cn and Cm.

In Figure 14-67, ODUkP/ODUj-21_A_So processes add the additional MI.

Replace Figure 14-67 with the following figure:

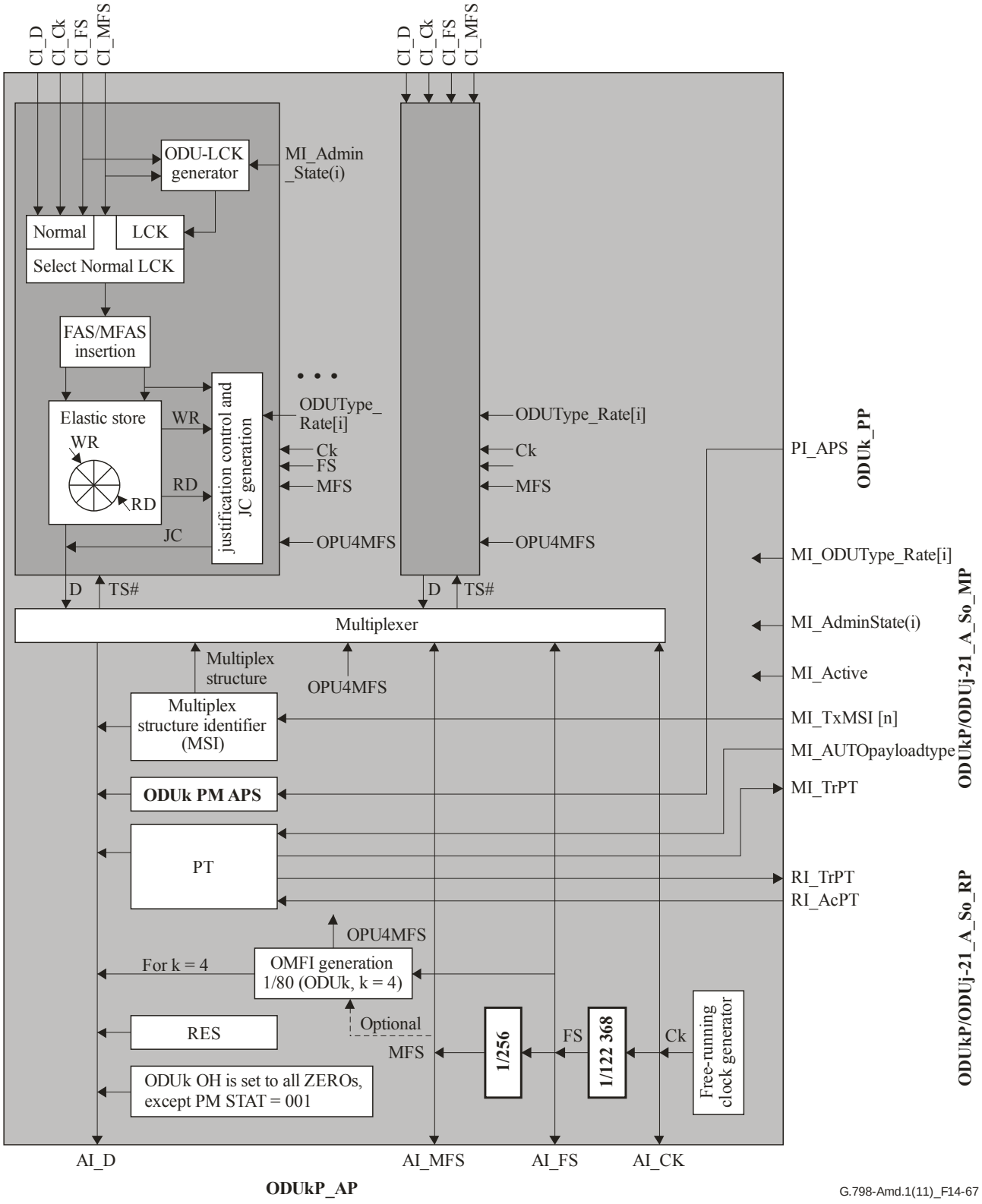

Figure 14-67 – ODUkP/ODUj-21_A_So processes

3.10.2) Text modifications in clause 14.3.10.2, ODUkP to ODUj payload type 21 adaptation sink function (ODUkP/ODUj-21_A_Sk)

In clause 14.3.10.2, ODUkP to ODUj payload type 21 adaptation sink function (ODUkP/ODUj-21_A_Sk), add in Table 14-36 the Management interface ODUkP/ODUj-21_A_Sk_MI_ODUType [i]:

Table 14-36 – ODUkP/ODUj-21_A_Sk inputs and outputs

Input(s)	Output(s)
ODUkP_AP: ODUkP_AI_CK ODUkP_AI_D ODUkP_AI_FS ODUkP_AI_MFS ODUkP_AI_TSF ODUkP_AI_TSD **ODUkP/ODUj21_A_Sk_MP**: ODUkP/ODUj21_A_Sk_MI_Active ODU3P/ODUj21_A_Sk_MI_ExMSI ODUkP/ODUj-21_A_Sk_MI_AdminState[n] ODUkP/ODUj-21_A_Sk_MI_Nominal_Bitrate_and_Tolerance[i] ODUkP/ODUj-21_A_Sk_MI_ODUType [i] **ODUkP/ODUj-21_A_Sk_RP**: ODUkP/ODUj-21_A_Sk_RI_TrPT	**n × ODUj_CP**: ODUj_CI_CK ODUj_CI_D ODUj_CI_FS ODUj_CI_MFS ODUj_CI_SSF ODUj_CI_SSD **ODUk_PP**: ODUk_PI_APS ODUk_PI_TSF ODUk_PI_TSD **ODUkP/ODU[i]j_A_Sk_MP**: ODUkP/ODUj-21_A_Sk_MI_cPLM ODUkP/ODUj-21_A_Sk_MI_cLOOMFI ODUkP/ODUj-21_A_Sk_MI_cMSIM[i] ODUkP/ODUj-21_A_Sk_MI_AcPT ODUkP/ODUj-21_A_Sk_MI_AcMSI[i] ODUkP/ODUj-21_A_Sk_MI_cLOFLOM[i] **ODUkP/ODUj-21_A_Sk_RP**: ODUkP/ODUj-21_A_Sk_RI_AcPT

In the specific processes list in this clause, add the following text with respect to the additional MI as shown below:

Specific processes

The specific processes are performed independently for each ODUj client signal that is multiplexed into the OPUk. The specific processes recover the ODUj from the ODTUjk or ODTUk.M.

Two justification methods as described below are provided, AMP (*ODTUjk*) and GMP (*ODTUk.M)*._Two justification methods as described below are provided, AMP (*ODTUjk*) and GMP (*ODTUk.M)*. The ODU type and rate, as configured via the ODUkP/ODUj-21_A-So_MI_ODUType_Rate[i] input for the related trib port, determine the mapping method and, in the case of GMP mapping, the base value and ranges for the parameters C_n and C_m.

Modify the current description text for AIS in consequent actions:

~~On declaration of aAIS, the function shall output a replacement signal as defined in 17.2/G.709 and 17.9/G709 within 2 frames. On clearing of aAIS the replacement pattern/signal shall be removed within 2 frames and normal data being output. The replacement signal clock shall be independent from the incoming clock. The replacement signal clock has to be within the range specified by Table 14-68 . Jitter and wander requirements as defined in Annex A/G.8251 (ODCp clock) apply.~~

On declaration of aAIS, the function shall output an all-ONEs pattern/signal within 2 frames. On clearing of aAIS, the all-ONEs pattern/signal shall be removed within 2 frames, with normal data being output. The AIS clock, frame start and multiframe start shall be independent from the incoming clock, frame start and multiframe start. The clock has to be within the ODUj frequency tolerance range as specified in Table 14-2 provisioned by the MI_Nominal_Bitrate_and_Tolerance from a free-running oscillator. Jitter and wander requirements, as defined in Annex A of [ITU-T G.8251] (ODCa clock), apply.

In Figure 14-69, ODUkP/ODUj-21_A_Sk processes, add the additional MI.

Replace Figure 14-69 with the following figure showing the additional Management interface:

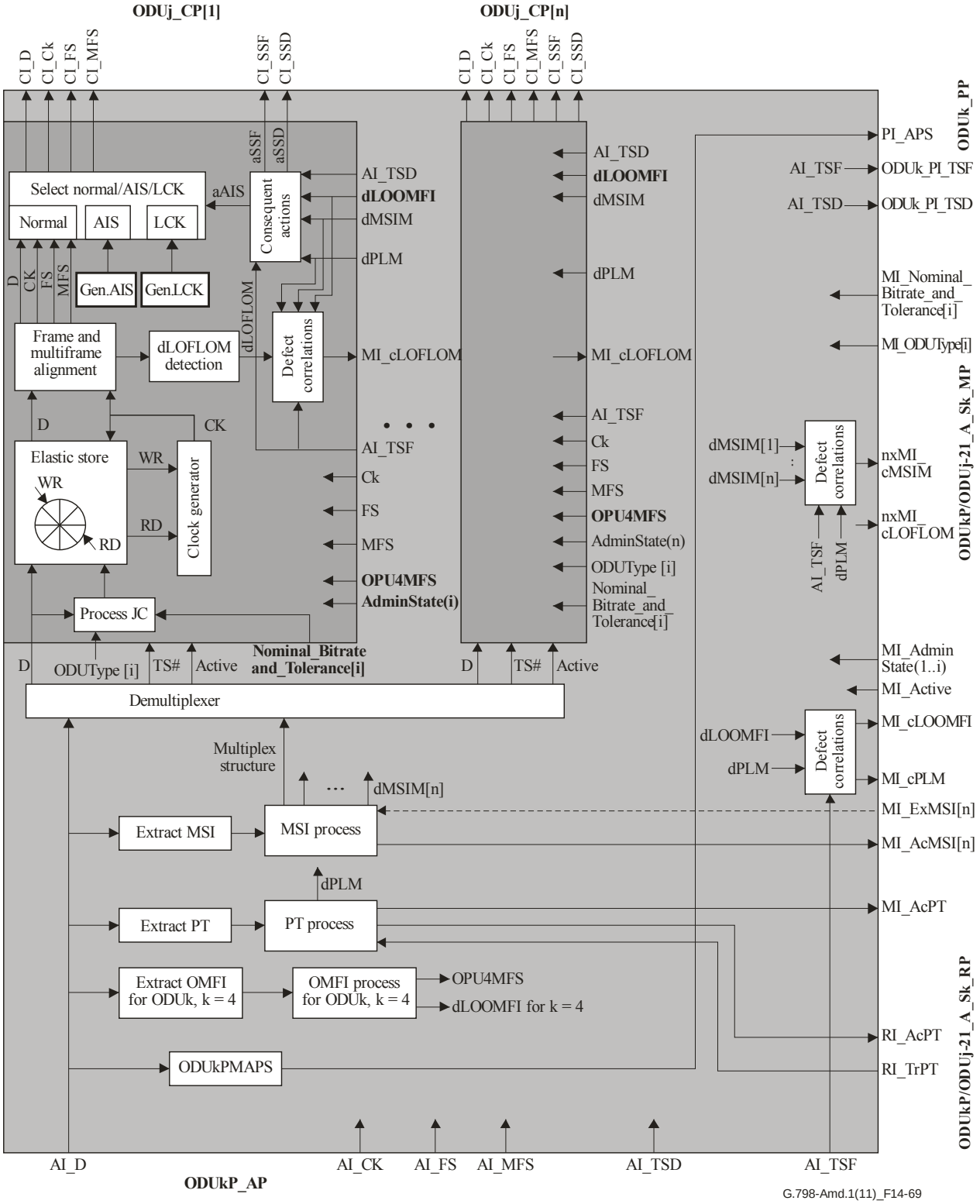

Figure 14-69 – ODUkP/ODUj-21_A_Sk processes

3.11) Clause 14.6.1.3

Delete the last phrase of Consequent actions that describes aAIS process, in clause 14.6.1.3 as shown below:

Consequent actions

See clause 10.1.1.2 of [ITU-T G.806], taking the following definitions of mMSU and mMSU_L:

mMSU[i] ← MI_ProvM[i] and (AI_TSF[i] or dPLM[i] or dLOM[i] or dLOA or dSQM[i])

mMSU_L[i] ← MI_ProvM[i] and (AI_TSF[i] or dPLM[i] or dMND[i] or AI_TSD[n] or dLOM[i])

~~On declaration of aAIS, the function shall output a generic AIS signal within two frames; on clearing of aAIS, the function shall output normal data within two frames. The bit rate of this generic AIS signal shall be consistent with the value of _XAR as calculated by the processes involved.~~

3.12) Modifications in clause 14.5.1.1.2, ODUkT trail termination sink function (ODUkT_TT_Sk)

Add the LTCAct_Enable input to Table 14-43:

Table 14-43 – ODUkT_TT_Sk inputs and outputs

Input(s)	Output(s)
ODUk_TCP: ODUk_CI_CK ODUk_CI_D ODUk_CI_FS ODUk_CI_MFS ODUk_CI_SSF **ODUkT_TT_Sk_MP**: ODUkT_TT_Sk_MI_ExSAPI ODUkT_TT_Sk_MI_ExDAPI ODUkT_TT_Sk_MI_GetAcTI ODUkT_TT_Sk_MI_TIMDetMo ODUkT_TT_Sk_MI_TIMActDis ODUkT_TT_Sk_MI_DEGThr ODUkT_TT_Sk_MI_DEGM ODUkT_TT_Sk_MI_1second ODUkT_TT_Sk_MI_DM_Source ODUkT_TT_Sk_MI_DMValue ODUkT_TT_Sk_MI_LTCAct_Enable **ODUkT_TT_Sk_TCMCP**: ODUkT_TT_Sk_TCMCI_Mode ODUkT_TT_Sk_TCMCI_Level	**ODUkT_AP**: ODUkT_AI_CK ODUkT_AI_D ODUkT_AI_FS ODUkT_AI_MFS ODUkT_AI_TSF ODUkT_AI_TSD ODUkT_AI_AIS **ODUkT_RP**: ODUkT_RI_BDI ODUkT_RI_BEI ODUkT_RI_BIAE ODUkT_RI_ DM **ODUkT_TT_Sk_MP**: ODUkT_TT_Sk_MI_AcTI ODUkT_TT_Sk_MI_cOCI ODUkT_TT_Sk_MI_cLCK ODUkT_TT_Sk_MI_cLTC ODUkT_TT_Sk_MI_cTIM ODUkT_TT_Sk_MI_cDEG ODUkT_TT_Sk_MI_cBDI ODUkT_TT_Sk_MI_cSSF ODUkT_TT_Sk_MI_pN_EBC ODUkT_TT_Sk_MI_pN_DS ODUkT_TT_Sk_MI_pF_EBC ODUkT_TT_Sk_MI_pF_DS ODUkT_TT_Sk_MI_pBIAE ODUkT_TT_Sk_MI_pIAE ODUkT_TT_Sk_MI_pN_delay

Add the LTCActT_Enable input to Figure 14-85, replacing it with the following:

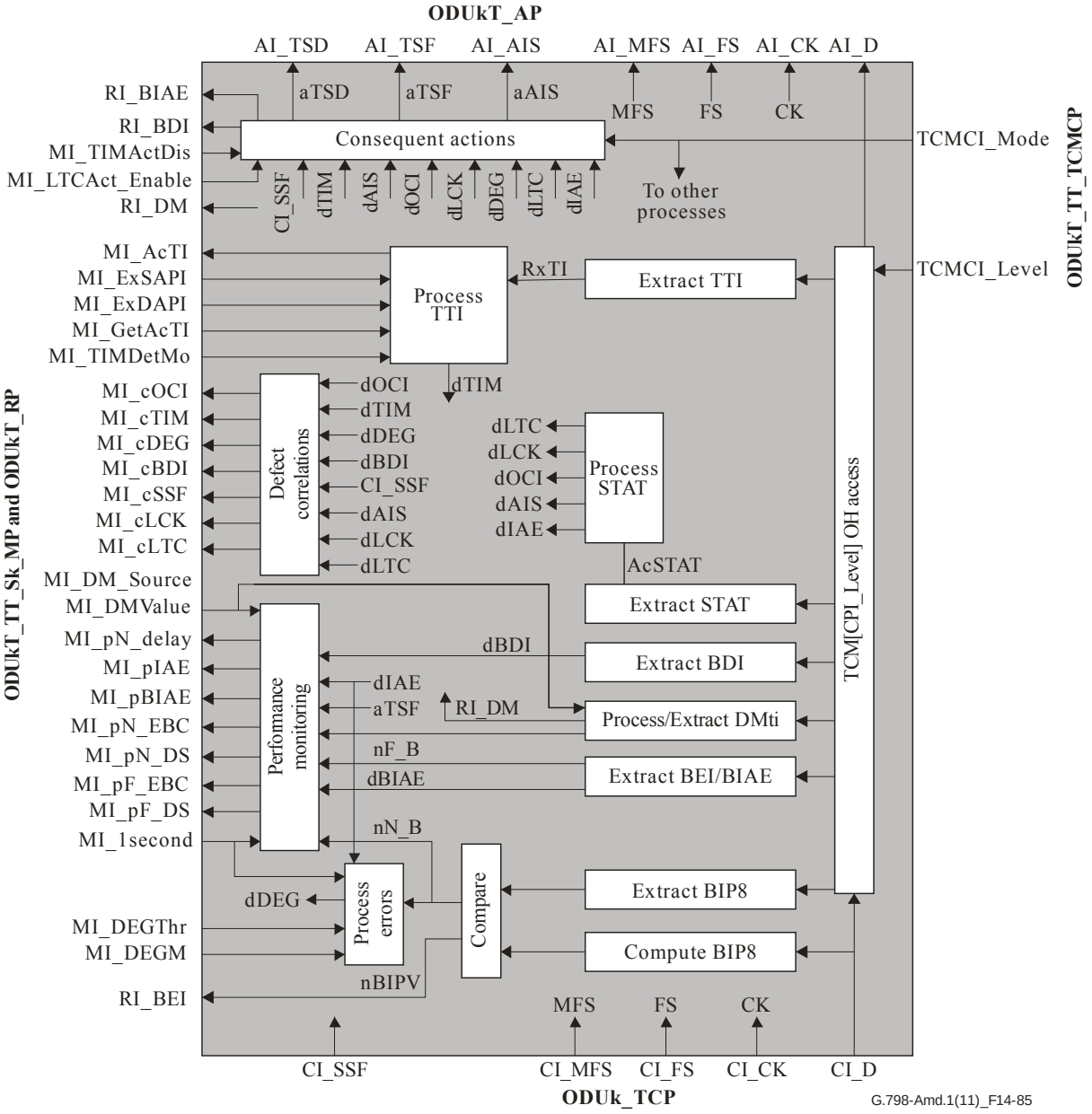

Figure 14-85 – ODUkT_TT_Sk processes

Modify Consequent action aTSF and aAIS as follows:

aTSF ← CI_SSF or ((dAIS or dLTC and LTCAct_Enable or dOCI or dLCK or (dTIM and (not TIMActDis))) and TCMCI_Mode == OPERATIONAL)

aAIS ← (dOCI or dLTC and LTCAct_Enable or dLCK or (dTIM and (not TIMActDis))) and TCMCI_Mode == OPERATIONAL

NOTE 1 – Equipment prior to this version of this Recommendation will not execute aAIS consequent action in the case of dLTC.

NOTE 2 – The default value for the MI_LTCAct_Enable is to be set to "false" to align the consequent action execution to existing network implementations.

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Printed in Switzerland
Geneva, 2012