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TELECOMMUNICATION
STANDARDIZATION SECTOR
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G.8275.1/Y.1369.1

Corrigendum 1
(01/2015)

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

Packet over Transport aspects – Synchronization, quality
and availability targets

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

Internet protocol aspects – Transport

Precision time protocol telecom profile for
phase/time synchronization with full timing support
from the network

Corrigendum 1

CAUTION !

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Corrigendum 1 to Recommendation ITU-T G.8275.1/Y.1369.1 (2014)

Precision time protocol telecom profile for phase/time synchronization with full timing support from the network: Corrigendum 1

Summary

Corrigendum 1 to Recommendation ITU-T G.8275.1/Y.1369.1 (2014) contains the following editorial and technical corrections:

- Clarification in the Alternate Best Master Clock Algorithm that the computation of E_{best} does not take into account the *Announce* messages received on a port r where the *notSlave* attribute is set to TRUE.
- Changes E_{rbest} to E_{best} in the first decision block in Figure 1.
- A decision block and an action block were removed from Figure 1.
- Terminology alignment in Figure 2.

Corrigendum 1 to Recommendation ITU-T G.8275.1/Y.1369.1 (2014)

Precision time protocol telecom profile for phase/time synchronization with full timing support from the network: Corrigendum 1

1) Changes in clause 6.3.1, Alternate BMCA

Make the following changes in clause 6.3.1:

The PTP profile specified in this Recommendation uses an Alternate BMCA, as described in subclause 9.3.1 of [IEEE 1588]. This Alternate BMCA differs from the default BMCA of [IEEE 1588] in the following:

- a) The Alternate BMCA considers the per-port Boolean attribute notSlave. If notSlave is TRUE, the port is never placed in the SLAVE state, and will always go to the MASTER state. If notSlave is FALSE, the port can be placed in the SLAVE state. The notSlave attribute is set via the configurable port dataset member portDS.notSlave.

The default value and range of values for this attribute, for the ports of a BC or OC that can only be a GM (i.e. T-GM), are TRUE and {TRUE}.

The default value and range of values for this attribute, for the port of a slave-only OC (i.e. T-TSC) are FALSE and {FALSE}.

The default value and range of values for this attribute, for the ports of a BC that may or may not be a GM (i.e. T-BC) are TRUE and {TRUE, FALSE}.

- b) The computation of $E_{r_{best}}$ is according to the description provided in subclause 9.3.2.3 of [IEEE 1588], with the exception that the $E_{r_{best}}$ of a port r must be set to the empty set when the notSlave attribute of this port r is set to TRUE, irrespective of any other consideration. This is so that the computation of E_{best} will not use the information contained in any *Announce* messages received on a port r where the notSlave attribute is set to TRUE.

- ~~b)c)~~ The Alternate BMCA allows for multiple clocks to be active grandmasters simultaneously (clocks with clockClass less than 128 cannot be a slave). If there are multiple active grandmasters, every clock that is not a grandmaster is synchronized by a single grandmaster in the PTP domain.

- ~~e)d)~~ The per-port attribute localPriority is assigned to each port r of a clock and is used in the determination of $E_{r_{best}}$ and E_{best} . Each parent clock or foreign master clock dataset, whose *Announce* information was received on the port r , is appended with the localPriority attribute of the local port r before the dataset comparison defined in Figure 2 and Figure 3 is invoked. The localPriority attribute is not transmitted in *Announce* messages. This attribute is used as a tie-breaker in the dataset comparison algorithm, in the event that all other previous attributes of the datasets being compared are equal. The localPriority attribute is set via the configurable, unsigned integer, port dataset member portDS.localPriority. The data type for this attribute is UInteger8. The range of values for this attribute is {1 - 255}. The default value for this attribute is 128. A clock compliant with this PTP profile is allowed to support a subset of the values defined in the range.

- ~~e)e)~~ The attribute localPriority is assigned to the local clock, to be used if needed when the data associated with the local clock, D_0 , is compared with data on another potential grandmaster received via an *Announce* message. The local clock localPriority attribute is set via the configurable, unsigned integer, default dataset member defaultDS.localPriority. The data type for this attribute is UInteger8. The range of values for this attribute is {1 - 255}. The

default value for this attribute is 128. A clock compliant with this PTP profile is allowed to support a subset of the values defined in the range.

- f) The dataset comparison algorithm is modified according to Figures 2 and 3 in clause 6.3.7 of this Recommendation.

NOTE 1 – Because the value of the notSlave attribute is, per definition, always TRUE on all PTP ports of a T-GM, the localPriority attribute is, in practice, not used for a T-GM.

NOTE 2 – For a T-GM, the Alternate BMCA output is in practice static and provides a recommended state = BMC_MASTER, because the notSlave attribute = TRUE for all the PTP ports of a T-GM. The resulting decision code can be M1 or M2, depending on the status of the T-GM (~~locked or in holdover~~i.e. clockClass value of the T-GM).

2) **Change in clause 6.3.6, State decision algorithm**

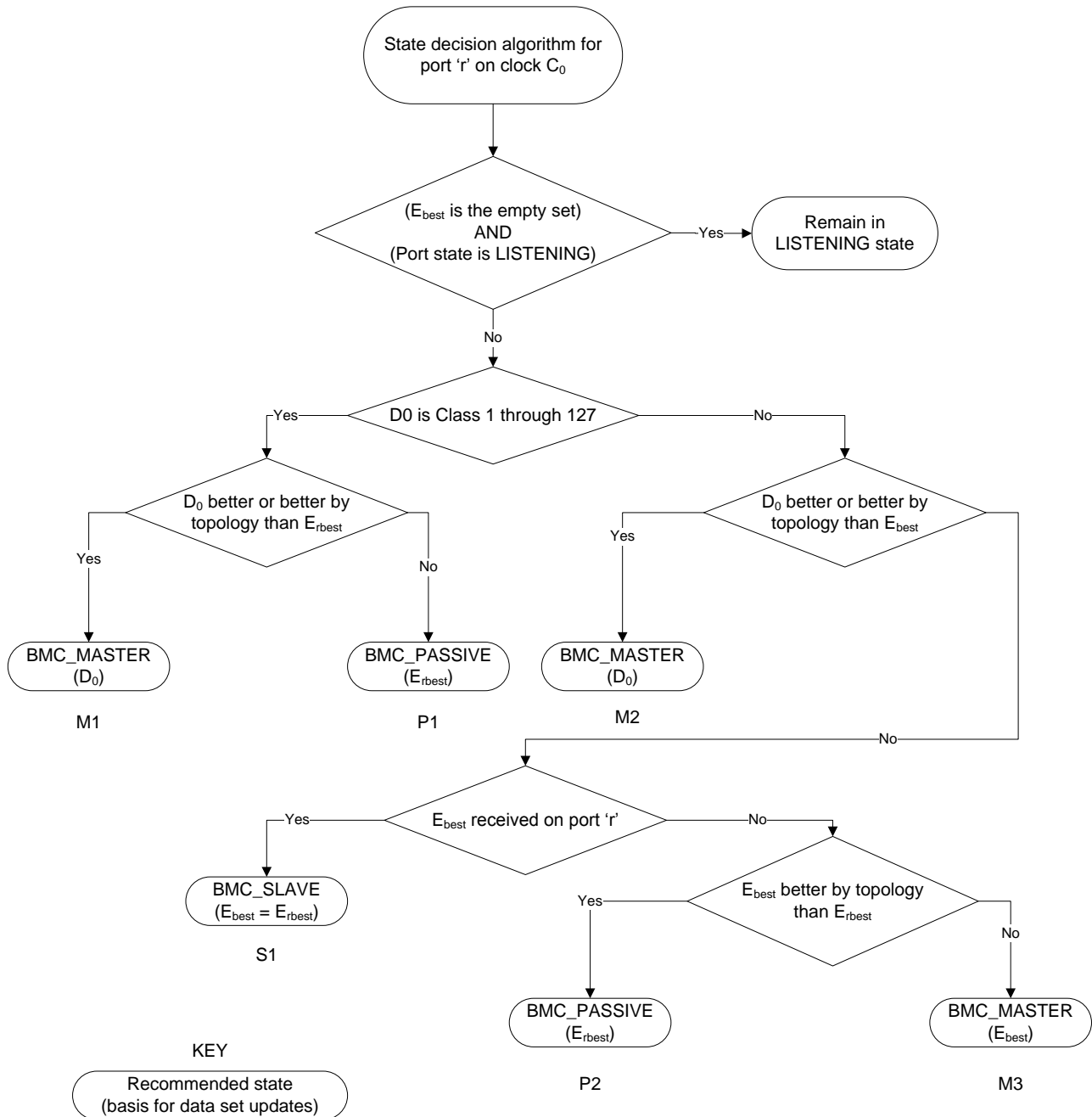
Make the following change in clause 6.3.6:

6.3.6 State decision algorithm

The state decision algorithm applicable to the Alternate BMCA of the PTP profile specified in this Recommendation is given in Figure 1, ~~clause 6.3.7~~. After a decision is reached by use of this algorithm, the data sets of the local clock are updated as specified in subclause 9.3.5 of [IEEE 1588]. Details on the use of the algorithm are given in subclause 9.3.3 of [IEEE 1588].

3) Changes in Figure 1

Replace Figure 1 with the following figure [Note: Compared to the prior Figure 1 in G.8275.1, (1) the decision block in the prior figure “notSlave for port ‘r’ is TRUE” and action block “Set E_{rbest} to the empty set” have been removed, and (2) “ E_{rbest} ” in the prior figure has been replaced with “ E_{best} ” in the decision block “(Erbest is the empty set) AND (Port state is LISTENING)” of the prior figure].



4) Changes in Figure 2

In Figure 2, replace “clockClass of A is 127 or less” with “GM clockClass of A is 127 or less”.
