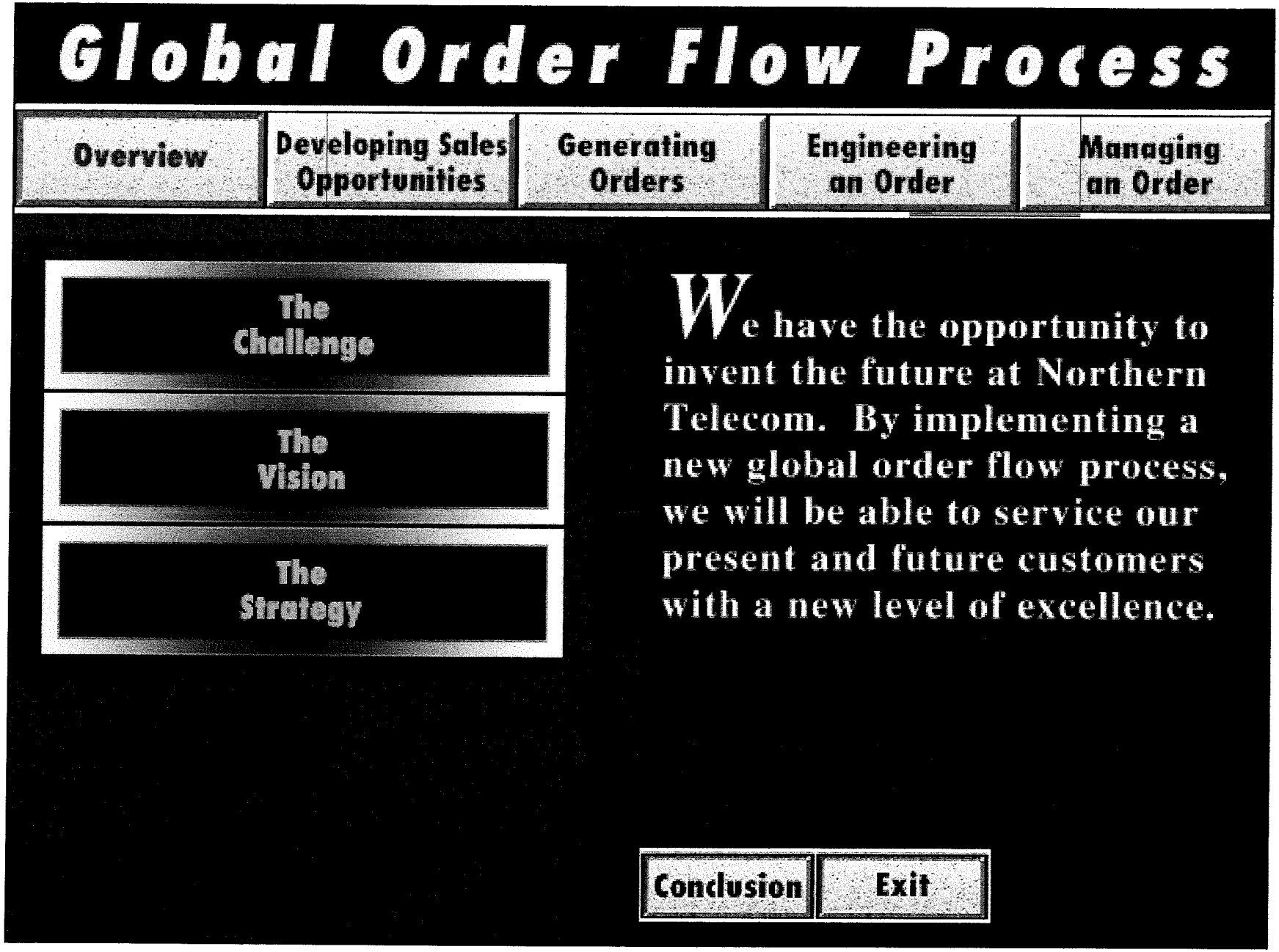
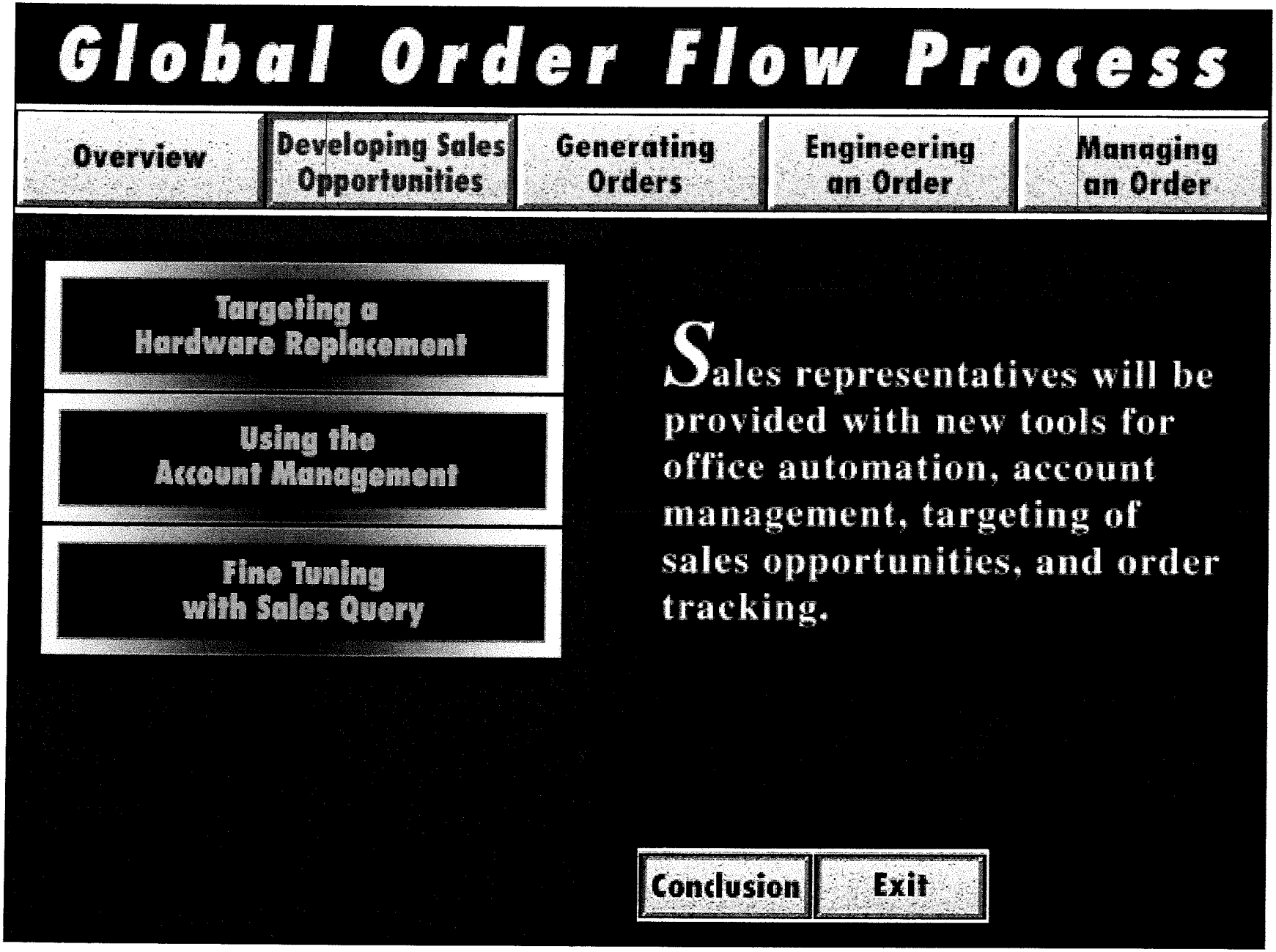

Global Order Flow Process
Overview
Developing Sales Opportunities
Generating Orders
Engineering an Order
Managing an Order
The Challenge
The Vision
The Strategy
We have the opportunity to invent the future at Northern Telecom. By implementing a new global order flow process, we will be able to service our present and future customers with a new level of excellence.
Conclusion
Exit


Global Order Flow Process
Overview
Developing Sales Opportunities
Generating Orders
Engineering an Order
Managing an Order
Targeting a Hardware Replacement
Using the Account Management
Fine Tuning with Sales Query
Sales representatives will be provided with new tools for office automation, account management, targeting of sales opportunities, and order tracking.
Conclusion
Exit

The Vision

The Challenge

Inventing the future. This is the opportunity we now have at Northern Telecom. Inventing a future that will enable us to service our present and future customers in a new and exciting way.
To realize the potential that lies before us, an organization-wide culture shift is necessary. Every employee must be empowered to perform at a new level of excellence bringing increased competitiveness in new and existing markets and superior service to our valued customers.
To succeed we must replace the outmoded order processes that inhibit our ability to compete effectively in the global marketplace. Our product offerings at the piece part level, together with highly complex pricing structures and a compartmentalized work flow result in constant churn, poor accountability, duplication of effort, long intervals, and high overhead costs for both Northern Telecom and our customers.
In addition, valuable end-user market research and competitive installed base data is currently only available to a select few. The Sales force does not have easy access to critical information like:

- The installed base of NT hardware and software
- What has been quoted and to whom?
- The content and status of orders

Furthermore, incompatible and disconnected systems and databases result in redundant and inconsistent data for our products, customers, and orders.

The Vision

Our goal is to increase customer satisfaction and reduce operating costs for both NT and our customers. By harnessing the power of modern information technology the reengineered Global Order Flow process will provide:

- Simplified product offerings through standardization
- Simplified pricing
- Standardized order flow processes
- Centralization of data into new, standard databases
- Portable computers containing powerful tools that link to global information
- Automated order provisioning and configuration
- Streamlined organizations
- End-to-end order management and accountability

We will partner with our customers to realize our vision. We must lead customers to and through simplification and exploit customer partnerships to springboard successes to other customers.This new global order flow process will provide NT and our customers with a strong competitive advantage. We want nothing less than to become #1 at "Easy to Do Business With!"

The Strategy

A great deal of effort is being applied to simplification of the product packaging and pricing strategies as well as organizational streamlining to facilitate implementation of the order flow vision. However, transforming legacy systems and databases to enable instant access to critical business information--anytime, anywhere-- also presents a significant challenge
This presentation is intended to provide an overview of the new systems and tools being developed

to optimize the reengineering process. The process is divided into four areas:

- Development of sales opportunities
  - Providing sales representatives with tools for office automation, account management, targeting sales opportunities, and order tracking
- Generating an order
  - Provisioning and pricing an order
  - Generation of a quote
- Engineering an order
  - Configuration, cabling and connecting an order with automated solutions provided by Accugraph.
- Order management
  - Order manager to serve as the central point of contact for the customer throughout it's life cycle with pro-active notification of order events, "exceptions", and automatic application of contract terms.

Developing Sales Opportunities

Targeting a hardware replacement

To generate solid business cases, access to market information is critical to finding timely and viable opportunities. The IMPACT tool delivers valuable market research and competitive analysis into the hands of the sales force, simplifying the process of finding new customers and market potential.
To illustrate how this process may work in the field let's look at the following scenario.
An NT sales person is working with a BellSouth planning engineer to replace AT&T's 1AE switches in Florida. Specifically, the sales person wants to sell DMS-100/200 together with the ISDN feature, Remotes and Fiberworld products as required.

Specifying an area of interest

The first step is to log onto IMPACT to find 1AE's in the area of interest. Let's look for all 1AE switches in Miami, FL. From the switch Search Screen we'll enter Miami for the city and FL for the state. We then select 1AE from this list. The switch database contains information on over 25,000 switches. 12 records are found that fit our search criteria.
This data can be downloaded to Excel for future reference and presentation charting.

Determining business associated with switches

Next, we can find out what businesses are assigned to these switches, and their potential need for advanced digital or data services. The Business database is effectively the US yellow pages containing important information including: location, yearly revenue, and number of employees. This gives you an idea of the number of extensions or business sets that may be business opportunities for NT. Information can be easily cross-referenced between switches and businesses.
From the Business Search screen, let's look for the hospitals associated with the 1AE switches in Miami. By selecting "Jackson Memorial Hospital" from the list and clicking on "View Business and Switch", more details about the business and its associated switch are displayed. We will target this switch for a DMS100 replacement.

Identifying potential networks

Having targeted a switch for a DMS 100 replacement, surrounding switches can be surveyed for networking possibilities. From the switch search screen we'll use "Nearby Switches" to find other 1AE switches that could be replaced by DMS products. We can take a look at 1AE switches located within a 50 mile radius of this switch. There are quite a few switches, and it looks like there are several opportunities for a future NT network.

Displaying information graphically

Information can also be displayed graphically. Here, data is represented on a local map. Clicking on a specific point will pop up the name and location of a switch. In addition, distances between switches, county and city boundaries, LATAs, and even actual streets can be displayed.

Additional IMPACT functionality

Additional information can be obtained for over a million of the 9.3 million businesses in the business database. Installed base data includes: the number of PCs a particular company uses, types of LANs and WANs accessed and PBX & key systems installed.
With IMPACT, the location of NT and competitors' switches can be easily identified making the search for possible opportunities much more efficient. A salesperson can now approach this prospect by explaining the additional services offered if a Northern switch is installed.

Using the account management application to manage accounts

Once opportunities are found the new Account Management tool will allow the salesperson to manage customer opportunities or projects. This tool includes planning, sales forecasting, contact and time management.

Setting up a project

We've entered the opportunity we identified in IMPACT into the account management application and set up our potential south Florida Network as a project by entering the Project name, account and key contact data.
The product mix screen is the basis of opportunity tracking. It provides a forecasting function fed by pricing and discount information, proposed delivery date, and probability of closing.
Project teams and timelines can also be attached to projects.
In addition, a standard successful sales plan can be set up for a 1A replacement strategy. Milestones are charted on a calendar and reports can be run to show progress throughout the plans execution.

Accessing an account

We can use the account management package to set up a new account, filling in standard information. We can also list CURRENT or ALL accounts or search for accounts using various criteria.
Notes can be attached to projects and individual accounts. These may include Goals and Mission statements, business priorities and interests, and a record of past sales activities.
Let's check to see what activity we have had on this account with reference to the ISDN feature.

Accessing a contact

Contacts are entered in much the same way as accounts. Information provided includes name and address, account, title, phone numbers, and function.

Using the calendaring function

You can schedule events associated with an account or project using the calendaring feature. The calendar can be viewed by day, week or month.

Additional Account Management functionality

By using the account management application, information is centralized and standardized across all accounts. Standard reporting formats are provided. New customer information will be exchanged between the central database and individual databases on a regular basis.

Fine Tuning a Sales Opportunity with Sales Query

Now that we have identified a potential network based on the need for advanced digital services and entered this opportunity into Salesbase let's explore the possibility of an ISDN software buyout for existing DMS switches.
The Sales Query tool is designed to assist a salesperson in analyzing a customers' existing NT installed base including hardware and software. In addition, hardware and software on order and order schedules can be easily retrieved from.

Identifying an opportunity for a software buyout

For our example let's focus on the DMS 100 product line and query the ISDN software packages, in particular the ISDN basic access.
Let's determines the sites where this is not licensed.
We can see that there are 7 offices in the Miami area with no ISDN services.
We can also check to see where this package is on order or already licensed.

Checking hardware dependencies

Now that we have identified several offices with no ISDN let's determine if there is additional hardware required.We have access to Product information on line including product availability and pricing as well as hardware and software inter-dependencies.
We see the additional requirements for a hardware upgrade to support ISDN.

Performing other queries with Sales Query

Queries can also be performed on hardware, central offices and order information.
Hardware queries provide information on price, availability, rate of discount, and additional firmware, engineering, or installation requirements?
Central office queries provide a detailed list of hardware and software installed in a switch.
Order queries are organized by desired office, status and delivery date. Information provided includes location, product type, order schedules and purchase order data.

Generating Orders

QuickQuote is a tool that enables a sales person in the field to rapidly generate a firm quote for a customer. Quick quote bases it's pricing structure on modelled hardware and software. In this way, customers buy functionality instead of individual piece parts. Working with high level products in the quotation phase eliminates the need for order detail reconciliation later in the process.

Creating a network map

Let's follow through with our sales opportunity for replacement of the 1AEs in Miami. We begin by assigning a name to this project and specifying the customer.
Let's draw a picture of the network we are proposing in this area. To begin adding nodes on the network, click on ADD. A palette of products appears. Click on the elements required. We will add a DMS-100, an RSC with an OPM, and an AccessNode with an RFT.
Notice that as we add elements to the network, the system shows us the price for each element in the network as well as a running total of the entire order.

Customizing network requirements

These icons are used to adjust the default settings. The default DMS100 has 10,000 non-ISDN lines and 1,000 trunks. For our south Florida network let's boost the line size to 20,000 lines, designating 900 of these as ISDN lines, and adjust the trunking to 2,000.
Other elements in the network have parameters which may be edited in a similar manner. The RSC, for instance, allows adjustment of the capacity and line mix.
Clicking on "Software" allows you to select the software features to be installed on the switch. We'll select ISDN software for our network. This software is grouped into building blocks which provide specific functionality. Throughout this process, the price is automatically updated.
Installation, engineering and power system options may be selected as well.
This calendar icon allows you to specify the required Delivery Date and any special requirement. A schedule is automatically generated with default intervals between key milestones. The salesperson can view this schedule by clicking on the calendar.

Reporting and sending the order

Reports can be generated reflecting the make-up of each element in the network. These reports give a list of the high-level order items included in the price.
Status offers the opportunity to adjust or send the order.
Once the Quick Quote application has a firm order it is transferred across the network to the Accugraph system for more detailed configuration and provisioning.

Engineering an order

Accugraph has partnered with NT to build the next generation configuration and provisioning tool. This is based on Accugraph's knowledge of the industry and experience with traditional configuration tools.
Accugraph reduces the provisioning process to a matter of hours giving one engineer the necessary tools to track information from the initial question and answer set down to the final production of specs and equipment allocation. Extensions as well as initial orders can be handled.
The benefits of this system include:

- Development and customization of orders is very easy because the system is table driven
- External configuration rule base can be easily maintained.
- Central office database maintains the current central office configuration
- Access to the current information because installation drawings are updated automat-

ically

- The system is designed so that it may run on UNIX, PC's and may be configured to run on Macintosh powerbooks.

When a user first logs in they are presented with a map of the world divided into regions. Let's select NT CALA. We get a detail map of that region. We can also select the language we would like to work in. Notice, if I select the mexican flag that all of items appear in spanish. Let's go through this demonstration in english.

Question and Answer Sets

The detail engineering section contains configuration question and answer sets that are dynmically driven. Default answers to these questions are assigned, however they can be modified. When the responses are modified, successive questions are changed to align with the new requirements.
If I modify the answer to a question, in this case the initial or extension option, notice that the number of questions required changes illustrated by the change in the scroll bars size.
The equal sign contains optional answers for this questions.

Provisioning and Configuration

Now let's allocate the equipment to the building. The Accugraph system drives the detailed engineering and provisioning. This process produces the material equipment lists, detail specification and pricing quotations.
All the elements in the material equipment lists can be displayed.
When the configuration process begins the system determines how all of the items fit together. Individual components like line cards are placed into line drawers which are then assigned shelf space in racks.
The elements in the material equipment lists are configured and placed into the symbols that represent racks or pieces of equipment.

Equipment Placement

We define the order we're going to work on and the system requests the location of the new equipment. Let's zoom in to the area where we will place the RSC sonet.
This window displays information about the placement of the equipment. The user selects the first corner of where the equipment is required. An error box alerts the user that the placement of this frame violates an allowable clearance rule for a nearby piece of equipment. We will override this rule. The other frames are now placed on the drawing automatically. Conflicts are displayed when they occur until the installation is complete.
These symbols contain all of the content information from the order. We can view the contents of a selected frame by clicking it. We can also view the contents of a selected shelf. The system retrieves the card information that resides in the database and displays it for us.
Line drawer information is also displayed. Notice they have been divided into sub groups.

Allocation of Cable Connections

The next step is to allocate cable connections for the newly installed equipment. The auto connect command scans all existing equipment and determines the required connections.
Cable routes can be viewed to help in the analysis process. Route information including weight and size limitations, PEC codes, and as well as excluded cable types for certain kinds of runs is provid-

ed.
The auto connect command has determined all the cable part numbers and connections. Cable information can be viewed with the show cable command. Individual cables are displayed with the part number, origin, destination, and connectors.
Cable routes can be modified manually to allow for maximum customization.
Cable lengths are tracked for each route and can be viewed by clicking on the "Details" button.
When elements are moved on the drawing cable routes are automatically updated.

Bar Code technology

Barcoding provides a mechanism to maintain up-to-date records of the customer network. By barcoding equipment in the factory and transferring the results to the installed base database a number of benefits are provided:

- Equipment audits will be minimized
- More accurate quotations and shortened engineering intervals.
- Asset management is simplified and cost reductions are realized
- Warranty tracking is reduced
- Engineering of extensions is more accurate

Managing an order

Once an order has been passed from Quick Quote, the order management process can begin. Managing the order includes: managing any changes to the order content, schedule or contract terms; and generating transactional documents including order acknowledgments, change orders and invoices.
A designated order manager will have end to end responsibility for an order and serve as the central point of contact for the customer.

Opening an Order

Our quote package is listed along with a breakout of the individual elements. Elements may be selected from the initial quote to define the order. Then an order number is assigned.
The status of this order remains 'quoted' until the order manager authorizes it. Once the order is authorized the fulfillment process begins. This includes the engineering, manufacturing, and installation scheduling of this order.
Purchase order numbers are then assigned to each piece of the order. When every item on an order is covered by a PO, the order can be shipped.

Specific order investigation

From this "Order in Progress screen", a listing of all orders is displayed.
By selecting our Miami network, we can view a list of the events scheduled for this order. This shows high level events including the scheduled date and the actual completion date so that the order manager can see at a glance where the order is in its life cycle.
For more details on specific events, click on that event. For example, by clicking on "Spec Release" a detailed list of the specifications required for this order is displayed.
Selecting "shipment" brings up the shipping status, including items shipped, date and method of shipment, and the percentage complete on this order.

There are similar links to Installation and Software Load data.
The "Asset Management Document Release" can be viewed with the click of a button. This document has been automatically generated because of functional pricing and continuous reconciliation of the order.
Billing terms are captured in the system as rules and applied automatically to an order. The Billing Schedule screen shows when billing is due.
Pending invoices can also be examined.

The Action Screen

For day to day management the action screen creates a To Do list which gives the order manager pro-active notification of order events. Messages are triggered by the order schedule and certain monitored conditions.
By clicking on a specific action message the user is taken to the required application where modifications can be made. Once satisfactory conditions are met the action message disappears.
For example, by clicking on the Pending Billing message the order manager is taken to the "Invoice Approval and Release screen" to complete the invoicing process.

Closing an order

Closing an order is simply a matter of ensuring that all the contract terms have been met and that the customer is satisfied.
If the financial add up, and there are no outstanding claims against the order and all the order events have been completed, then the order can be closed and storage information can be recorded.

Conclusion

Northern Telecom is charting an aggressive course towards unprecedented customer responsiveness through superior products and customer service.
The reengineered global order flow process, together with NT's empowered work force will lead Northern Telecom to a bright and challenging future.