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## New Release of COBOL-Plus v6.11

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### Changes to the ISAM utility

A new switch has been added to the ISAM utility to facilitate batch verification of indexed files. The new /Q switch, when used in conjunction with the /V switch, eliminates all output if no ISAM verification errors are detected. This simplifies location and identification of errors during verification of multiple files. In addition, a BELL character is inserted into the output for each file in which any verification error occurred.

### ISMULD Program

A utility program is now provided with COBOL-Plus to rebuild the index structure for indexed organization (ISAM) files. This program uses only information stored in the data portion of the file (i.e., files with extension CDn) and completely rebuilds the index portion of the file (i.e., files with extension CIn).

There are two primary uses for the ISMULD program: (1) to repair files whose index structures have been corrupted; and

(2) to make it possible to back up only the data portions of files and then recreate the index portions if the files are restored from backup. If one or more index files are missing when ISMULD is run, it creates the index files as required.

### Corrections

The ISAM utility did not convert ISAM files from pre-6.0 format into the correct format if the index had a deleted bucket chain. This delete chain only pertains to index buckets which were reclaimed and is not related to the delete chain pointer displayed by a home block dump. Files which have already been converted using the update (/U) switch MUST be rebuilt with the ISMULD utility to insure that no future key errors will occur.

**NOTE: For ISAM files previously updated successfully, and even successful verification is no guarantee that the file is correct. All files updated with prior versions of the ISAM utility MUST be rebuilt!**

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## MessageNet Released

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We are pleased to announce that our new electronic mail package, MessageNet, is ready for release for VAX/VMS. After extensive field testing, MessageNet was first introduced at DEXPO West in San Francisco and was very well received.

Briefly, MessageNet is a fully automated gateway to electronic mail services such as EasyLink, MCI Mail, Telex, Mailgram, Telegram, Cablegram, and paper mail services. MessageNet also provides direct transfer of messages and files over ordinary telephone lines between computers equipped with MessageNet.

Some of the new features we are adding are the following. The editor will have the capability to do *split screen* display. This can be used at any time but is primarily intended to be used when replying to a message. The reply you are

composing is displayed in the top window of the screen and the original message you are responding to is in the bottom window separated by a line of dots. You can move around in either window and can move text between the windows by using the cut/paste function. MessageNet also allows full screen editing when replying, if desired.

We are also adding a Calendar/Reminder feature that allows you to send a memo to yourself or any other MessageNet user at any time of the day or night, and can be scheduled for years in advance. This has been found to be very useful for callbacks, appointments, and personal reminders.

If you would like some more information, or a brochure on MessageNet, please call our sales department. They will gladly send you the latest product information and inform you about our MessageNet demo.

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## VTCOM-F-Wrong version of XL

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Over the last few months we have had several calls from people who were having problems with different aspects of VTCOM. Because of this we thought it would be appropriate to write an article on the subject.

There are several things about using VTCOM with TSX-Plus that are less than obvious. First, you should use the XM version of VTCOM (VTCOM.SAV), rather than the SJ version (VTCOM.REL). Next you should generate your TSX-Plus system with sufficient PLAS region space. This is the resource necessary for virtual arrays and virtual overlays. For each simultaneous use of VTCOM, you should have at least 25 blocks of PLAS swap file (SEGBLK=25.). We have found that 100 blocks seems to be sufficient. The system parameter IOABT=1 should be set in TSGEN, or the SET IO ABORT command issued before running VTCOM. Failure to do this may cause you to be unable to exit VTCOM, or cause it to hang after file transfers.

If you wish to use VTCOM, and you want to use the XL handler, you should make sure there is a DEVDEF for XL, and the file XL.TSX is on the system disk (SY:). If the handler does not load, it probably failed the installation tests. While under TSX-Plus, you should issue the SET XL CSR=nnnnn and SET XL VECTOR=nnn commands appropriate for your hardware, and then restart TSX-Plus. XL should now load. On the PRO computers, XC defaults to the communication port, and should load without difficulty. Keep in mind that neither XL nor XC can be used on a multiplexer port (DZ, DZV, DH, DHV, DHU, or QSL on the PRO).

As an alternative to using XL or XC with VTCOM, we recommend using a CL unit. In this case, one should not use a DEVDEF for XL or XC in TSGEN. In the *TSX-Plus Reference Manual* section 14.3.7, there is an example of how to use VTCOM with a CL unit.

Now we come to the point you have all been waiting for, the error message:

```
?VTCOM-F-Wrong version of XL (or XC).
```

This error message occurs when the internal table used by TSX-Plus to determine the correct XL version number does not return the proper number. If this happens, you need to determine the correct version number. This may be done by editing the XL.MAC handler source file, and searching for the string "\$\$VER". This string will be assigned the appropriate version number. You may also use SIPP to search the XL.SYS file for the value 012705. The XL version number is stored in the high byte of the word following the word which holds 012705. A third method of obtaining this number is by calling the XL handler with .SPFUN 204. The version number will be returned in the high byte of the status word.

TSX-Plus uses the CLVERS parameter within TSGEN to assign the appropriate version to CL. If CLVERS=0 then TSX-Plus automatically chooses a version that should allow VTCOM to function normally. If CLVERS is not 0, then TSX-Plus uses the assigned value as the CL version number. If the automatic selection of the CL version does not work in your case, then you need to change the value of CLVERS in TSGEN to the number which you found by looking at XL.

You may modify the value of CLVERS by using TSXMOD— if you have TSX-Plus v6.00 or later. See the *TSX-Plus Installation Guide* for full instructions on how to do this. This is not a permanent solution, because the next time you regenerate TSX-Plus, the value of CLVERS will revert to the old value specified in TSGEN. Note that this is the only way it may be changed for PRO/TSX-Plus.

The permanent method of modifying CLVERS is by changing its value in TSGEN. CLVERS is in the section not normally modified by the user. Set CLVERS to the value you found in the XL handler, then rebuild TSX-Plus.

For further information on this subject, as well as other subjects, consult the S&H Bulletin Board Service at 615/320-5462.

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## DECUS/DEXPO

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At the San Francisco DEXPO held in October, we demonstrated the newest version of TSX-Plus and announced the release of our first VAX product, MessageNet. It was a pleasure to meet all of the people who visited with us there. As always, we believe in the importance of the exchange of information and ideas and we are always looking and listening for ways to improve our products.

Our next participation will be at the Canadian DECUS in Montreal, February 1987. Steve Brenner will present a seminar on Monday, February 16th titled *TSX-Plus Technical Overview*. The spring DECUS will be held in our own corporate headquarters city of Nashville, Tennessee (alias Music City, USA). We look forward to seeing "Y'all" at our DEXPO booth here.

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## RTSORT News

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RTSORT version 2.0 introduced a problem when attempting to run using only the /MESSAGE switch (without a /GETCXT). It would digest any messages sent, but not perform any sorts nor send a return message. Programs which called RTSORT in message mode would thus wait for a return message until aborted. The following patch corrects the problem:

```
.R SIPP
*SY:RTSORT
Segment? 1
Base? 11342
Offset? 26624

Segment      Base      Offset      Old  New?
000001      011342      026624     103374 103006
000001      011342      026626     105037 ^Y
*^C
```

RTSORT version 2.0 and earlier had a problem when sorting files which contained a large number of records. Certain files (depending on the number of input records) would cause RTSORT to abort with a "Temp file link failure (internal

sort error)". Note that this error message can be received for other valid reasons such as hardware failure. When the error occurred in the case of the software failure, it was reproducible given the same input file. The following patch corrects the problem in RTSORT version 2.0:

```
.R SIPP
*SY:RTSORT
Segment? 3
Base? 11340
Offset? 1542

Segment      Base      Offset      Old  New?
000001      011340      001542     000310 620
000001      011340      001544     170610 ^Y
*^C
```

RTSORT version 2.1, currently in field test, incorporates these corrections. It also corrects two other problems: (1) once the /FILE switch was specified it remained in effect until RTSORT was restarted; and (2) records could be incorrectly sorted to sequential files when they contained blanks past the last key position.

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## DU—What, When and Where

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The multitude of devices supported by the DU device handler generates frequent inquiries about hardware and version compatibilities. We will try here to summarize our experience.

The RT-11 DU handler was first released by DEC with V5.0 for the RD51, RA80 and RC25 disks. Support for additional MSCP class devices came in the following versions: RD50 and RX50 in V5.1; RD52 in V5.2; RA81 and RD53 in V5.3; RD31 and RX33 in V5.4. Handler bad block replacement was included in V5.3.

TSX-Plus first included the DU handler in V4.0. TSX-Plus V5.1C used the RT-11 V5.1C DU handler and thus supported the RD50, RD51, RA80, RC25 and RX50 devices. In order to use the RQDX2 or RQDX3 controllers, it was necessary to copy the RT-11 V5.2 DUX.SYS to DU.TSX. TSX-Plus V6.0, V6.01 and V6.16 used the RT-11 V5.2 DU handler and thus added support for the RD52. Actual experience has shown that the handler shipped with V6.0, V6.01 and V6.16 works satisfactorily on RD50, RD51, RD52, RD53, RA80, RC25, RX50, and the 11/53 devices RX33 and RD31 even though they are not nominally supported by RT-11 V5.2. However, handler bad block replacement is not included.

Since no patches to DU were necessary to make it work with TSX-Plus, it was acceptable with older versions to simply configure the RT-11XM handler DUX.SYS as necessary and copy it to DU.TSX. **This may not be done with the RT-11 V5.3 or V5.4 DU handlers.** The new DU handlers use features that require changes to TSX-Plus that are not included prior to TSX-Plus V6.2. In addition, patches to the V5.3 and V5.4 DU handlers will be mandatory for use with TSX-Plus.

Handler bad block replacement is not an issue for the RD or RX series of disks. It is never done on RX50 or RX33 disks and is done by the controller for the RD series. Under RT-11, handler bad block replacement is only available from the XM monitor and then only starting with V5.3. The significance of this is that the larger disks like the RA80 and RA81 must be initialized with the /BAD switch, and not the /REPLACE switch. Thus, large disks may become fragmented as bad blocks appear, sometimes interfering with the placement of very large files. It does not mean that these devices are unusable until TSX-Plus V6.2 is released, but only that they cannot use handler bad block replacement.

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**TSX-Plus v6.2**

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TSX-Plus version 6.2 is almost ready for release. It will be compatible with RT-11 version 5.04, and will include support for the MU handler (TK50 tape drive) on the Q-Bus only. If you have a UNIBUS with a TK50 tape drive, and would like to field test the MU handler, please contact the Technical Support Department at 615/327-3670.

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**BBS**

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Due to some necessary maintenance and other activities on our VAX system, our Bulletin Board Service (BBS) has not been up and running with much consistency recently. That now all seems to be behind us. So we would like to take this opportunity to once again invite you to call in and see what we have. The BBS phone number is 615/320-5462.

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