Today’s software organizations are rapidly moving toward object-oriented programming techniques to develop complex applications. The promised benefits?

- Portable, well-engineered systems, easily maintained and reusable across projects or across development platforms
- Shortened development cycles
- An overall increase in productivity—the ability to deliver more applications in less time, and with less effort

Yet few organizations are really obtaining these benefits. They’re finding that most tools claiming to support object-oriented development often fall short of their claims by providing only “cut and paste” interface builders or generating C++ code at the backend of the process.
TeleUSE Features

- **User Interface Templates with Multilevel Encapsulation** for flexibility and simplicity in reusing objects in other areas

- **Rules-Based, Event-Driven Call-back Script Modules** drastically reduce the amount of time and work required to write callback code in reusable modules

- **“X Windows Smart” Debugging** for rapid and efficient debugging of callback code

- **C++ Class Generation** lets you work smarter by providing full access to GUI components (such as reuse, subclasses, instantiation, etc.)

- **TeleUSE Ada Lightning Integration Package** provides a simple interface to tie TeleUSE-generated GUI components with Ada applications

- **Multi-Platform, Single-Source-Based Development** allows the same GUI application to run on UNIX or Windows 95/NT platforms

- **Generation of Reusable Software Components** means that you can get your job done faster by selecting from a library of GUI objects

Today’s engineers need a comprehensive, full-featured solution that supports an object-oriented approach throughout the entire lifecycle of GUI application development—from concept, through design and development, to the generation of code that truly mirrors an application’s object-oriented design. That solution is TeleUSE, the renowned User Interface Management System (UIMS). It provides all the features tools developers need to interactively design and build fully object-oriented, Motif-based GUIs or HTML documents. You can use TeleUSE to generate C code, UIL or C++ classes that map directly to your designs. And, if you develop Ada 83 or Ada 95 applications, your GUI application can be easily interfaced to Ada via the TeleUSE Ada Lightning Integration Package.

**TeleUSE: Providing World-Class Tools for Complex GUI Applications**

TeleUSE radically reduces the ramp-up time associated with complex application development, helps engineers deliver mission-critical GUIs in a fraction of the time required previously, vastly improves product maintenance and fosters teamwork and widespread reuse. In short, TeleUSE is the solution companies need to help them complete the shift to object-oriented software methodologies—and to fully realize the rewards of this new approach.

The Visual Interactive Presentation (VIP) tool—a powerful palette from which you can create GUI masterpieces.
TeleUSE Features

- **User Interface Templates with Multilevel Encapsulation**

TeleUSE’s Visual Interactive Presentation (VIP) tool allows you to easily design object-oriented widget templates—screen elements, screens or groups of screens that can be reused within or across applications. Developers needing a control panel, for example, can simply use an existing control panel template that inherits the widgets, resource values and methods defined in the template. Templates can be viewed and edited either through the VIP tool or within the outline-oriented tree editor, which displays a template’s components as nodes in a tree hierarchy.

Not only does the system support true inheritance across all instances of a template, but with TeleUSE, a template’s designer can use the object-oriented mechanism of encapsulation or data hiding, to selectively control which information in a template will be revealed to its users. Users can access and change particular template parameters, add certain nodes to a template or directly edit selected nodes—all without seeing any information that is not absolutely necessary to the operation at hand.

The benefits? Encapsulation gives the designer flexibility in providing for a template’s reuse. It shields users from complex or irrelevant information, so they can quickly use even large templates in different application contexts. And features that are integral to the original template design are protected—and maintained through all instances of the template—to enforce changing corporate standards.

- **Rules-Based, Event-Driven Callback Scripts**

One of the most powerful features of TeleUSE is its Dialog Manager, which lets you specify, manage and control the dynamic or dialog code that connects the GUI to the application code. You do so not through painstaking hand-coding of

Effective development, debug, and build facilities speed your GUI creation process.
TeleUSE Features

- **Advanced Application Building**
  automates the build process and allows for customization and third-party tools integration

- **Extensive Widget Libraries**
  provide thousands of resources to help facilitate your every need

- **Internet/Intranet**
  facilities support the composition of HTML pages containing formatted text to make portions of applications accessible from Web browsers

- **Powerful Client/Server Development Tool**
  delivers seamless graphical access to relational databases

You can specify callbacks as member functions. You are, in effect, defining C++ objects that tightly integrate the presentation (data) and dialog (behavior) components of your application.

The results? Quick and easy instantiation and change of widget templates dynamically, at runtime. And, because TeleUSE implements the key components of an application and its interface as C++ classes—using Motif widgets as primitives—one enjoys true tool support for optimal C++/Motif programming technique.

Applications and their components are extremely easy to reuse, and the effort required for product maintenance is reduced dramatically.

- **“X Windows Smart” Debugging**
  TeleUSE’s graphical, interactive Dialog Debugger traces callback code as it is associated with X events, offering a significant advantage over general-purpose C and C++ debuggers. And you can run the Dialog Debugger in concert with the development environments provided by the platform vendors to debug dialog and application code simultaneously.

- **C++ Class Generation**
  TeleUSE generates true C++ classes that are directly mapped to your design, and these classes then create and manage Motif user interface elements. With this capability, TeleUSE’s VIP tool becomes a visual C++ class designer, from which you can specify callbacks as member functions. You are, in effect, defining C++ objects that tightly integrate the presentation (data) and dialog (behavior) components of your application.

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- **TeleUSE Ada Lightning Integration Package**
  The TeleUSE Ada Lightning Integration Package adds support to TeleUSE that allows you to access application code written in the Ada programming language from graphical user interfaces developed using TeleUSE. Full use of the complete TeleUSE system for application development in Ada is provided. Ada compilation systems (such as the Aonix ObjectAda and ObjectAda for Windows products) can be fully integrated with the TeleUSE UI Builder to build applications incorporating Ada application code.
Ada interface packages for GUI components can be generated and instances of such objects can be created from within Ada application code. The TeleUSE Ada Lightning Integration Package supports Ada tasking as well as object-oriented development with Ada 95, while maintaining full support for the Ada 83 language.

**Support for Multi-Platform Deployment**

The TeleUSE family of products offers support for multi-platform deployment to UNIX, Windows and the Web. TeleUSE QuickPort**, which includes TeleUSE for UNIX and TeleUSE/Win,** significantly shortens time normally associated with migration of substantial applications from UNIX to Windows 95/NT. If you previously hand-coded your Motif applications or used other UIMS products, you can use TeleUSE QuickPort to leverage the robust, cross-platform and single-source application development support within TeleUSE. TeleUSE/Win** allows the deployment of applications that fully meet the user’s requirements for a Windows look and feel, and can be maintained and enhanced directly on Windows.

**Advanced Application Building**

The TeleUSE User Interface (UI) Builder offers over 100 options to customize the automated build process, and also provides hooks into third-party tools, such as configuration management systems, debuggers, testing tools and compilers. The UI Builder not only builds fully executable applications but also reusable software components that package visible portions of an interface with their associated behavior. You can create a repository of these components and use them repeatedly as fully operational building blocks for larger applications.

**TeleUSE QuickPort and TeleUSE/Win are both sold separately. For more information, ask for the TeleUSE/Win product overview.**

”With TeleUSE QuickPort, your UNIX/Motif experts can give you Windows 95/NT GUIs virtually overnight!”
Extensive Widget Libraries

Both TeleUSE on UNIX and TeleUSE/Win contain popular Windows Compatibility Widgets, a collection of additional Motif widgets that make it faster and easier to implement a Windows 95-like GUI for all of your cross-platform, business-critical applications. You get the ToolBar, Tab Manager, Tab Button, ComboBox and SpinBox widgets, in addition to a handy Widget Tips utility that enables you to add a pop-up help balloon to any widget in your application. Additionally, users can take advantage of clipboard-style interactions between TeleUSE-created applications and native Windows applications, such as Excel, for instance. Windows users expect these kinds of GUI controls, and they give TeleUSE-created applications a look and feel that is truly like that provided by native Windows applications.

TeleUSE also supports the latest version of the XRT Professional Developer’s Suite (PDS) from KL Group, Inc., the leading Motif widget product in the industry. XRT/PDS, a separately purchased add-on to TeleUSE, is available for cross-platform development and is the easiest way to add powerful 2D/3D graphs, robust data-entry and validation, tables and other intuitive interface elements to your applications.

“Extensive widget libraries supply thousands of valuable resources for your every GUI application need.”
Internet/Intranet Facility—TeleUSE/Mariner

The emergence of the Internet has provided software developers with an additional avenue for deploying applications. Companies must be able to deploy their mission-critical applications for an enterprise on all of the established operating system platforms like Windows and UNIX, as well as make portions of the application’s functionality accessible from Web browsers.

TeleUSE/Mariner, a standard feature of TeleUSE, allows users to deploy their applications on the Internet. This feature includes a specialized palette of widgets for creating user interfaces for deployment on the Web from within the TeleUSE Visual Interactive Programming tool (VIP). TeleUSE/Mariner supports the composition of HTML pages containing formatted text, images and HTML forms that contain input fields such as editable text boxes, checkboxes and radio buttons. Composed HTML pages are displayable either by a Web browser or by the TeleUSE/Mariner HTML Layout Widget. VIP uses this widget for design-time display of composed HTML pages. Common Gateway Interface (CGI) programs and associated server application support libraries that facilitate processing of forms are provided by TeleUSE/Mariner and an administration utility is provided for the installation, configuration and removal of Web-based application interfaces created within a “live” website. It can also monitor the status of installed TeleUSE/Mariner applications and collect statistics on accesses to the HTML pages.

Powerful Client/Server Development Tool—Database Support with TeleUSE/DB

TeleUSE/DB delivers seamless graphical access to relational databases, minimizing training and maintenance costs while letting developers take full advantage of advanced GUI, client/server and Relational Database Management System (RDBMS) technologies. TeleUSE/DB database support is available as an add-on to either TeleUSE for UNIX or TeleUSE/Win.
A specialized SQL data type is added to the dialog scripting language to provide a high-level script interface to the SQL routines of relational databases such as Sybase and Oracle. You can write dialog scripts that can be used with multiple RDBMS. The RDBMS used by the interface is determined by the reusable component that you build into your application.

A Database Template Builder in TeleUSE/DB enables you to graphically bind network database objects and actions to GUI objects. The templates generated can be used in conjunction with the bind operations of the SQL data type, resulting in much faster database application development.

TeleUSE/DB provides a set of Motif widgets containing specialized database resources that are used to create database templates.

TeleUSE/DB employs a unique Database Object Value Tool which, when combined with database templates, facilitates displaying SQL results in standard OSF/Motif widgets. As an alternative, TeleUSE/DB also provides KL Group’s XRT/table widget and an API for using the widget in basic ways. You can extend the functionality provided by separately purchasing the XRT/PDS family of widgets and take full advantage of the XRT/table library.

TeleUSE/DB also includes convenience routines that enable you to reference objects in the database and obtain information associated with their fields.

TeleUSE/DB includes a browser that you can use as is, or enhance and include as a component in your end-user application. The browser enables the end user to view database object information located locally or across the network and to retrieve and update the data via dynamic SQL operations.

An SQL query builder window is provided for end users unfamiliar with SQL syntax.

### Aonix: More Than a Supplier—A Partner

At Aonix, we are as diligent in supporting our customers as we are in developing world-class development solutions. In today’s world of distributed enterprises and global businesses, large applications are frequently developed and/or distributed by teams operating in different locations and possibly even on different continents. With our global presence and worldwide sales and support locations, we are there to serve our customers in a variety of ways including customer support, training, consulting and customization services. Aonix solutions are designed to improve the quality of software applications and to improve programmer productivity for even the most challenging of applications, and our qualified support staff is looking forward to helping you achieve these goals.