

## C++Builder 2007

The RAD C++ Development  
Environment for Windows



## Agenda

What's New in C++Builder 2007

Feature Review

Demonstration

## Past, Present, and Future of C++

- 1983 – First version of C++ used internally at AT&T
- 1985 – First commercial implementation released
- 1990 – Turbo C++ for DOS version 1.0
- 1991 – C++ standard work begins
- 1997 – C++Builder v1.0
- 1998 – ISO/ANSI C++ standard approved
- 1998 – C++Builder v3.0
- 1999 – C++Builder v4.0
- 2000 – C++Builder v5.0
- 2002 – C++Builder v6.0
- 2003 – Revised standard released
- 2003 – Work started on next revision of the C++ standard
- 2005 – Technical Report (TR1) on C++ Library Extensions
- 2005 – C++Builder 2006
- 2006 – Turbo C++ 2006
- 2007 – C++Builder 2007
- Ongoing - C++0x working draft

## Introducing C++Builder 2007

**C++Builder 2007** - The world's leading native C++ Rapid Application Development (RAD) Integrated Development Environment (IDE) for Microsoft Windows



## C++Builder 2007 - What's New

### Windows Vista Support

- Seamless support for the Full Window's Vista API
- Write Once Deploy Everywhere\*
  - \*Windows® 2000, XP, and Vista
- VCL Support for Aero and Vista Desktop
- AJAX Technologies Support

## C++Builder 2007 - What's New

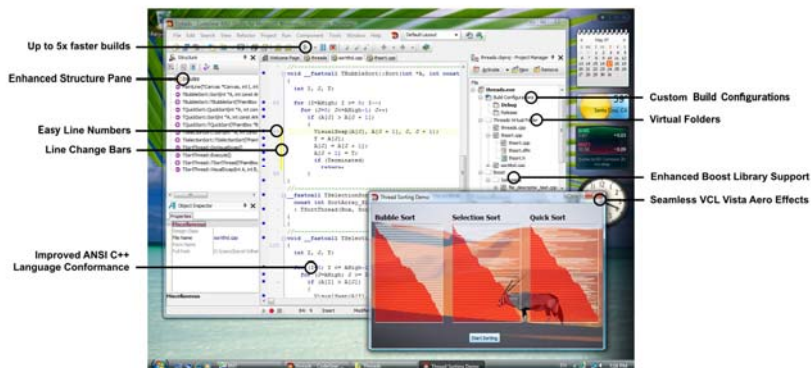
### Build it your way

- New Build Flexibility Supports MSBuild
- Custom Build Options
- IDE Build Performance - Up to 5x Faster

## C++Builder 2007 - What's New

### Build it your way

- Vista and XP Themes
- Duplicate File Name Support
- Better Help for the Memory Manager
- Multi-select in Project Manager
- New File Browser
- New Toolbar in Structure View
- Virtual Folders
- The File CPU Pane can be docked

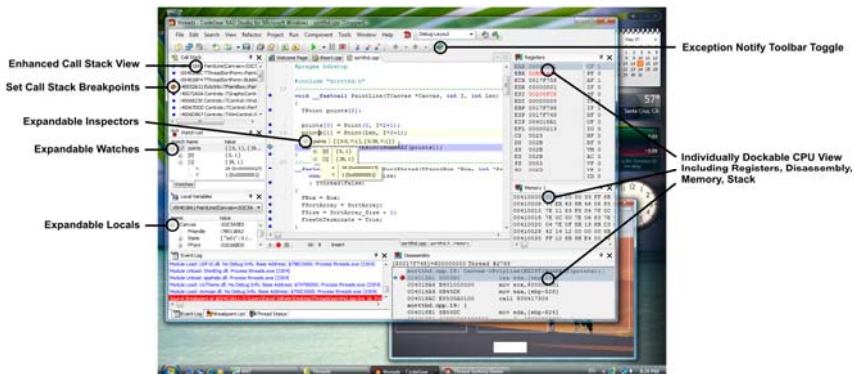


### IDE Enhancements

## C++Builder 2007 - What's New

### Latest Conformance and Compatibility

- ANSI C++
- Dinkumware
- Boost Library
- Indy 10



### Time Saving Debugger Enhancements

## C++Builder 2007 - What's New

### Support for Unit Testing

- Integrated with the DUnit Testing Framework
- Wizards to quickly generate skeleton templates
- Run tests either with Console
- Run tests Runner or the DUnit GUI Test Runner

## C++Builder 2007 - What's New

### New DBX 4 Database Framework

- New Architecture
- Support for latest versions of popular RDBMs including:
  - CodeGear InterBase, Microsoft SQL Server, MySQL, Oracle, IBM DB2, and Sybase
- Simplifies the writing of data drivers
- Supports connection pooling
- Compatible with existing components and existing DBX 3 drivers

## Review of Key New Features

- Seamless support for Microsoft Windows Vista Aero, Vista Desktop and Vista APIs
- Increased ANSI C++ conformance and compatibility including Boost and Dinkumware library support with updates to the Indy 10 Internet Suite
- New C++ build flexibility and custom configurations with MSBuild engine
- Up to 5 times faster in-IDE build performance improvements over prior versions
- Numerous debugging enhancements
- UML C++ source code visualization
- Integrated C++ unit testing
- New DBX 4 data access with support for the latest versions of popular RDBMs
- C++ IDE enhancements including virtual folders and enhanced C++ structure pane

## C++ standard conformance support

### Plum Hall C++ compliance test suite

- <http://www.plumhall.com/>
- C++Builder compiler test results
  - 5.9 passes 4205 out of 4397 tests for a total of 95.63%
  - 5.8.2 passes 4193 out of 4397 tests for a total of 95.36%
  - 5.6.1 passes 4038 out of 4396 tests for a total of 91.86%
  - 5.6 passes 4037 out of 4396 tests for a total of 91.83%
  - 5.5 passes 4019 out of 4396 tests for a total of 91.42%
  - 5.4 passes 4000 out of 4396 tests for a total of 90.99%

## Boost libraries v1.34 - <http://www.boost.org/>

The following libraries pass 100% in both BDS 2006 and C++Builder 2007

- algorithm/minmax, any, array, Conversion, crc
- disjoint\_sets, dynamic\_bitset, Format, functional
- Integer, logic, pool, preprocessor, regex, timer
- Tokenizer, tuple

## Boost libraries v1.34 - <http://www.boost.org/>

The following libraries are listed by Boost as usable. The same for BDS 2006 and C++Builder 2007:

- algorithm/string, bind, concept\_check, config
- date\_time, filesystem, foreach, function
- functional/hash, io, iostreams, iterator
- numeric/conversion, numeric/interval
- program\_options, random, serialization, signals
- smart\_ptr, static\_assert, thread, utility, variant



## Boost libraries v1.34 - <http://www.boost.org/>

These cases pass in C++Builder 2007 (but not in BDS2006):

- assign/ptr\_list\_inserter, assign/ptr\_map\_inserter, graph/bundled\_properties,
- graph/cuthill\_mckee\_ordering, graph/filtered\_graph\_cc, graph/king\_ordering,
- graph/property\_iter, iterator/indirect\_iter\_member\_types, math/hypot\_test,
- mpl/apply, multi\_array/reshape, multi\_array/storage\_order,
- optional/optional\_test\_ref\_fail1, python/result, python/string\_literal
- spirit/chset\_tests, spirit/chset\_tests\_debug, test/test\_fp\_comparisons,
- tr1/run\_complex\_overloads, tr1/std\_run\_complex\_overloads,
- tr1/run\_random, tr1/std\_run\_random, tr1/std\_test\_complex,
- tr1/test\_complex, tr1/tr1\_remove\_const\_test, tr1/tr1\_remove\_pointer\_test,
- tr1/tr1\_remove\_volatile\_test, tr1/tr1\_tricky\_add\_pointer\_test,
- type\_traits/decay\_test, type\_traits/remove\_const\_test,
- type\_traits/remove\_pointer\_test, type\_traits/remove\_volatile\_test,
- type\_traits/tricky\_add\_pointer\_test, utility/enable\_if\_lazy

## Boost libraries v1.34 - <http://www.boost.org/>

C++Builder 2007 fails the following where BDS 2006 passed:

- regressions against BDS 2006:
- mpl/filter\_view
- parameter/earwicker
- rational/rational\_test
- test/basic\_cstring\_test

## Boost libraries v1.34 - <http://www.boost.org/>

The following libraries were marked as unusable by Boost for BDS 2006. We've made improvements in some, but do not know if they will be judged as usable by boost or not.

- Graph, lambda, multi\_array, multi\_index,
- numeric/ublas, ptr\_container, python, spirit
- Statechart, typeof, utility/enable\_if
- Wave, xpressive

There will be library patches for Boost 1.34.1 post-RTM so that you can just download and build the libraries.

## Demonstrations

## Q&A

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