FIELD CHANGE ORDER

NUMBER: DEBET-F003

APPLICABILITY: Rework "as needed" DEBET LAN BRIDGE 150 models, DEBET-AC, DEBET-AD, DEBET-RP, DEBET-RQ, DEBET-AU, DEBET-AG, DEBET-RU, DEBET-RG DEBET-AK and DEBET-RK at and below Revision Level "D01" for Customers experiencing problems as noted in the Problem/Symptom Section of this FCO document. This FCO implements ECO numbers 5417521-TWO015 and DEBET-TWO021.

PROBLEM & SYMPTOM: This FCO corrects the following problems: 1) HELLO messages with a SNAP header were treated as a regular HELLO message and processed incorrectly. (Problem/Symptom Section continued on Page 2 of 7).

SOLUTION: Replacement of ROM’s located at locations E131 and E132 with those supplied in this FCO EQ Kit, number EQ-01646-01.

QUICK CHECK: The unit tag located at the rear of the DEBET-AC, DEBET-AD, DEBET-RP, DEBET-RQ, DEBET-AU, DEBET-AG, DEBET-RU, DEBET-RG, DEBET-AK and DEBET-RK will indicate a REvision level at or above "E1". (Quick Check continued on Page 5 of 7)

PRE/CO-REQUISITE FCO: N/A

MTTI HRS
1.0 hour

TOOL/TEST EQUIPMENT: N/A

FCO PARTS INFORMATION

<table>
<thead>
<tr>
<th>FCO KIT NO.</th>
<th>DESCRIPTION OF CONTENTS</th>
<th>EQ KIT VARIATION</th>
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<tbody>
<tr>
<td>EQ-01646-01</td>
<td>23-654E6-00 (E132) Microcode ROM</td>
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</tr>
<tr>
<td></td>
<td>23-655E6-00 (E131) Microcode ROM</td>
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FCO CHARGING INFORMATION

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<thead>
<tr>
<th>WARRANTY/CONTRACT</th>
<th>NONWARRANTY/NONCONTRACT</th>
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<td>ON-SITE</td>
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<td>TRAVEL/</td>
<td>EQ</td>
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<td>INSTALL</td>
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</tr>
<tr>
<td>DEC</td>
<td>DEC</td>
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</table>

APPROVALS
Problem/Symptoms (Continued from Page 1)

2) The LB150 was responding incorrectly to the all-bridge-multicast address (the response packets would have the wrong source address).

3) Address filtering on addresses of the form FF-FF-FF-FF-xx-xx (where the first 4 bytes are FF) are not handled correctly once the bridge is rebooted).

4) The "second operating" counter would drift 24 minutes and 48 seconds ahead every day the bridge is operating.

5) No-frame-interval is implemented in the LB150. If no packets are received for 5 minutes, on either port, then a loopback packet test is run on the LANCE for that port. If the test fails, the LB150 goes into self-test. If the test passes, the LANCE is initialized again and the bridge operation continues. Furthermore..

If COLLISION LIMIT EXCEEDED gets incremented 5 consecutive times in a row, run the Quick Test on the LANCE.

6) If the bridge is running in IEEE mode and it’s in backup mode (in parallel with another bridge), it would sometimes receive a packet on Port B and transmit it out on Port A.

7) The RBMS/ELMS command INIT WITH DEFAULTS will cause the power-up counter to be equal to -1 (65535) when the LB150 comes back up.

8) TCN messages go out every 9 minutes 50 seconds from backup bridge when in IEEE mode.

9) LB150 no longer forwards oversized packets (greater than 1518 bytes).
10) Invalid_message counter was being incremented incorrectly by firmware.


REWORK PROCEDURE

1. Obtain the Customers permission and perform all necessary procedures to remove the DEBET from the Network.

2. To insure that the DEBET maintains the Customers parameters, verify that switch #2 on the rear I/O panel in the off (UP) position. If switch #2 is not in the off (UP) position, set it to this now.

   ** Switch #2 in the off (UP) position prevents NVRAM from resetting to factory default setting when the bridge is powered up. This setting should be used to prevent the loss of parameters stored by RBMS, during a power failure.

3. Remove power from the DEBET by disconnecting the AC power cord from the outlet.

4. Remove the DEBET chassis assembly by removing four rubber feet and four screws at the bottom of the unit.

5. To gain access to the module and power assemblies, remove the 24 machined screws holding on the FCC enclosure.

   *NOTE* - On Value Engineered DEBETs* Steps 6, 7, 8 and 9 are not required. In Value Engineered DEBET*, the power supply is housed in the top cover of the unit.

6. Remove three wire harnesses at J1, J4 and P1 of the Power Supply module, and the flat ribbon cable that goes thru the rear access hole of the plenum, located at the front center of the unit. (See Figure 2)
7. Remove the Fan Assembly Harness (70-22908-01) from the cable retainers located on the inner rear enclosure wall. (See Figure 2)

8. Loosen two captive screws on the plenum that the Power Supply board is attached to, and two Phillips head screws also located on the plenum at the front of the unit. (See Figure 2)

9. Remove the Power Supply assembly from the FCC enclosure.

**************************************************************************
*                          *** CAUTION ***                               *
*    The ROMS in this FCO, as with other modules and ROMS, contain    *
*    electrostatic discharge sensitive devices (ESDS). The use of the    *
*    VELOSTAT kit is essential to prevent damage which may not be       *
*    noticed immediately.                                              *
**************************************************************************

10. Locate and remove the microcode ROM at location E132 using an IC remover or small screw driver, and replace with microcode ROM 654E6. (See Figure 1)

11. Locate and remove the microcode ROM at location E131 using an IC remover or small screwdriver, and replace with microcode ROM 655E6. (See Figure 1)

12a. After ROM replacement place the Brady Marker stickers "E" and "1" over the existing Revision level on the rear panel of the DEBET FCC (plenum) enclosure.

12b. After ROM replacement place the Brady Marker stickers "E" and "1" over the existing Revision level on the rear panel of the DEBET plastic enclosure.

13. Reverse sequence steps 1 thru 8 to restore the DEBET back to operation.

14. Testing of the DEBET is accomplished in the following two manners:

a) By a diagnostic self-test whenever power is applied to the unit. To verify successful completion of the diagnostic upon power-up examine the self-test LED on the rear of the unit. If the diagnostic
is successful the "T" (self-test ok) and the DC OK LED’s will be ON.

NOTE** (Please allow up to 45 seconds for the self-test and communications tasks to complete, then compare the status of the LED’s.)

b) Check the logical link by sending a message from a node on one side of the bridge to a node on the other side. On a VAX/VMS system running DECnet, you can send a message of this type by issuing the SET HOST command.

15. Complete LARS data as shown on Page 6.

16. Update Site Management Guide to reflect installation of this FCO.

QUICK CHECK (Continued from page 1 of 7)

1) Invoke ELMS (Extended LAN Management Software) by typing ELMS at the DCL ($) prompt.

2) Issue the command, USE BRIDGE "BRIDGE NAME or PHYSICAL ADDRESS" at the ELMS prompt.

3) Issue the command SHOW "BRIDGE NAME or PHYSICAL ADDRESS" CHARACTERISTICS at the ELMS prompt.

4) Examine the software version field. The value should be V1.4 or higher.

* If the software version is at V1.3 or lower this FCO should be installed.

FIGURE 1
## LARS EXAMPLE

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<th>CATEGORY F</th>
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<td>Y</td>
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</table>

(a) Warranty Optimum, Warranty Standard and Warranty Basic (on-site) Agreements.
(b) Applies to INDEC AREA ONLY - Warranty Optimum, Warranty Standard and Warranty Basic (on-site) Agreements.
(c) RTD=Return to Digital or Off-site Agreements; If Field Engineer On-site, use Activity Code "F".

\ FC0_DOCS
\ DEBET
\ EQ-01646-01
\ JUL 1992
\^ DEBET