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AMENDMENT 1
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Space data and information transfer systems — Tracking data message

AMENDMENT 1

Systèmes de transfert des informations et données spatiales — Message de données de suivi

AMENDEMENT 1

Reference number
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Recommended Standard CCSDS
503.0-B-1
AMENDMENT 1

Issue Date: September 2010

Tracking Data Message

AMENDMENT 1

The Management Council of the Consultative Committee for Space Data Systems (CCSDS) has authorized the publication of amendment 1 to CCSDS 503.0-B-1, issued November 2007.

Page 3-27

Subsection 3.5.2.6 RANGE,

– insert new sentence following "If ambiguous range is provided . . . the RANGE observable must be performed":

"For two-way and three-way data, the ICD should specify whether the observable is based upon the round trip light time, or half the round trip light time (due to the signal's having traveled to the spacecraft and back to the receiver)."

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Subsection 3.5.5.1 CLOCK_BIAS,

– replace third and fourth sentences ("For example, the CLOCK_BIAS keyword . . . consistent with the TDM convention for differenced data") with the following:

"For example, the CLOCK_BIAS keyword may be used to show the difference between UTC and a station clock by setting PARTICIPANT_1 to the name of the station clock and PARTICIPANT_2 to 'UTC'. The observable should be calculated as clock#2 minus clock#1 (i.e., UTC – ST, where ST is the station time), consistent with the TDM convention for differenced data."

Reference Number: CCSDS 503.0-B-1 Cor. 1

NOTE – Current versions of CCSDS documents are maintained at the CCSDS Web site: http://www.ccsds.org/

Correspondence regarding CCSDS documents should be addressed to

CCSDS Secretariat Space Communications and Navigation Office, 7L70 Space Operations Mission Directorate NASA Headquarters Washington, DC 20546-0001, USA

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Subsection 3.5.5.1 CLOCK_BIAS (continued),

– after the fifth sentence (“This parameter may . . . including Delta-DOR.”), insert the following:

  “If used for Delta-DOR, only a single CLOCK_BIAS should be provided per daily VLBI session, with a time-tag strictly before the first data point (e.g., one minute prior), and with the understanding that the clock will continue to drift throughout the session. An exception could be made for the (rare) case where a station clock is reset in the middle of a VLBI session, in which case a second CLOCK_BIAS measurement may be provided.”

Page B-3

Add new row at end of table:

33. Whether the RANGE observable for 2W and/or 3W range is based on the round trip light time, or half the round trip light time.	3.5.2.6

Page D-11

Figure D-11, at the bottom of the figure, replace

“CLOCK_BIAS = 2004-136T15:42:00.0000 -4.59e-7 CLOCK_BIAS = 2004-136T16:02:00.0000 -4.59e-7” with “CLOCK_BIAS = 2004-136T15:41:00.0000 -4.59e-7”

Page D-15

Figure D-15,

– replace

  “PARTICIPANT_1 = UTC-NIST PARTICIPANT_2 = DSS-10” with “PARTICIPANT_1 = DSS-10

  PARTICIPANT_2 = UTC-NIST”

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Figure D-15 (continued),

– replace

"PARTICIPANT_1 = UTC-NIST PARTICIPANT_2 = DSS-40" with "PARTICIPANT_1 = DSS-40 PARTICIPANT_2 = UTC-NIST"

– replace

"PARTICIPANT_1 = UTC-NIST PARTICIPANT_2 = DSS-60" with "PARTICIPANT_1 = DSS-60 PARTICIPANT_2 = UTC-NIST"

ICS 49.140

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