

MIS NEWSLETTER

MANAGEMENT INFORMATION SYSTEMS

Volume 1. Number 3 August 1989

THIS MONTH

Welcome to the August issue of the MIS Newsletter.

This month we are introducing the back stage operation of MIS, Tech Support. At LDS, with our limited staffing, the Manager of Tech Support doubles as the System Programmer. Most of you have no contact with this operation and may not even be aware it exists. But it plays a very critical role in your day to day usage of our information systems. Without Tech Support you might have to wait 5 to 10 seconds for a response after you punch the <enter> key on your terminal or PC when requesting info from the mainframe. This is the operation that keeps the mainframe operating system and all it's components humming at optimum performance so you can quickly access the data that helps you do your job. And for those rare occasions when the monster has an ache or pain, Tech Support plays the role of EMT.

For our System of the Month, we highlight the Business Information System, more commonly known as BIS. This system permeates nearly every segment of daily activity at LDS and provides the foundation for measuring where the Division has been, where it is, and where it is going in terms of orders, backlog, and revenue. Many of you work with one or more phases of BIS, but few know the full breadth of the system. Hopefully this will help you better understand how it works and where your job fits in. Also, there are some tips for more efficient and effective use of BIS.

PC News this month brings you info to save you money on Lotus 1-2-3 upgrades, news about 286 and 386 upgrades for your PC's, and an announcement about new Interleaf desktop publishing software for PC's and Macs.

- Dale Dennis



MIS TECHNICAL SUPPORT

by Bob Heaton, Jr.

BACKGROUND

A little known, yet very important function in MIS, is Technical Support. The primary objective of Technical Support is to ensure the availability of the business computing facility for this division. Bob Heaton Jr. is the Manager of Technical Support as well as it's senior Systems Programmer.

RESPONSIBILITIES

Technical Support is responsible for the installation, maintenance and performance of all system software and hardware in MIS. It provides problem analysis and specialized programming for the MIS Programming group. Personal computing (PC) support was added in June of this year.

SYSTEM HARDWARE AND SOFTWARE

Loral Data Systems uses an IBM 4381 computer for all it's business application

systems. Approximately 300 terminals and personal computers are directly attached to the system. In addition, a link to DECNET permits access for another 200+ terminals in Engineering.

Technical Support runs the 4381 computer with IBM's state-of-the-art MVS/XA Operating System. The Operating System is the master software that controls all the functions of the computer. MVS/XA is extremely complex and requires a high level of technical expertise to maintain.

It contains several million lines of program code and requires about 900 Megabytes (million characters) of disk space. To put that into perspective, it is more than 1000 times the size of DOS on a PC.

THE CHALLENGE

Because the IBM 4381 is the smallest processor capable of running MVS/XA, maintaining optimal system performance is a big challenge. New application systems increase the load on the central processing unit (CPU). When the load on the CPU approaches 100%, all processing slows down including online response times. Technical Support constantly makes changes to accommodate system growth and at the same time maintain acceptable response times. Without this on-going effort, the system would come to a grinding halt!

THE RESULTS

Technical Support is doing a good job of maximizing the utilization of the IBM 4381 system. As of this writing, the average number of daily online transactions is 81,000 with an average response time of 0.78 seconds. Technical Support's tuning efforts have extended the life of the 4381 system by at least two years. This resulted in a cost avoidance for the division of \$150,000 per year.

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SYSTEM OF THE MONTH

BIS

by Peggy Long

"BIS", or Business Information System, is the overall name used when talking about the online systems that help control Order Entry, Shipping, Invoicing, and Accounts Receivable at Loral Data Systems. Also included in this group are the Product Directory and the Customer Name and Address File. These are integrated with Sales Commissions and Cost Monitoring. The following will give you a little history, the process flow of an order, and a few tips on using BIS.

HISTORY:

Prior to the implementation of BIS in November of 1982, orders, shipping documents, and invoices were all typed using the "Blue Line" method, reproduced on "Old-Blue" a fluid duplication machine, and distributed manually to as many as 15 different departments. Heaven help you if an order had changes to it! All copies had to be located and replaced with the updated versions. By this time the copies could be anywhere. Sometimes the order shipped before the change order reached the right people causing inaccurate shipments and billings.

The need for an automated order entry system was obvious as early as 1979, but the BIS system design remained "on the table" for more than 2 years. Because the product lines at that time did their orders so differently from each other, agreeing on the standardization to use one system was difficult. During the final phases of the design, our company acquired the Equipment Recorders product line. The large volume of Equipment Recorders orders, shipments, and invoices were more than we could handle manually and forced the issue of using the BIS system for these orders in a pilot phase.

There were some bugs and problems to work out, as there usually are with a new system, but the pilot group brought them to our attention and they were quickly resolved. The system successfully handled the new product line. In November of 1982 the other product lines began using BIS. Since that time there have been 54,500 orders, 73,000 shipments, and 80,000 invoices processed thru the BIS system.

PROCESS:

From the time an order is entered until it has been shipped, invoiced, and paid, many different departments enter, view, or print information about the order using BIS. The following will give you an idea as to who does what in the processing of a customer order:

The process starts when the Contract Administrator (CA) receives a purchase order from the customer. If the customer is one we have dealt with before they will have a customer record on file, otherwise one will be entered by the CA. Terms and conditions are set by the Credit/Collections Administrator.

The CA then enters an order into the Order Entry system. There are approximately 30 data fields entered on the order header such as customer number, contract date, product line, FOB, inspection, and acceptance points, government contract number, DMS priority rating, and whether or not a certificate of compliance (C of C), certificate of origin, or any special instructions are required, and more. Once the header has passed all edits, the line items can be entered by the CA. The line items contain order quantity, unit price, product, feature, part number, description and project number (if applicable, this causes a project to be entered into the Cost Monitoring System), and more.

Once all the line items have been entered the CA may open the order causing it to show up as a part of backlog until shipped or cancelled. From this point most changes to the order will create a revision history which can be viewed from the Order Entry Menu. Also, you can view the "order requirements" (what is left to ship on the order) from the Order Entry Menu.

The next step is to fill the order. The Planners in Production Control use BIS and the Material Control System to determine if the order can be filled from inventory or if work orders need to be launched to build the products. In larger systems the orders will sometimes start in Manufacturing and end up in Engineering where the finished products are integrated into the customer's system. There the software, manuals, and training are also obtained.

If an order is filled by Production Control (ie. standard or special products or spare parts), then production control will create a packing list using the BIS order. Otherwise a Notice of Completion (NOC) can be created by engineering. Please note that when creating a NOC you are also creating a packing list. In the system the packing list/NOC are marked to indicate what items (by serial number) are to ship.

When all items to be shipped are ready to go and all accompanying documentation has been prepared, such as the C of C, it is all taken to the shipping department for packaging, weighing, and loading onto the truck. Once the goods are on the truck the shipping instructions are entered into the shipping system indicating the number of packages, who packaged it, who the carrier is, the waybill number, etc.

When the shipping clerk enters the shipping instructions, the portion of the order that shipped is no longer a part of backlog, can be invoiced for payment, and is considered revenue. If you were to look at the order requirements screen these items would no longer appear. Invoicing is also done thru the BIS System.

Just to give you an idea of what automating this process did for us, when we acquired Aviation Recorders we put them directly on-line using BIS. Before A/R came we did approximately 350 invoices per month, now we do approximately 1200 invoices per month with the same number of people. The sales taxes are also calculated automatically which saves a lot of time.

The Collection Administrator receives customer status and "aged" reports automatically from the system. These reports tell us who owes what and when. These reports are extremely important in keeping our number of days from shipping to collecting (DSO) down. BIS also creates the data to FAX the collection letters to the customer when an invoice is past due. Once payment is received and applied to the account the process is complete.

However, something that BIS gave this company that it didn't previously have is the ability to view historical data. Today historical information is extracted daily on products, prices, ability to meet schedules, customer payment record, sales by salesman, sales to different countries, returns, on and on.

Here are a few tips that may help when using the BIS system:

1) On the Order Entry Menu you can display an order catalog listed by POA #, customer P/O #, customer #, or customer name. You can then make a selection to show the order summary screen with backlog and each item listed.

2) There is a special function in Order Entry called 'Order Mass Update' which

allows you to change the customer required date, manufacturing scheduled ship date, or engineering scheduled ship date for each line on an order by simply keying it in once and pressing enter.

3) The Revision History option shows what items changed on an order, when it changed and what it was before it changed.

4) The Order Requirements option shows what is left to ship on an order (backlog).

5) When displaying a line item you can press <PF8> and if any shipments exist you will see the shipment display screen.

6) After changing a line in Order Entry you can press <ENTER> a second time to take you to the next line on that same order. This saves you from going back to the menu and coming back in to the next line.

7) There are order notes, shipping notes, and invoice notes that can be entered from the header screen. Also extended line notes from the detail screen.

8) A listing of daily shipments, shipments by shipment #, and shipments by order #, can be displayed from the Shipping System Menu.

9) BIS files are defined to FQS so that special queries or reports can be obtained. Also there are several pre-defined reports in the Batch Reporting System (see option I on the Main Menu).

10) An order remains on file for viewing for 18 months after the order has shipped complete (unless there are outstanding receivables). After that the order is purged and an extract of the order is put onto another file (MKM620) and may be examined using FQS. ■

MIS TECHNICAL SUPPORT

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EXPANDED SUPPORT

As previously mentioned, PC support became a part of Technical Support this year. Dennis Hertzler is our PC Support Analyst. He has several years experience on a variety of personal computers. He is available for hardware installation, user assistance, problem analysis and user training. Judging by his call log, many of you know Dennis well!

THE FUTURE

With the explosion of personal computers in the business enterprise, Technical Support faces a new challenge: mainframe connectivity. End user computing is here today. Users need the ability to connect to the mainframe and freely exchange information. Technical Support is working to meet that challenge. ■

PC NEWS

by Dennis Hertzler

LOTUS 1-2-3 Upgrades: Lotus Development Corp. recently introduced a new upgrade to 1-2-3. Release 3 is now available.

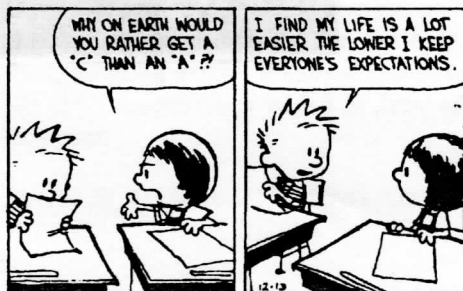
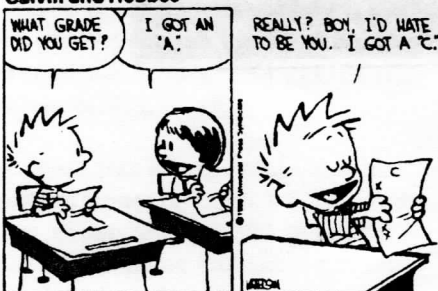
Release 3 requires more than a standard PC. You must have at least a 286 machine with 1 Megabyte of memory and a hard drive. If your machine does not meet these requirements, then you won't be able to use Rel. 3. Later, Lotus will be delivering Rel. 2.2 which will work on most PCs, but will not have all the features of Rel. 3.

New features in Release 3:

- > "3D" spreadsheets.
- > The ability to link files.
- > Multiple files open at the same time.
- > New and better graphing functions.
- > New database features.

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Calvin and Hobbes



LOTUS

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These are just a few of the new features. PC Support is planning a demonstration of Rel. 3 in the near future. We will notify you of the date and time.

For those that want to upgrade now, we have a source that charges \$119.95 for the upgrade instead of the \$150.00 that Lotus charges. Please call Dennis on ext. 5378 for more information.

INTERLEAF PUBLISHER: There is now a version of Interleaf for MS-DOS and Macintosh computers. PC Support is in the process of evaluating both of these programs for internal use. The system LDS currently uses to make our manuals, KEEPS, is based on Interleaf. We are looking at Interleaf for PCs, to hold our publishing costs in check.

Interleaf is an integrated word processor, graphics, and publishing program. The capabilities of it and the KEEPS system are almost identical. Interleaf can

also be a good replacement for a publishing program like Pagemaker. It is much faster than Pagemaker for entering text, and has extra capabilities.

Like 1-2-3 Release 3, it does require more than an average PC. You must have either a 386 machine with 2 MB of RAM (3 MB minimum unless you like waiting), or a Mac II with 5 MB RAM. Both the PC and Mac versions require about 25 MB of hard disk space. A large, two page screen is also recommended but not a must. Interleaf Publisher sells for \$995. If you have an interest in Interleaf we have it installed on the Model 80 in MIS for evaluation purposes.

ACCELERATOR BOARDS: Thinking of getting a new PC because your current one is slowing you up? If you have an "outdated" IBM XT or compatible, there is an alternative to replacing it with an expensive new machine. Accelerator boards are now available that can increase the speed of your PC for under \$500.

PC support is currently evaluating a board from SOTA Technology, that uses Intel's 386sx microprocessor running at 16MHz. This board claims speed increases of up to 19 times faster than an IBM PC and 2.5 times faster than an IBM AT! With an optional memory upgrade, you will also be able to run 386 specific software like OS/2 and Windows/386. The board works on any machine based on an 8088 or 8086 Intel microprocessor. We can get this board from PC Connection for only \$419. SOTA also makes a board with an Intel 80286 processor on it. This board sells for \$299. So before you buy a new system, consider upgrading your current one.

For those of you that already have 80286 machines, but still aren't happy with the speed, there is a new processor board that replaces your 286 processor with a 386sx processor. It's from Culmulus Corp. and plugs into the 286 socket. Because of this, it will work on any 286 machine and offers a 2 to 5 times performance increase. It has a suggested retail cost of \$595. Call PC Support for more info. ■

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Address Correction Requested

