# Otis Elevator Company

*Application Profile*

Otis Elevator is a multibillion-dollar company involved in the building, sales, and service of elevators, escalators, and people movers. Otis has over 130 business entities in countries throughout the world.

As part of an effort to maintain a competitive edge in the volatile world of international business, Otis sought to reduce its operating costs. Specifically, the company looked for a solution to the problems caused by the deluge of financial information reported by its worldwide business entities. These problems included:

- Excessive paperwork for financial reporting.
- Tremendous staff overtime required at the last minute to close monthly books and prepare management reports.
- Waste of key staff members' time to run repetitive reports.

To solve these problems, Otis decided on a comprehensive, PC–based executive information system (EIS) solution.

## EIS DESIGN CONSIDERATIONS

Prior to beginning work on its new EIS, Otis developed a number of requirements for the system. The EIS would have to meet the following criteria:

- Be easy and intuitive to use.
- Require little ongoing maintenance.
- Increase the speed with which financial information reached decision-makers.
- Highlight long-term trends.
- Meet the data retrieval needs of executives and the data analysis needs of analysts.
- Leverage Otis's existing computer-systems investment, which was in financial reporting and consolidation applications and in standard PC workstations based on the Microsoft® Windows™ operating system.

## EIS SOLUTION HIGHLIGHTS

"CFO"—Otis Elevator's custom EIS application—is a solution built on the Microsoft Excel spreadsheet for Windows. Users of CFO are given access to thousands of online reports, which are updated automatically as information arrives via modem from Otis Elevator's worldwide operations. In addition to providing online users with access to continuously updated reports, CFO automatically creates a month-end hard-copy "chartbook." The chartbook contains 570 full-color trend-and-variance charts on all of Otis's major operations. At the close of the books each month, the EIS creates and prints this 80-page chartbook in two hours, *without any human intervention.*

**CFO Main Menu**
The CFO main menu features four icons that provide access to the different screens of the Otis EIS system (described later) as well as a vertical toolbar with buttons to access four common Windows-based applications. In addition, there is an Otis icon for exiting the CFO system. Information on each of these icons is available by clicking the Help button on the toolbar.

## World View

The World View screen displays a map of the world with colored circles above each region in which Otis operates. The circles serve as a stoplight chart to depict each region's condition in regard to whatever topic is listed at the bottom of the screen, such as total sales. Green circles indicate a figure 5 percent or more above plan; red indicates 5 percent or more below plan; and white indicates results somewhere between these two. To select a different topic, a user clicks the Focus icon next to the map and chooses from a list of topics. The circles change color to indicate the regions' conditions in regard to the new topic. Users wishing to drill down to more detail about the performance of a specific region simply click a colored circle to reach either summary figures or a detailed report. Even greater detail is available by double-clicking the item names listed in a detailed report.



CFO - Otis Elevator

MAIN MENU

FOCUS

Elevator Sales Margin

*This world map serves as both a stoplight chart and a menu. Circles appear in green, white, or red to indicate overall trends. By pointing the hand cursor on any circle, more detailed information becomes instantly available.*

## Charts

The Charts screen offers a choice of seven different charts that are dynamically updated whenever the underlying data changes. Each chart displays the current period and full-year results for the prior five years, plus projected figures for the remainder of the current year. Analysts can review the reports reflected in these charts by choosing Analyst from the CFO main menu.

## Analyst

The Analyst screen of CFO is a gateway to over 40,000 reports and 570 charts maintained in the EIS. Each month 9000 reports are automatically added to the system. Because of size limitations, the demonstration program you are viewing contains only 40 reports and 7 graphs, with fictional information. The Analyst screen displays a blank Microsoft Excel worksheet, with a custom menu option in the toolbar labeled CFO. Clicking the question mark button on the worksheet provides a full explanation of the features available on the CFO menu. The Otis staff has access to all the Microsoft Excel analysis features for each report and chart. To return to the CFO executive-level main menu, a user chooses the Executive View option from the CFO menu on the Microsoft Excel worksheet.

## Books

The Books screen provides access to the company's standard operating reports, including sales/profit, assets/cash flow, orders/margins/units, and others. Since these reports are organized by geographic focus, the Books screen displays geographic icons representing the four international regions of Otis operations plus a fifth icon for worldwide totals. Users click the icon for the region they are interested in and then choose from a menu of the seven operating reports. Like other CFO reports, these are color-coded to show negative numbers in red and feature drill-down analysis that the user gets by double-clicking individual report items.

# SUMMARY

Otis Elevator's CFO system has done more than improve the flow of information to analysts and executives. Its Microsoft Open EIS solution also results in significant bottom-line savings. In use since 1988, CFO handles a mammoth volume of information with very little maintenance cost. In fact, the companywide EIS is maintained by a single financial analyst who, while proficient in Microsoft Excel, is not a programmer. This person spends a total of approximately eight hours per *month* to maintain the entire system. Estimated savings due to the CFO reporting system are 34.8 employee hours per day, which translates into significant annual savings. In addition, Otis executives note that they are able to spot trends faster and focus on key elements more quickly, thus improving their ability to manage more effectively.

**Sample EIS Application Requirements:**

- Microsoft Windows graphical environment version 3.0 or later.
- A PC with a 386 processor and at least 4 megabytes of RAM.
- Microsoft Excel version 4.0 for Windows.
- A VGA monitor.

**To Start the Sample EIS Application:**

- Start Microsoft Excel 4.0.
- Open the EISDEMO.XLA file in the OTISCFO directory.

# FOR MORE INFORMATION

More information on the Microsoft Open EIS solution is available by calling Microsoft Inside Sales at (800) 227-4679. If you require TDD/TT (text telephone) services for the deaf and hard of hearing, call (206) 635-4948. Outside the United States, contact your local Microsoft subsidiary.

Otis Elevator's CFO system was developed by Gus Evans, G. Warfield Evans Associates, 612 South Greenwood Avenue, Clearwater, Florida, 34616; tel. (813) 461-5611.

# Microsoft OPEN EIS PAK

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# Wheeler Copiers
*Application Profile*

Wheeler Copiers is a multimillion-dollar company that manufactures, sells, and services photocopy machines for large and small businesses in the United States, Canada, Mexico, and Europe. Wheeler also sells copier supplies and accessories and maintains a worldwide customer-support operation.

Wheeler's diverse activities—from product development to toner sales to customer service—along with its worldwide market, pose a tremendous information challenge for the company's managers, planners, and analysts.

## EIS DESIGN CONSIDERATIONS

Wheeler needed an enterprise information system (EIS) that would make access to business information both simple and flexible. Because of the company's wide range of business activities and its broad geographic scope, management did not want an EIS that was limited to a few predefined screens and menu options. Instead, managers required an application that was extremely flexible in the way it presented information and did not demand substantial training for users.

Specific objectives included a design that would:

- Make access to business information as simple and flexible as possible.
- Present data in a rich and meaningful way.
- Enable users to personalize their on-screen views of the data by changing layouts and formats.
- Allow the personalized views of data to be compared and grouped.
- Provide a user interface that could be used with a variety of databases.
- Support database changes and expansion without code changes to the EIS.

## EIS SOLUTION HIGHLIGHTS

The management of Wheeler Copiers contracted with Microsoft Consulting Services (MCS) to create an open EIS solution. MCS developed an EIS solution called ControlPoint to meet the needs of Wheeler Copiers. ControlPoint was built using two off-the-shelf products for the Microsoft® Windows™ operating system: the Visual Basic™ programming system and Microsoft Excel version 4.0.
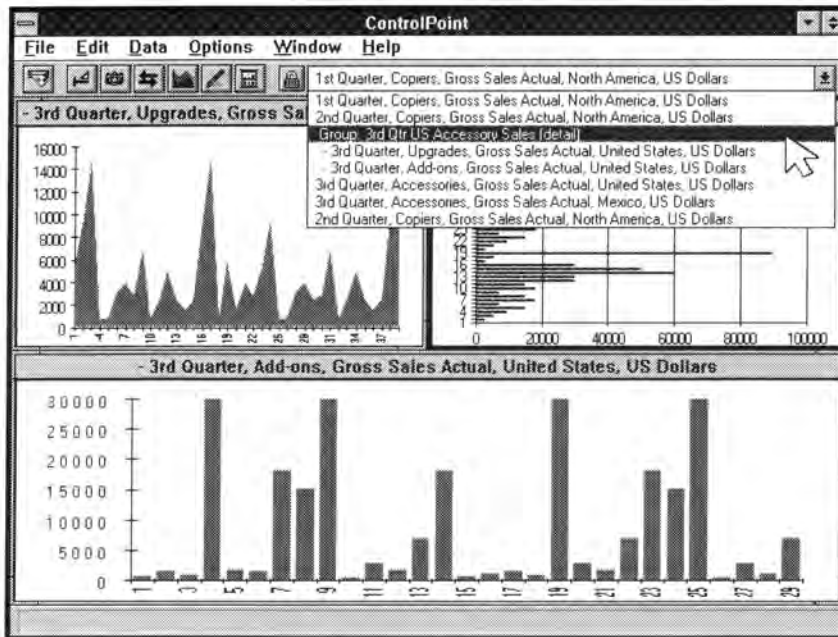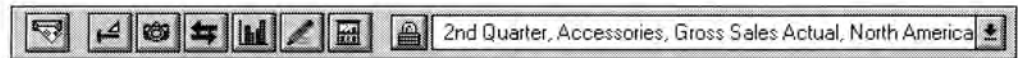
### Views

Key to the ControlPoint application is the concept of *views*. Views in ControlPoint are simply different presentations of information. A view includes certain information or raw data—for example, gross sales for the second quarter—as well as a format or "look" for that information, such as a green bar chart with legends.

The ControlPoint screen is organized around a series of tools that help users create and select the views of information they want to see. Views can be grouped together for easy retrieval by simply giving a name to the selected group. Any number of views (limited only by the screen quality) can be displayed on-screen at once. These side-by-side comparisons, with various perspectives of crucial data, are a powerful aid to managers. Because ControlPoint uses the same screen to display and manage different types of information such as sales, manufacturing, expenses, and so on, users don't have to learn different interfaces in order to work with different types of data.

The sections below introduce you to a few of the primary ControlPoint tools. Refer to the application's Help menu for detailed discussions of ControlPoint's design and features.

## The ControlPoint Menu

This toolbar appears on the ControlPoint main screen:





### View List

The View List feature displays a drop-down list of the most recently used views when the user clicks the down arrow on the toolbar. The name of the currently selected view is visible in the text box to the left of the arrow. ControlPoint maintains a separate view list for each user (according to the user's logon name). This makes it easy for Wheeler managers and analysts to quickly select those views that they use most often in their areas of responsibility.

### View Finder

The View Finder tool brings up a dialog box that lets users create or define new views of information by browsing through the company's databases and selecting the types of information they want to

*ControlPoint offers an easy-to-use interface that helps users create new views of data, customize chart formats, and arrange the screen to better analyze and compare information.*

study. The five buttons in the box at the far left of the View Finder screen identify the broad categories of information that are available for viewing. These include subject (the whole company or specific products), perspective (revenues, expenses, assets, and so on), market/channel (North America or Europe), and more. The other two boxes on this screen display the folders for the different databases available for each button category. Users can double-click one of the folders to drill down the hierarchy to other folders.

A user creates a view by clicking a button to select a category such as *subject* and then moving to the boxes to the right and selecting a database that contains the desired information. These steps are repeated for each category.

In this way users can quickly build the contents of a specific view such as *Year-to-date advertising expenses, in Deutsche marks, for copiers sold in Germany.* ControlPoint automatically consolidates all the information from the various sources to create and chart this single new view.

When the exact combination of desired information is identified, the user clicks the Add button to add this view to the main View List or clicks the Show Now button for a quick preview of the new view. For more information, see Creating New Views in ControlPoint Help.

### Change View Format

The Change View Format tool lets users change the presentation attributes, or look, of the active view. This tool brings up a dialog box that includes choices of colors, patterns, legends, tick marks, gridlines, and so on.

### Change Graph Style

The Change Graph Style tool lets users change the graph style for the active window. When the user clicks this icon and moves the cursor down slightly, a menu of graph styles (such as line, bar, and pie) appears from which to choose.

*Electronic Mail Links*

This demonstration version of ControlPoint does not support e-mail links. In the actual working application, users can click this icon to send the current view or group of views to other users via e-mail.

*Layout View Group*

The Layout View Group tool enables users to change the layout of views that are displayed in separate windows on the screen. Using the dialog box, the user can change the number of rows and columns available on-screen, and additional view windows are created. For this demonstration application of ControlPoint, a maximum of six views can be displayed on-screen at once. When the appropriate number of views are displayed, the user chooses the OK button. After the views have been redrawn, a view can be moved around by clicking it and dragging and dropping it into an empty view window.

*Save Group View*

The Save Group View tool allows the user to specify a group name for the views that are organized on the screen in a specific layout. This named group is stored on the View List, from which it can be easily recalled with a single mouse click on the name.

### Exploring ControlPoint with Help

ControlPoint includes an extensive online Help facility. A user simply chooses Help from the menu bar at the top of the screen for detailed instructions on every aspect of the EIS. Help provides a much more thorough explanation than is possible in this brief overview.

## SUMMARY

Key decision-makers and analysts at Wheeler Copiers were able to learn the basic ControlPoint interface with *less than five minutes* of instruction. The application's simplicity and flexibility allow each user to quickly tailor the EIS to present the information needed most. Analysts can easily browse through a tremendous volume of information and create important views for top executives to see with a single click on the View List.

As a Microsoft Open EIS solution, ControlPoint is both easy to use and cost effective, with its Windows graphical interface and its foundation in Microsoft Excel. A key benefit cited by Wheeler management is the application's ability to make significant changes to the back-end sources of data while maintaining the same ControlPoint interface. Tables can be added or removed, with the resulting change of information automatically placed in the ControlPoint menus and dialog boxes and no programming changes required to the application itself.

### Sample EIS Application Requirements:

- Microsoft Windows graphical environment version 3.0 or later.
- A PC with a 386 processor and at least 4 megabytes of RAM.
- Microsoft Excel version 4.0 for Windows.
- A VGA monitor.

### To Start the Sample EIS Application:

- Create a ControlPoint icon by using the Program Manager in Microsoft Windows. Use the Browse button to choose the CTRLPNT.EXE file from the ControlPoint directory.
- Double-click the ControlPoint icon from the Program Manager in Windows.
- When the DataBase Logon dialog box appears, click the OK button (it is not necessary to enter a database file name, user name, or password; these are visible for demonstration purposes only).

# FOR MORE INFORMATION

The solution created for Wheeler Copiers differs from the other EIS sample applications in that the ControlPoint application is available to be tailored and used by other companies. Refer to Notes to the EIS Developer in the ControlPoint Help menu for details.

More information on the Microsoft Open EIS Pak and other Microsoft applications is available by calling Microsoft Inside Sales at (800) 227-4679. If you require TDD/TT (text telephone) services for the deaf and hard of hearing, call (206) 635-4948. Outside the United States, contact your local Microsoft subsidiary.

For additional information on the ControlPoint/Wheeler Copiers EIS application, contact: Microsoft Consulting Services, Microsoft Corporation, One Microsoft Way, Redmond, WA 98052-6399. Or call MCS at: Central Region, (708) 495-5550; Northeast Region, (617) 487-6500; South Region, (214) 458-1739; West Region, (206) 635-1980.



## Microsoft OPEN EIS PAK
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# Hydromax Seaplane Company

*Application Profile*

Hydromax designs, markets, and manufactures aircraft for private and commercial use. Because the company's activities cover such a wide spectrum—from financing a drawing-board design to closing sales with its customers—Hydromax managers face an almost overwhelming variety and volume of information in their daily tasks. The need for timely, consolidated, and easy-to-understand information is especially critical in the following areas:

- Production reporting.
- Manufacturing planning.
- Management of critical subcontractors.
- Sales management.

## EIS DESIGN CONSIDERATIONS

Faced with strong competition from a foreign seaplane manufacturer, Hydromax must look for an advantage in every aspect of its business. To do this managers must constantly monitor a wide range of project-management and financial data. This information is stored in various applications on a variety of computer systems maintained by both Hydromax and the company's key subcontractors. In order to meet the decision-making and analysis needs of Hydromax management, an executive information system (EIS) must provide the following:

- An intuitive user interface in a single application environment.
- Seamless access to data files that are maintained by a variety of organizations.
- Dynamic automated links to financial and project-management information.
- Flexible screen design that can present specific management techniques and paradigms.

## EIS SOLUTION HIGHLIGHTS

To meet all of these design considerations, Hydromax created an EIS system based on two off-the-shelf Microsoft® applications for the Windows™ operating system: Microsoft Excel and Microsoft Project. The resulting Hydromax EIS application gives managers a choice in the navigation tools they use—graphical screen buttons or pull-down menus—to find the information they need.

The Hydromax EIS Directory is the first screen that appears when the application is opened. This screen features buttons—triggered by mouse clicks—that take the user to analyses of production, development, marketing, and financial data. Users may also click the title bar of any screen to return to the previous screen.

In addition to the screen buttons, users are offered a custom EIS menu that is displayed in place of the default Microsoft Excel menu. The EIS menu features a variety of navigation commands that select the different areas of analysis as well as a directory command, which returns a user to the initial Directory screen from any place in the EIS.

**Production Data**

When a user presses the Production button in the EIS directory screen, "line of balance" (LOB) charts are displayed showing the overall production status of the different components of the seaplanes. These screens present work-flow diagrams for each component, such as wings, floats, fuselage, and so on, and highlight shortages of critical parts. This production analysis is based on data

stored in a Microsoft Excel worksheet and is crucial to helping managers coordinate the completion of each part in its proper order and frequency. Only the Floats production screen is available for view in this demonstration.

**Development Data**

In addition to information on internal operations, managers at Hydromax require information on two key subcontractors involved in Hydromax aircraft development. The Development screen gives users the ability to view several kinds of crucial information.
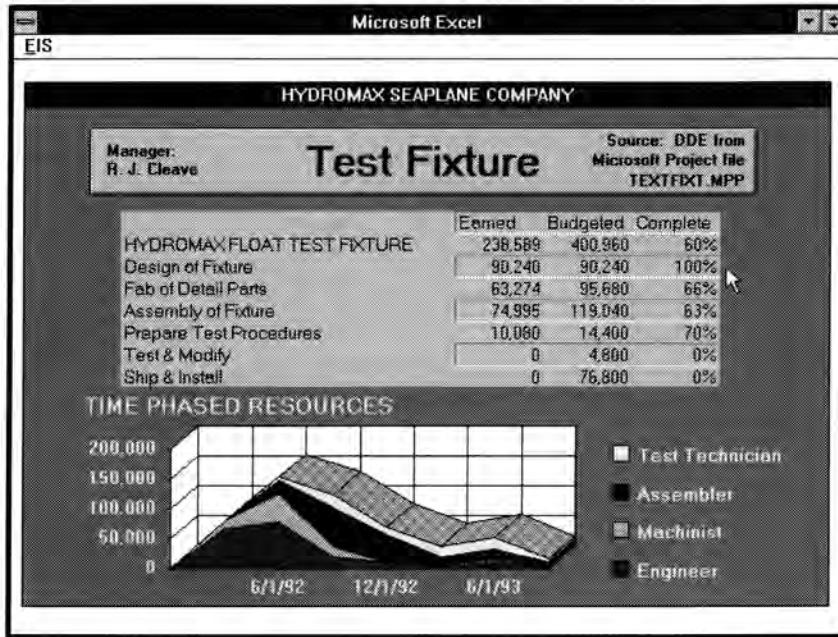


*Using DDE, OLE, and data access capabilities Microsoft Open EIS provides a seamless interface for data from a variety of sources.*

*Production Button*

This Production button in the Development screen summarizes the progress of the first lot of 80 floats being manufactured at Hydromax. Although not available in this demonstration, additional screens show similar information about other components such as wings and fuselage. Clicking the Hydromax Seaplanes Floats button displays the full LOB production chart for the floats.

*Prototype 1 Button*

The Prototype 1 button provides a variety of information on the production status of the prototype for a new seaplane model and displays the data both graphically and in a column/row table. The graph at the bottom of the screen is automatically updated to reflect changes in the baseline budget for the prototype seaplane and shows how much work has been accomplished against that budget. The View Critical Path button to the right of the table brings up a screen showing a PERT diagram. A Hydromax manager added a note to this screen suggesting actions that can be taken to improve the scheduled delivery date. The PERT diagram is pasted as a linked object from Microsoft Project.

All of the prototype data is stored in a Microsoft Project file and is automatically updated using dynamic data exchange (DDE) to retrieve the information and display it on the EIS screen in Microsoft Excel.

*Floats Button*

The Floats button brings up a screen that provides schedule information on the subcontractor who is producing the prototype floats for the seaplane. Note that the task summarized on line 58 has been expanded into its subparts to highlight a problem area in the schedule involving the test fixture part and its subcontractor, discussed in the next section.

This Gantt chart is another Microsoft Project linked object that is pasted into Microsoft Excel. A note and arrow have been added to the worksheet using the Microsoft Excel text frame and line-drawing capabilities. Double-clicking on the Gantt chart starts Microsoft Project and opens the file FLOATS.MPP. Users can explore the prototype floats data in more detail using this Microsoft Project information.

*Hydromax Float Test Fixture Button*

The Hydromax Float Test Fixture button displays the progress of the test fixture—a part required to complete the floats—being built at another subcontractor's shop. The Time Phased chart displays the budgets by job classifications, such as assemblers and engineers, over time. The table showing earned, budgeted, and complete figures gives the current status of the prototype production and uses DDE to automatically tie the Microsoft Excel table to the source data that is managed on a day-to-day basis in Microsoft Project. The buttons to the left and right of the Hydromax Float Test Fixture button on the main Development screen represent work being done for other customers at this subcontractor's shop. These buttons are not active in this demonstration.

## Marketing Data

The EIS Marketing screen, reached by clicking the Marketing button in the EIS Directory screen, displays a Sales Funnel chart and table that provide Hydromax managers with a view of what sales have occurred and what the future might look like. A "healthy" sales funnel begins at the top with a large number of potential customers. At each successive stage of the sales process—moving from prospect (above funnel) to strong lead to a closed sale (in process)—the number of customers and dollars should follow a gradual, regular decline, or focus. Significant drops at one of the early stages indicate that actual sales will likely drop in the future.

This information helps the staff to manage current sales initiatives, forecast potential production requirements, and look at past results in order to develop sales-cycle statistics. The Sales Funnel chart can be used to present a view of companywide sales or, when linked to individual subprojects, can be used to develop target account plans that are essential to closing major sales.

The sales funnel data is maintained in a Microsoft Project file and is charted in the EIS screen using Microsoft Excel with a DDE link to the Microsoft Project file.

## Financial Data

The Hydromax financial organization uses the EIS Finance screen, reached by clicking the finance button on the main EIS Directory screen, to analyze the financial aspects of the production plan. This screen relies upon three variables to calculate the hours and people necessary to build the production aircraft. These variables are:

- The number of hours required to build each pound of the first aircraft.
- The weight of the aircraft.
- The learning curve that will follow from the first aircraft.

Learning-curve theory states that each time the quantity of planes produced is doubled, a certain amount of savings will result based on the learning curve. For example, if an 80 percent learning curve is assumed, a reduction of 20 percent in required hours can be expected between aircraft 1 and 2, aircraft 2 and 4, aircraft 4 and 8, and so on.

The Finance screen lets users do "what if" analyses by entering their own values for the hours/pound, weight, and learning-curve percentage. As these figures are changed, the accompanying chart and table are changed in real time to produce a new learning curve and new calculations of the hours and dollars saved or lost.

# SUMMARY

The Hydromax EIS gives managers a single, integrated application from which to quickly view the critical elements involved in seaplane development, production, and sales. The Microsoft Open EIS solution seamlessly ties together the Microsoft Excel and Microsoft Project files that Hydromax employees and subcontractors are using in their everyday tasks. The result is a powerful tool that helps Hydromax decision-makers achieve a competitive advantage in their industry.

**Sample Application Requirements:**

- Microsoft Windows graphical environment version 3.0 or later.
- A PC with a 386 processor and at least 4 megabytes of RAM.
- Microsoft Excel version 4.0 for Windows.
- Microsoft Project version 3.0 for Windows (optional).

**To Start the Sample EIS Application:**

- Start Microsoft Excel 4.0.
- Open the HYDROMAX.XLA file in the Hydromax directory.

# FOR MORE INFORMATION

More information on the Microsoft Open EIS solution and other Microsoft applications is available by calling Microsoft Inside Sales at (800) 227-4679. If you require TDD/TT (text telephone) services for the deaf and hard of hearing, call (206) 635-4948. Outside the United States, contact your local Microsoft subsidiary.

The Hydromax application was developed by Steve Garfein, RPM Systems, 42 Sycamore Creek, Irvine, California 92715; tel. (714) 854-3387.

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# English International Savouries Limited (EIS, Ltd.)

*Application Profile*

English International Savouries Limited is a manufacturer of packaged food products, including canned fruit, jam, snack food, biscuits, soup, and pasta.

The company exports these food products around the world. Because of international competition and the tight schedules involved in manufacturing and distributing perishable products, the management of English International Savouries requires up-to-date information on vital facts regarding the company's performance, including:

- Total product sales.
- Regional sales.
- Current year's sales compared to those of the previous year.
- Sales forecasts.
- New-product introduction plans.
- Inventory and production figures.

## EIS DESIGN CONSIDERATIONS

The management of English International Savouries is a diverse group of people with varying degrees of computer expertise. Some managers prefer to simply view business information on a computer screen with a minimum of interaction, while others need to use the information with word processing, project management, and electronic mail applications. In order to meet the needs of these various users, the company chose to develop an executive information system (EIS) that would include the following:

- An intuitive user interface that could support the casual browsing needs of some users and the heavy analytical and reporting needs of those who work with mainline desktop applications.
- Automated links to word processing, project management, and electronic mail applications.
- Simplified "what if" forecasting.
- Drill-down analysis of sales information by product, region, and sales channel.

## EIS SOLUTION HIGHLIGHTS

To create a solution for its managers, English International Savouries used the Microsoft₀ Excel EIS Builder. The core of the company's application is the Home View screen (described later). To move around in the application, click the mouse anywhere that the arrow cursor turns into a hand. This action causes additional information to appear. Click the Previous button (the hand pointing left) on any screen to return to the preceding screen, or choose the Home View option from the Command menu in the upper left of any screen to return directly to the Home View main screen.

### Home View

The application's opening screen displays a series of tables and charts containing information regarding the company's critical success factors. The chart in the upper left of the screen displays 1992 sales by quarter, with bars representing the prior year, forecasts, and actual sales results. The chart at the bottom left shows a breakdown of year-to-date sales by product. The table in the lower center of the screen displays year-to-date totals for sales revenue, profit, and the profit margin percentage. The chart in the lower right displays cumulative sales figures comparing the year-to-date

period of the prior year and forecasted sales. On the right side of the screen is a map of the world that leads to an analysis of international sales and forecasts by region. Help and Quit buttons are located in the upper right portion of the Home View screen.
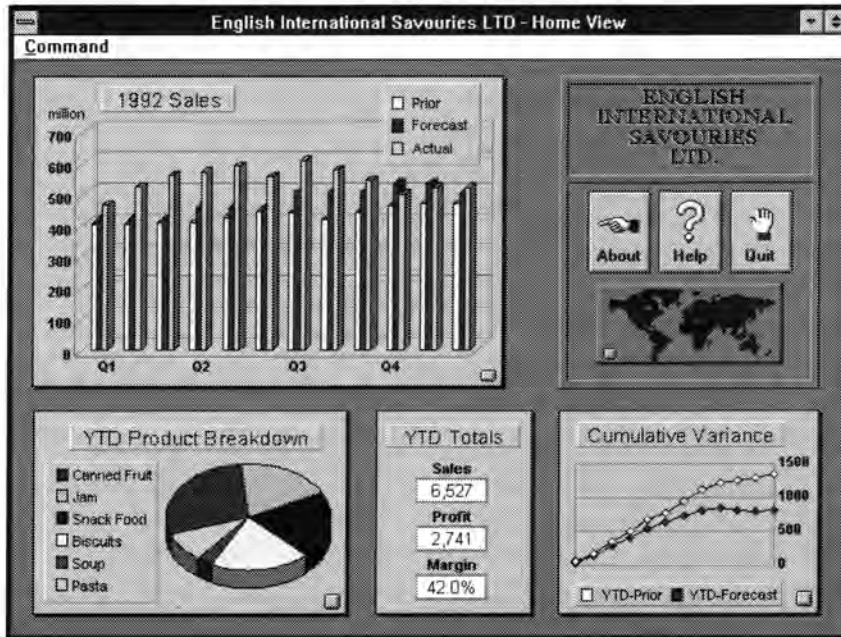


*Microsoft Open EIS lets you look at critical and comparative data in any combination. Simply click the buttons in Home View to see forecasts, year-to-date sales, as well as sales by product or region.*

### 1992 Sales (Forecast View)

Clicking anywhere on the 1992 Sales graph displays the Forecast View screen. This screen allows managers to perform easy "what if" scenarios. When the user clicks any of the three buttons to the right of the table, the Projected-Growth dialog box appears. When the user enters a new rate in this box, the table figures change accordingly. The new forecast can be made into a chart by clicking the bar-chart icon in the upper right portion of the screen. Click anywhere on the chart to return to the forecast table. To change the product whose future is being forecasted, click the product name displayed in the Product box in the upper left corner of the table. Two additional buttons located below the sales forecast table—Product Introduction Plans and Inventory and Production (described below)—lead to even greater detail about each product.

Help is available by clicking the question mark icon. Users can return to the Home View screen by clicking the Previous button or choosing Home View from the Command menu.

### Product Introduction Plans

When this button is clicked, it opens a Microsoft Project file that displays schedules and other product introduction information for the product currently displayed on the sales forecast table. For this sample demonstration, a single Microsoft Project screen shot is displayed. In the actual application, users would work with a custom toolbar for access to a variety of project charts and tables containing product introduction plans.

### Inventory and Production

When this button is clicked, it brings up the Inventory and Production Planning Inquiry screen that serves as a front-end to retrieve data from a mainframe system. For the purposes of this demonstration, the screen uses a simulated mainframe link. To retrieve information, click once on a product in the Products column and once on a date in the Time Period column. Then click the Retrieve button to view the requested information. The Microsoft Visual Basic™ programming system was used to create this interface between a host and the Windows™ operating system.

### YTD Product Breakdown (Comparison View)

Clicking the YTD Product Breakdown graph brings up the Comparison View screen, which provides a more detailed analysis. The two pie charts on this screen make it possible to compare actual product sales with either prior or forecasted sales. Clicking the arrow to the right of the table

allows a user to toggle between prior and forecasted sales. The color representing a product is the same in the table columns as in the pie wedges, so users can quickly compare figures in the table with regions in the two pie charts.

**Cumulative Variance (Drill Down View)**

Clicking the Cumulative Variance graph displays the Drill Down View screen, which consists of a table with sales figures broken down by product. Both the Year-To-Date and Prior column titles contain buttons that, when clicked, change the columns to Month-to-Date and Forecast. Help is available by clicking the question mark icon.

This view is named Drill Down because users can drill down to additional details by Period, Region, or Distribution Channel by clicking the product names. If either Channel or Region is chosen, details for the product currently being studied are displayed in the Drill Down table format. If Period is selected, a different screen—Monthly Detail View—appears, showing figures for every month. The Monthly Detail View screen is also available by clicking anywhere on the Drill Down table while Channel or Region information is displayed.

*Monthly Detail View*

The Monthly Detail View screen provides sales information on each product. As with the Drill Down table, users can toggle between Forecast and Prior by clicking the Forecast column title. To select other products for analysis, click the right and left arrows on either side of the product name at the top of the Monthly Detail View table.

The icons located at the right of the Monthly Detail View screen provide additional tools for further analysis and for sharing this information with others. To view a cumulative summary with totals per quarter, click the sum icon. To view either a trend bar chart or variance line charts, click the chart icons. Clicking the memo icon (the sheets of paper) starts Microsoft Word version 2.0 for Windows—using a dynamic data exchange (DDE) link—and automatically pastes a copy of the monthly detail table into a preformatted memo. Clicking the envelope icon simulates the creation of an e-mail message containing the trend worksheet. In the actual working application, this action is accomplished thanks to the Microsoft Excel support for the MAPI (Messaging Application Programming Interface) electronic messaging standard for the Windows system. This feature pastes the trend file into Microsoft Mail and automatically displays the Microsoft Mail e-mail address dialog box. Also available in the actual program, but not in this demonstration, is an autodial feature. If a modem is connected to the system, clicking the telephone icon automatically dials the number for the product manager whose name is displayed in the box above the icons.

**World Map (Region View)**

Clicking the world map icon on the Home View screen brings up the Region View screen. Region View displays a table, two charts of sales information, and a map of the world with named sales regions. The figures reflect total sales (worldwide), as indicated by the box at the top of the screen. Users can view sales figures for a specific part of the world by simply clicking a named region on the map. This map is an object that was pasted from a file from the Microsoft PowerPoint® presentation graphics program. The labels for the region names are transparent buttons added by the Microsoft Excel EIS Builder. Users can return to the Home View main screen by clicking the Previous button or choosing Home View from the Command menu.

# SUMMARY

Because of their Microsoft Open EIS solution, managers at English International Savouries can quickly track vital performance indicators for their food products around the world. The company's system—built with the Microsoft Excel EIS Builder—presents information with a focus on presentation graphics, thus allowing very fast detection of trends. Users can navigate the entire system with simple mouse clicks, without having to learn any commands or complex menu structures.

To examine this application in greater detail, use the author mode of the Microsoft Excel EIS Builder to look at the structure of the application from the developer's perspective.

**Sample EIS Application Requirements:**

- Microsoft Windows graphical environment version 3.1 or later.
- A PC with a 386 processor and at least 4 megabytes of RAM.
- Microsoft Excel version 4.0 for Windows.
- A VGA monitor.
- Microsoft Excel EIS Builder (optional).
- Microsoft Word version 2.0 for Windows (optional).

**To Start the Sample EIS Application:**

- Start Microsoft Excel 4.0.
- To run the application as a user, open the EIS_DEMO.XLA file in the EISLTD directory.
- To run the application as a developer/author:

  1. Start the Microsoft Excel EIS Builder by opening the AUTHOR.XLA file in the EISBLDR directory.
  2. From the EIS menu, choose Open to open the EIS_DEMO file in the EISLTD directory.
  3. To run the application, use the EIS menu and choose Run.
  4. To return to author mode, click Halt, or press CTRL+H.

# FOR MORE INFORMATION

More information on the Microsoft Open EIS Pak and other Microsoft applications is available by calling Microsoft Inside Sales at (800) 227-4679. If you require TTD/TT (text telephone) services for the deaf and hard of hearing, call (206) 635-4948. Outside the United States, contact your local Microsoft subsidiary.



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