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Constant Delay Using the FME Bits and the CON Register in the *Ambassador*™ T8100A, T8102, and T8105 TSIs

Introduction

This application note explains information which is supplied in Appendix B of the *Ambassador*™ *T8100A, T8102, and T8105 H.100/H.110 Interfaces and Time-Slot Interchangers* Data Sheet (DS98-387NTNB). The information described here will clarify the uses of the FME bits and bits 0 and 1 in the CON register.

This application note assumes familiarity with the data sheet (DS98-387NTNB) and the terms **forward** and **reverse** connections, as well as **constant** and **minimum** delay modes.

FME Bits and Associated Types of Connections

There are three types of connections which use the FME bit for switching:

1. Local-to-Local	The FME bit settings in the local connection memory are used.
2. Local To/From H-Bus	The FME bit settings in the H-Bus CAMs are used.
3. H-Bus to H-Bus	The FME bit settings in the H-Bus CAMs are used.

When using the individual FME bits, the value of the FME bit is the calculated value from the equations in Appendix B of the data sheet. This value depends on whether the transfer is a **forward** or **reverse** transfer and whether **constant** or **minimum** delay modes are required.

Use of CON Register Bits 0 and 1

The 2 bits in the CON register (address 0x0E) are used for either selecting use of the individual FME bits or globally overriding the FME bit settings in the local connection and the H-Bus CAMs.

- When CON bit 1 = 0:
  - — When bit 1 of the CON register (address 0x0E) is 0, the individual FME bit settings are used from either the local connection memory or the H-Bus CAMs. Which FME bit is used depends on the type of transfer, as explained in the prior section.
- When CON bit 1 = 1:
  - — When bit 1 of the CON register (address 0x0E) is 1, the FME setting used for a transfer is the current value of the CON bit 0. Both the local and H-Bus FME individual bits are not used. There are two cases:
    1. If bit 0 is a 0: Only **reverse** connections provide **constant** delay.
    2. If bit 0 is a 1: Only **forward** connections provide **constant** delay.

To obtain **constant** delay connections for both **forward** and **reverse** connections, each FME bit has to be set to the calculated value using the equations in Appendix B of the data sheet. Also, bit 1 of the CON register (address 0x0E) must be set to zero.

For additional information, contact your Microelectronics Group Account Manager or the following:

INTERNET: **http://www.lucent.com/micro**
E-MAIL: **docmaster@micro.lucent.com**
N. AMERICA: Microelectronics Group, Lucent Technologies Inc., 555 Union Boulevard, Room 30L-15P-BA, Allentown, PA 18103
1-800-372-2447, FAX 610-712-4106 (In CANADA: **1-800-553-2448**, FAX 610-712-4106)
ASIA PACIFIC: Microelectronics Group, Lucent Technologies Singapore Pte. Ltd., 77 Science Park Drive, #03-18 Cintech III, Singapore 118256
Tel. (65) 778 8833, FAX (65) 777 7495
CHINA: Microelectronics Group, Lucent Technologies (China) Co., Ltd., A-F2, 23/F, Zao Fong Universe Building, 1800 Zhong Shan Xi Road, Shanghai 200233 P. R. China **Tel. (86) 21 6440 0468**, **ext. 316**, FAX (86) 21 6440 0652
JAPAN: Microelectronics Group, Lucent Technologies Japan Ltd., 7-18, Higashi-Gotanda 2-chome, Shinagawa-ku, Tokyo 141, Japan
Tel. (81) 3 5421 1600, FAX (81) 3 5421 1700
EUROPE: Data Requests: MICROELECTRONICS GROUP DATALINE: **Tel. (44) 1189 324 299**, FAX (44) 1189 328 148
Technical Inquiries: GERMANY: **(49) 89 95086 0** (Munich), UNITED KINGDOM: **(44) 1344 865 900** (Ascot),
FRANCE: **(33) 1 40 83 68 00** (Paris), SWEDEN: **(46) 8 600 7070** (Stockholm), FINLAND: **(358) 9 4354 2800** (Helsinki),
ITALY: **(39) 02 6608131** (Milan), SPAIN: **(34) 1 807 1441** (Madrid)

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