

| APPLICATION | | REVISIONS | | |
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| REV STATUS OF SHEETS | | | | | | | | | | | | |
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| REV | | | | | | | | | | | | |
| SHEET | | | | | | | | | | | | |
| UPDATE DOCUMENT, DX10 3270 INTERACTIVE COMMUNICATIONS SOFTWARE (ICS), RELEASE 2.2.0-990 | | | | | | | | | | | | |
| TEXAS INSTRUMENTS INCORPORATED DATA SYSTEMS GROUP | | | | | | drawing number 2234368-9901 | | | | | | |
| | | | | | | REV. ** | | | SHEET 1 OF 9 | | | |

General Information

Release 2.2 of DX10 3270 ICS (Interactive Communications Software) includes support for both the Business System 300 (model 350 and above), the 940 EVT, and the 931 VDT. The keyboard mappings for the above terminals are summarized in Appendix A of the DX10 3270 ICS Users Guide, (part no. 2250954-9701*D). The Users guide was updated primarily to refer to generic key names rather than the key names for individual terminal.

This document is divided into two sections. Section 1 describes enhancements made to DX10 3270 ICS in upgrading to release 2.2. Section 2 describes source updates made to DX10 3270 ICS for the patches released with DX10 3270 ICS Release 2.1.

SECTION 1
ICS ENHANCEMENTS

1.1 PASCAL LINK CONTROL FILE FOR PSC

The PSC directory size has been changed to use aliases for auto resolution. It has increased in size from 15 to 27 making use of aliases for automatic symbol resolution. This means that if the PSC object library is included in the link control stream, the link editor will include only those modules required for the user written PSC program. The pre-linked PSC subroutine module IC\$OPN is now an alias. A specific include on this module only, without using the PSC object library, will NOT resolve references to the other runtime routines. The link control streams are discussed in the DX10 ICS Release Information, (part no. 2250945-9901*E).

1.2 IDENT FEATURE

The ICS Terminal Emulator has also been changed to left justify entries when the Identification (IDENT) feature is invoked. Blank or null entries will be converted to DUMMY. The DX10 3270 ICS Users Guide discusses the IDENT feature.

1.3 LICC AND LICS CHANGES

The LICC and LICS procs directed their outputs to files in the S\$PROC directory which created problems for users if this directory was full. Both of these procs now use the terminal local file for their outputs and it will be necessary to enter the COMMAND sequence before entering any other SCI command. The QICT and MICC procs call LICC and will also be affected.

1.4 MAXIMUM NUMBER OF ICS COMMUNICATION LINES RESTRICTION

The total number of ICS communications lines cannot exceed nine.

SECTION 2
SOURCE UPDATES

2.1 IMPLEMENT AUDIBLE ALARM RETURNED IN WCC BYTE

The alarm bit returned by host applications in WCC byte was previously ignored. This problem has been corrected.

2.2 ZERO STRING LENGTH

Zero length entries in fields were incorrectly processed. This problem has been corrected.

2.3 ENDACTION UPDATE

Message 'TERMINATED BY ANOTHER USER' is displayed by making the error code parameter a positive value when QICT is entered at another station.

2.4 GENXPA

'GENXPA' and 'GENCOM' modules now correctly process three digit overlay id in the 'COMMCOM' module.

2.5 PTORDER

The screen is now cleared properly when 'PT' order is received for unformatted screen.

2.6 ICSSTA

ITC queue is now cleared before writing parameters.

2.7 ICSPSC-PROVIDE RECOVERY FOR COMM LINE DISCONNECT

The following modules were affected:

CHKSAV

Will now not ABEND when transmitting status message and detecting a disconnect. Instead error is returned to user.

CRTINIT

If the local format file is not empty, status is set in Open Comm SVC to device busy to avoid host sending data in queue after Open Comm.

INITTASK

Checks for Assign Comm Luno error and open Comm error; If error occurs, ABEND is not called, but an error is logged.

USRCLS

If not ending and Device End gets Disconnect error, the error is logged rather than calling ABEND.

USRFLG

If option 1 gets a disconnect error, the error is sent to the user.

RESPND

If it gets error #18, message is not logged and the error is sent to the user program.

USRFLG

Data flag is set to true when user fills the screen buffer.

2.8 CMNDR

For some formatted screens the lowest and highest modified buffer positions were not updated correctly so that the entire screen was rewritten instead of only part of the screen. This created a 'flicker' problem that has been corrected. The LMP and HMP buffer positions were also corrected for local format file processing.

When data characters follow a 'SF' order then the linked list is now updated when the previous image only contains two fields such

that any previous fields may be removed if data characters overwrite an attribute.

The UPDFLD module was fixed to handle the case where starting position is equal to stopping position and/or one of these position is on an attribute character.

The following problems to EUA order processing were fixed:

1. An EUA order was not processed if it was the last or only order in the data buffer.
2. If the start address equals the stop address and the current buffer address is in a protected field then some protected fields were cleared until the first unprotected field was found.
3. The ICSCRT task would hang in a loop when the stop address was greater than the last defined field on the screen.

2.9 PSTART

ITC queue to PSC emulator is now cleared before writing parameters. TYPE entered in XPSC is validated against TYPE in user program open call.

When a PSC application selects the auto-select control unit option with local format on the 'OPEN' call, ICS now finds the first active controller before validating whether local format has been installed.

When PSTART terminated abnormally it would not free the terminal address it had marked as PSC-ACTIVE. It now frees the terminal address upon abnormal termination.

PSTART was optimized to not activate time delay task to PSC emulator.

Extended time slice when accessing data in shared procedure is now performed.

2.10 ICSPSC

A successful completion code and overexhausted (-2) position VALUE are now returned for GET and FILL calls to fields which only contain an attribute.

A time delay is now performed between unsuccessful ITC gets from PSTART during initialization.

No MSG to user task is now given when line is disconnected during emulator task initialization.

2.11 ICSPRT

When only null characters, attribute characters, or non-print fields are encountered on a print line, spaces are not printed and a line feed is not performed.

Formatted and unformatted printouts for 'NL' and 'EM' ORDERS were not always handled correctly. Formatted means the print line length is specified in the WCC byte. A previous fix use to cause printing on the same line. This problem has been fixed.

Printer emulator did not process the correct local format file if the terminal ID was greater than 9. This problem has been corrected.

2.12 ICSCRT, ICSPSC, ICSPRT

ASCII representations for 'FIELD MARK' and remote 'DUP' characters are now correctly translated to the correct EBCDIC characters.

2.13 ICSCTL

On ICS systems that have lines running at high speeds (9600) and have installed the minimum ICS receive buffer size (3840 bytes) there were occasions when ICS could not process the buffers fast enough to accept additional data from the host. This problem made terminal response appear slow. The source fix improves the response time by examining for read completions more frequently.

2.14 ICSCRT

When host data is received and CRT I/O aborted the CRT cursor position was not saved. The cursor position is now saved in case the host does not update it on subsequent write operations. However, the cursor position is not saved when the CRT is in a locked state (cursor blinking in lower left hand corner).

When the skip key was depressed, the modified field was not transmitted to the host. This problem has been corrected.

2.15 QICT

Terminal addresses are released regardless of whether emulator task associated with active station is in the system or not. QICT will now release stations when ICS tasks terminate without marking their terminal address IDLE.

2.16 LCBSCI

When data was sent to the host, and an RVI was received, then the next select, followed by data from the host, could cause the system traps to be modified, causing a system crash >20, characterized by a value >0001 at location >0014. This fix prevents this problem by preserving REGISTER 8.

When receiving an EOT from the host, all pending transmissions are aborted and an error (RVI) is reported to the task.

2.17 BCCDBS

Some IBM host applications transmit data with more than two leading SYNS. If the BCAIM hardware does not properly strip off the SYNS, sporadic line failures could occur at baud rates above 4800. This fix modified the downloaded BCAIM character detect to disregard SYNS.

2.18 ICSOPN

The original value for CTRL ID is sent from the user to PSTART without any masking. Error #12 is not a fatal error so the user can do a recovery for a Comm line disconnect.

2.19 ICSCLS

When a user issues a close, the PSC runtime issues a Poll Task Status of the PSC emulator task to determine whether emulator is active and issues a data request to the emulator for the CLOSE if emulator is active.