EnCompass Knowledge Systems®

Visualizing the Present, Designing the Future,
Managing the Transition[sm]

EnCompass Training Curriculum— Advanced Track

15 December 2003

EnCompass, OrgAnalyst, EnCompass Enterprise, and *EnCompass Knowledge Systems* are registered trademarks of EnCompass Knowledge Systems, Inc.

Windows, Excel, Exchange, Word, and *Outlook Express* are trademarks or registered trademarks of Microsoft Corporation.

CONTENTS

1 INTRODUCTION AND CONCEPTS

INTRODUCTION TO ENCOMPASS

When we use the term "EnCompass," we refer to two different things. The EnCompass **technology** is a database-centered software application which maps organizational processes and analyzes networks of communication and decision-making within an organization. The EnCompass **organization and service** uses this technology to assist systems managers and corporate directors in understanding and improving business processes. Implicit in this effort are three related goals:

1. Analyzing and understanding the current state of affairs within the organization—where processes are working well, and where they need to be improved
2. Setting future goals and directions for change
3. Monitoring the pace and success of progress toward these goals

By combining the technological power of the software with the expertise of its staff and associated consultants, EnCompass offers custom-tailored solutions for clients in business, government, and education.

ORGANIZATIONAL PROCESS MAPPING

> The company has gotten too big when, when you want to get something done, you don't know who to call. All you can do is to write a policy and hope that the right person knows that it was intended for him!
>
> — CEO, Fortune 100 Company

This quote typifies the sense of frustration increasingly experienced by senior executives and directors of complex and physically distributed organizations, as they

wrestle with the challenges of guiding their enterprises in a world characterized by an ever accelerating pace of change. The tasks of analyzing, synthesizing, and managing organizational processes and system infrastructure can be daunting ones.

To meet this challenge, we need to understand how organizations actually work.

BASIC CONCEPTS

Task-related interactions

Axiom: Enterprises organize around tasks, not charts

Every organization has a defined structure, usually codified in a more-or-less formal *organization chart* which details its functional entities and their interrelationships. But in their day-to-day activities, people in an organization do not think about a chart; they interact with other people, and make decisions based on their perceptions of those people, their interrelationships, and their relative importance and impact on each other's work. When problems arise within an organization, it is usually because these perceptions do not match. But too often, management attempts to correct the situation by making mechanical adjustments to the "org chart"—reorganizing, re-engineering, or downsizing—arrived at through depersonalized workflow methodologies that take no account of how personal interactions influence task execution and decision processes. Without the perspective of this "human" dimension, the picture is incomplete and provides only a partial foundation for the management of business processes, systems, and infrastructure.

Thus, the tasks that make up the everyday heartbeat of any enterprise are carried out in a constant series of innumerable *individual, personal interactions among its members*—face-to-face meetings, phone calls, emails, and memos. And these interactions take place not in isolation, but within a number of organizational *networks* of varying scope and complexity. Rather than simply altering the formal structure, it is crucially important to understand and strengthen the existing, functioning networks of personal interaction, and construct new ones in a planned and deliberate way.

Organizational networks

Within the enterprise, we can identify three types of organizational networks that provide the context for task-related interactions. These three types form a hierarchy of decreasing size and impact on organizational decision-making.

At the lowest tier of the hierarchy is the **communication** network, linking those who provide information with those who need to access it in the execution of their responsibilities. The next tier is the subset of those who have substantive **influence** on

the related processes or tasks. A still smaller set of individuals have a direct impact on **decision-making** processes.

Issues

As we examine this complex of organizational networks, a further layer of complexity arises from the fact that most organizations perform more than a single function. Almost always, they are involved in a broad range of different but interdependent tasks: R&D, product development, manufacturing, marketing, customer support, planning, corporate development, and so on. In any organization, members generally play different roles and exert different levels of influence within each of these functional areas. Therefore, the patterns of interaction among individuals and organizational units—the networks of communication, influence, and decision—will vary widely depending on what function they are performing. Within the context of an EnCompass study, these varied tasks and business processes are referred to as **issues,** and for this reason we refer to the interpersonal interactions and the organizational networks as **issue-dependent.**

Expert knowledge

Axiom: Individual members are the experts

Another fundamental concept for understanding organizational processes is that individuals know the most about how their own jobs work: what is important and unimportant, and whom to talk to, and how, when tasks need to be accomplished. No one person is in possession of all this knowledge; rather, it is collective, distributed across the organization.

Closely related to this idea is the notion that when making decisions based on this individual, situational knowledge, people operate on *perception, not fact.* For example, it quite often happens that where one person perceives his or her interactions with another to be crucial to their ability to perform a particular task, the other person attaches much less importance to them. In such a case, their attitudes and priorities during these interactions will differ markedly. Clearly, an organization where mismatches of this kind are common is one in which important processes are likely to be inefficient, or break down altogether.

As a corollary to this relativistic concept, we observe that for a manager who wishes to gain insight into how the enterprise works (or doesn't), there is no single, objective or unbiased source of information. Every person within the organization has his or her own point of view—a view that is often further skewed by wishful thinking, self-interest, or a natural desire to show one's own performance in the best possible light. In fact, there are often as many perceptions as to how the enterprise functions, and

how it should function, as there are members of the organization. In order to create effective and enduring changes in group processes, it's vital that these individual perceptions be melded into a consistent view of the current reality and a common vision for the future.

NETWORK MAPPING WITH ENCOMPASS

The EnCompass application is designed to address these concerns. For enterprise managers and corporate directors, it provides a tool for gathering information on individual task-related interactions throughout the organization, incorporating the differing perspectives of all its members. It produces visual maps of the multidimensional and issue-dependent families and tiers of networks, enabling the analyst to examine these interrelationships to any desired level of detail, study the interplay between them, and locate ineffective, counterproductive, or missing processes. Careful study of the maps reveals graphical answers to a number of fundamental questions, for example:

- Do the requisite communication channels exist to support informed decision and task execution processes? Who are the key people forming critical decision paths?
- Are the processes clearly understood, or are there significant misperceptions that could adversely affect current or future performance? Where are there underutilized human resources?
- Are the right individuals involved and appropriately influencing the various decision processes, and are the links and networks through which decisions propagate through the organization appropriate?
- Are there dysfunctional or irrelevant, resource-absorbing elements in the networks?
- What factors influence the structure of these nonformal networks, and how can the networks be altered to align them better with the needs of the operation?

Measuring interactions—the data collection instrument

To collect and store all this information, EnCompass uses a **data collection instrument (DCI),** specifically tailored for each study (figure 1-1, page 5). Presented as a form which participants fill out either on paper or on the World Wide Web, the DCI lets each person in the study report on his or her regular task-related interactions with others in the organization. For each of these, the form records the **name** of the other

person, the respondent's perception of the interactions' overall **frequency** and **importance,** and their usual **modus of interaction**—whether they are normally **concurrent** (face-to-face meetings, telephone, videoconference) or **non-concurrent** (email, fax, or memo). Factors such as interaction method have been shown to have a strong influence on the patterns of interaction.

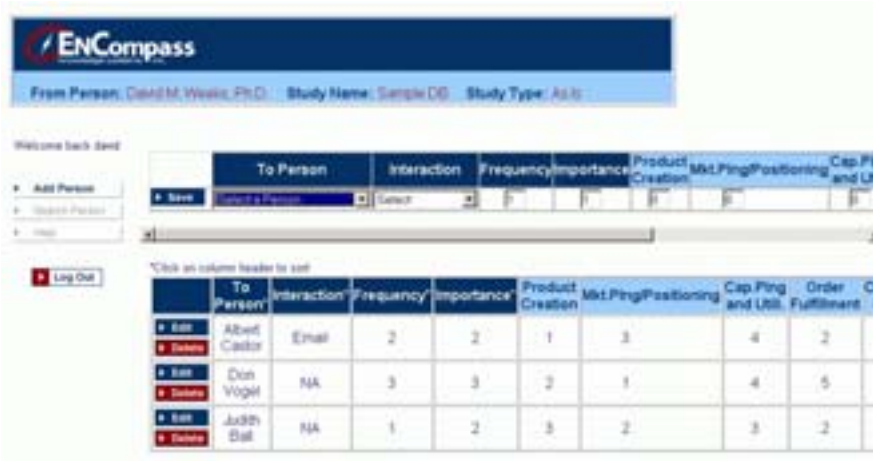


Figure 1-1: EnCompass data collection instrument

Further, for each of the regular interactions, the DCI form asks the respondent to estimate its **impact** on both parties' ability to get their jobs done, with respect to each of the tasks or processes that have been defined as issues for the specific study.

Displaying the data

Once the interaction data have been collected and entered into the EnCompass database (and the study project properly set up), the EnCompass application can display the interaction networks.

The EnCompass display starts with a 3D representation of the organization's formal reporting structure (figure 1-2, page 6).

Here, each person in the organization is represented as a "node" in the hierarchical tree. The observer can show the structure to any number of levels, and rotate and zoom the display to look at it from any point of view.

The organization view

Although the 3D "org chart" is striking and interesting, by itself it provides little in the way of insight into organizational processes. The real utility of EnCompass begins when we display the results of the data-collection survey (figure 1-3, page 6).

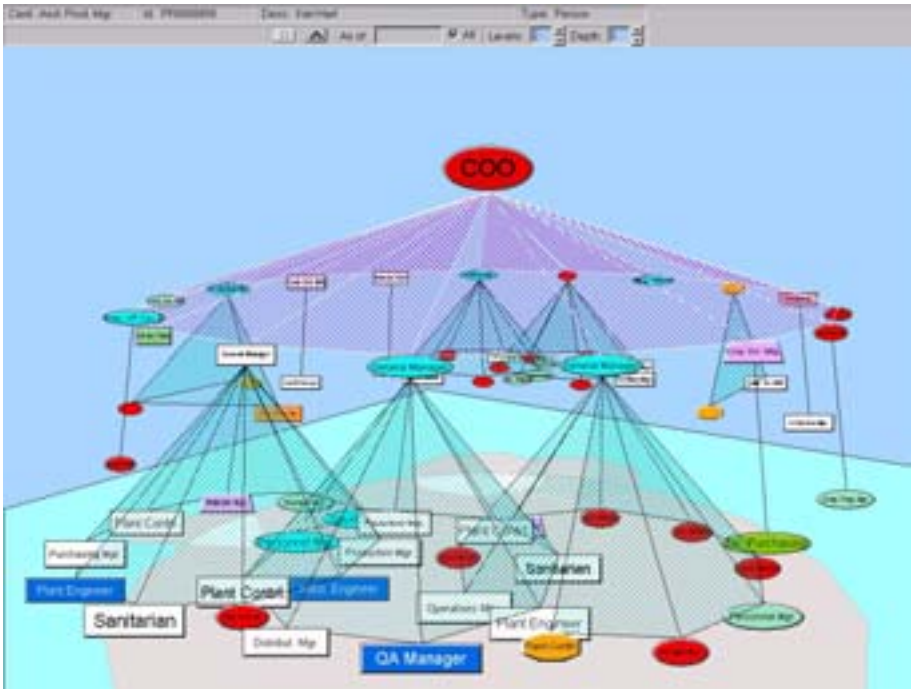


Figure 1-2: EnCompass 3-D Display

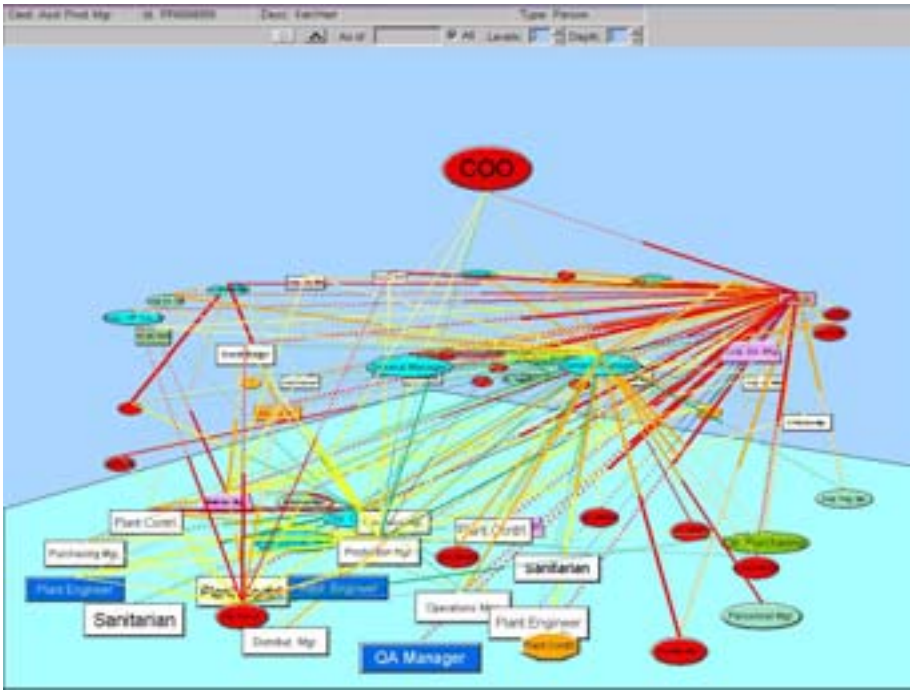


Figure 1-3: Data collection links

Here, we see the same organizational structure as in figure 1-2, with the connecting lines removed so as not to clutter the display. Against this background, we overlay a pattern of bidirectional "links" between individual members of the organization. Each link—or more precisely, one-half of each link—represents a regular task-related interaction as reported by one person on one line of the data-collection form.

The color and thickness of each link show the **importance** and **frequency** of the interaction, as estimated by the respondent. Each link consists of two halves, each half representing the viewpoint of one of the parties to the interaction. For this reason, we describe the EnCompass-generated view as *validated,* meaning that each individual's perception is subject to confirmation by the other.

Note that in many cases, the two half-links differ in color and width, indicating that the two parties did not agree on the frequency or importance of their interaction. In extreme cases, one half of a link is a dotted segment, indicating an "unconfirmed" link: one which was reported by only one person—the other party did not acknowledge that the interaction occurred at all. Clearly, a map that contains large numbers of disagreed or unconfirmed links (as here) is a picture of an organization in which communication is breaking down.

Typically, the EnCompass analyst generates a view like this one for each of the tasks or processes that have been defined as issues of concern for the study, or for combinations of related issues. In each case, this **organization view** graphically shows where the important networks are located, quickly revealing isolated personnel, inefficient or inappropriate communications channels, and ineffective processes. Displaying the interaction networks against the organization structure aids the analyst in whether the formal structure supports or inhibits particular organizational processes.

By carefully selecting appropriate parameters for display, the analyst can focus on precisely those patterns of interaction that are of most concern. A study can include any number of **analysis definitions** that select and display subsets of interactions based on a number of potentially significant factors, such as:

- The nature of the interactions themselves. For example, "high-frequency, low-importance interactions" represent ineffective communication and wasted effort.
- Characteristics of the people involved. Factors such as age, gender, location, salary, or tenure may have unintended effects on information flow or task execution.

- The level of **agreement** between the pairs of interaction partners. Links in which the two parties disagree strongly on their interaction's frequency or importance signal areas of fundamental confusion about important processes.

For details on creating analyses and interpreting the results, see chapter 5. For illustrations and discussion of example analyses, see chapter 9.

The issue view

In addition to the organization view, in which interaction links are displayed against the background of the organization's formal structure, EnCompass also generates a set of **issue views** (figure 1-4). Here we reveal a different framework, one in which a person's position depends not on his or her standing in the formal reporting hierarchy, but rather on the importance—*as perceived by the other members of the organization*—of his or her contribution to a specific issue or process. In this **virtual hierarchy,** an individual's position may be quite different from the one he or she holds in the formal hierarchy, and will most likely vary from one issue to another.

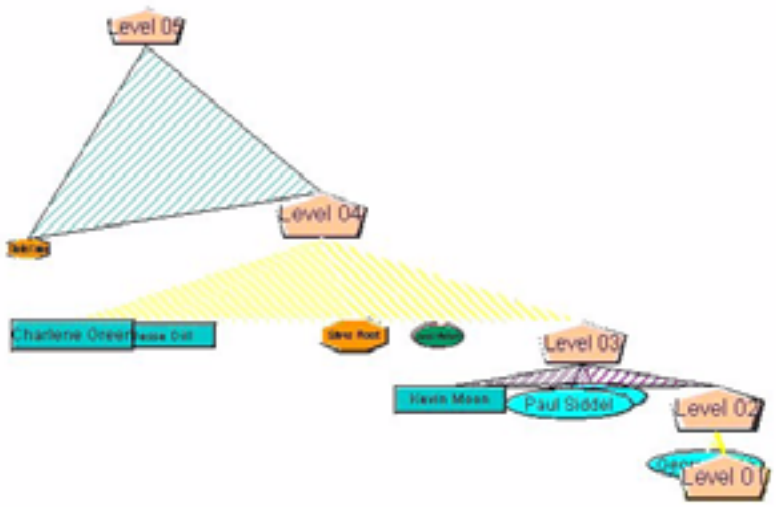


Figure 1-4: Emergent structure—issue view

The issue view thus provides a great deal of insight, by identifying those individuals who have real influence on decision-making about each specific issue. Further, by overlaying the interaction links against this framework, the analyst can see clearly the channels through which these decision-makers receive information and propagate their decisions throughout the organization.

"As-is" vs. "should-be"

The purpose of EnCompass is not only to analyze and understand the present situation. it's also intended to help managers set future goals and directions for change, improvement, and alignment around key issues.

In the first stage of an EnCompass study, the data-collection survey gathers information from participants on their perceptions of the existing state of affairs within the organization. After these data are absorbed and analyzed, the same respondents are asked to complete a second survey. This time, they are asked to give their view of how things would work in the ideal organization. By tabulating these "should-be" results and comparing them with the original "as-is" picture, EnCompass reveals both existing channels that do not contribute to the desired goal, and a set of "missing links" that need to be put in place—in essence, a blueprint for creating the optimal organization.

By sharing and discussing these results with managers and key personnel, EnCompass consultants help the organization's members arrive at a mutually agreed-upon vision for the future and a directed path to change. By periodically repeating the survey and taking new measurements, we monitor the enterprise's progress toward its goals and provide the opportunity to make adjustments at key points in the process.

IN-PROCESS METRICS

The third goal of EnCompass is to enable managers to monitor the pace and success of their efforts toward change and process improvement. A primary tool for meeting this goal is the **EnCompass enterprise metrics.**

EnCompass metrics are a set of statistical calculations which measure the depth and quality of interrelationships among members of an organization. They enable the analyst to quantify organizational characteristics which in other settings are typically described in less precise and more impressionistic terms:

- **Clarity** (or "alignment"): the overall level of agreement and understanding among the members of the organization or organizational unit.
- **Involvement:** a measure of how effectively the organization's members are engaged in carrying out the tasks that are important to it.
- **Leverage:** the degree to which the existence of an organization gives its members greater influence than they would have as independent individuals.
- **Priority:** a measure of the perceived impact of the issues examined in an EnCompass study.

- **Relative Priority:** the impact of a single issue as compared to all the other issues.
- **Integration:** the degree of interconnectedness between two organizations or organizational units.

Collectively, these results amount to a numeric "scorecard" of the degree to which an organization's communications and decision-making processes are integrated and effective. By tracking the numbers over time, metrics can serve as benchmarks for orienting and monitoring organizational change and improvement.

For more on metrics, see chapter 7.

ACTIVITY-BASED MANAGEMENT

In recent years, **activity-based costing (ABC)** systems have received increasing attention as a means of reducing costs and improving resource utilization in both the manufacturing and service sectors. By tracking the costs associated with organizational processes, ABC systems enable management to:

- assess the true cost of products and services
- compute associated margins and profit contributions
- improve competitive posture and enhance financial performance

By itself, however, ABC provides only the cost side of the picture. Traditional ABC methods provide no way of assessing whether the value derived from the individual activities warrants the cost incurred.

INTRODUCTION TO ORGANALYST

OrgAnalyst is a component of the EnCompass software which completes the picture, by enabling not only costing, but **activity-based management (ABM).** By linking cost data with organizational process visualization, it provides managers with the information they need to make sound management decisions, including:

- identifying fragmented or ineffective use of resources
- consolidating or reorganizing non-cost-effective processes

Top-down vs. bottom-up costing

ABC systems typically calculate costs using a "top-down" approach, based on a defined hierarchy of organizational budget units. By tabulating the actual costs incurred within the various subunits, the system can tally up the total costs for each unit and for the enterprise as a whole. This approach is time-consuming, and can be difficult to implement throughout an organization. Moreover, it lacks flexibility: for example, it makes it difficult to account for an activity that a person may perform in more than one department, and its inherent focus on products generally excludes other ways of calculating costs.

The OrgAnalyst model, in contrast, uses a "bottom-up" method. It starts with a comprehensive list of all tasks that members of the organization execute, for example "assembling equipment" or "analyzing safety reports." OrgAnalyst tabulates the percentage of time each person spends on each defined task, and stores this "timeslice" data with the individual Person record in the database. By plotting it against salary data that is also part of the Person record, OrgAnalyst can make accurate calculations of costs down to the level of individual workers and activities.

Each task, moreover, can belong to a hierarchical set of tasks, called a **work breakdown structure.** Furthermore, the project designer can allocate each activity to one or more **programs,** which can in turn form part of a **program breakdown structure.** Because these structures can be defined in any desired way, this approach provides for great flexibility. For example, the program structure is typically set up to match the organizational accounting structure, so that OrgAnalyst calculates costs as a function of budget unit. But it may equally well be defined in terms of functional areas, products, and so on.

Value-chain mapping

The most powerful advantage of OrgAnalyst appears when it is used in concert with EnCompass. By applying activity-cost data to the organizational process maps, OrgAnalyst can show the actual costs of interactions. As we have seen, the EnCompass process-visualization tools can map the *value chain:* the sequence of processes that add value to the product of the enterprise. By mapping its activity-cost data to each step in the chain, OrgAnalyst can reveal non-value-added steps and areas of inefficient or duplicated effort, and recognize opportunities for simplifying or consolidating processes and organizational structures. Finally, by constructing "should-be" views of the process, we can evaluate the potential savings of these alternative configurations.

ORGANALYST STUDY RESULTS

The combination of ABC with process and interaction mapping methodologies has proven to be a powerful and cost effective method of identifying and localizing problems and facilitating change in under performing enterprises. In a recent case, the organization recovered six times the cost of the project in cost savings in the first year, and savings by the end of the second year aggregated to more than thirty times the total project cost. In addition, the organization exhibited positive cash flow and profit contribution for the first time in a number of years. Of potentially greater significance for the long term was a the halving of the product development cycle, a reduction in the cost of both new and existing products, and a substantial reduction in quality problems and warranty returns.

For a detailed discussion of OrgAnalyst and setting up ABM projects in EnCompass, see chapter 8.

ENCOMPASS PROCESS OVERVIEW

Because the organizations that use the EnCompass service may vary widely in size and needs, the exact steps in the process will differ from study to study. However, in most cases the procedure is organized around the following general outline:

1. **Preliminary interviews**—EnCompass staff (EnCompass personnel or associated consultants) meet with representatives of the organization to conduct an initial assessment of their needs and current status. EnCompass presents a formal proposal for approval.
2. **Definition of study issues and participants**—EnCompass staff meet with organization team members to define the processes and *issues* to be examined and the population to be included. Based on this input, EnCompass constructs and tests a preliminary *data collection instrument (DCI)* to ensure that the issues are adequately defined and comprehensive, and that the survey population is sufficiently inclusive.
3. **Project setup**—The designated project designer for the study creates a new *project* record in the EnCompass database, and sets up the project with the appropriate issues, *attributes,* selections, and display characteristics.
4. **Data collection**—EnCompass makes the finalized DCI available on the World Wide Web. Data from the responses automatically enter the EnCompass database.
5. **Data analysis**—The analyst uses the EnCompass software to create *analyses* and examine the data, taking note of areas where mismatched perceptions

and inefficient communications channels may be creating problems for the organization.

6. **Facilitated workshops**—EnCompass staff conduct two or three sessions for managers and other key personnel to review the analysis, discuss and negotiate differences that may be revealed, and examine alternatives for improving the effectiveness of the operation.
7. **"Should-be" survey**—A second survey captures the organization's collective view of its goals for the future. Analyzing the results of this survey provides maps which will serve as the organization's "visual contract for change."
8. **Periodic updates**—Regular status reviews monitor the organization's progress toward its goals.

The EnCompass software provides tools to carry out the **project setup** and **data analysis** stages of the process, and may also be used to present results to the organizational participants in the workshop stage. The tasks of conducting interviews, identifying issues, leading workshops, and presenting findings are performed by EnCompass personnel or consulting partners who are trained in the techniques of managing engagements. For a detailed discussion of the engagement process, see chapter 2.

ABOUT THIS MANUAL

Throughout this book, we will generally observe the following typographical conventions:

Italics, as usual, mean special emphasis on a word.

Terms you should remember are in **boldface.**

Terms that are explained in the glossary are in ***boldface and italic.***

Names of windows, dialog boxes, data-entry fields, and similar interface elements are in *italics,* as are *menu items.*

Names of **tabs** and **control buttons** in EnCompass dialogs are also in **boldface.**

NOTE to readers of the draft version. The following color codes indicate conditional text to be included in the corresponding versions:

Basic

Advanced

Engagement

Working examples throughout the text are drawn mostly from the “Sample DB” project in EnCompass.

To submit questions or comments, please contact EnCompass:

By telephone: 310-231-2600

By fax: 310-231-2601

By postal mail: EnCompass Knowledge Systems, Inc.
11620 Wilshire Blvd., Suite 450
Los Angeles, CA 90025

By email: support@encompassknowledge.com

3 USING THE SOFTWARE

GETTING STARTED

INSTALLATION

Load the EnCompass installation CD/ROM. The installation program should start automatically. If it doesn't, execute the program SETUP.EXE in the root directory of the CD/ROM. Follow the installation program instructions.

LOGGING ON

Every EnCompass user is assigned a user name and password. You may use this name and password to log on to the system from your own workstation, or any other computer where EnCompass is installed.

Start the program by double-clicking the "EnCompass" shortcut icon on your desktop (or click the Start button on the Windows task bar, and select *Programs : EnCompass : EnCompass* from the menu).

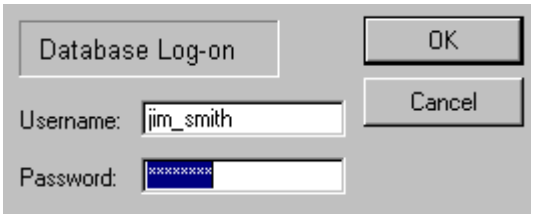


Figure 3-1: *Database Log-on* dialog

When EnCompass starts, it presents you with the *Database Log-on* dialog box (figure 3-1). To log on to the system:

1. In the *Username* box, type your EnCompass user name (if it's not there already).

2. In the *Password* box, type your EnCompass password.

   NOTE: EnCompass user names and passwords are not case sensitive—that is, it makes no difference whether you type "password," "PASSWORD," or "PaSsWoRd."

3. Click **OK.**

A small parasol symbol shows that EnCompass is making the connection with the database.

LOGGING OFF

To log off the system and exit EnCompass, do *either* of the following:

1. From the *File* menu, choose *Exit.*
2. Click the **Close** button at the upper right corner of the EnCompass window.

CHANGING YOUR PASSWORD

Every EnCompass user logs in to the system with a user name and password. You can change your password whenever you wish.

To change your EnCompass password:

1. From the *Administer* menu, choose *Change Password.*
2. Type your new password in the *Password* box.
3. Press Tab to move to the *Verify Password* box, and type the new password again.
4. Click **OK** to finish. You must use your new password the next time you log in.

NOTE: EnCompass user names and passwords are NOt CaSe SEnSiTivE.

ENCOMPASS ONLINE HELP

From any dialog box within EnCompass, you can get specific help by pressing F1. To view the main Help page, choose *Contents and Index* from the EnCompass *Help* menu.

THE TOOL BAR

The tool bar at the top of the Help window contains controls for navigation, printing, and other functions

.

- **Hide/Show** toggles display of the navigation pane on and off.
- **Locate** locates the current topic within the table of contents.
- **Back** and **Forward** cycle through the topics you have already viewed.
- **Home** returns to the main page of the help system.
- **Font** cycles through the available display font sizes.
- **Print** provides printing options.
- **Options** provides access to a number of commands and the Internet Explorer Options screen.
- **Using Help** provides detailed information on using the online help system.

THE NAVIGATION PANE

The navigation panel at the left provides four useful ways of locating individual help topics:

- The **Contents** tab lists most topics in subject order.
- The **Index** tab lists topics in alphabetical order.
- The **Search** tab lets you search the entire help system for specific words or phrases.
- The **Favorites** tab provides a place to keep a personal list of frequently visited topics.

To toggle display of the navigation pane on or off, click the **Hide/Show** button on the tool bar.

THE ENCOMPASS INTERFACE

ENCOMPASS DATABASE TABLES

EnCompass works by collecting data on the interactions between members of an organization, and storing all of this information in a ***database.*** As an EnCompass user, you can view and edit the details of any piece of this data, or extract any desired set of database records for analysis.

In order to retrieve information from the database, you must **submit a query** to locate the records containing the data you need.

SEARCHING THE DATABASE

All the information in the EnCompass database is organized in ***tables.*** Each table holds a specific kind of information, for example “locations,” “persons,” or “issues.” For descriptions of the EnCompass database tables, see Appendix A.

Within each table, the basic unit of organization is the ***record.*** Each record contains a number of ***fields,*** each one holding a single piece of data. You can open any record,

examine or edit the contents of its fields, and view its links to other records in the database.

To retrieve records from the database, you need to know which table to search for them. The easiest way to see what database tables are available for searching is to look at the shortcut icons on the left-hand side of the EnCompass main window. (You can also access the tables by making choices from the *File* option on the EnCompass menu.)

You tell the system exactly what information you want to retrieve by entering choices in a *Search* dialog box. This is called **submitting a query** to the database. (Technically, EnCompass converts the choices you enter in the *Search* dialog to SQL statements, which it uses to select records from the database.) You can create complex or highly specific queries by using wild cards in the search dialog fields, and you can save often used search patterns as named, stored queries and share them with other users.

To submit a database query:

1. On the vertical tool bar at the left-hand side of the EnCompass window, click the shortcut icon for the table you want to search. (Or choose the appropriate option from the *File* menu).
2. In the *Search* dialog box, enter values in one or more search fields to limit the search. Use wild cards and numeric operators to save time and typing (see *Using wild cards,* page 34).
3. Enter values in the search fields to specify conditions for your search. If the *Search* dialog contains more than one tab, you can enter values in individual fields to create a very specific query.

   To search for *all* the records in the current project, click **Clear.** To use a previously saved query, select a public or private search definition from the drop-down list at the top of the dialog box (see *Using stored queries,* page 35).

NOTE: In many of the search fields, you must select a value from a drop-down list. The values you can choose from often depend on which project is selected. If appropriate choices don't appear in the list, or some fields are disabled, click the **General** tab and make sure that the correct project is selected in the *Project* field.

4. Click **Search.** EnCompass searches the database for the information you requested, and displays the matching records in a data list window.

Using wild cards

A wild card is a single character that stands for one unspecified character, or a string of them. Two wild card characters are available for use in EnCompass: % and _.

The character % stands for any number of characters, either letters or numbers. It is equivalent to the familiar DOS/Windows wild card *.

- For example, if you know that a person's last name is "Smith" and his first name begins with "J," you can use "J%Smith" to find all names in the database that start with "J" and end with "Smith." This search will also return "Jay Smith," "Jed Smith," and "Juliet E. Smith," but it will find the record you want.

The wild card symbol _ (the underscore character) stands for a single character, either a letter or a number. It is equivalent to the DOS/Windows value ?.

- For example, if you cannot remember whether John spells his last name as Smith or Smyth, search for him by entering "John Sm_th."

Example

To search for persons connected with the Acme Products Company (ACM) whose last names begin with the letter "C," query the *Person* table as shown in figure 3-2 (page 35). (Note the space before the letter *C* in the *Name* field.)

While the query is running, the icon in the upper right corner of the EnCompass desktop area changes to a moving one. The query is finished when the icon stops moving and once again indicates the data type you are working with. To stop a query

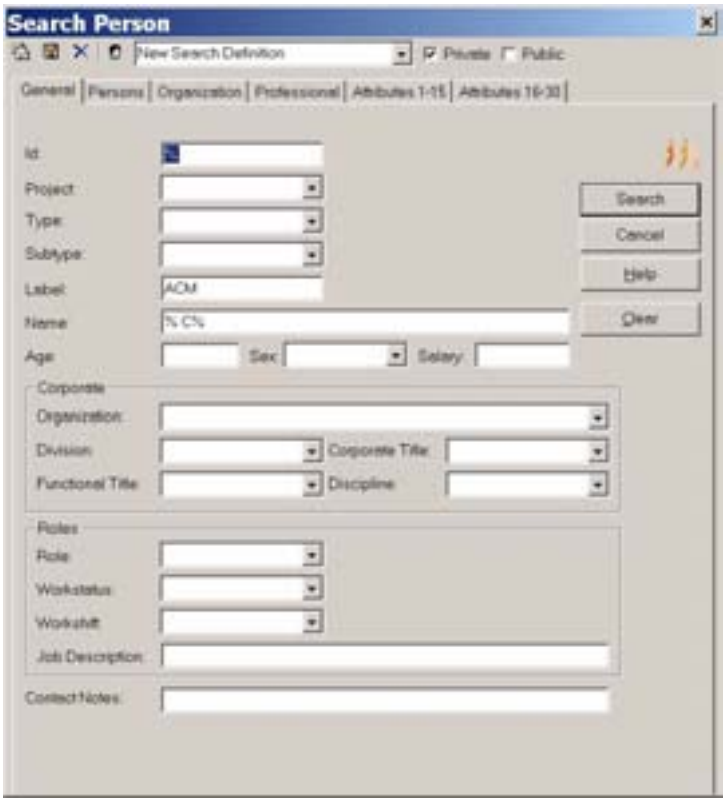


Figure 3-2: Database query (*Search* dialog)

before it finishes, click the **Stop** button on the tool bar (or choose *Stop Query* from the *File* menu).

TIP: Since the Acme Products Company (ACM) is the subject of the "Sample DB" project, you could obtain the same result by selecting *Sample DB* in the *Project* field, instead of *ACM* in the *Label* field.

USING STORED QUERIES

Most of the *Search* dialog boxes contain many fields, on multiple tabs. In order to make your database queries as specific as possible, you may often fill in a number of these fields with complex patterns of search values, including wild cards and numeric operators. For queries that you use repeatedly, you can save these search definitions and use them again later, so you don't need to enter all the search criteria again. Stored queries appear in the search definition list at the top of each *Search* dialog box.

Stored queries can be *public* or *private.* Public queries are visible to any user; private ones are visible only to the person who created them. The *Private* and *Public* check boxes to the right of the search definition list box determine whether the list displays your private stored queries, all public stored queries, or both. (Note: Although public queries are visible to all users, they can be changed only by the person who created them.)

For example, to store the query we used in figure 3-2, we would take the following steps:

1. In the *Search Person* dialog, click the **Create New Query** button on the tool bar.
2. In the *Project* field, select *Sample DB.* (If we wanted the query to apply across all projects, we could leave this field blank.)
3. In the *Label* field, enter "ACM," the EnCompass database identifier for Acme Products. (We can look up the abbreviation in the *Organization* table.)
4. In the *Name* field, enter "% C%". (Note the space before *C;* this ensures that the query will locate only last names.)
5. Click in the search definition list box to select the string "New Search Definition." Type "Last name C."
6. On the tool bar, click the **Save Query** button to store the query definition.

EnCompass stores the query with status *Private.* If we wanted to make it visible to all users, we would click the icon to the left of the *Search Definition* box. The icon changes to , indicating that the query is now *public.* This means that it will appear on the list of available stored queries only when the *Public* box is checked. To change it back, click again.

From now on, whenever we want to perform the same search again, we only need to open the *Search Person* dialog box, select the stored query from the list, and click **Search.** If the stored query doesn't appear on the list, make sure that the appropriate *Public* or *Private* box is checked, and that you have selected the correct project in the *Project* field.

Using queries in analyses

Saved queries are especially important in creating analyses (see *Creating Analysis Definitions, page 77*). To build an analysis, you must tell EnCompass which sets of data-collection records to include; you do this by selecting from lists of named *Criteria, Data Collection, Person,* and *Organization* queries in the *Analysis Data Entry*

dialog. Each of these named queries must have been created and saved in its respective database table so that it will appear on the list.

LIST WINDOWS

When you click **Search** in a *Search* dialog, Encompass retrieves the information you requested and displays a list of the matching records in a data list window. A data list shows all the database records that match your search, one per line. The columns display information from selected fields in each record.

For example, the list in figure 3-3 displays the results of the search we specified in figure 3-2.

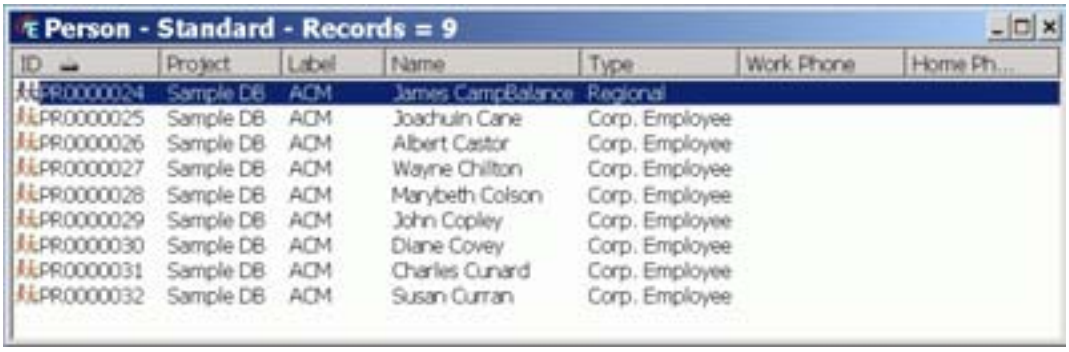


Figure 3-3: Data List window

For each item in the list, the columns show the contents of selected fields in the corresponding database record. To see full details on any single item in the list, open the record to display it in a data-entry dialog box (see *Data dialog boxes,* page 41).

The View menu

The selection of which fields appear in a data list's columns depends on the view you select from the *View* menu. There is a “standard” view for each list, and EnCompass administrators may define additional views for each table as needed (see *Creating view designs,* page 187).

The Options menu

The *Options* menu presents some choices that are the same for all list windows, and some that are specific to individual lists.

- *Set DblClk* determines what happens when you double-click an item in the list. For each list, you can select either *Open Record,* so that double-clicking opens the data entry dialog for that item, or another frequently used function.

In most cases the second option is *Start Query;* this causes a double-click to display an exploded view of the selected record in the *Tree View* window.

- For the *Analysis* list, the second option is *Load Analysis,* which causes a double-click to load and run the selected analysis immediately.
- *Minimize on Use*—When the *Set DblClk* option is set to *Start Query,* check this option if you want EnCompass to minimize the list window when the query starts.
- Other options may appear for each list, usually to let you choose from a number of alternative list layouts. See the online help screen for each list for detailed information.

Right-click menu

Every list has a context-sensitive menu, providing quick access to frequently used commands, including search, edit, select, explode, and print functions. To display the context-sensitive menu, click the right mouse button on any item in a list (or press Shift+F10 on the keyboard).

Help button

For online help information about any list window, click the "Help on Lists" button on the EnCompass tool bar.

GENERATING LIST REPORTS

Besides viewing the details of records in a data list window, you can also create a report containing any or all of the records your search found. In this way, you can share information by transmitting data directly from the EnCompass database to your other offices or other people. You can send the report directly to a printer, attach it to an email message, or export it for use in a word processor, spreadsheet program, web browser, or other application. You can also preview the report before you send it.

Previewing reports

Previewing reports from data lists lets you see on the screen how your report will look when printed.

To preview a report of the list we created in figure 3-3:

1. In the data list, select (highlight) the records you want to include in your report. (To select all the records, choose *Select All* from the *Edit* menu or the right-click menu.)
2. From the *Reports* menu, choose *Print Preview Selected.*

TIP: You can preview a report of *all* the items in the list (including those that were not included in your search) by choosing *Print Preview All* from the *Reports* menu or the right-click menu.

Print preview window

The print preview replaces the data list, in the same window (figure 3-4).

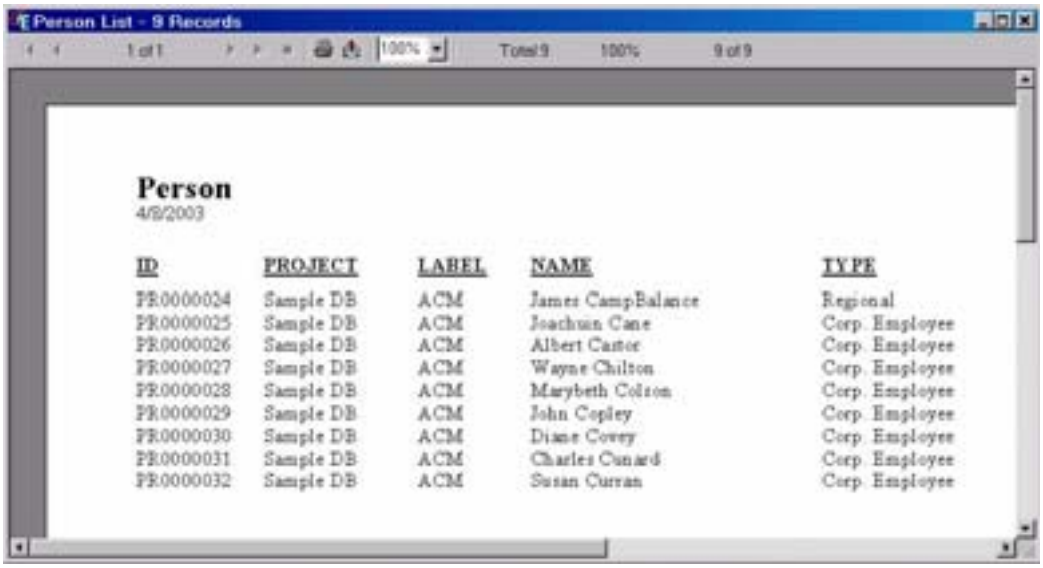


Figure 3-4: *Print Preview* window

The *Preview* tool bar contains buttons that let you scroll through the report, go directly to the first or last page, print the report, or export it to another program or disk file. (These commands are also available from the *Preview* menu.) The tool bar also contains a sizing box for enlarging or reducing the report image within the window.

To print the report while you are in preview mode, click the printer icon on the Preview tool bar (or choose *Print* from the *Preview* menu or the right-click menu).

To leave preview mode and return to the data list display, choose *Close* from the *Preview* menu or the right-click menu. (Note: Clicking the Close Window button will dismiss the list window completely.)

Printing search results

You can also print a report directly from the data list, without previewing it first.

To print directly from the data list:

1. In the data list, select (highlight) the records you want to include in your report.
2. From the *Reports* menu, choose *Print Selected.* To print all the records in the list (including those that were not included in your search), choose *Print All* from the *Reports* menu.

EnCompass prints the report to your default system printer. To change printers or printer options, choose *Print Setup* from the *File* menu.

Sending search results by email

If your email software is properly set up, you can send an email message containing the results of your database query to anyone you wish.

To email search results:

1. In the data list, select (highlight) the records you want to include in your report.
2.  Click the **Email** button on the tool bar, or choose *Email Selected* from the *Reports* menu.
3. Fill in the addressee and subject information as your email program requests them.

NOTE: Emailing reports only works if you have defined a Windows MAPI client. See the online help topic “Configuring your email program to work with EnCompass.”

Exporting data in other file formats

After you submit a database query and retrieve and sort the desired records in the list window, you can select any number of records from the list and export them for use in a word processor, spreadsheet program, web browser, or other application.

To export data:

1. In the data list, select (highlight) the records you want to include in your report.
2. From the *Reports* menu, choose *Print Preview Selected.*
3. From the *Preview* menu, choose *Export* (or click the *Export* icon on the tool bar).
4. In the *Export* dialog box (figure 3-5), click the arrow next to the *Format* box, and choose a format from the drop-down list.

   You can choose from various formats for spreadsheets, MS Word documents, PDF, HTML format for a web browser, and others.

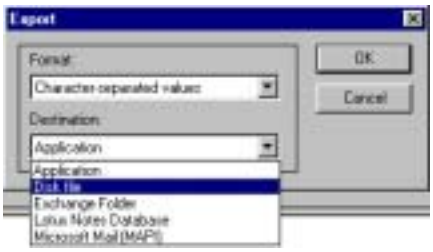


Figure 3-5: *Export* dialog

5. Click the arrow next to the *Destination* box, and select where you want the exported file to go. The destination can be a file on disk, an email program, or the registered application for files of this format. EnCompass will prompt you to make further choices depending on which option you choose.
6. Click **OK.**

To leave preview mode and return to the data list display, choose *Close* from the *Preview* menu, or from the right-click menu.

DATA DIALOG BOXES

To view full details of a single record in the list, you can open the record to display the information in a data-entry dialog box.

To open a data record:

While viewing a data list, do any of the following:

- *Double-click* an entry in the list.

  (NOTE: For this method to work, you must select *Set DblClk : Open Record* from the *Options* menu for this list.)

- *Right-click* the entry you want to view, then choose *Open* from the pop-up menu.

- *Select* an entry by clicking it with the mouse, then choose *Open Record* from the *Edit* menu (keyboard shortcut Ctrl-E).
- Select the entry with the Page Up/Page Down and ↑ / ↓ keys, then press Enter ↵.

For example, we can view the full database record for Charles Cunard by double-clicking his name in the list in figure 3-3. Figure 3-6 (page 42) shows the result.

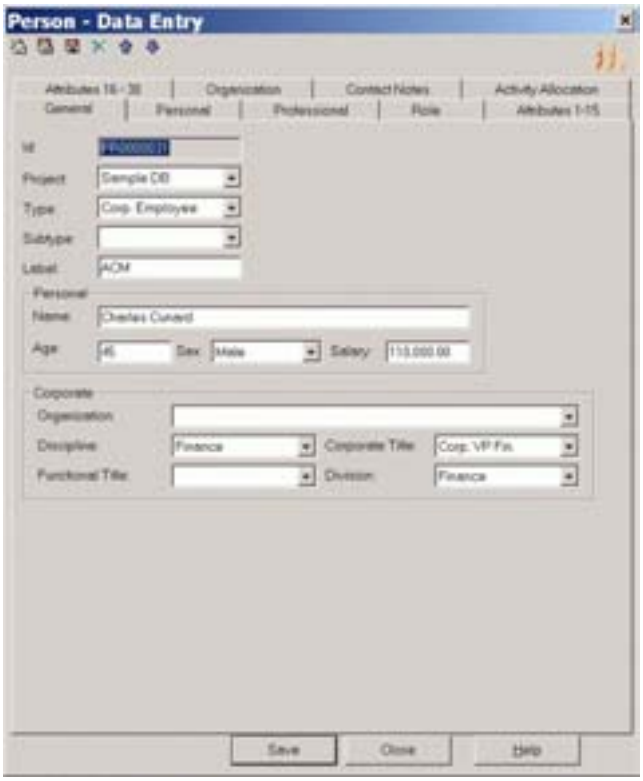


Figure 3-6: Data dialog box

Data dialogs usually contain several tabs, and allow you to modify the data in some fields.

The **New Record** button on the dialog's tool bar lets you create a new database record.

DISPLAYING DATABASE STRUCTURE

The EnCompass database is much more than simply a collection of records in unrelated tables. Each record has a place in a network of *connections* throughout the database. For example, a *person* is part of an *organization,* which exists at one or

more specific *locations.* Within the organization, people supervise and report to one another in a hierarchy of authority and responsibility. These structured connections bring context and meaning to what would otherwise be only a mass of isolated facts.

The power of the EnCompass system lies in its ability to present this structure in a graphical display, which you can view from different angles and manipulate in various ways. This facility provides an important tool for visualizing the interrelationships between different kinds of data, and it is at the heart of the EnCompass method of analyzing patterns of interaction within an organization that is the subject of an EnCompass study.

However, to create this display, we have to start somewhere.

EXPLODING RECORDS

Once you have searched a database table and located a desired record in a data list, you can view its relationship to other records by a process known as *exploding the record.* You can *explode down* to see the record's connections with those below it in the database structure (its ***children*** and all their ***siblings***), or *explode up* to see what higher-level structures it belongs to (its ***parents***). EnCompass shows the exploded view in a *Tree View* window. In the tree display, you can select any item to see the details of that record.

For example, suppose we are working on the Sample DB project, and want to view the network of connections centered on the Acme Products Company's COO, Don Vogel. We would proceed as follows:

1.  Click the *Person* icon on the vertical tool bar.
2. In the *Search Person* dialog box, select *Sample DB* in the *Project* field, and type "%Vogel" in the *Name* field.
3. Click **Search** to retrieve the record.
4. In the *Person* list, make sure Don Vogel's name is selected.
5.  Click the ***Explode Down All*** button on the tool bar (or choose *Explode Down All* from the *Search* menu, or choose *Explode : Down All* from the right-click menu).

EnCompass creates a tree display containing the record you selected and those that are connected to it.

THE TREE DISPLAY

EnCompass can display structured data in two different ways:

- The 2D (outline) display (figure 3-7) shows hierarchical relationships in top-to-bottom order.

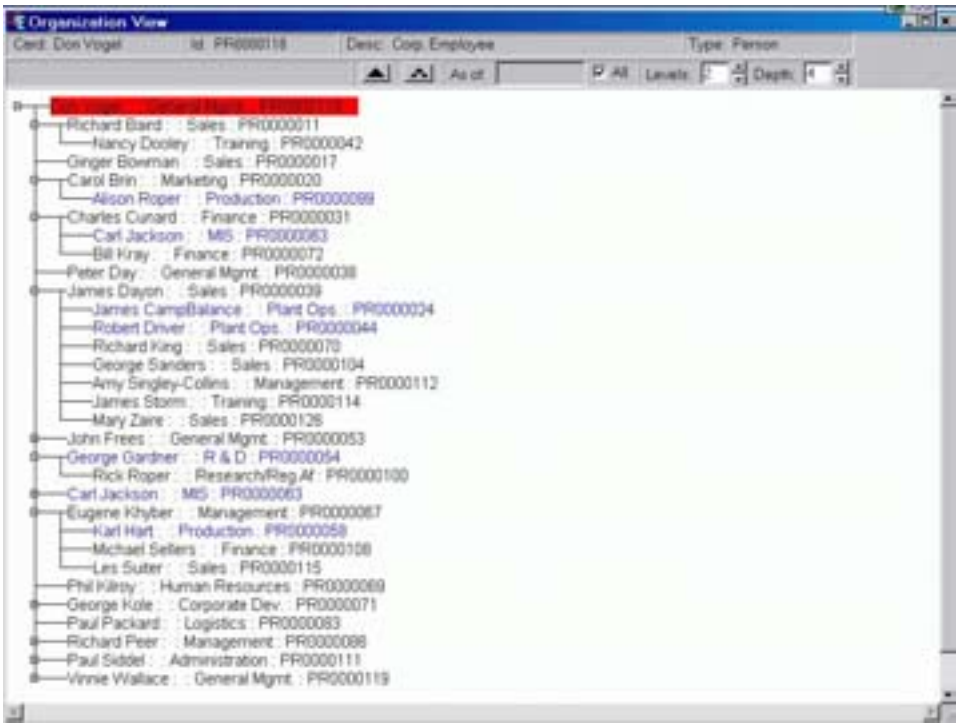


Figure 3-7: 2D (outline) tree display

- The 3D (tree) display (figure 3-8, page 45) is a three-dimensional model which you can rotate, tilt, and zoom to get any desired perspective on the data.

Each *card* in the 3D display, and each line in the 2D outline display, represents a single record in the database. You can toggle the display between 2D and 3D views, to take advantage of the most useful features of each view, by choosing *2D* or *Outline* from the *View* menu or the right-click menu.

The status line at the top of the *Tree View* window shows the name of each record as you point to it (3D view) or select it (2D). For any selected record, you can do either of the following:

- *Double-click* to open the record and see full details on it.

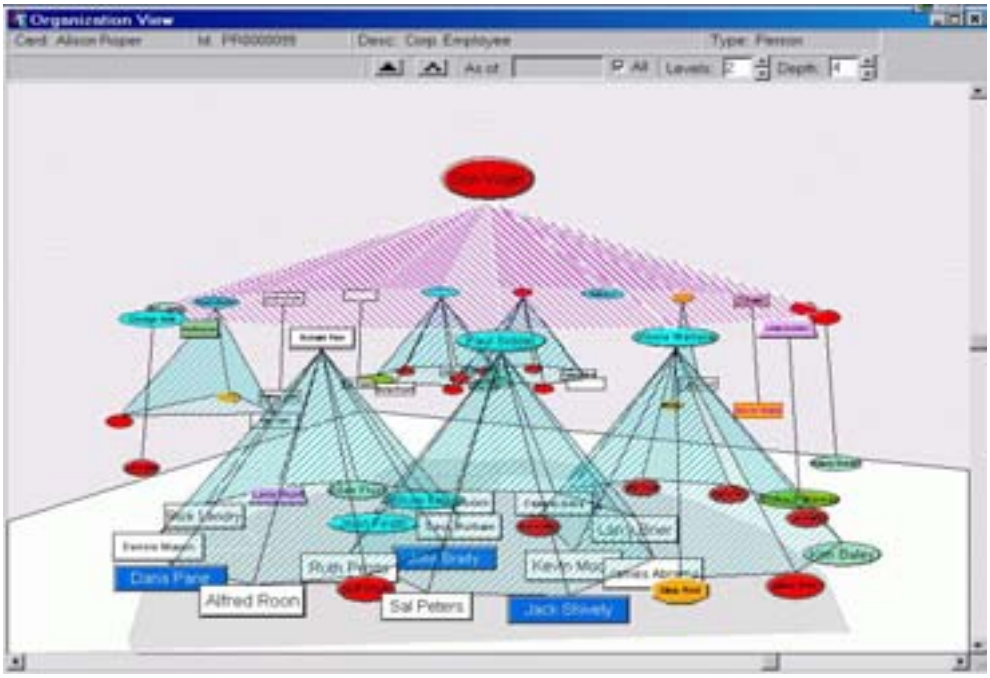


Figure 3-8: 3D tree display

- Click **Explode Down** or **Explode Up** again to redraw the display starting from that node.

Tree designs

Each card or outline item normally displays the name of the database record it represents. However, EnCompass administrators can create any number of alternative *tree designs.* A tree design is constructed from a set of *tree views,* each of which defines which data fields EnCompass will display for a given type of data—person, organization, data collection, and so on.

For example, the "standard view" shows the following data fields for person and organization records:

	2D	3D
Person	ID, Name, Label	Name
Organization	ID, Label, Name, Phone, Web address	Name

If needed, you could create an alternate design that shows the following fields instead:

	2D	3D
Person	Title, Name, Department	Title
Organization	Name, Label, Type	Name

Tree designs appear on the *View* menu in the *Tree View* window. To apply an alternate tree design, select it from the *View* menu, then click the **Redo current query** button at the top of the *Tree View* window to redraw the tree.

For details on creating tree views and tree designs, see chapter 10 and the EnCompass online help.

Status bar

When you select an item in either the 3D or outline display, the status bar at the top of the *Tree View* window immediately shows the following information about that record:

- *Card:* (Determined by the *Card* field in the corresponding tree view design)
- *Id:* The record's unique EnCompass system ID number
- *Desc.:* (Determined by the *Description* field in the corresponding tree view design)
- *Type:* The kind of data the record represents—i.e., the database table it resides in

Changing the date and depth

When you "explode down all" on a data record, EnCompass can search the structure to a depth of 20 levels. In order to save time and simplify the display, you may want to restrict your query to a smaller number of levels. To limit the search to any desired depth, use the Levels control at the top of the *Tree View* window to select the number of levels you want to view, then click the **Redo current query** button.

EnCompass remembers the value you enter here and uses it as the default for subsequent "explode down all" queries.

To see the state of database connections as they existed at a particular date in the past, clear the *All* check box at the top of the *Tree View* window and enter the date in the *As of:* field.

The *Depth* control (next to the *Level* control) works in conjunction with the "View nodes centric to a node" data-collection link control (see page 52).

Recent views list

When you explode a record, EnCompass remembers the starting point and the date settings you specified, and whether the view was up/down one or up/down all. (For up/down all views, it does *not* remember the number of levels.) You can see a list of the most recent views at the bottom of the *File* menu. To reload any of these views, click the item on the menu (or press its associated number key on the keyboard).

To remove all entries from the recent views list, choose *Clear List* from the *File* menu.

Building the structure

Of course, database structure doesn't happen by itself. Any time you create a new record, you should be sure to create the appropriate connections between it and the existing structure. (This is especially important for the *Organization, Person, Location,* and *Folder* tables.) Records that are not connected to any others are **orphans;** you can locate them by using the *Search … Orphans* choice on the menu in each table. As the relationships between people and organizations change over time, you can easily make whatever changes are needed to maintain the structure and keep it up to date. For complete details on creating and maintaining database connections, see the online help topic "Managing database connections."

Building a database structure is a necessary part of the process of setting up a project. For details, see *Building Database Structure, page 74*.

DATA DISPLAY CONTROLS

The graphical data display window is at the heart of EnCompass. The 3D and 2D tree displays let you visualize the connections among records in the database, and the 3D organization view and issue view are also the basis on which you overlay the results of data-collection analyses (see *Displaying the organization view,* page 85, *Displaying the issue view,* page 108).

In both the 3D and 2D views, EnCompass provides tools for manipulating the display in order to see the exact records and relationships you are looking for, and also to

tailor the appearance of every item in the display to your specifications. The display tools appear on the tool bar when the *Tree View* window is active (figure 3-9).

Figure 3-9: Data display tools

Showing and hiding data links

These top-level controls determine which sets of links appear in the display, and the direction and depth of exploded views.

Show data-collection links

Shows or hides data-collection links, after you load an analysis. Turning this control on activates the data-collection link controls.

Show hierarchy

Shows or hides the organizational hierarchy structure. (Keyboard shortcut: Ctrl-L)

Explode down/Explode down all

Shows how a record is connected with those one or more levels below it.

Explode up/Explode up all

Shows how a record is connected with those one or more levels above it.

Showing and hiding data objects

When you explode a record, EnCompass displays the record and all those it is connected with in the database, in either a 2D outline or a 3D tree display, in which each record is represented as an individual **card,** and links between records appear as solid lines. The exact appearance of outline items, cards, and links (size, color, etc.) is controlled by settings on the *Options* menu.

In the 3D display, EnCompass adds a shaded pattern to the space that is shared by all the records that are one level apart. Each level thus appears as an umbrella-like **cone,** and multilevel structures are visible as nested sets of cones, making it easier to visualize the structure in a three-dimensional tree diagram which you can rotate, tilt, and view from any angle.

In a complex data structure, the display can be full of detail and difficult to read. EnCompass provides a number of functions to collapse or hide parts of the structure temporarily and make it easier to see the elements you need to view. To use these

tools in the 3D display, select a cone by clicking one of the shaded umbrella lines, or the card that is at the vertex (top or bottom) of the cone, and then click one of the following buttons on the tool bar:

Close all

Collapses the selected cone to take up less space.

Open all

Reopens a collapsed cone to show all the cards.

Simplify

Hides all objects except the selected cone.

Complicate

Restores the objects that were removed by using the **Simplify** control.

Detach cone

Removes the selected cone from the display completely. (This does not remove any connections from the database.)

Attach cone

Restores the previously detached cone to the display.

NOTE: If you detach one cone and then detach another, the *Attach cone* function will restore only the second. The only way to reattach the first cone is to redraw the entire display with the “Redo current query” button.

TIP: Remember that the 2D outline display and the 3D tree display work together. The **Close/Open** and **Simplify/Complicate** tools work on the 2D display as well, and the actions you take in one view will affect the display in the other. For example, if you collapse a node in the 2D view and then switch to the 3D view, you’ll find that the corresponding cone is displayed in a collapsed state. Similarly, if you simplify a 3D view to display only a single cone, only the set of nodes belonging to that cone will appear in the 2D outline.

Zooming, rotating, and navigating

So that you can view the data structure from any angle or distance, EnCompass provides tools for navigating around the display.

Controls on the tool bar:

Zoom In/Zoom Out

Move your vantage point closer to or farther away from the structure. The zoom in and out step increments are set in the *Display Settings* dialog.

Go to home setting

Moves your vantage point back to the initial home view. The home view is defined in the *Set Home View* dialog.

Make a U turn

Returns to the previous vantage point.

Rotate space to card

Rotates the entire structure so that the selected card or cone is in front, keeping the same distance and elevation.

Position view to card

Rotates the entire structure so that the selected card or cone is in front, changing the distance and elevation as necessary.

Rotate cone to card

Rotates only the cone in which the selected card or cone is located so that the item is in front, leaving all other objects in place.

Rotate cone counterclockwise/Rotate cone clockwise

Rotates the selected cone counterclockwise or clockwise by 36 degrees. (Click a cone to select it.)

Other controls:

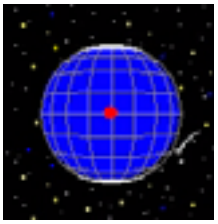
Scroll bars

The scroll bars at the bottom and right-hand side of the *Tree View* window provide fine control over the vantage point. The horizontal scroll bar rotates the entire structure around the vertical axis. The vertical scroll bar controls the vantage point's elevation. Move the slider up to view the structure from more overhead, and down to view from a lower angle.

If the scroll bars are not visible, you can display them by choosing *Scrollbars* from the *View* menu.

TIP: When you move the vantage point below the center line (to view the structure from beneath), the table plane may obscure your view. To remove it, open the *Environment Colors* dialog, select the **Table** option button, and set *Pattern* to "None."

Orbit



The *Orbit* tool lets you move your viewpoint on the 3D data structure quickly to any desired angle. To display it, choose *Orbit* from the *View* menu.

To change your view of the structure, drag the red satellite dot to any position over the globe. To move to a position behind the globe, press the Ctrl key before releasing the mouse button. The dot turns yellow, and the vantage point moves to the rear of the globe.

To enlarge or move the orbit tool, double-click it. The tool display changes to a standard window that you can resize or reposition as necessary.

Sextant

The sextant provides a precise readout of your viewing angle and distance. it's especially useful in conjunction with the orbit tool, for returning quickly to a specific viewpoint. To display the sextant, choose *Sextant* from the *View* menu.

The *Latitude* and *Longitude* figures indicate your vantage point's distance above or below and to the left or right of the center position, respectively. The *Eye is at* figure shows the altitude of your viewpoint above the surface, as controlled by the **Zoom In/Zoom Out** buttons on the tool bar.

Data-collection link controls

When you use the tree view to display the results of an EnCompass analysis, two groups of controls determine the appearance of individual cards and the links between them. In addition, the *Show* menu provides options for displaying off-page links and lists of related data-collection records.

Displaying connected and unconnected nodes

These controls determine which sets of individual cards appear in the analysis display.

View isolated nodes

Displays only those individuals who have *no* interactions matching the agreement parameters for the current analysis. Nodes that have any valid connections are removed from the display. This tool is a useful way to identify resources (people, departments, etc.) that are not well integrated into the organizational structure. (Keyboard access *Show : Nodes : Isolated*)

View selected nodes

Shows the cards that are selected. This feature is useful for isolating and displaying the closeness path between two nodes. (Keyboard access *Show : Nodes : Selected*)

View connected nodes

Displays only those individuals who have valid interactions matching the agreement parameters for the current analysis. Nodes that have no connections are removed from the display. (Keyboard access *Show : Nodes : Linked*)

View all nodes

Shows all individuals whose names appear in data-collection records for the current project, whether they have links to other individuals or not. (Keyboard access *Show : Nodes : Either*)

Showing connections from a specific node

When you select any individual card in the display, these controls determine what links from it to other cards are visible. To select a card, move the mouse over the card until the legend at the top left of the *Tree View* window shows the correct name, then click once. (If the card you want is not readily visible, use the *Search Item* dialog to locate it; see *Finding a card,* page 53.)

View nodes in network

Shows all of a card's links to the network currently displayed. Use this to view a person's extended sphere of influence. (Keyboard access *Show : Network : Node Network*)

Clicking this button again returns to the “view network” mode.

View nodes centric to a node

Shows the direct links from the selected card. Use this to see an individual's immediate sphere of influence. (Keyboard access *Show : Network : Node Centric*)

To view links from a different node, click this button again to return to “view network” mode, then select the new card you want to focus on and click this button again.

Remember to set the link depth to a high enough value to include all the links you want to see. To change the node-centric depth, choose a new value with the *Depth* control, then click this button twice to redraw the display.

View network

Shows the entire network of links among all cards on the display. (Keyboard access *Show : Network : All*)

NOTE: Remember that EnCompass displays links based on the specific analysis you have loaded. A person may have interactions that don’t appear on the display because they are not relevant to the issues selected for the current analysis. To see the full set of interaction links, create or load an analysis that includes *all issues.*

Off-page links

In the tree display, you always have the option of choosing the number of hierarchy levels you want to display. Limiting the depth of the view will simplify the display and make it easier to navigate. However, links to cards at lower levels will appear to be dead ends, because those cards don’t appear anywhere on the screen. Normally, EnCompass doesn’t show these dead-end links. If you want to see them, check *Offpage Links* on the *Show* menu.

FINDING A CARD

In a large or complex 2D or 3D tree display, it may be difficult to locate a specific card simply by a visual scan. In this case, you can locate a card quickly by using the *Search Item* function.

To find a card in the tree display:

1. From the *Edit* menu, choose *Search Item* (keyboard shortcut: Ctrl-F).
2. In the *Search Item* dialog (figure 3-10), enter values in the *Card, Description,* or *Outline Text* fields to specify the card you want to find.

   Figure 3-10: *Search Item*

   The *"="* option button searches for exact text. The *"Like"* option looks for any card containing the string you enter, and accepts the % wild card. All searches are case-insensitive.
3. Click **Search.**

EnCompass automatically selects the first card it finds that matches your search text. To look for another matching card, choose *Search Next Item* from the *Edit* menu (Ctrl-N).

SHOWING DUPLICATE NODES

The *Show Duplicate Nodes* function lets you isolate quickly any objects that appear more than once in the tree display.

To view duplicate nodes in the tree:

1. Display a data structure in the 2D outline or 3D tree view. To find duplicates in a multi-issue tree, explode down on a master or meta issue.

   When you want to make a list of duplicate names, it's easier to view it in the 2D outline view.
2. From the *Show* menu, choose *Duplicate Nodes.* EnCompass highlights all objects that appear more than once.
3. On the main tool bar, click **View selected nodes.**

The "show duplicates" feature is especially useful when examining multiple-issue analyses, where it's often important to verify that related issues are well integrated. For example, the same decision-makers may need to be involved in both product design and cost planning. Conversely, in other cases it may be advisable to ensure that the same individuals do not play a role in areas that should remain separate, such as corporate auditing and investment management.

CUSTOMIZING DISPLAY SETTINGS

The following settings, available through the *Options* menu, apply to the display on the local workstation; they don't affect other users. In most cases, you can change these settings for a single session, or save them for future sessions.

Other display settings are global and apply to all users. Normally, the project designer defines these settings when setting up each project.

As Of options

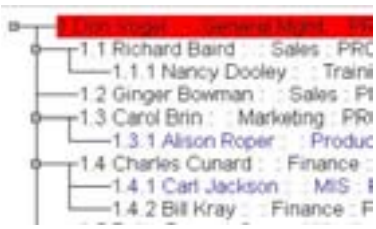
When exploding a record, EnCompass normally searches the database for all connections that existed at any date. To limit all your searches to only those database connections which existed as of a particular date, choose *As Of* from the *Options* menu. On the *Date* panel, select the *As Of* option and enter a date in the adjoining box.

Dialog field colors

This feature is only for use in product development. It is not functional in normal use.

Display codes (2D view)

In the 2D outline view, EnCompass can display a sequential number for each record, indicating its position in the current structure; e.g. 1.1.1, 1.1.2, and so on for records at the third level. To show these numbers, check *Display Codes* on the *Options* menu.



Display settings (3D view)

The *Display Settings* dialog (figure 3-11) controls basic size and zoom-factor settings for the 3D graphic display.

To open the *Display Settings* dialog, choose *Display Settings* from the *Options* menu.

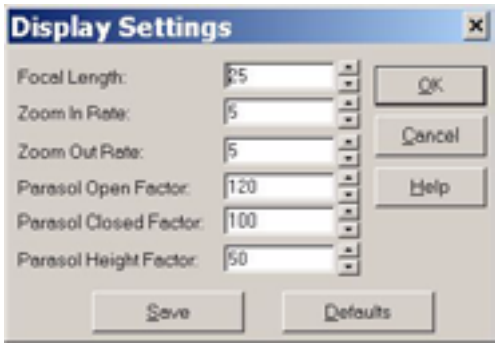


Figure 3-11: *Display Settings* dialog

- *Focal Length:* focal length of a lens viewing the structure. Lower values are wide-angle views; higher values are longer, "telephoto" views.
- *Zoom In Rate/Zoom Out Rate:* rate at which the Zoom In and Zoom Out tools move closer to or further away from the structure
- *Parasol Open Factor/Parasol Closed Factor:* width of a hierarchy cone when opened and closed (relative to the default values)
- *Parasol Height Factor:* displayed height of a hierarchy cone (relative to the default value)

To return the display settings to the system defaults, click **Defaults.**

To use the new settings only for the current session, click **OK.** To save the new settings for all future sessions, click **Save.** Changes you make to the display settings apply only to the local workstation; they don't affect other users.

Tree View Environment (2D view)

The *Tree View Environment* dialog (figure 3-12, page 56) lets you set the background color for the 2D tree display. It also contains the **Font** button, for changing the font that appears on items in the 2D tree display.

Figure 3-12: *Tree View Environment* dialog

To display the *Tree View Environment* dialog, choose *Environment Color* from the *Options* menu.

To choose a background color, make a selection from the *Color of Background* chart. The *Outline Sample* box shows what the display will look like with your current color and font settings. (To change the font, click **Font** and make your selections in the Environment Font dialog.) Click **Apply** to apply the changes to the display.

To restore the system defaults for color and font, click **Default.** To save the current settings so that they will be used for future sessions, click **Save.**

Environment colors (3D view)

The *Environment Colors* dialog (figure 3-13) lets you customize the appearance of various elements in the 3D view, such as the background, the connecting lines and covering surfaces of cones, and the horizontal plane.

To display the *Environment Colors* dialog, choose *Environment Colors* from the *Options* menu.

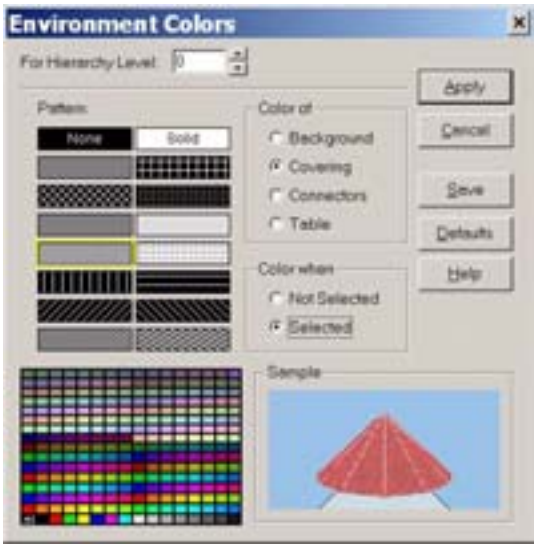


Figure 3-13: *Environment Colors* dialog

To change the background color:

1. In the *Color of* box, select *Background.*
2. Click a color in the chart to select it. The *Sample* box shows how your selection will look.

   For presentation purposes, you may want to select a white background.

To change the appearance of connecting lines

1. In the *For Hierarchy Level* field, select the number of the hierarchy level you want to customize. “0” controls the top-level cone.
2. In the *Color of* box, select **Connectors.**
3. In the *Color when* box, choose **Selected** to set colors for links at this level when they are selected; choose **Not Selected** to set colors for links when they are not selected.
4. Click a color in the chart to select it. The *Sample* box shows how your selection will look.

To change the cone covering

1. In the *For Hierarchy Level* field, select the number of the hierarchy level you want to customize. “0” controls the top-level cone.
2. In the *Color of* box, select **Covering.**
3. In the *Color when* box, choose **Selected** to set the appearance of cones at this level when they are selected; choose **Not Selected** to set the appearance of cones that are not selected.

4. In the *Pattern* box, choose a pattern (texture) for the cone surfaces at this level. To make the cones transparent, click “None.”

5. Click a color in the color chart. The *Sample* box shows how your selection will look.

To change the horizontal table

1. In the *Color of* box, select *Table.*

2. In the *Pattern* box, select a pattern (texture). To make the table transparent, click “None.”

3. Click a color in the chart to select it. The *Sample* box shows how your selection will look.

   When choosing a *pattern* for the covering and horizontal table, note that some of the patterns are transparent, so that the objects are visible through them, whereas others are opaque and block your view of any objects behind them.

Applying and saving your settings:

To apply your settings to the current session only, click **Apply.** To save them for all your future sessions, click **Save.** To restore all the system default settings, click **Defaults.**

Environment font

The *Environment Font* dialog (figure 3-14) lets you choose the font, size, and style of the lettering on individual items in the tree display—cards in the 3D display, and line items in the outline display.

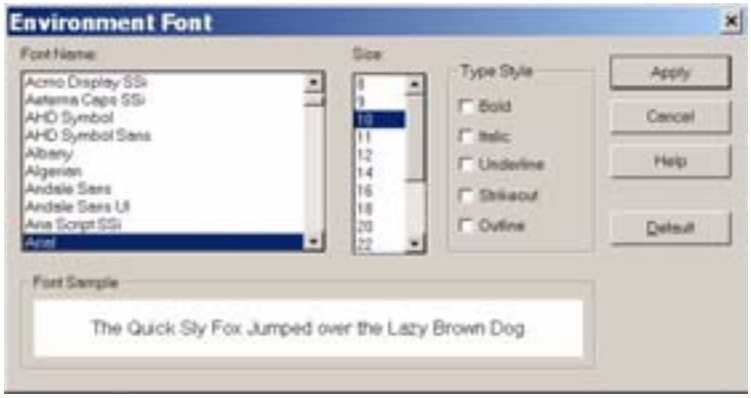


Figure 3-14: *Environment Font* dialog

To display the *Environment Font* dialog:

- From the 3D view, choose *Environment Font* from the *Options* menu.
- From the 2D view, choose *Environment Color* from the *Options* menu, then in the *Tree View Environment* dialog, click **Font.**

To use the *Environment Font* dialog, select values for *Font Name, Size,* and *Type Style.* The *Font Sample* box shows how your choice will appear on the screen. To restore the system default values, click **Default.**

Click **Apply** to apply your settings to the current display.

To save the setting so it applies to future sessions:

- For the 3D view, click **Save.**
- For the 2D view, click **Apply,** then click **Save** in the *Tree View Environment* dialog.

Indent (2D view)

Normally, in the 2D outline view, EnCompass indicates each new hierarchy level by indenting the line. To remove the indenting and make all lines start at the same point, clear the *Indent* option on the *Options* menu.

Set home view (3D view)

The *Set Home View* dialog (figure 3-15, page 59) determines your initial vantage point on the 3D data structure when you first display the tree view. You can use the **Home** button on the tool bar to return to this viewpoint at any time.

To display the *Set Home View* dialog, choose *Home* from the *Options* menu.

- *Latitude* controls the observer's angle above or below the equator, in degrees.
- *Longitude* determines the position around the globe.
- *Home Eye Point* gives the observer's distance from the globe, as a percentage of the default value.

Figure 3-15: *Set Home View* dialog

To make the home values equal to those currently active in the display, click **Current.** To return the home values to the system defaults, click **Defaults.**

To use the new home values only for the current session, click **OK.** To save the new values for all future sessions, click **Save.** Changes you make to the home settings apply only to the local workstation; they don't affect other users.

Size cards (3D view)

The standard size for cards in the 3D display is set by the Object Design specifications for each project. You can enlarge cards to see the text on them more easily, or reduce them to get a clearer view of the connecting links.

To enlarge or reduce cards from the default size, choose *Size Cards* from the *Options* menu and choose a percentage value from the list. This value remains in effect for all 3D views until you change it.

10 ENCOMPASS ADMINISTRATION

In addition to the commonly used basic program features and the search and data-entry functions available through the individual database tables, there are a number of administrative tasks which EnCompass users occasionally need to perform. Access to most of these activities is restricted to users with Administrator or Operator privileges.

ADDING A NEW USER

Every person who will log in to EnCompass must have an entry in the User table of the database, which contains the user name, password, user type, and other access options. You may add a new EnCompass user at any time. However, note that because every user record must be connected with a record in the Person table, you must first make sure that the person record exists before creating a new user.

To add a new user:

1. Search the *Person* table for the person you want to add as an EnCompass user. If the person is not listed, create a new record for him or her in the *Person* table. When finished, click **Save** and **Close,** but don't close the *Person List* window yet.
2. Open the *User Profile* list by running a database query on the *User Profile* table. Since the purpose of this query is only to open the list window, you may stop it at any time (or search on the name of a nonexistent user like "x").
3. Right-click anywhere in the *User Profile* list, then choose *Create New Record* from the popup menu (or choose *Create New Record* from the *Edit* menu).
4. In the **General** tab of the *User Profile–Data Entry* dialog, enter the appropriate information in the data fields. For help on filling in a field, select the field and press F1.

NOTE: It's especially important to make sure that the "initial password" information is correctly entered in the *Description* field. If this is not done, the database will fail to recognize the user.

5. Click the *Person* tab. In the *Person* list, select the person record for your new user. Press and hold the right mouse button, drag the person record to the *User Profile–Data Entry* dialog, and drop it there. EnCompass fills in the data fields with information from the *Person* record, and creates the appropriate database connections.

6. Click **Save** and **Close** to finish creating the new user record.

When you create a new user account, it's always a good idea to log on using the new user's ID and password, to ensure that the record was created correctly. Then send an email to the new user informing him or her of the creation of the new account and the password.

CREATING A NEW GLOBAL SELECTION

Global selections are the records that determine what choices appear on drop-down lists in data-entry and search dialogs throughout EnCompass. (These are system-wide choices, such as organization types or project types. Settings which change from project to project are set in the *Project Selections* table.) Once the choices for a given dialog field are set up, there is generally little reason to change them. However, you can create new items when needed.

To create a new global selection:

1. Search the *Global Selection* table for any or all existing selection types.

2. In the *Global Selection List,* click the **New Record** button on the tool bar (or choose *Create New Record* from the *Edit* menu or the right-click menu).

3. In the *Global Selection Data Entry* dialog, fill in the data fields with information to identify the selection item.

4. When finished, click **Save** and **Close.**

For a list of the global selections that are available, see the Reference and Lists section of the EnCompass online help.

For information on other administrative tasks—for example, testing database and server connections—see the topic EnCompass administration in the EnCompass online help.

CREATING VIEW DESIGNS

Views define what data fields EnCompass will include when displaying database records in either a *data list* or the 2D or 3D *tree display.* There are two kinds of view:

- **List views** apply to data list windows. They determine which database fields appear in the columns, as well as the column header names, default sort order, and grouping properties. List views appear on the *View* menu of a data list.
- **Tree views** are the building blocks of the *tree designs* which are available in the graphical tree display. For each type of data (person, organization, etc.), a tree view can control which fields appear on the cards in the 3D display, in the columns of the 2D (outline) display, and in the status line in both display types.

Views are stored as records in the *View* table, and EnCompass administrators create them using the *View Design Data Entry* dialog box.

To create a new view:

1. Search the View table for views of the type you intend to create: *List* or *Tree.*
2. In the *View* list, click the **New Record** button on the tool bar (or choose *Create New Record* from the *Edit* menu or the right-click menu).
3. On the **General** tab of the *View Design Data Entry* dialog, fill in the data fields with information to identify the view.

   To copy an existing view, use the right mouse button to drag an entry from the *View Design* list.
4. On the **Column Layout** tab, select the columns you want to appear in this view. To add a column, select an entry in the *Available Fields* panel and click **Add.** Repeat until all the fields you want appear in the *Column Assignments* panel.

   For details on the other fields on this tab, consult the context-sensitive help for each field (Shift-F1).
5. If you are creating a list view, go to step 7. If you are creating a tree view, click the **Tree View** tab. Select which database fields you want to appear in the *Card* and *Description* fields in the tree display.
6. If you want this tree view to include a specific object design for data from this table, select the field that the *Object Design* table should refer to in the *Design*

Column field. For each card, EnCompass compares the data in the field you specify here with that in the *Label* field of the *Object Design* table. If the values match, EnCompass uses the specified card design to display the card.

Example

For the *Person* table, the tree view called "Division" specifies the *Division* field as the "column used for design type." If we turn to the "Sample DB" project and examine the person records for J. Ball (president) and D. Vogel (COO), for instance, we see that both of them are in the "Executive" division. If we now look at the *Object Design List,* we see that for entries with the label "Executive," it specifies a fat oval with a red background. Therefore, any layout that uses the "Person – Division" tree view will draw the cards for J. Ball and D. Vogel with that design.

By contrast, any layout that uses the "Person – Standard" tree view will apply no special design to the cards for J. Ball or D. Vogel, because that view specifies the *Corptitle* field as the "column used for design type," and the *Object Design List* contains no entry for "President" or "COO."

7. When finished, click **Save** and **Close.**
8. From the *Administer* menu, choose *Setup : Clear Cache….*

If you created a list view, the new view should now appear on the *View* menu in the data list window. If it's a tree view, the new view should now appear in the *Available Views* list in the *Tree Design Data Entry* dialog.

CREATING TREE DESIGNS

Tree designs let you customize the appearance of the graphical ***tree display*** in EnCompass. A tree design consists of a set of ***tree views,*** which determine what data fields appear in the display for each type of data (person, organization, etc.). By picking and choosing from among the available tree views, you can build a tree design that shows exactly the information you want to see for each data type. The available tree designs appear on the *View* menu in the 2D and 3D tree displays.

To create a new tree design:

1. Search the *Tree Design* table for any or all existing tree designs.
2. In the *Tree Design* list, click the **New Record** button on the tool bar (or choose *Create New Record* from the *Edit* menu or the right-click menu).

3. In the *Tree Design Data Entry* dialog, fill in the data fields with information to identify the design.

   To copy an existing design, use the right mouse button to drag an entry from the *Tree Design* list. For detailed information on any field, consult the context-sensitive help (Shift-F1).

4. When finished, click **Save** and **Close.**

BACKING UP THE REGISTRY

Occasionally, after an abnormal program exit, some EnCompass functions that require access to the database may stop working properly. Often this problem is caused by a corruption of entries in the user's local Windows registry, and in this case the easiest way to restore normal function is to overwrite the corrupted registry key with a previously saved backup.

To save a backup copy of the EnCompass registry key:

1. From the Windows Start menu, choose *Run.*
2. In the *Run* dialog, type "regedit," then click **OK.**
3. Locate and select the key named "HKEY_CURRENT_USER\Software\Parasol\Encompass."
4. From the *Registry* menu, choose *Export Registry File.*
5. In the *Export Registry File* dialog box, choose the location and file name for the saved backup and click **Save.** Windows saves the file with the extension .REG.

To restore the saved registry key:

1. Use Windows Explorer to locate the .REG file you saved.
2. Right-click the file name and choose *Merge* from the pop-up menu.

GLOSSARY

activity

A defined task assigned to personnel in an activity-based management system.

analysis

The output stage of the EnCompass process. Each analysis query displays the interaction patterns of a particular set of study participants, reflecting a specific combination of *issues, attributes,* and agreement criteria.

as-is

A set of data-collection records which reflect the current state of affairs within an organization. Contrasts with *Should-be,* a type of data-collection record that records the ideal situation.

attribute

A characteristic of a person or an organization that is likely to have an influence on interactions between people, for example “salary grade,” “company tenure,” or “number of employees.”

card

The representation of a database object in the 3D tree display. Card shapes, colors, and sizes are determined by settings in the *Object Design* table.

child

A record that comes below another record in the database structure hierarchy. A record may have one or more children.

concurrent

Occurring while both parties to an interaction are available and participate at the same time through a direct medium of communication, as in face-to-face discussions, meetings, telephone conversations, or video conference.

confirmed link

A data-collection link that is reported by survey respondents on both sides: A interacts with B, and B interacts with A. The two respondents may report different values for frequency, importance, and impact.

criteria

Defines a database query that will select data-collection records for an analysis. For each of the issues in a project, it specifies a range within which the interaction values reported by the *From* person and the *To* person must match, in order for the data-collection record to be included in the analysis.

data collection

The records of all the individual interactions between members of an organization in an EnCompass study, as gathered by the study's survey questionnaire.

data collection instrument

A survey form, either on paper or web-based, through which each study participant reports the *frequency, importance,* and *impact* of his or her interactions with other organization members.

database

A method of storing data in a computer in an organized, logically connected fashion. Information in a database is organized in *tables, records,* and *fields.*

duration

The average length of a person's typical interaction with another person regarding a specific issue.

effectivity date

The date when a connection in the data structure is visible in the display. A connection that is *in-effective* appears in the tree display, with its connected records. A connection marked *out-effective* for a given date disappears when the display is set for that date or after.

emergent structure

A structure that is based not on the formal organizational hierarchy, but rather on the importance that individual members assign to each other. Emergence can reveal who are the truly active figures in an organization, against a scale of real impact on specific issues, and irrespective of corporate seniority.

field

A single distinct element of a record in a *database,* consisting of a single piece of information of a specific type.

filter

[under construction]

folder

A container element that serves to organize database records.

frequency

A measure of how often one person interacts with another.

global selection

Determines the *system-wide* choices that appear in drop-down lists in EnCompass dialogs, such as organization types and project types, subtypes, and statuses.

impact

A measure of how great an effect a person's interaction with others has on the individual issues defined for a project.

importance

A study participant's perception of how important an interaction is to successfully completing his or her work tasks.

issue

One of the matters of central concern and importance for the purposes of an organizational analysis. Issues typically involve business processes such as “market planning” or “customer communication.”

issue view

A view of EnCompass study data in which the network of individual interactions appears against an emergent structure based on each individual's importance to a specific issue.

job

An automated task that EnCompass performs. This includes events that occur at regular intervals, such as time announcements, as well as database-record updates which are waiting for processor time to become available.

link design

The color and width settings used to display data-collection links in the 3D tree display.

list view

A database record that determines which database fields appear in the columns of a *data list.* The available views appear on the *View* menu for each table.

nomination

The number of survey respondents who must assign a given impact value to their interactions with a person on an issue for that person to rise to a given level in the emergent structure. For example, if the nomination level in an analysis is set to 10, person B will be promoted to level 5 if and only if at least 10 other people assign an impact value of 5 to their interactions with person B. People who fail to receive the specified number of nominations at any level appear at level 0. The number of required nominations is set in the emergence analysis definition.

nonconcurrent

Occurring when two parties to an interaction do not participate simultaneously and the interaction involves an indirect medium of communication, such as paper documents, faxes, or email.

object design

Specifications for the color, size, shape, and font of objects displayed in the *Tree View* window.

organization view

A view of EnCompass study data in which the network of individual interactions appears against the organization's formal reporting structure.

parent

A record that comes above others in the database structure. Any record can have only one parent.

program

An administrative unit to which individual activities are assigned in an activity-based management project.

project

The large-scale unit of organization for work in EnCompass, typically involving the analysis of interactions among members of a single company or other organization.

project selection

Defines the values that data fields can have within a project—the choices that appear in the drop-down lists for many fields in the *Attribute, Person*, *Organization,* and other data-entry dialog boxes.

real-time server

The computer that handles EnCompass system events, including user logins, records created or changed, and messages sent between users. Real-time event messages appear in the *Real-Time Messaging List*.

record

A collection of data or words treated as a unit in a ***database.*** The individual elements of data in each record are stored in ***fields,*** and the records in turn are organized in ***tables.***

revision history

A list of the revision records that are attatched to a database record. A revision record is added each time a change is made to a record's connections to other records in the database, and includes the effective date, change-order number, revision level, and other revision-tracking data.

revision record

A database record containing detailed information on changes to a single database object. Revision records are listed in the *revision history* for each object.

should-be

A set of data-collection records which reflect an organization's ideal structure. Contrasts with *As-is,* a type of data-collection record that records the current state of affairs.

sibling

A record that is at the same level as another record in the database structure. Sibling records share the same *parent,* but cannot share any of the same *children.*

table

The portion of a *database* that contains a specific type of data. Tables contain *records,* which in turn hold specific elements or *fields.* You can search database tables in EnCompass by using the *Search* shortcut icons on the vertical tool bar at the left of the screen.

timeslice

In an activity-based management (ABM) project , the percentage of time that an individual spends on a given activity.

tree design

A database record that defines which data fields will appear in the EnCompass graphical 2D or 3D *tree display.* A tree design consists of a collection of *tree view* definitions, one for each data type.

tree display

The two- or three-dimensional display of the hierarchical relationships between objects in the EnCompass database. Includes both the *Organization view* and the *Issue view*.

tree view

A database record that determines which database fields appear in the 2D and 3D *tree displays* of records from a given table. A collection of tree views for all tables makes up a *tree design.*

user

A person who is authorized to log in to the EnCompass system. Information on EnCompass users appears in the *User Profile* table.

wild card

A character that substitutes for and allows a match with any character or set of characters in its place. Many software programs use symbols such as * and ? as wild cards. EnCompass uses % and _.

APPENDIX A: ENCOMPASS DATABASE TABLES

The EnCompass database contains the following tables. NOTE: Not all tables are visible to all EnCompass user types.

Activity

Activity records contain the names of individual tasks assigned to people in an activity-based management (ABM) project.

Analysis

Stores analysis definitions, which are built up from stored queries in the *Criteria, Data Collection, Person,* and *Organization* tables. Each analysis query displays the interaction patterns of a particular set of study participants, reflecting a specific combination of issues, attributes, and agreement criteria.

Attribute

The list of personal and organizational attributes for each project. Attributes are characteristics of people or organizations that are likely to have an influence on interactions between people, for example “salary level,” “company tenure,” or “number of employees.” The EnCompass analyst can study these effects by using person or organization queries to select for specific attributes.

Criteria

Criteria queries are used in analysis definitions. A criteria query specifies a range within which the interaction values reported by the “From” person and the “To” person must match, in order for the data-collection record to be included in the analysis. Every analysis must include a *Criteria* query.

Data Collection

Records of all the individual interactions between members of an organization in an EnCompass study, as gathered by the study's survey questionnaire. Each data-collection record contains the rankings that a specific person gave to his or her interaction with one other person, in terms of its overall frequency, importance, and impact on each of the issues that the project designer has defined as important.

Document

Documents and forms available to all EnCompass users.

Filter

Not used.

Folder

Folders are container elements which users may add in order to organize connections among database records.

Formula

Table formulas are calculations that EnCompass can perform on numerical fields in database records. Once the EnCompass engineering team creates a formula, it becomes available for use in list views and tree views, so that its results can appear in data lists and tree displays.

Global Selection

Global selections determine the *system-wide* choices that appear in drop-down lists in EnCompass data-entry and search dialogs, such as organization types and project types, subtypes, and statuses.

Issue

Basic identifying information on the defined issues for each project.

Job Schedule

A list of all the automated tasks that EnCompass performs. This includes events that occur at regular intervals, such as time announcements, as well as pending database-record updates awaiting processor time.

Link Design

Color and width settings for the display of data-collection links in the 3D tree display.

Location

A *location* is any place where an organization in the EnCompass system has a business presence. Locations can be as general as world regions (for example, "North America"), or as specific as a street address. The more specific locations contain full address information (street address, postal code, etc.), while more general locations contain only the identifying name and corresponding code.

Message Log

A detailed record of analysis transactions. When you perform an analysis on records in the database, the message log remembers the individual steps it took to complete the analysis.

Object Design

Specifications for the display of objects in the *Tree View* window. For the 2D outline view, object design specifies the font, color, and size of each type of item. For the 3D view, it controls these characteristics as well as the color, shape, and size of cards.

Organization

Information on companies that provide services to EnCompass—consultants, vendors, and the like—or that participate in EnCompass studies.

Person

Names, addresses, and contact information for people who take part in EnCompass activities, either by providing services to EnCompass, or by being participants in an organizational study.

Program

Programs are administrative units to which individual activities are assigned, in the context of an activity-based management project. A program record can be either of two types:

- *Program units* are the specific organizational entities that hold the responsibility for individual work units. Each work unit must be attached to at least one program unit.
- A *program branch* is a container object which provides a structure for the individual program units. Program branches normally consist of higher-level organizational groups, for example [good examples needed].

Together, program units and program branches constitute a *program breakdown structure* for each ABM project: a hierarchy within which each activity for each person finds a place.

Project

Basic identifying and descriptive information on each EnCompass project.

Project Selection

Project selections define the values that data fields can have within a project. In practice, this means that project selections determine what choices will appear in the drop-down lists for many fields in the *Attribute, Person*, *Organization,* and other data-entry dialog boxes.

Real-Time Messaging

Log of events handled by the real-time server. The RTS handles the events that happen in the EnCompass system, including user logins, messages sent between users, and database write events. Whenever a user creates or changes a record, the RTS makes the necessary changes in the database and sends the updated information to the screens of all connected users. The *Real-Time Messaging List* presents a continuous display of these system events.

Software Defect

Information on features and functions of the EnCompass system software which need to be corrected, changed, or added. Members of the engineering team use the *Software Defect* table to communicate with each other about bug fixes and feature changes. EnCompass operators and administrators may view the table to see the status of a bug fix or feature change request.

Timeslice

Timeslice records contain data on the percentage of time that individual persons spend on each of the activities or programs in an activity-based management (ABM) project.

Tree Design

Tree designs define which data fields will appear in the EnCompass graphical 2D or 3D tree display. A tree design consists of a collection of tree view definitions, one for each data type.

User Profile

Login names, passwords, user types, privilege levels, and other information on authorized EnCompass users.

View

Views define what data fields will appear when EnCompass displays a specific data type in a data list or the graphical tree display.

APPENDIX B: LIST OF STANDARD ANALYSES

The following set of basic analyses are to be created for every EnCompass project:

Name	Criteria Query	DC Query	Description
All Very Important (agreed)	Importance 1	All Very Important	Agreed Importance ±1, else ±5 Freq. >0, Imptc. ≥4, All issues >0
All Frequent Important (agreed)	Frequency & Importance 1	All Frequent & Impt.	Agreed Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0
All Frequent Important (disagreed)	"	"	Disagreed Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0
All Frequent Important (either)	"	"	Either Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0
All Freq Impt Concurrent (agreed)	"	All Frequent & Impt., Concurrent	Agreed Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0, Concurrent
All Freq Impt Concurrent (disagreed)	"	"	Disagreed Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0, Concurrent
All Freq Impt Concurrent (either)	"	"	Either Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0, Concurrent
All Freq Impt Nonconcur-rent (agreed)	"	All Frequent & Impt., Nonconcurrent	Agreed Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0, Nonconcurrent

All Freq Impt Nonconcur-rent (disagreed)	"	"	Disagreed Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0, Nonconcurrent
All Freq Impt Nonconcur-rent (either)	"	"	Either Freq. & Imptc. ±1, else ±5 Freq. & Imptc. ≥3, All issues >0, Nonconcurrent
All Unimportant (agreed)	All 5	All Unimportant	Agreed All ±5 Freq. >0, Imptc. ≤2, All issues >0
All Frequent Unimportant (agreed)	"	All Frequent Unimportant	Agreed All ±5 Freq. ≥3, Imptc. £2, All issues >0
Issue1 ≥3 : Frequent Important (agreed)	Issue1 1, Freq. & Imptc. 1	Issue1 ≥3, Frequent Important	Agreed Freq. & Imptc. ±1, Issue1 ±1, else ±5 Freq. & Imptc. ≥3, Issue1 ≥3
Issue1 ≥4 : Important (agreed)	"	Issue1 ≥4, Important	Agreed Freq. & Imptc. ±1, Issue1 ±1, else ±5 Freq. >0, Imptc. ≥3, Issue1 ≥4
Issue1 : Emergence	Issue1 1	Issue1 >0, Important	Agreed Issue1 ±1, else ±5 Freq. >0, Imptc. ≥3, Issue1 >0
(etc. for all issues)			