

Cabazon, IDE for Business Basic Developers

By David Lewis

The benefits of a Windows integrated development environment (IDE) are numerous. With *Cabazon*, BASIS brings this productive development environment to Business Basic developers. In this article we'll address where *Cabazon* fits into the overall *Volcano* strategy, the context for *Cabazon* in terms of larger software development trends, and the specific development-enhancing features you will find in this new IDE.

Positioning

Cabazon is essentially a Windows platform release. Included in *Cabazon* is an IDE that represents component-based graphical user interface (GUI) elements as objects. This treatment of GUI elements is a time-honored approach taken by Motif, Microsoft Foundation Class (MFC), and Java's AWT.

Cabazon can be used to generate the client, or first tier of a client/server application, and utilizes the new *Pinatubo* interpreter and file system. *Cabazon* clients will work with two and three-tier applications written in *Pinatubo* or written by other vendors such as Oracle or Informix. At the same time, these clients remain accessible to data servers and the BASIS ODBC Driver™ through the SQL interface. *Cabazon* can also be used to generate complete monolithic applications and bring legacy code forward.

Technology Background

Cabazon offers Business Basic more than just an IDE; it also provides a connection to three of the most important developments in computing today: component programming, the Internet, and Windows 97.

Component Programming

Cabazon will allow developers to incorporate third-party OCX and ActiveX components into their Windows applications.

ActiveX is built on top of Component Object Model (COM). It serves as the foundation for all the advanced tools provided by Microsoft. COM is an enabler for component-based programming. In addition, it is the enabling technology for distributed objects under Windows 9x and Windows NT.

Using ActiveX components, developers can leverage off other programmers. Do you want http services and we only supply sockets? Go get the Internet control pack from Microsoft and plug it in. Components make the language infinitely extensible.

The Internet

The Internet delivers components to the desktop. It is a higher level tool than just TCP/IP or even RPC and allows developers to think and work at the component level rather than the TCP segment level. The web browser will become the common user interface. Internet-enabled applications that can leverage off this front-end framework will let developers concentrate on their specialty, the problem domain, and not about the nuts and bolts of interface construction.

Windows 97

The Internet is everywhere. It is at home, the office, in cybercafés, and it will soon be available in Windows 97. Using Microsoft's Internet Explorer as a desktop shell, ActiveX scripting will be available through VBScript along with OLE Distributed COM (DCOM).

IDE for Business Basic

Some may say that the console has been good enough up until now, why change? As product demands are changing, user expectations are changing, and code is becoming more complex, software development has to change. IDEs can help manage more complex GUI development by providing a structure upon which to hang code, while giving easy access to many different tools.



Business Basic is already a rapid application language. An IDE can help reduce the development cycle even further. The cycle of coding-compiling - debugging - coding - compiling-can be shortened through powerful debuggers, full-function editors, and project management. The BASIS *Cabezon* IDE features include:

Code Editor

Cabezon offers a full-featured code editor with many advantages over console programming, or even ASCII programming, using a general-purpose text editor. The editor will be aware of Business Basic syntax and will provide syntax-driven coloring of BBx code. This allows keywords, comments, and strings to be easily identified in the editor, making code browsing easier. Many other powerful text editing capabilities will be provided:

- Cut, copy and paste
- String searching
- Global search and replace
- Multiple files open for editing at one time

Program Execution Tools

Currently, ESCAPE statements, settrace/endtrace statements, and dot stepping represent the debugging tools available to BBx programmers. With *Cabezon*, the control program execution and the variable watch window in the IDE will offer the following new debugging tools:

- Breakpoints
- Single stepping over statements
- Stepping into GOSUBS and functions
- Stepping out of GOSUBS/functions to the calling line of code

Variable Watch Window

The companion to the program execution tools is the variable watch window. The variable watch window allows the contents of variables to be inspected and modified at different levels of the GOSUB stack, from the current level up to the global level.

Advanced Project Manager

Project management will be a snap using the advanced project management capabilities of the *Cabazon* IDE. Projects can be built either automatically or manually. In the automatic mode, the starting module is loaded into the IDE and run. As each called public program is run, it is automatically inserted into the project. This allows projects to be quickly constructed from existing large programs. Even in the manual mode, projects can be built quickly through Windows 95 standard file selection mechanisms.

Resource Editor

The *Cabazon* IDE will be tightly integrated with the BASIS ResBuilder™, allowing forms, dialogs, child windows, icons/bitmaps, and menus to be quickly designed and immediately available for use within the project.

Forms Editor

The forms editor allows forms, dialogs, and child windows to be designed quickly and easily. All the controls are easily available from a tools palette. They can be dragged and dropped onto the form and laid out using an advanced set of sizing, placement, and alignment tools.

All installed ActiveX controls will also be available for use in the project.

Image Editor

The *Cabazon* IDE will also have an integrated image editing tool for quick design of bitmaps, cursors, and icons. These graphical images can then be used for program icons, bitmap images on the form, and special-purpose cursors.

Menu Editor

Designing menu bars and attaching them to top-level forms will be done through the menu editor. Menus can be designed once and used throughout the project.

We all should be focusing on solving the high-level problems rather than writing yet another routine to get input from the user. We

should be producing more with less. The user requirements for graphical user interfaces and the rapidly changing technologies on the Windows platforms raise the bar on the minimum acceptable functionality for our applications.

The goal of *Cabazon* is to provide an aid in managing the complexities, freeing you from the trivialities of data formats and pixel spacings so you can concentrate on what you know best, the business application needs of your market.