STANDARDS CHANGES CATALOG (SCC)

SCC NUMBER: SCC #163R1

CHANGE PROPOSAL TITLE: Updating the MIL-STD-Parameter Table.

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ORIGINATOR'S INTERNAL NUMBER: N/A

AFFECTED DOCUMENTS: This change is for MIL-STD-188-220C.

PRECEDENCE: Routine

RECOMMENDATIONS: None

RECORD OF PROCESSING

DATE:	ACTION:
29 Jan 04	Proposal
29 Jan 04	Work Item
30 Mar 04	Revision 1

1. STATEMENT OF THE PROBLEM:

   The present Parameter Table contains errors, does not include parameter values for SATCOM and some of the values were generated using equations now considered obsolete.

2. PROBLEM ANALYSIS:

   In the creation of the MIL-STD-188-220 Parameter Table, some values were not included because the testing was not yet completed (SATCOM), one column of values were entered as milliseconds but labeled seconds, some values were incorrectly transcribed in the copying from the generation worksheet to the Parameter Table and some values were not properly generated. In addition, recent modeling and simulation results from the AFATDS program have provided insight into some performance improvements obtained by modification to some of the existing equations that generate Parameter values. Need to add clarification to define scrambling as V.36, differentiate between Type 1 and Type 3, identify the CT algorithm, better identify R/T models covered, and add note about limitations of the table.

3. PROPOSED SOLUTION:

   Make the following changes. All change proposals are shown in enclosure 1 which is the updated MIL-STD-188-220 Parameter Table.

   a. Add new sheets to the MIL-STD-188-220 Parameter Table to include SATCOM values. (See enclosure 1, Tables VII, VIII and IX).
   b. Correct the values in Table I for NBDT with squelch detect changing from msec to seconds. (See enclosure 1, Table 1).
   c. Sheet 1 (Document Info) has an incorrect title. Change title from "MIL-STD-188-220 Parameters and Parameter Values" to "MIL-STD-188-220 Parameter Table". (See enclosure 1, Sheet 1).
   d. The equation for calculating DTEPROC and DTEACK in the HF sheets did not account for all delays. Update the values in these sheets. (See enclosure 1, Table V)
   e. Random locations have transcribing errors. Correct these values. (See enclosure 1).
   f. Update the values for QSO to account for removal of TURN in equations and to provide for a minimum value (1800 octets) such that lower bit rates are not limited to extremely small values for QSO. (See enclosure 1, Table 1)
   g. Delete RT-1439 from list of radios listed in Table I info. Values for RT-1439 are not available. (See enclosure 1, Table 1 info)
   h. Define the HF radios that have been evaluated and for which the values in the table apply. (See enclosure 1, Table IV info)
   i. Remove values for "N" rates with FEC on. Golay FEC should not be utilized when the embedded Reed Solomon FEC is being utilized. (See enclosure 1 Table I)
   j. Delete the hidden columns in Table IX. (See enclosure 1, Table IX).

k. Update values for Type 1 Busy State Timer to allow time for the station in RNR state to recover based on rotation time. (See enclosure 1, Table I).
l. Update values for T2 Ack Timer. Original minimum value of 10 was a TCIM limitation and the value has been changed to 1. The 5/8 rotation time was determined to be too tight and changed to a full rotation time. The result is rounded UP to an integer. (See enclosure 1, Tables II and III).
m. Update values for Type 2 K-Window to account for the larger size of messages with Golay FEC on.
n. Update the values for Type 2 K2 and Type 2 K3 windows based on changes to Type 2 K Window.
o. Update Type 2 Response Timer to limit maximum value to 99%.
p. Update Type 2 P-Bit Timer. This is based on Type 2 Ack Timer which was changed.
q. Modify Net Busy Timeout. Originally a fixed value. Now based on the MTT.
r. Update Type 4 Ack Timer. Make identical to Type 2 Ack Timer.
s. Update Type 4 K-Window. Increase the window for DAP-NAD.
t. Update MUP to be consistent with new Type 2 Ack Timer.
u. Update Intra Net factors to be consistent with the new Type 2 Ack Timer.
v. Add a statement to identify V.36 as the scrambling algorithm.
w. Define the Cipher Text algorithm.
x. Add statement about R/T tested and note that other radios may not work.
y. Add Type 3 retry description for SATCOM.
z. Update table to identify Type 3 and Type 1 differences. (i.e. Change Type 1 Retries to Type 3 Retries. Type 1 has no retries).

4. ALTERNATIVE SOLUTIONS: None.

5. SYSTEM CHANGES REQUIRED:

6. CONFIGURATION ITEM DOCUMENTATION CHANGES: MIL-STD-188-220C

7. IMPACT ON INTEROPERABILITY: None.

8. IMPACT ON RELATED DOCUMENTS: None.

9. IMPLEMENTATION DATES. Upon approval of this SCC.

10. OTHER CONSIDERATIONS: None.

11. REFERENCES: None.

12. TROUBLE REPORTS (TRs) ADDRESSED IN THIS SCC: None.