

DEV-10: Integrating OpenEdge Architect into Your Development Environment

Paul Petersen, Daniel Becroft

DEV-10: Integrating OpenEdge® Architect into Your Development Environment

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Agenda

- Background and Business Drivers
 - Why we moved to OpenEdge 10 and OE Architect?
- Deep Dive:
 - How We: Moved our V9 app into OE Architect
 - How We: Set up own Eclipse environment
 - Why We: Moved to Team Development Tools – SVN
 - How We: Setup/Use Subclipse, Tortoise SVN and SVN Notifier
 - How We: Integrated to our existing tools
- Working with OE Architect –Productivity, Tips and Tricks
- Wrap Up

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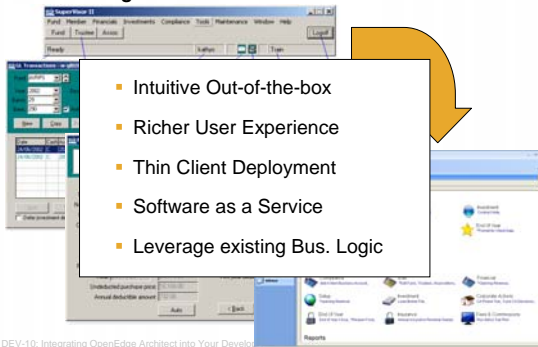
Supercorp Australia Pty Ltd

Background

- Established in 1987. "SuperVisor" Product was born.
- Software Provider to Superannuation Administrators ie Retirement / Pension Administration
 - 401K Retirement Administration (USA)
 - Registered Retirement Savings Plan (Canada)
 - Special Retirement Plan (France)
- 4 of 5 largest Self-Managed Super Providers, 100s of Accountants
- History of Transformation (legislative/market necessity)
- Last complete rewrite in 98/99. "Supervisor II" drove new business!
- 10 years, 12 major, 80+ minor releases later ...**

Business Driver -> Expand our market

Time for new generation of our software




- Intuitive Out-of-the-box
- Richer User Experience
- Thin Client Deployment
- Software as a Service
- Leverage existing Bus. Logic

4 DEV-10: Integrating OpenEdge Architect into Your Development Environment

Why OE 10?

Leverage new technologies

- Access latest User Experience (.NET™ or Advanced GUI)
- Latest ABL features – ProDataSets, XML, WS etc
- Open AppServer™ for n-tier, enterprise integration
- Faster, more open and secure DB
- Latest Tools



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Why OpenEdge Architect?

Potential for higher productivity!

- New Editor, Search Capabilities, Local History etc
- New Project Based development
- Great Integrated Debugger
- Works with old tools ie AppBuilder/GUI

Single IDE to accommodate most development needs


- OpenEdge, Sonic™, Crystal, Web, HTML, WS etc
- Team Development (SCM) , Life Cycle Mgmt (LCM)
- Future needs and languages Ruby, Python, C#?



6 DEV-10: Integrating OpenEdge Architect into Your Development Environment

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3. Why We: Moved to Team Development Tools – SVN
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7 DEV-10: Integrating OpenEdge Architect into Your Development Environment


How we moved V9 to OpenEdge Architect

The Usual

- Convert Databases from V9 to OE10
- Recompiled and fixed code
 - ADM Code → re-integrate extensions and tools
 - Application Code → some small language differences
- Configured a New Project in OpenEdge Architect
 - Startup .pf, Propath, Databases etc
- Imported our Application code into OpenEdge Architect

Not so Usual

- Downloaded plug-ins - DID NOT WORK! Why?
 - SCM, WST, AnyEdit, Crystal Reports, PS:escript etc
- Downloaded and setup Full Eclipse SDK
- 'Trial and Error' approach to integrating custom tools



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Tip #1 – Review Development Approach and Tools

Consider Improvement Opportunities!

- Revise your development approach and tools
 - Adhoc or Standard Development Procedures
 - Single developer or teams of developers
- Create an inventory of home-grown and other tools eg
 - Environment Configuration, Utilities, "SCM"
 - Code Mining, Utilities eg ProRefactor
 - Project/Task/Bug Tracking, Packaging / Deployment

** These form your plug-in shopping list!

- Learn and Trial various OpenEdge Architect integration capabilities



9 DEV-10: Integrating OpenEdge Architect into Your Development Environment

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10 DEV-10: Integrating OpenEdge Architect into Your Development Environment

Why we setup our own Eclipse Environment?

Some good reasons

- Access to full power of eclipse platform
- Common platform for all Plug-ins – Progress®, Non-Progress
- Create a Standard Operating Environment (SOE) for all developers
- Manage, Update and Test latest versions and features of Java, Eclipse and new plug-in capabilities
- Its fun to play with plug-ins ☺

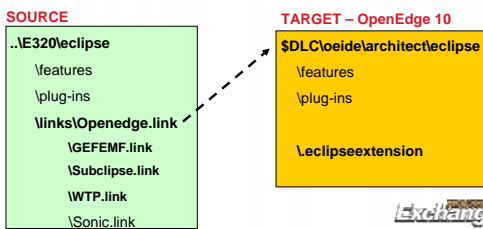


11 DEV-10: Integrating OpenEdge Architect into Your Development Environment

Tip #2: Use Links to Manage many Plug-ins

Eclipse link files

- Link files are used to point a SOURCE eclipse environment to TARGET eclipse environment
- The SOURCE environment can link to 1..n Target environments
- The TARGET needs a ..\eclipse\ eclipseextension file



12 DEV-10: Integrating OpenEdge Architect into Your Development Environment

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Demo: How we setup our Eclipse Environment

- Creating a flexible Environment
 - Using a full Eclipse SDK
 - Eclipse and 3rd Party plug-ins
- Managing multiple versions
- Links and .eclipseextension
- Eclipse 3.4 – Use Drop-ins ☺



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Summary: How we setup our Eclipse Environment

Demo Summary

- Step 1: Download full Eclipse SDK 3.2.2 or higher
- Step 2: Download Eclipse Projects GEF, EMF, WTP, DTP
 - Note: Match Versions !!! Eg E3.2.2 requires GEF 3.2.2, EMF 2.2.2
- Step 3: Download 3rd Party plug-ins
 - Subclipse 1.2.4+ (SCM)
 - AnyEdit 1.8.1 etc
- Step 4: Extract .zip files into manageable directories
- Step 5: Create Link Directory under \eclipse
- Step 6: Create .eclipseextension file under each plug-in directory
- Step 7: Create Link Files to point to each set of plug-ins

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Tip #3 - Managing Changes to Dev Tools Environment

Setup a controlled plug-in Testing Environment!!!


- Trial all updates to Core Eclipse eg R3.4 - Ganymede
- Trial all updates and new plug-ins
- Trial old and new features with working code
- May need to re-integrate tools etc

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16 DEV-10: Integrating OpenEdge Architect into Your Development Environment

New Application / Technology Requirements

Technical Environment

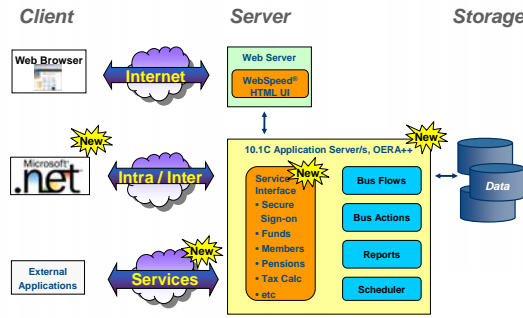
- .NET User Interface (Advanced GUI under dev)
- N-tier using ProDataSets, AppServer and modified OERA
- Developing in OpenEdge 10.1C -> Deploy 10.2A?
- Crystal for Reporting



17 DEV-10: Integrating OpenEdge Architect into Your Development Environment

New N-Tier Application Architecture

Looks easy at this level ...



18 DEV-10: Integrating OpenEdge Architect into Your Development Environment

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N-Tier development challenges

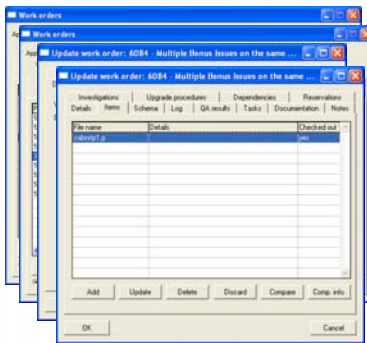
Some Issues

- Different toolsets
 - OpenEdge/ABL Server-Side Developers
 - GUI/WEB/.NET Client-Side Developers
- Each developer needs "working copy" of code
 - Each developer needs own N-Tier environment for unit testing
 - AppServers, Database?
- Co-ordination of changes to central dev. environment
 - Version control of Proxy.dll for .NET Developers
 - Testers need stable integrated N-tier environment

19 DEV-10: Integrating OpenEdge Architect into Your Development Environment



Old Team Development Tools



- Manage Dev Process
- Launch Dev Environment (AppBuilder)
- Track Tasks, Bugs etc
- SCM (limits)

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Old Team Development System

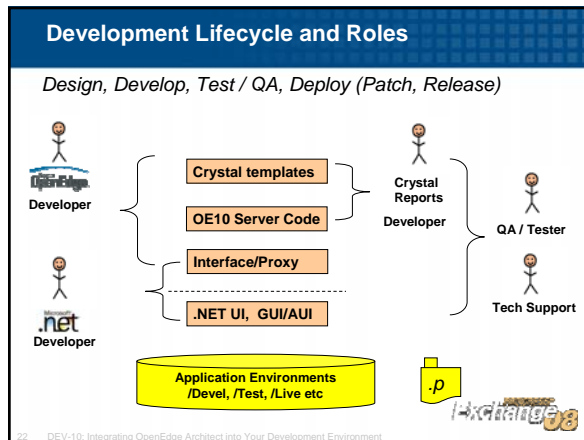
- Pros
 - Integrated SCM, Task Tracking, Deployment Mgmt
 - Developer Tools – Source Code Analysis etc
 - Integrated to Client Support System (Bug Tracking, 4GL-based)
- Cons
 - Integrated into App Builder only, not integrated into OE Architect
 - Couldn't handle N-Tier Development / AppServer environment
 - Limited to one developer per file, until deployed
 - Managed ABL and Crystal reports only, *not C#, test scripts* etc

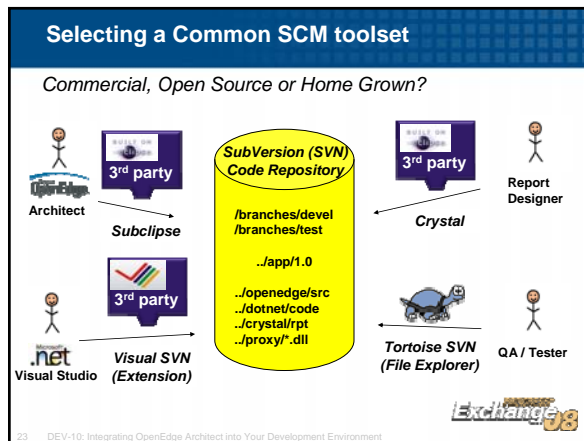
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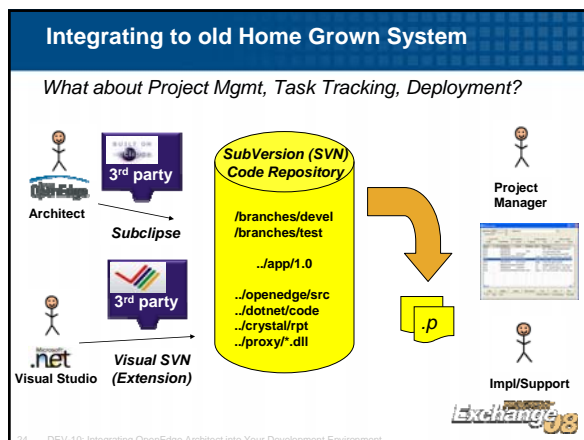


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25 DEV-10: Integrating OpenEdge Architect into Your Development Environment

Demo: How we moved to Team Development

- Show SVN Repository
 - Connecting, Sharing
- SVN TimeLapse
 - Version History
- Access from anywhere
 - OE Architect
 - Subclipse
 - Tortoise SVN
 - Visual SVN (VS 2005)



26 DEV-10: Integrating OpenEdge Architect into Your Development Environment

Summary Team Development - Setup

- Need a SCM that is compatible with your version of Eclipse
- SVN for Eclipse 3.2+
 - SVN Server 1.4.6
 - Visual SVN, Ankh for Visual Studio
 - Tortoise SVN 1.4.5+ for explorer integration
- Subclipse Plug-in 1.2.4 - works well
- Had troubles with
 - EVS - Enterprise Versioning System (cvs replacement)
 - PushOk software Version 1.x and 2.1+ (svn for Visual Studio)
- Read latest on SVN compatibility and Upgrades
 - **NOTE: All client tools must be compatible**



27 DEV-10: Integrating OpenEdge Architect into Your Development Environment

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28 DEV-10: Integrating OpenEdge Architect into Your Development Environment

Some OE Architect hooks

_server.p - see `com.openedge.pdt.text\runtime`

- Started with OE runtime
- Connects OE Runtime to Eclipse via Socket
- Mediates calls to start AppBuilder
- Passes events to AppBuilder as ADE_Events
- Publishes OEIDE_Events (extra events)

_idestartup.p

- started after `_server.p`
- Can be used to start common tools as Persistent Procedures
- Used to setup subscription to OEIDE_Events



29 DEV-10: Integrating OpenEdge Architect into Your Development Environment

Demo: How we integrated our own tools

- Add a custom tool to setup a project
 - Separate OETools Project
 - Java™ or newproject.p
 - Run Configuration
 - Customization Manager



30 DEV-10: Integrating OpenEdge Architect into Your Development Environment

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Productivity, Tips and Tricks

A Quick List

- Create a blank Workspace configured to layout you want it
- Local Versions, TimeLapse
- AnyEdit plug-in
- Remap Keys so Shift-F2 compiles
- CTRL-SHIFT-R – to quickly find code items
- Search with Regular Expressions
- Debugging Code – Last Edit Point, Back, Forward buttons
- Our developers are at least 10%+ more efficient at coding in OE Architect
- Our project/work tasks have less code clashes due to SVN



31 DEV-10: Integrating OpenEdge Architect into Your Development Environment

In Summary

- Eclipse/OE Arch is a great tools environment
- OE Architect has many options for integrating your own home-grown tools or replace them
- Understanding it will help you leverage its power
- SCM / SVN helps individuals and teams
- More information is available in
 - Help -> Contents, also Cheatsheets
 - PSDN Forums, Whitepapers



32 DEV-10: Integrating OpenEdge Architect into Your Development Environment

Relevant Exchange Sessions

- DEV-13: Developer Productivity with Roundtable Plug-in for OpenEdge Architect
- DEV-21: Embracing OpenEdge Architect
- DEV-34: Writing Your Own Plug-ins for OpenEdge Architect – A Developer's Experience
- DEV-43: OpenEdge Tools and User Interface Info Exchange



33 DEV-10: Integrating OpenEdge Architect into Your Development Environment



