ClearCase Integrations with Microsoft

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Topics

- A brief history of the Microsoft VC++ development environment
- Microsoft SCC Interface
- ClearCase VB/VC++ integrations w. SCC Interface

Visual Basic & Visual C++

- Tremendous growth in corporate programming teams
- Becoming the languages of choice for Windows-based programming
- Windows programming ease of learning & ease of use
- Reusability: code and components
- Accelerates application development

Visual C++ 1.0 & 1.5 (1993)

- Integrated Development Environment (IDE)
- Reduce complexity of C++, encouraging programmer adoption
- Microsoft Foundation Class (MFC) Library 2.0
- Class architecture plus reusable code
- Wizards to aid in application generation
- Integrated editor, compiler, debugger, source browser
- Integrated visual resource editor
- Version 1.5 adds support for OLE development

Microsoft Foundation Class Library

- A C++ application framework for writing for MS Windows
- Class Library: set of reusable C++ components
- Programmers rarely access Windows API directly - instead, create objects from MFC classes and call member functions of those objects.
- MFC class categories: CObject, Application architecture, Visual objects, OLE 2, Database, General Purpose

Projects within VC++

- Projects are the programmer's framework within VC++
- Project refers to all the source files and libraries that make up a program, coupled with the compiler and linker commands that build the program

Visual C++ 2.0 (1994)

- Completely redesigned, truly integrated environment
- Adds project management tools
- Includes
  – Microsoft Visual Workbench
  – Microsoft C/C++ Compilation System
  – Microsoft Foundation Class Library
  – Microsoft App Studio Resource Editor
  – Run-Time Libraries, Tools, Debugging solutions
  – Online help and documentation

Components of Microsoft Visual Workbench

- Text editor for developing application source files
- Build tools: compiler, linker, debugger, make utility
- App Studio resource editor for developing user interface components such as dialog boxes, forms, menus, toolbars, controls
- AppWizard to create full-featured skeleton of the app
- ClassWizard to create new classes and to add C++ framework code
- Run-Time library with over 550 reusable functions and macros
- Integrated online help

Visual C++ Version 4.0 (1995)

- 32-bit application development for Win95, WNT, and Win3.1 (using Win32s)
- Component Gallery: “storage” for prewritten components including C++ classes, OLE controls.
- Microsoft Developer Studio: IDE w. new class navigation tools - ClassView, WizardBar
- Custom AppWizards
- MFC version 4.0: 150 classes, 120,000 lines of code, supports new Win95 UI controls
- Incremental compiler, incremental linker, minimal rebuild

Microsoft's Common Source Code Control (SCC) Interface Specification

- An API specifying standard means for IDE tools to communicate with source code control facilities.
- Common layer
- Eliminates need for customized implementations
- Specifies basic set of functions for source code control

ClearCase's SCC Integration

- Member of Microsoft Component Builder Program
- Integration approach is to enable users to work from within their environment of choice
- Access to ClearCase or ClearCase Attache from within VB or VC++
- Will be included in next releases of CC/WNT and CC Attache

Supported Functions

- Create projects & add files
- Checkin files/elements
- Checkout files/elements
- Uncheckout files/elements
- Rename elements
- Delete file from a project
- Write-protect checked in files until explicitly checked out
- Access ClearCase browsers: properties, history, vtree, diffs
- Call “full” ClearCase or ClearCase Attache

Demonstration....

- Questions???
- Thank you for coming!