parallel tools platform

release 2.0 and beyond...

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October 2007

New Features (not guaranteed!)

- Runtime

- Debugging

- Remote services

- Scalable Tools Communication Infrastructure (STCI)

New resource manager support

Targeted systems

- OpenRTE (OpenMPI runtime)
- PE/LoadLeveler
- MOAB/PBS (ORNL)
- Blue Gene
- Cell Cluster (RoadRunner)

Other new runtime features

- Improved model to support broader range of systems

- Model and UI scalability enhancements

- New icons showing resource manager, queue and machine state

- Single console view of output from all processes

Debugging

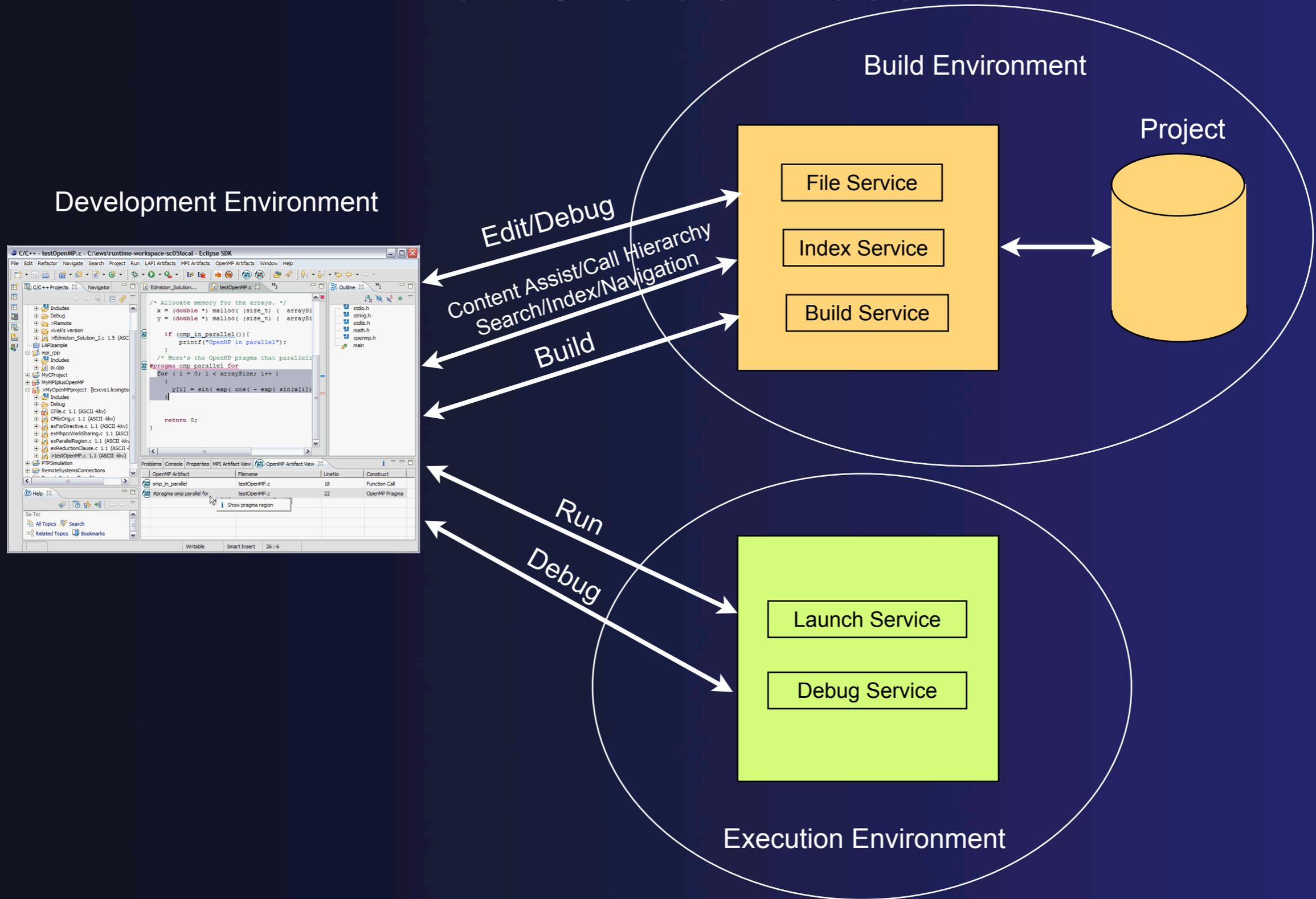- Uses new Eclipse flexible debug hierarchy

- Scalability improvements in UI

- More robust error handling

- Will transition to Scalable Tools Communication Infrastructure (STCI) when it becomes available

- New UI features
  - Support for large numbers of processes/threads
  - Array slice view

Debug targets

- PERCS
- Parallel hybrid debugging on Cell (RoadRunner)
- Blue Gene
- Cray (ORNL)

Remote services

Build Environment

Development Environment

File Service

Index Service

Build Service

Project

Edit/Debug

Content Assist/Call Hierarchy
Search/Index/Navigation

Build

Run

Debug

Launch Service

Debug Service

Execution Environment

Remote services (cont...)

- Joint project between C/C++ Development Tools (CDT) project and PTP

- PTP 2.0 will be remote enabled for launch, monitoring, debugging

- Adding support to CDT for:
    - Remote file system (projects on remote machines)

    - Remote indexing

    - Remote build services (standard and managed)

    - Remote launch/debug

- Aiming for CDT 5.0 (July 2008)

STCI (http://stci.wikidot.com)

- Open source effort to create a scalable infrastructure for tools

- Participants include IBM, ORNL, ANL, Krell, RENCI, UO, UWisc, UTK

- Three working groups established to complete design by November

- Meetings
  - August 2007 (IBM)
  - October 2007 (ORNL)
  - November 2007 (Reno)

STCI Architecture