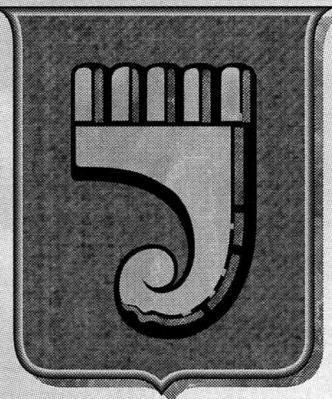


# Clarion for Windows™

## *Professional Edition*



- Create Database Applications for Windows 3.1, Windows 95 and Windows NT
- Generates Complete Programs for Your Database, Automatically
- Powerful Programming Language, with Objects
- Fast, Compiled Performance
- Small, Royalty-Free Executables
- Easy Project Maintenance

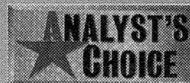
Clarion beats Delphi for many of your rapid development demands. ...many will prefer Clarion over Delphi for rapid professional applications development. Both produce speedy, royalty-free executables. ...Clarion automates and organizes so much more of the development process than Delphi."

—InfoWorld, 4/22/96

"A turbocharged 18-wheeler—TopSpeed's 32-bit update gives developers sleek tools to build fast, heavy-duty applications. ...a fast, stylish, and reliable vehicle for developers of data-driven applications who want to use the 32-bit power of Windows 95 and Windows NT—without abandoning their 16-bit Windows users. Clarion is unrivaled for its ease of constructing an attractive graphical application that does real work..."

—PC Week, 11/13/95

**TopSpeed**  
CORPORATION



# When the Database Drives Design

If Your Applications Are Shaped by Their Underlying Data, Clarion for Windows Delivers a Strong Foundation in Literally Minutes, and the Advanced Tools to Customize Applications to Solve Your Business Problem.

Your starting point is a full featured application. Pick your database files, or tables from a DBMS. Select the keys that link the tables. Run a wizard, choose a 16 or 32-bit target, and compile. In literally a few minutes, you'll have a complex application for viewing, editing, and reporting your database. Each browse window opens on a separate thread, with its own record buffer. The end user can select among multiple key orders by clicking a tab. Double-clicking a record in the list opens an update form, with automatic concurrency checking, and optional Referential Integrity Constraint support. With a starting point that might take weeks to implement with another tool, imagine what you can do once you actually start your development work!

Clarion cuts your development time. Using the visual design tools, when you drop a control in a window or report, you place a complete solution—you don't have to write code. Clarion control templates already know how to perform the tasks typically required for maintaining your database. Updating a record, performing a lookup on another table; even a combo box that knows how to add a record to a child table if the end user types a new value into the control. All these are connected right into the business rules and application logic stored in the database dictionary, so it's already customized for your database.

Clarion makes your applications more efficient. Clarion is centered around a fourth generation language—it's designed from the ground up for working with databases, both local and client/server. It features small, efficient database drivers. The TopSpeed compiler creates tight, fast executables—true machine code with a smaller footprint than comparable applications made with competitive tools.

"I opened the box at 10:00 on a Saturday morning. By 4:00 that afternoon, I had worked my way through the tutorial and had a functional sales order-entry application with customer and item maintenance, and had added a few of my own twists to the script. That got my attention. I have since spoken to several developers who confirmed my first impressions about Clarion's ability to quickly create applications that have a great deal of functionality..."

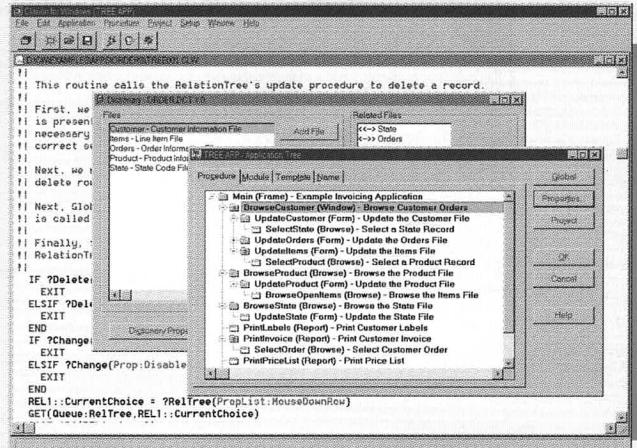
—DBMS, June 1996

"When wizards aren't enough... (Clarion for Windows') Application Generator made it easy to perform our tasks. It guided us through the process of creating the basic

## Create Complex Applications With Little or No Coding

By centering the development process around a database dictionary that stores the database structure, business rules, and application pre-formatting, Clarion automatically creates surprisingly complex applications just by running a wizard. By examining your database, Clarion designs a useful application as your starting point.

You can reuse the database dictionary for many applications. By storing application pre-formatting—for example, a spin button that cycles through a series of valid values for a particular field—you can create many applications for different users all with a common look and feel. If you have a large database with many tables, and most of your development involves creating applications for different departments, with each department maintaining different combinations of tables, Clarion saves you time. A few days of pre-formatting all the fields and tables can halve your development time over the next six months.



The Database Dictionary, the Application Tree, and a Clarion language source code file. The dictionary provides the organization of the Application Tree, which is the backbone of your project.

## Use 32-bit Features Without Abandoning 16-bit Users

A single, "hybrid" development environment calls 16-bit and 32-bit parts as needed, depending on the system you're developing on (so you can develop under Windows 3.1), a

database and automatically created standard forms and reports that were easily customized to match our tests."

—PC Magazine, 5/28/96

"It's a complete application development package whose capabilities cover the spectrum from instant gratification to complete customization.

—Windows Tech Journal, September 1995

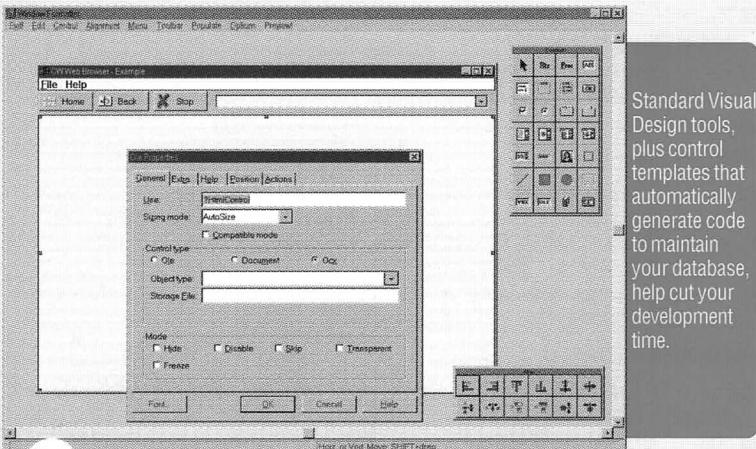
"It (TopSpeed) designed Clarion for Getting The Job Done, and it is unexcelled in this area, even by Delphi... So whereas Delphi makes it easy to create applications with complex custom interfaces and a unique look and feel,



# gn, Clarion Drives Development

on the operating system you're developing for (you choose Windows 3.1, or Windows 95/NT from a drop list).

Incorporate Windows 95 controls (such as tree, progress, and tabs) in your 16 bit Windows programs. Bring 16 bit .VBX controls forward to 32-bit Windows safely and reliably. If your users are moving to 32-bit Windows in stages, no other tool lets you support both 16 and 32-bit users as easily as Clarion. With one tool, and one project file, you can compile applications for all Windows platforms.



Standard Visual Design tools, plus control templates that automatically generate code to maintain your database, help cut your development time.

## A business Language With Built-In Database Grammar

The Clarion 4GL language is built from the ground up for business development. It's readable, easy to learn, and easy to maintain. It automatically uses integer math on decimal types to eliminate floating point conversion errors on your currency calculations. Its built in database grammar helps you maintain databases of every type—the replaceable database drivers automatically perform the necessary optimizations. And Clarion supports objects. You can write procedural code, or incorporate object structures (including OLE and OCX objects), and OOP code statements within procedural code, or write object oriented code.

Clarion makes it far easier to generate robust, tight business database applications with a common look and feel—and do it quickly... Clarion is the best for business applications, and that's business with a capital 'B.'"

—InfoWorld, 8/14/95

"Clarion for Windows is a very developer-friendly environment... worth consideration if you're doing serious Windows development."

—Data Based Advisor, January 1996

"It is arguably the best Windows development tool on the market today."

—PC Techniques, June/July 1995

## Create Faster Programs With Smaller Footprints

The TopSpeed compiler creates fast applications—far faster than interpreted RAD tools. And because the small (typically 100KB) database drivers contain everything you need to connect to your data, your application footprint doesn't require huge external database engines. The typical Clarion app requires about 1.5MB on the end user's system, including database support and reports.

## Give Yourself the Clarion Headstart

If the database drives *your* application design, you owe it to yourself to evaluate the RAD tool that automates your development tasks, and delivers the smallest, fastest executable you can build. Call TopSpeed or your local distributor today, to see how Clarion for Windows gives *you* a head start. Turn to the next page for telephone numbers and distributor listings.

- Create Both 16 and 32-bit Applications From a Single Project File, Using a Single Development Environment
- Windows 95 Controls Such as Tree, Tool Tips, Property Sheets, etc., Backwards Compatible With Windows 3.1.
- Royalty-Free Distribution of Finished Applications
- Database Dictionary Stores Database Structure, Business Rules and Application Pre-Formatting Options
- Database Drivers for ASCII, BASIC (delimited), Btrieve (local), Clarion, Clipper, dBase III and IV, FoxPro, DOS (binary), ODBC, and TopSpeed
- Direct Drivers for Client/Server Databases Available Separately
- Application Wizard Creates Applications Based on Database; Creates Applications for Legacy Databases Automatically
- Visual Design Tools Support Standard Windows Controls Plus .VBX and .OCX Custom Controls
- Extensive Formatting Options Provide Control Over Application Appearance, Such as Colors, Transparency, 3D Effects, etc.
- Report Formatter Creates Reports Which Are Compiled Into Executable Files
- Separate ReportWriter Allows ad hoc Reporting for End Users; Single License for Developer Included (\$199 Value)
- Business Oriented Fourth Generation Language With Object Support
- OOP Implementation Supports Polymorphism, Inheritance, and Encapsulation
- Create Internet Documents (HTML) From Any Database, Automatically
- Resource Kit/Programmer's Guide (\$79 value) Included
- Over 2500 Pages of Printed Documentation

## Development Environment

### ■ The Dictionary Editor

- Organizes your application's data files, their relationships, referential integrity constraints, validity checking rules, even pre-formatting controls referencing database fields. Allows the Application Generator to automatically build an application structure, and populate windows, dialog boxes, and reports for you, including code to manage database navigation, updating, and reporting.
- Changes made to the dictionary update the application, providing automatic maintenance for your applications' working lifetimes. If the database or pre-formatting options stored in the dictionary change, you can simply regenerate and recompile.

### ■ The Application Generator

- Generates pre-tested Clarion language source code customized to your database, and an intelligent interface for adding or editing functionality. If the functionality you desire isn't included, "embed points" provide access to the window and control events, so you can insert custom code which complements the code the wizard generates.
- The Application Tree—a logical procedure call tree—is the center of the Clarion for Windows development environment. It provides a hierarchical list of the procedures that make up your program. It both describes and organizes your project.

### ■ The Window and Report Formatters

- Drag and drop control editing of windows and reports; edit graphically or edit synchronized source code. Reports are compiled into the executable, with complete control over the Windows printer settings.
- "Clones" Windows 95 controls, such as tree, progress, tabs and tool tips for use in Windows 3.1 applications. Using a single development environment, and a single project, you can create identical, native applications for both 16 and 32 bit Windows.
- Supports .VBX, .OCX controls and OLE client objects; apps can store objects in BLOBs (depending on database selected).

### ■ The Compiler/Project System:

- Both compilers (16 and 32-bit; automatically called based on target OS) produce small, native, fast, royalty-free executables. The typical application footprint, including database drivers and reports is approximately 1MB (16-bit), 1.5MB (32-bit).
- Executables run literally dozens of times faster than p-code. No run-time interpreter .DLL required.
- Create or call .DLLs for use with other applications; full access to Windows APIs.
- Smart Linking, and patented Smart Method Linking technologies not only remove unused data, but also remove unused virtual methods for most efficient executables possible.
- Register based parameter passing usually much faster than stack based, especially for small procedures.
- Binary coded decimal math library for precise currency calculations; up to 31 digits of precision on either side of the decimal point.

### ■ The Debuggers (separate 16 and 32-bit debuggers):

- Fully Windows-hosted, including support for conditional breakpoints and watchpoints, a spy window for Windows messages, and many other features.

## Clarion Language

- Structured 4GL designed for business applications, with roots in COBOL, PL/I, and Modula-2. Most developers can easily master the language in 30 days or less. Clarion provides a high level of abstraction, for quick, reliable development, and a straightforward,

# Feature Summary

efficient database grammar; yet creates executables which run as fast as those created with lower level languages.

- New Object Oriented Programming support provides increased reusability; includes inheritance, encapsulation, polymorphism, and control over privacy.
- Supports "Smart Typing," wherein the compiler automatically converts (casts) data when assigning values from type to type.
- Support for arrays, linked lists (QUEUE), user defined types, objects, class references, and reference variables.
- Windows and reports are data structures known to the compiler. Clarion is a "Windows-aware" language, allowing optimization of these types. C/C++ systems and others that depend on header files have to "learn" what a window is each time you compile.
- The ACCEPT loop provides the message passing, event-driven structure of the application—automatically.

## Clarion Templates

- Reusable, intelligent building blocks. Default set includes application wizard, browse, update and report templates.
- Additional templates included for HTML document generation, ASCII text viewer, grandparent-parent-child tree control, file drop-list, child table combo-box, and others.
- Many third party templates available separately. Catalog included.

## Clarion Database Drivers

- The drivers are compact dynamic link libraries; for each database type, you ship the .DLL (typically 100K) with the application. The drivers (both 16 and 32-bit) that come with the product include ASCII, BASIC (comma or tab-delimited), Btrieve (local), Clarion, Clipper, dBase III and IV, FoxPro, DOS (binary), ODBC, and TopSpeed.
- Drivers support data types native to each database; SQL drivers available separately, including the 16/32-bit Oracle Connect direct driver.

## Documentation and Help

- Over 2700 pages in five books. Online help files include Language Reference and Frequently Asked Questions guide.
- "Documentation... includes not only 'how it works,' but also 'when to use this information—the sort of thing we wish more tool makers would provide..." —PC Week 11/13/95

## Other Components

- Includes Clarion for Windows ReportWriter (\$199 value).
- Includes Programmers Guide (\$79 value) providing information on advanced topics, including OOP primer and language level tutorial.
- Many other utilities and add-ons, such as the TopSpeed Deployment Kit, Internationalization Kits, available separately. Catalog included.

## Minimum System Requirements

- Any system meeting the minimum requirements for Microsoft Windows 3.1, Windows 95, or Windows NT. For best performance, 8MB, 12MB, or 16MB RAM are recommended for the respective operating systems. Applications developed with Clarion run well on any system meeting the minimum requirements for Windows.

## Networks Supported

- Any Microsoft Windows compatible network.

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