Module 1: Overview of Eclipse and PTP

Objective

- To introduce participants to the Eclipse platform and PTP

Contents

- History
- What is Eclipse?
- Who is using Eclipse?
- What is PTP?
History

- Originally developed by Object Technology International (OTI) and purchased by IBM for use by internal developers
- Released to open-source community in 2001, managed by consortium
  - Eclipse Public License (EPL)
  - Based on IBM Common Public License (CPL)
- Consortium reorganized into independent not-for-profit corporation, the Eclipse Foundation, in early 2004
  - Participants from over 100 companies
Eclipse Foundation

- Board of Directors drawn from four classes of membership:
  - Strategic Developers, Strategic Consumer, Add-in Providers, and Open Source project leaders
- Full-time Eclipse management organization
- Councils guide the development done by Eclipse Open Source projects
  - Requirements
  - Architecture
  - Planning
- Currently 9 projects and over 50 subprojects
What is Eclipse?

- A vendor-neutral open source development platform
- A universal platform for tool integration
- Plug-in based framework to create, integrate and utilize software tools
Equinox

✦ OSGi framework implementation model
  ✦ Formerly known as the Open Services Gateway initiative
  ✦ Standard for application lifecycle management
✦ Provides the most fundamental Eclipse infrastructure
  ✦ Plug-ins (known as a bundle)
  ✦ Bundle install, update and uninstall
  ✦ Bootstrap and launching
  ✦ Extension registry
✦ Introduced in Eclipse 3.0
Platform

- Core frameworks and services with which all plug-in extensions are created
- Represents the common facilities required by most tool builders:
  - Workbench user interface
  - Project model for resource management
  - Portable user interface libraries (SWT and JFace)
  - Automatic resource delta management for incremental compilers and builders
  - Language-independent debug infrastructure
  - Distributed multi-user versioned resource management
  - Dynamic update/install service
Plug-ins

- Java Development Tools (JDT)
- Plug-in Development Environment (PDE)
- C/C++ Development Tools (CDT)
- Parallel Tools Platform (PTP)
- Test and Performance Tools Platform (TPTP)
- Business Intelligence and Reporting Tools (BIRT)
- Web Tools Platform (WTP)
- Data Tools Platform (DTP)
- Device Software Development Platform (DSDP)
- Many more...
Who is using Eclipse?

- Commercial tool developers

- Commercial application developers

- Commercial application users
  - Adobe, Agence France Press, AlterPoint, Bank SinoPac, City of Stuttgart, Compass Group, DaimlerChrysler, NASA JPL, Plum Canary, Refractions Research, RSS Solutions, SAS
What is PTP?

✦ The Parallel Tools Platform aims to provide a highly integrated environment specifically designed for parallel application development

✦ Features include:
  ✦ An integrated development environment (IDE) that supports a wide range of parallel architectures and runtime systems
  ✦ A scalable parallel debugger
  ✦ Parallel programming tools (MPI/OpenMP)
  ✦ Support for the integration of parallel tools
  ✦ An environment that simplifies the end-user interaction with parallel systems