



Integrating the HP-ETK with the Eclipse IDE

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The logo features a large black circle with a bright, glowing white ring around its perimeter, set against a dark background.

The Eclipse CDT

C/C++ Development tools

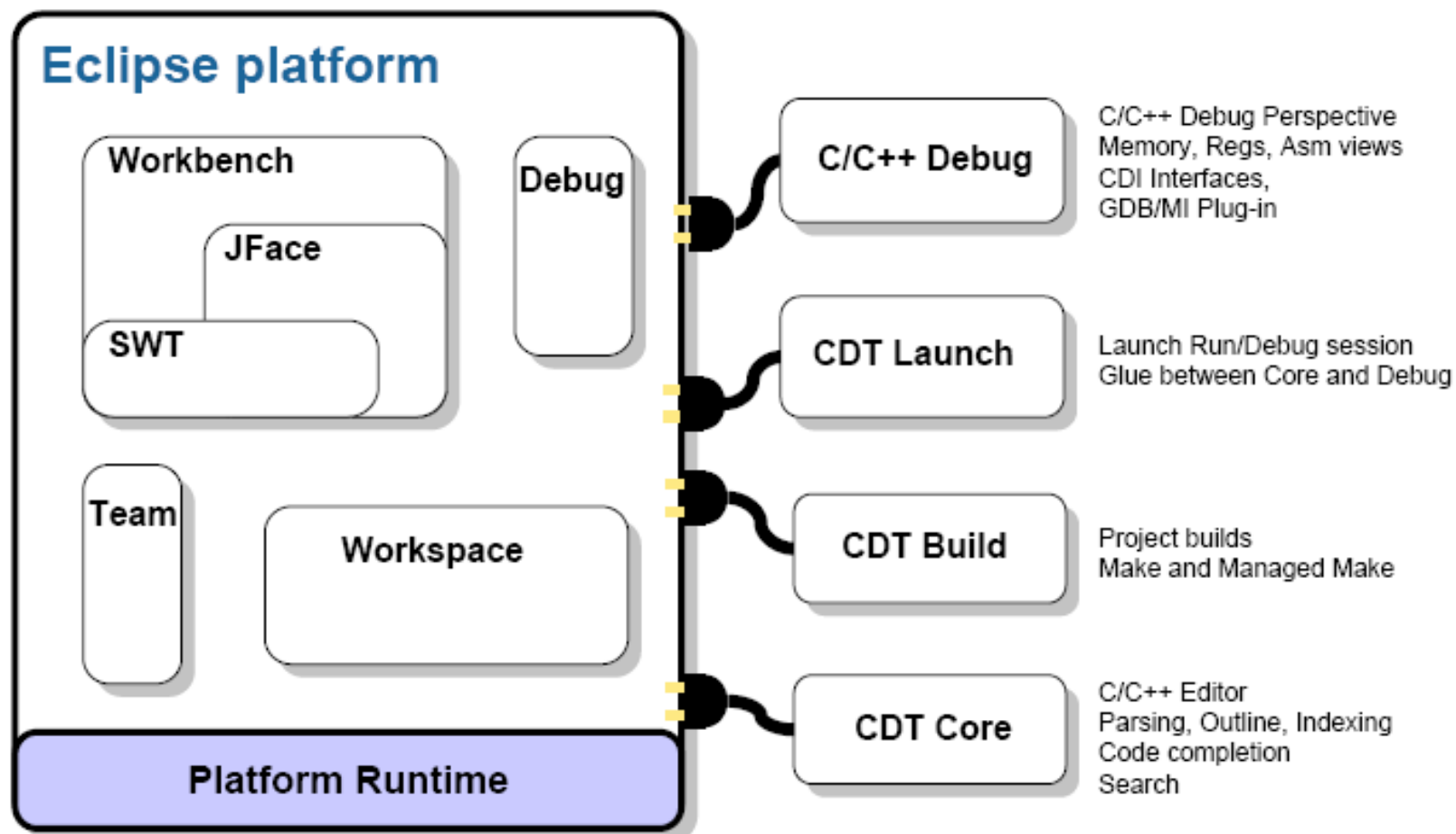
A fully functional

C/C++ IDE



CDT Overview

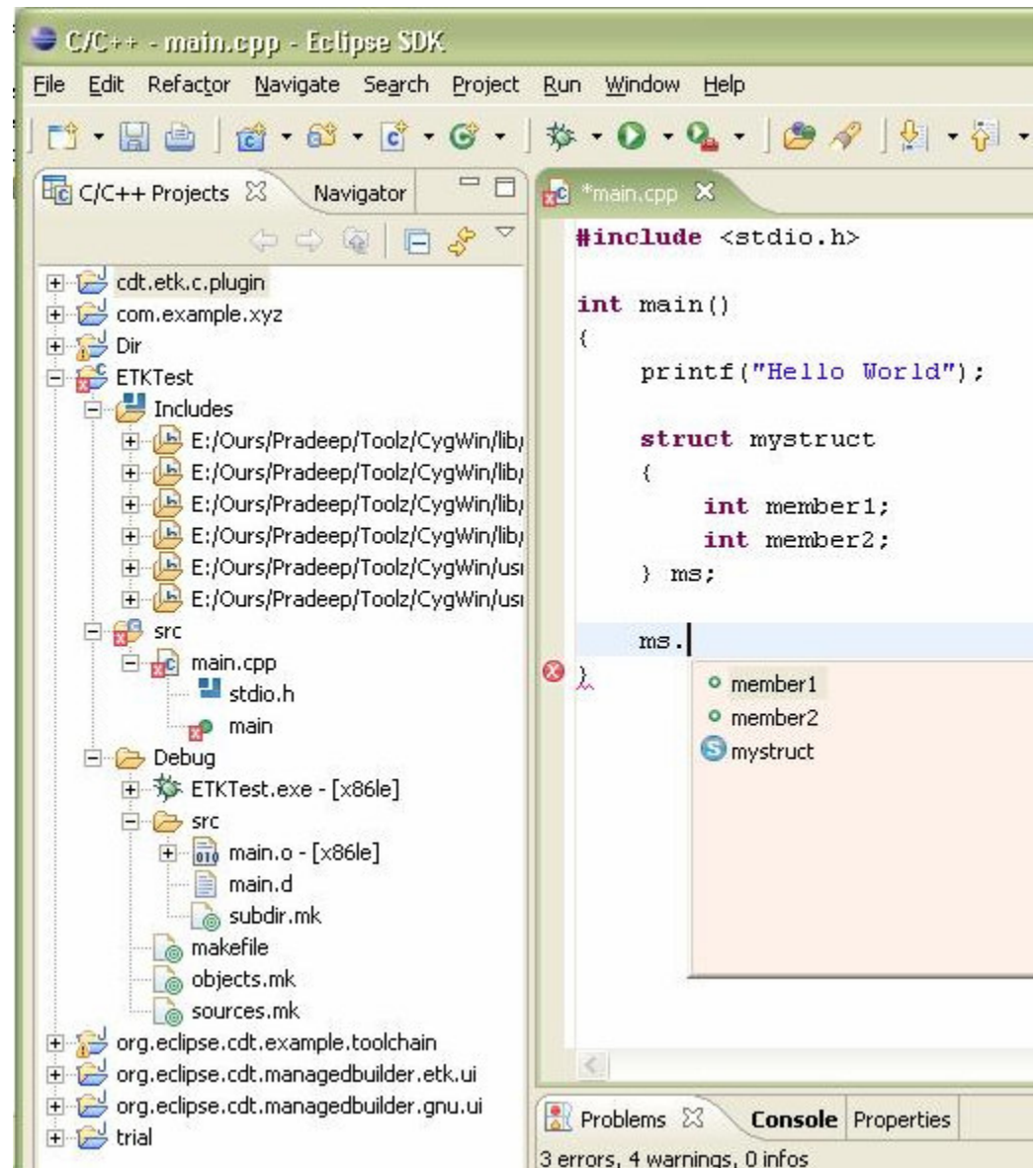
CDT Architecture





CDT Features

- Code Completion
 - Auto suggest
 - Auto complete
 - Members
 - Function Arguments
- Standard Build
- Managed Build
 - Automatically generated makefiles





CDT Features (contd...)

- Syntax Coloring
- Support for External Tools and Tool sets
- Dynamic UI for specifying compiler options
- Wizards for projects and classes

```
*main.cpp X
#include <stdio.h>
#include <stdlib.h>
#include <string>

int main()
{
    printf("Hello World");

    struct mystruct
    {
        int member1;
        int member2;
    } ms;

    std::string s = ato;
}
```

std::string s = ato;

- atof(const char * __nptr) double
- atoff(const char * __nptr) float
- atoi(const char * __nptr) int
- atol(const char * __nptr) long int
- atoll(const char * __nptr) long long



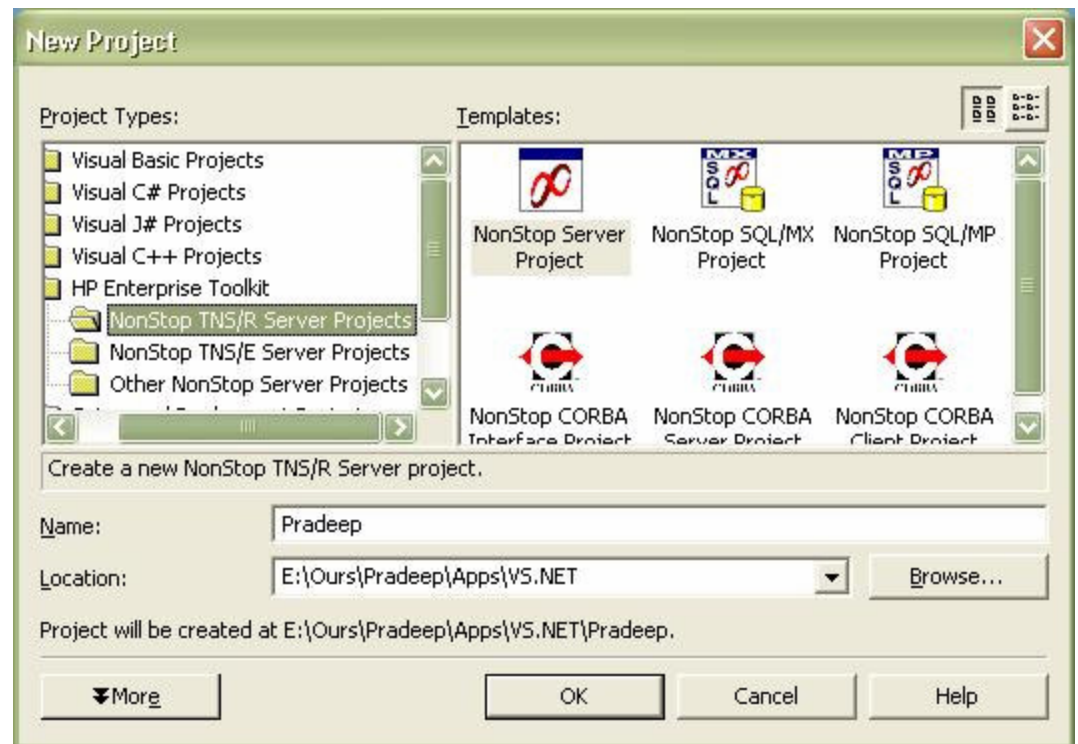
The Enterprise Tool Kit

- Compilers and tools for developing software for the Non-Stop Kernel (NSK)
- Integrated with Visual Studio .NET
 - Proposal to have a similar tool kit for the eclipse platform



Options in ETK

- Project Settings in ETK
 - Language
 - How to launch
 - Compiler
 - Code Generation





ETK Dialogs

The image displays three overlapping Eclipse wizard dialog boxes. The top-most dialog is the 'HP NonStop TNS/R Server Application Wizard - Pradeep'. It features a 'Welcome' message and a sidebar with 'Overview' and 'Application Settings' tabs. The 'Application Settings' tab is active, showing options for 'Target NonStop Server Platform' (Guardian, QSS) and 'Application Type' (Executable, non-PIC [.txe], Executable, PIC [.tpe], Dynamic Link Library [.so], User Library [.tlb], Static Library [.tlo]). Below these are dropdowns for 'Initial Source File Language' and 'Initial Source File Location'. The middle dialog is the 'HP NonStop TNS/R Server Application Wizard' (without the name suffix). It has a similar layout but with 'Project Deployment' selected in the sidebar. It includes fields for 'Host Name/IP Address', 'User Name', 'Guardian Target Location', 'Guardian Target Name', and 'QSS Target Location'. The bottom-most dialog is the 'HP NonStop TNS/R CORBA Server Project Wizard - Pradeep'. It also has a 'Welcome' message and a sidebar with 'Overview', 'Application Settings', and 'Interface Projects' tabs. The 'Interface Projects' tab is active, showing a message that 'Interface Project is not available in the solution.' and a list of supported interfaces: SQL Support and Project Deployment. All three dialogs have 'Finish', 'Cancel', and 'Help' buttons at the bottom.

HP NonStop TNS/R Server Application Wizard - Pradeep

Welcome to the HP NonStop TNS/R Server Application Wizard

This wizard generates a NonStop TNS/R Server Application Project based on information provided through the wizard.

Overview

Application Settings

Target NonStop Server Platform:

- ☒ Guardian
- ☐ QSS

Application Type:

- ☒ Executable, non-PIC [.txe]
- ☐ Executable, PIC [.tpe]
- ☐ Dynamic Link Library [.so]
- ☐ User Library [.tlb]
- ☐ Static Library [.tlo]

Initial Source File Language:

Initial Source File Location:

HP NonStop TNS/R Server Application Wizard

Welcome to the HP NonStop TNS/R Server Application Wizard

This wizard generates a NonStop TNS/R Server Application Project based on information provided through the wizard.

Overview

Application Settings

Project Deployment

Deploy Project After Successful Build:

Host Name/IP Address: User Name:

Guardian Target Location: \$volume.subvolume

Guardian Target Name:

QSS Target Location:

Finish Cancel Help

HP NonStop TNS/R CORBA Server Project Wizard - Pradeep

Welcome to the HP NonStop TNS/R CORBA Server Project Wizard

This wizard generates a NonStop TNS/R CORBA Server Project based on information provided through the wizard.

Overview

Application Settings

Interface Projects

SQL Support

Project Deployment

Interfaces to be supported

Interface Project is not available in the solution.

Finish Cancel Help



Why CDT?

- Existing C/C++ editor
- Support for integration of Tool sets
- Integration of Toolsets for other languages
- UI for setting compiler options
- Automatic generation of makefiles

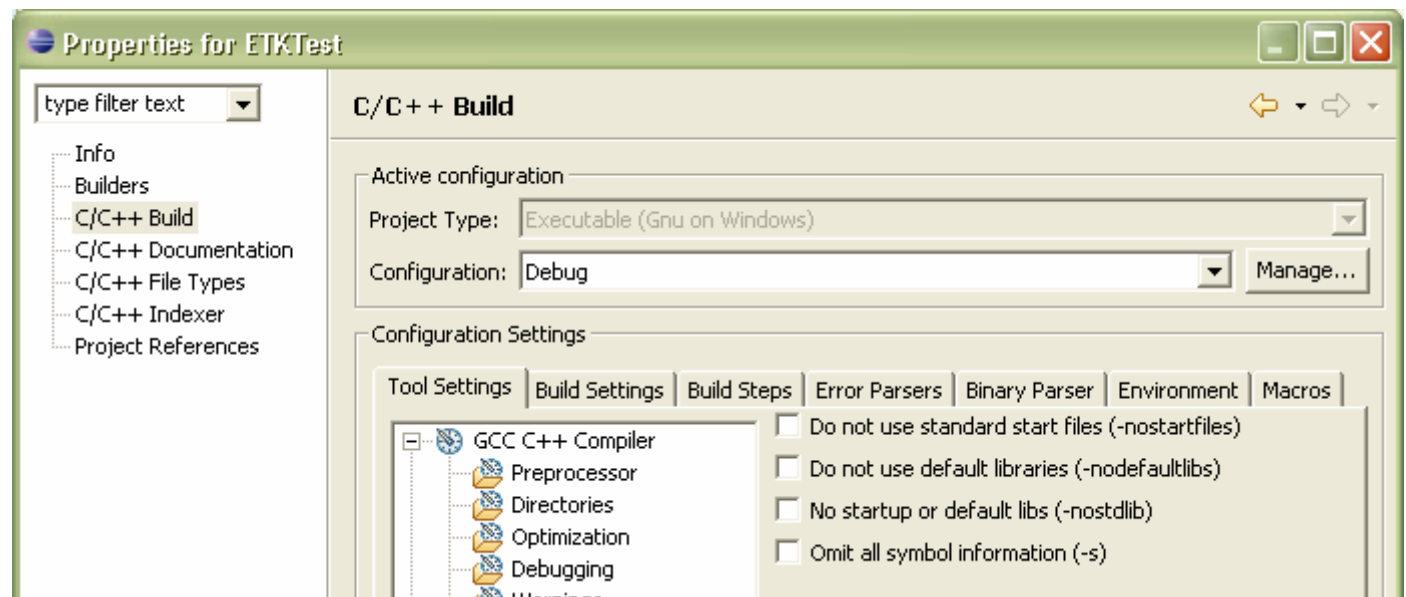


The toolkit conforms to the UI of eclipse.



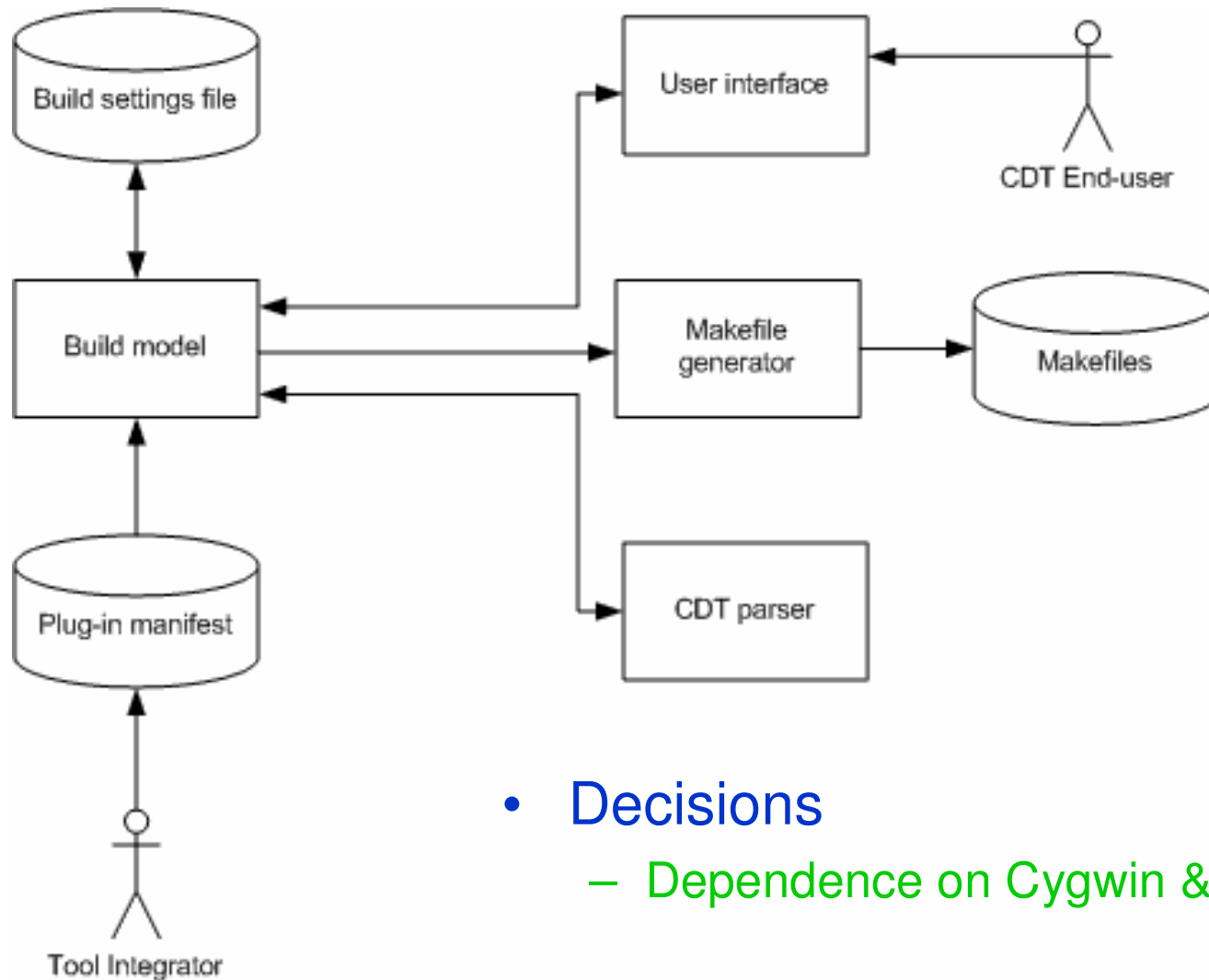
Integrating ETK with Eclipse

- ETK Feature
 - Project settings
 - Language Settings
 - Compiler Settings
 - Code Generation Settings
 - Launch Settings
- Eclipse Equivalent
 - Project Type/Configuration
 - Project Type
 - Compiler option UI
 - Code Generation UI and Wizards
 - CDT Launcher





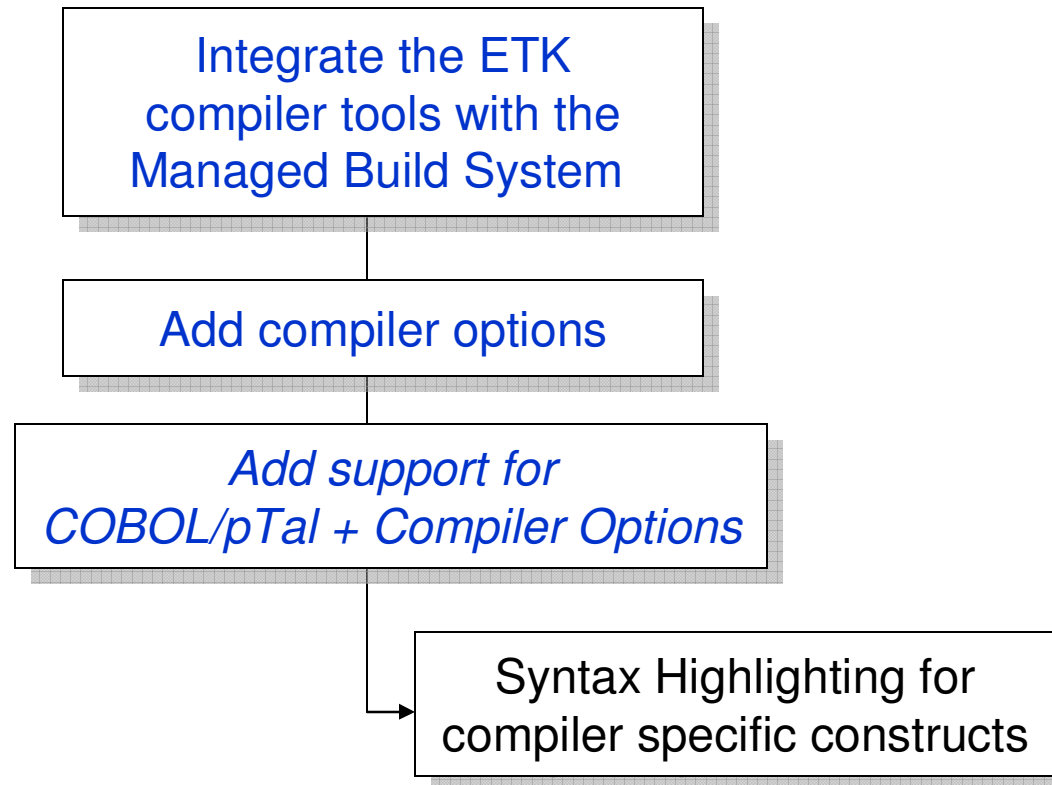
Extending the Managed Build System



- Decisions
 - Dependence on Cygwin & make



Plan of Action + Status





References

- **Eclipse In Action: A guide for Java Developers**
 - *by David Gallardo, Ed Burnett, Robert McGovern – Computers*
- **Official Webpage of Eclipse CDT**
 - *www.eclipse.org/cdt*
- **The Managed Build System extensibility document**
 - *available on the internet*
- **Instant IDEs: Supporting New Languages in the CDT**
 - *Jeffrey Overbay, Craig Ramussen, OOPSLA'05*