ISPW: Enterprise Cross-Platform SCM
SHARE Anaheim: Session 9132

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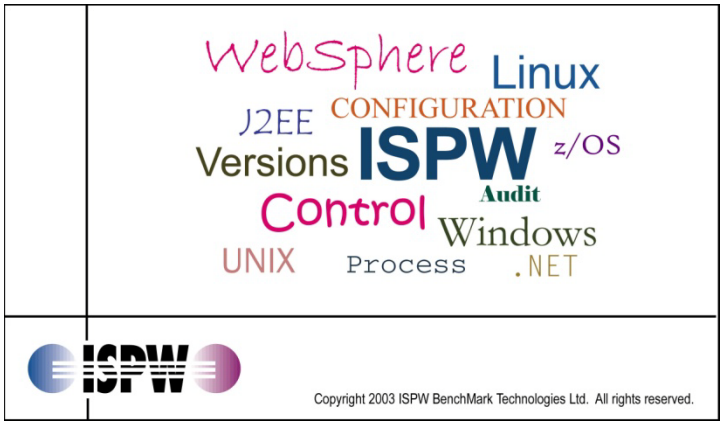

About the Company

- Privately held software products vendor, founded 1986
- Customer examples:
  - ABN Amro Bank, Amsterdam, Netherlands
  - Bank of Montreal, Toronto ON
  - Commerce Bank, Kansas City MO
  - FedEx, Memphis TN
  - Isracard, Tel Aviv, Israel
  - Insurance Corporation of British Columbia, Vancouver
  - Southern California Edison, Los Angeles CA
  - State Auto Insurance Companies, Columbus OH
  - St George Bank (now Westpac), Sydney Australia
  - State of California, Franchise Tax Board, Sacramento
  - UNUM Insurance, Chattanooga, TN

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Other SCM Vendors and Tools

- Allen Systems Group: LCM
- CA: SCM for Mainframe (Endevor) and Harvest
- IBM: SCLM and IBM/Rational toolset
- Serena: ChangeMan Suite and PVCS Dimensions

What is ISPW?

Feature	ISPW	Which means ….
It's a Software Change Management product	✓	All of the commercial SCM products support versioning, compiles, production updates, etc.
It's a Teamware IDE	✓ DB2 application with Object-action UI	ISPW is also a developer's workbench with a GUI-like interface built to integrate tools, utilities, code generators and 4th GLs
It deploys executables to remote z/OS LPARs	✓ With the ISPW Deploy feature	For Customers with more than one Production system, ISPW can deploy application code to remote LPARs in other data centers, cities or countries
It deploys executables to Unix, Linux and Windows servers	✓ With the ISPW Remote Deploy feature	ISPW even supports cross-system applications with both mainframe and distributed code, such as those running in the WebSphere Application server. Every runtime component can be deployed, such as HTML, .exe and .dll files, and WAR and EAR files

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DB2 High Performance Architecture

Feature	ISPW	Which means ….
Manages multiple platforms?	✓ z/OS plus AIX, Linux, HP/UX, Wintel, and Sun Solaris remote servers	ISPW is a multi-tier, multi-platform product **It's not just for the mainframe !**
DB2-based control file?	✓ 75 DB2 tables	**ISPW is a DB2 application**
High-performance communications layer?	✓ With encryption and compression	Users and application servers are connected around the world with a fast, secure communications pipe
Customizable and extensible?	✓ With updates to DB2 parameters; each ISPW table is extensible	Customers can handle their site-specific requirements with no hard coding
Centralized cross-platform auditability and control?	✓ z/OS, AIX, Linux, HP/UX, Widows, and Sun Solaris	Auditors approve of ISPW's centralized control over **both** mainframe and distributed applications with just one product

Mainframe and Distributed Version Control

Feature	ISPW	Which means ….
Mainframe non-standard module types?	✓ PDSs plus VSAM, DB2, Adabas and any other module type	ISPW can manage any type of mainframe source and executables files, including those developed with 4th GLs, CASE tools and vendor code
Distributed components?	✓ mainframe & distributed components	Customers only need one SCM product to manage their cross-platform systems, such as WebSphere applications
Where are versions stored?	ISPW "Warehouse" is a mainframe-based PDS/E implementation	Both distributed and mainframe versions are stored on the mainframe using standard IBM technology
EBCDIC and ASCII code?	✓ Both text and binary objects	Even Word docs, GIFs, XML, JAR, WAR and EAR files, etc., are all versioned with ISPW
How many versions?	Unlimited; site-defined policies by module type and application	Each Application can follow the Site standards or set its own rules for the number of module versions and retention

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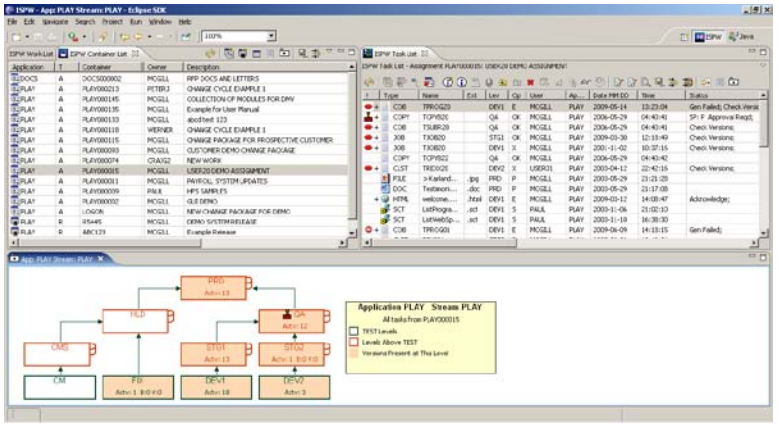
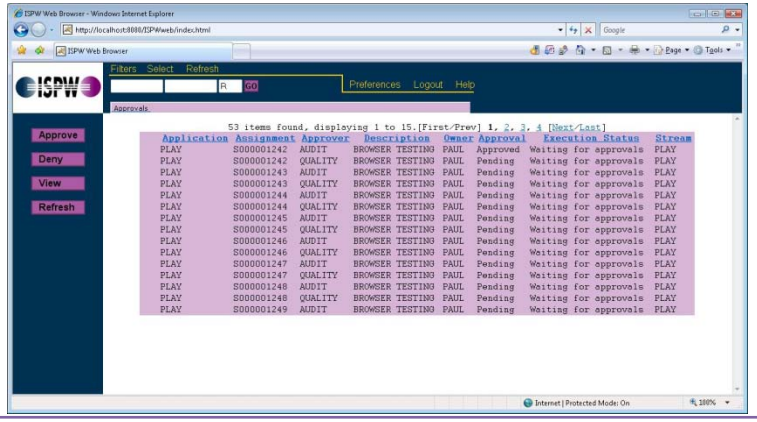
Eclipse, Browser and 3270 User Interfaces

Feature	ISPW	Which means ….
3270 User Interface?	✓	IT staff can work with ISPW from any user interface they choose, or even connect through every UI at the same time
Eclipse User Interface?	✓ For both mainframe and distributed developers	
Browser User Interface?	✓ For managers and approvers	

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Commerce Bank
ISPW Conversion

Presenters:
Craig Danielson – Change Manager
Mark Tucker – Technical Lead

Information Technology Change Management

Commerce Bank

Agenda:

- Commerce Bank
- History
- Mainframe Environment
- Distributed Environment
- Converting to ISPW
- Code Development and Deployment
- Integration with Change System
- Final Analysis

Commerce Bank

Bank:

- Located in Kansas City, Missouri
- Opened in KC in 1865
- 300+ Locations
- 350+ ATMs
- Operate in KS, MO, IL, OK, COLO
- 5,200 Employees
- $18.5 Billion in Assets Under Management
- Super Community Bank

History

Reasons for Purchasing ISPW

Looked for All in One Solution

- ISPW Supports Mainframe and Distributed Applications
- One System to Learn, Train, Support

- Maintenance NOT tied to MIPS
- Data all on Mainframe
  - Mirrored to DR (No Extra License & Easy to Use at DR)
  - Stable Proven Environment
- ISPW Answered all Questions Asked
- References

Mainframe Environment

Architecture and Environment:

- 71 Mainframe Applications
- Cobol, Assembler, DB2, VSAM, CICS, RUTL
- One Mainframe Split into 2 LPARs (Test and Prod)
- 4 Test CICS Regions
- 4 Production CICS Regions
- ISPW
  - Developers Sign-on through Test LPAR to Prod ISPW
  - All Compiles Executed on Test LPAR using Prod ISPW
  - DB2 Binds Executed on same LPAR that stores Database

Distributed Environment

- ISPW Remote Server
  - 300 Windows Physical and VM Servers (Windows 2003 & 2008)
  - 24 AIX LPARs
  - 3 HP_UX LPARs
- Subversion is used for Source Control, ISPW to Deploy
- Most deployments are only Copying file(s) to a Target Environment
- Websphere, MQ Broker, and .NET applications
  - Deploy Executables (.ear or .msi) to Staging Directory on Target Server
  - Developers Complete Install
- One application has automated deployment script

Converting to ISPW

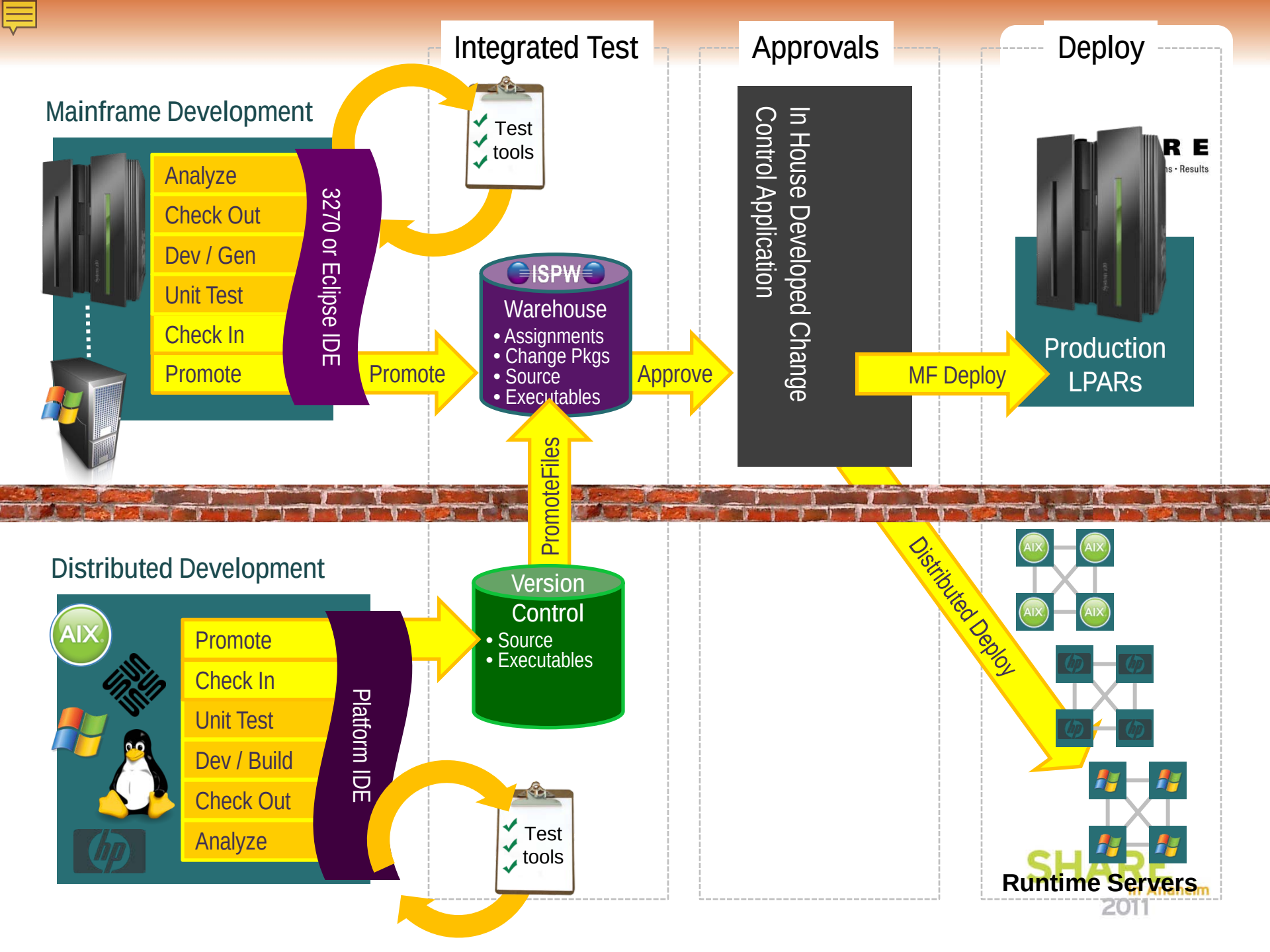
ISPW Implementation (Mainframe or Distributed):

- Don't Bypass the Project Management Process
  - Gather Your Requirements
  - Don't Assume Current Tool is Actually Meeting Requirements
  - Question Status Quo (Revisit Processes)
    - Double Link (NCAL) – The Vendor told Us to Do This
- Don't Take Shotgun Approach
  - Don't try to do all Customization Upfront
  - Convert Small Subset (5 – 10 Applications)
  - Convert Using Phased Approach
  - Break into Logical Groups Based on Requirements

Code Development & Deployment

Subversion Repository

- Established an Enterprise Repository
- CollabNet Subversion
- Redhat Linux (SUSE) VM Linux OS
- Repository Access Controlled by AD Groups
- Repository is Partitioned by Application
  - Each application has a Non-secured and Secured Repository


Integrated Test
Approvals
Deploy
Mainframe Development
Analyze
Check Out
Dev / Gen
Unit Test
Check In
Promote
3270 or Eclipse IDE
Test tools
Promote
ISPW
Warehouse
• Assignments
• Change Pkgs
• Source
• Executables
Approve
In House Developed Change Control Application
MF Deploy
Production LPARs
PromoteFiles
Distributed Development
Promote
Check In
Unit Test
Dev / Build
Check Out
Analyze
Platform IDE
Version Control
• Source
• Executables
Test tools
Distributed Deploy
Runtime Servers

Code Development & Deployment

Distributed Developers

- Checkout Source Code from Repository
- Make Changes, Build Executables, and Test on Desktop
- Commit Source Code Changes back to Repository with a Tag
- Automated Build Applications (Cruise Control or Hudson)
  - Executes Ant Script to Build Executable
  - Deploys to Test Environment
  - Uses Subversion Tag to Track and is Stored in Manifest
  - Completes Test
  - Executables Imported into ISPW
  - Promoted through Lifecycle for Testing and Deployed to Production

Code Development & Deployment

Java Developers

- AIX Environment
  - Permissions and Ownership Issues
  - Executable Manually Installed with Script Written by the Developers

.NET Developers

- Executable(s) Manually Install (Take servers out of the load balancer)

MQ Broker – IBM Message Management Tool

- Manages and Creates MQ message Flows and Message Queues
- To Update a Message Flow
  - MQ Broker Deploys Archive Files (BAR files)
    - Broker Archive (.bar)
    - CICS regions
    - Websphere Applications etc, etc…
  - BAR file Built from Xml and Java Files

Code Development & Deployment

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Code Development & Deployment

MQ Broker Automated Deployment

- Developers Check out Source Code from Subversion Repository
- Developers make Changes to Code, Build and Test on Desktops
- Commit the Code back to Subversion Repository
- A Subversion Command Line Script
  - Executed every 15 minutes
  - Copies Latest Version of Subversion Repository to Staging Server.
- Developer Builds BAR file from Source Code on Staging Server
- Imports Resulting Build into ISPW
- Developer Deploys BAR with ISPW to Test Environment
- ISPW Executes Script that Calls MQ Broker to Deploy the BAR File

Code Development & Deployment

Deployment Scripting in ISPW

- Korne Shell Executed by dpapcmd
- Korne Shell Calls Ant Script
- Ant Script Calls Java Classses
  - Uses the gateway to Return Set Information. Set Information is Returned as Ant Properties
- Ant Script Parses through Ant Properties Returned
  - Calls Broker Deployment Script for each BAR File
  - Parsing the Ant Properties Requires Calling a Javascript from Ant

Integration with Change System

Change Control Console

- Requesting, Tracking and Reporting of Changes
- Currently Written in Classic ASP application
- ISPW supplied a DLL to Return Set Information to ISPW
- Created a COM+ Application to Manage DLL Supplied by ISPW

Final Analysis

Generally both the mainframe and distributed developers find using ISPW easier than using our previous deployment tool.

We have established a single point of control for change management at Commerce Bank

We can now get our applications deployed as a single package (great synchronization

There are some things that we are working with ISPW on like a new command line interface for more automation

The conversion isn't easy but the result is worth the effort

The ability to view files contents in a deploy environment's directory structure.

Questions

Contact Us!

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