

z/VSE Live Virtual Class

Thursday, Feb 21, 2008 at 11:00 AM ET

<https://asp22.centra.com:443/GA/main/0000009b87f600000117b47fa70e94bd>

WAVV 2008

Pete Clark, CPR Systems

and

Approaches to Application Development for z/VSE

Wilhelm Mild, IBM Boeblingen Lab



z/VSETM z/VM[®] Linux[®]
Splash

WAVV-World Alliance

z/VSE and z/VM are trademarks of IBM

----- Linux trademark of Linus Torvalds

WAVV 2008 Announcement

- **April 18-22, 2008 – Friday thru Tuesday**
- **SPLASH - Friday at 7:00 PM**
- **92 WAVV sessions and 25 Vendor sessions, 8:00 AM Saturday thru Tuesday 1:00 PM**
- **Vendor Product Exhibition Sunday and Monday**
 - Hardware and Software Products
- **System z Academic Initiative, area students visit, WAVV and the Vendor Exhibition - Monday**

WAVV 2008 Information

- WWW.WAVV.ORG

- Hotel Information

- »Marriott Convention Center

- »Chattanooga, Tennessee

- Session Agenda

- Abstracts

- Registration Forms

WAVV Session Topics

- **CICSTS and CICS/VSE:**
- **VSAM, DB2Data:**
- **Computing Security**
- **e-Business and Multi-Platform Computing:**
- **Web Enablement and Technology:**
- **Hardware (all computing platforms):**
- **Network Wide Computing:**
- **Development Languages and Systems Utilities:**
- **z/VSE and z/VM Futures:**
- **z/VSE, z/VM, Linux, Installation, Support, Performance**
- **User implementations and experiences**
- **Vendor Product Specific Product Sessions**

WAVV 2008 Attendees

- Applications Developers & Designers
- DataBase Administrators
- Network Management and Designers
- Performance Analysis and Management Personnel
- Security Personnel
- Software and Hardware Planners
- Systems Programmers
- Technology Planners and Implementers
- Web Development Personnel

WAVV 2008 Review

- **Comprehensive technical education on a variety of today's critical technology**
- **Exposure to future technology and industry trends**
- **Access to developers, industry experts, peers with extensive experience**
- **Real educational value**
 - little time away from office (over a weekend)
 - low fee(\$400), low hotel rates(\$99 per night)
- **Looking forward to seeing everyone at WAVV 2008**



Approaches to Application Development for z/VSE

Wilhelm Mild
z/VSE Solution Architect
zvse@de.ibm.com



Trademarks

The following are trademarks of the International Business Machines Corporation in the United States and / or other countries.

CICS*	IBM*	Virtual Image Facility
DB2*	IBM logo*	VM/ESA*
DB2 Connect	IMS	VSE/ESA
DB2 Universal Database	Intelligent Miner	z/VSE
e-business logo*	Multiprise*	VisualAge*
Enterprise Storage Server	MQSeries*	VTAM*
HiperSockets	OS/390*	WebSphere*
	S/390*	xSeries
	SNAP/SHOT*	z/Architecture
		z/VM
		zSeries
		System z

* Registered trademarks of IBM Corporation

The following are trademarks or registered trademarks of other companies.

LINUX is a registered trademark of Linus Torvalds

Tivoli is a trademark of Tivoli Systems Inc.

Java and all Java-related trademarks and logos are trademarks of Sun Microsystems, Inc., in the United States and other countries

UNIX is a registered trademark of The Open Group in the United States and other countries.

Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation.

SET and Secure Electronic Transaction are trademarks owned by SET Secure Electronic Transaction LLC.

Intel is a registered trademark of Intel Corporation.

ACUCORP is a registered Trademark of ACUCORP Corporation

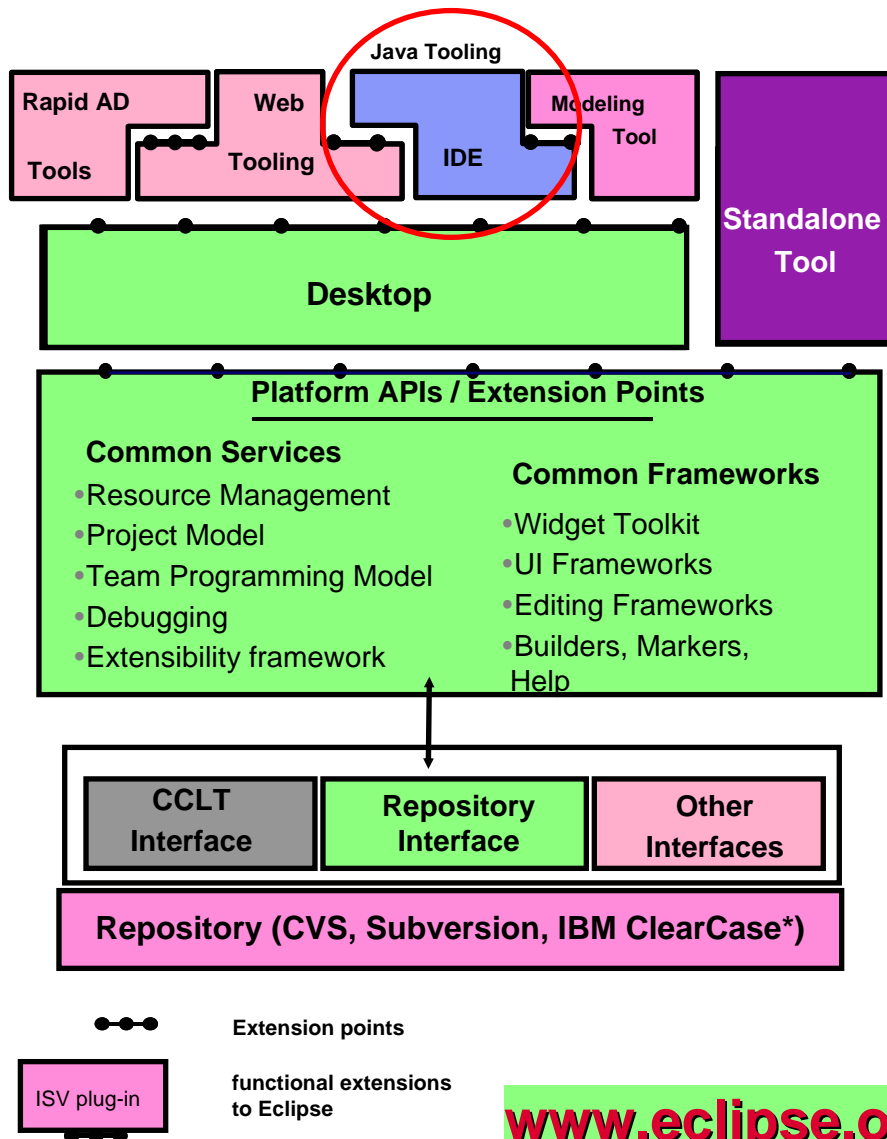
Development objectives !!!

- **Tools for managing existing z/VSE source code and changes**
 - COBOL, ASM, PL/I, C
 - increased productivity for changes and new development
 - flexibility in versioning
 - effective group development control

- **Develop for multiple platforms**
 - common framework for the enterprise instead of multiple unique platform dependent tools
 - same basic tool set for open systems and mainframe

- **Open source based technology**
 - tools that students know from school and university communities
 - help new developers adapt to the mainframe

Eclipse – the open Standard for application development

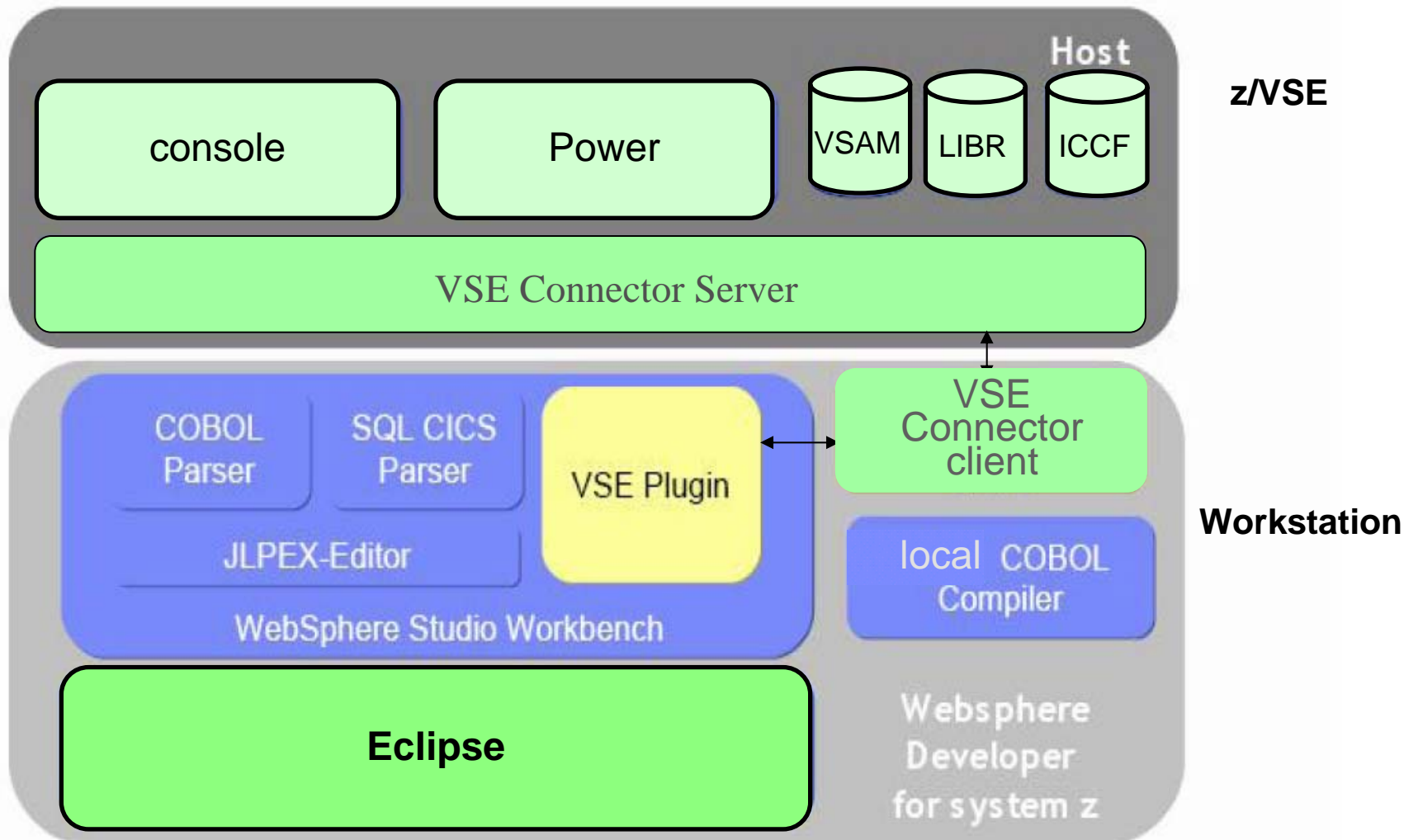


What is Eclipse about:

- **Open source development framework**
 - with modern Editors
 - syntax help & check
 - semantic check
- **Centralized source code maintenance**
 - entire source code in central Repository
 - cross platform project administration
- **Versioning software interface**
 - CVS, Subversion, or IBM ClearCase
 - automatic Workgroup-control
 - i.e. development groups, system group
- **Open for ISVs development Plug-Ins**
 - **Integrated Development Environments (IDE)**
 - for System z (WDz, RDz)
 - for Java, COBOL, PL/I, ASM,C
 - **Application analysis and optimization**
 - Analyze the applications and workflows with graphical correlations
 - **IBM HATS Development Plug-In (LVC xxx)**
 - develop new front-ends to 3270 apps.
 - **IBM EGL development Plug-In for z/VSE**
 - follow-on to Visual Age Generator

The IBM Development environment for the enterprise

WebSphere Developer for System z (WDz) with z/VSE Development Plug-in

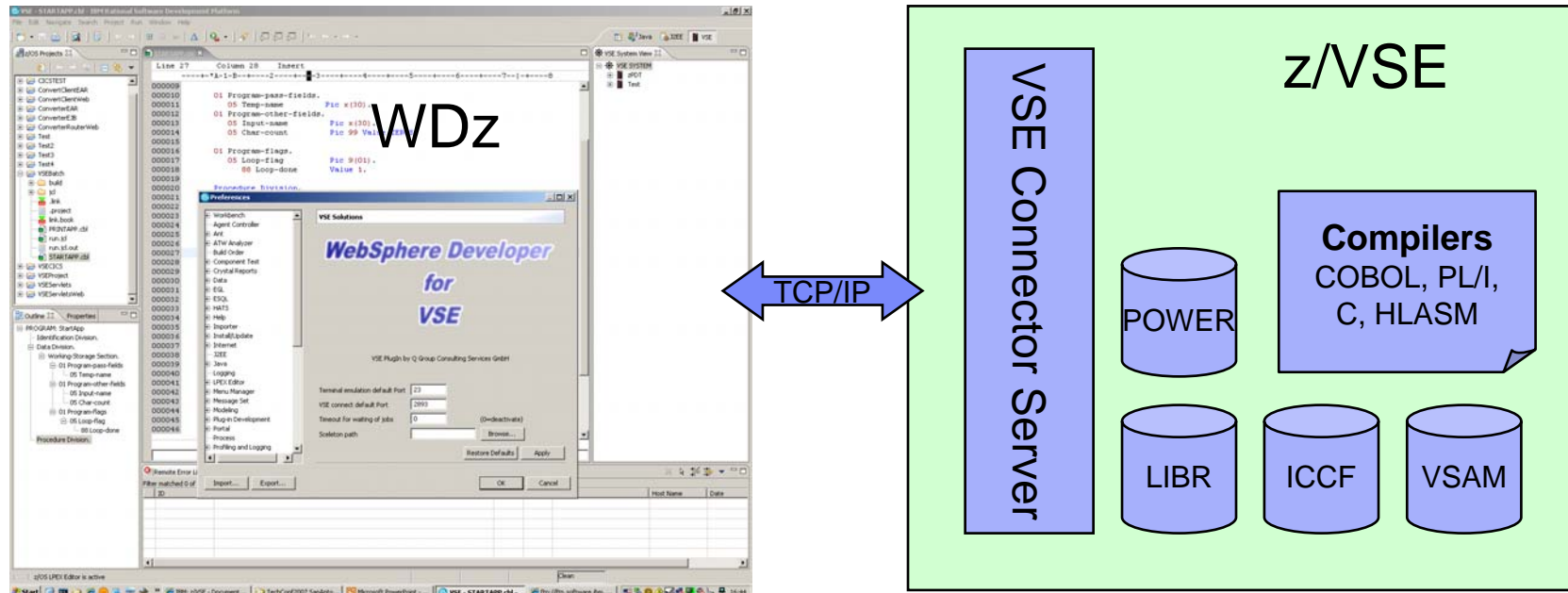


WDz functions for z/VSE and z/OS development

- **Enhanced Eclipse tools with mainframe development functions**
 - special editor functions for mainframe languages
 - local COBOL compiler
 - support for COBOL, ASM, PL/I, C
 - editor for CICS BMS maps
 - support for SQL generation
 - functions for remote processing and mainframe deployment

- **Integrated test environment**
 - full functional test within the development environment
 - debug possibility via z/VSE emulation window

(1) Development of COBOL applications in WDz



- **Development of COBOL**
 - **batch and CICS application**
 - Source code editing/checking
 - Access to z/VSE within the tool (console and 3270 access)
 - Compile, Link and error feedback from z/VSE
- **Additional supported languages: PL/I, ASM, C, BSM Maps**

WebSphere Developer (WDz) in z/VSE perspective

The screenshot displays the IBM Rational Software Development Platform (RSDP) interface for z/VSE development. The main window is titled "VSE - PRINTAPP.cbl - IBM Rational Software Development Platform".

1. Perspective: The overall view of the development environment, showing the menu bar, toolbars, and the main workspace.

2. View: The "VSE System View" on the right side, showing a tree structure of system components like VSE SYSTEM, VSE Lab, VSE Workshop, VSE Mainframe, and various libraries and datasets.

3. Projects: The "z/OS Projects" view on the left, showing a tree of project files including .TmpVseRemote, BMS, Java2VSE, soap, StartApp, Test, .link, .project, link.book, PRINTAPP.cbl, STARTAPP.cbl, TIMEZONE.cbl, and Timezone.

4. Editor: The central editor window showing the source code for "PRINTAPP.cbl". The code includes sections for Identification, Data, Working-Storage, Linkage, and Procedure Division.

5. Outline View: The "Outline" view at the bottom left, providing a hierarchical view of the program structure, including sections like Identification Division, Data Division, Working-Storage Section, Linkage Section, and Procedure Division using Recvd-Parms.

6. VSE Console: The "VSE Console" at the bottom right, displaying a memory map (MAP) with columns for address, space, area, size, and name.

AR	0015	SPACE	AREA	V-SIZE	GETVIS	V-ADDR	UNUSED	NAME
AR	0015	S	SUP	716K		0		\$\$A\$SUPI
AR	0015	S	SVA-24	1888K	1748K	B3000	768K	
AR	0015	V	B5	1280K	4864K	500000	45056K	
AR	0015	1	F1	1024K	4096K	500000	OK	POWSTART
AR	0015	2	F2	2048K	49152K	500000	OK	CICSICCF
AR	0015	3	F3	600K	14760K	500000	OK	VTAMSTRT
AR	0015	4	F4	2048K	18432K	500000	OK	
AR	0015	5	F5	768K	256K	500000	OK	
AR	0015	6	F6	256K	256K	500000	OK	
AR	0015	7	F7	1024K	19456K	500000	OK	TCPIP00
AR	0015	8	F8	2048K	49152K	500000	OK	
AR	0015	9	F9	256K	256K	500000	OK	
AR	0015	A	FA	256K	256K	500000	OK	
AR	0015	B	FB	256K	256K	500000	OK	
AR	0015	S	SVA-31	7588K	6748K	3700000	OK	SECSERV

WebSphere Developer (WDz) in z/VSE perspective

The screenshot displays the IBM Rational Software Development Platform interface for z/VSE. The main window is titled "VSE - PRINTAPP.cbl - IBM Rational Software Development Platform". The interface is divided into several panes:

- 1.Perspective:** The top menu bar and toolbar.
- 2.View:** The "VSE System View" tree on the right, showing a hierarchical structure of VSE components like VSE SYSTEM, VSE Lab, VSE Workshop, VSE Mainframe, Librarian, PRD1, PRD2, PRIMARY, I3SYSR5, CRYPTO, SYSDUMP, Power, Reader, List, Punch, Transmit, VSAM, VSAM.MASTER.CATALOG, VSESP.USER.CATALOG, #VSAM.#CICS.DBDCICCS, ICCF, and folders 1 through 59.
- 3.Projects:** The "z/OS Projects" tree on the left, showing a project structure with folders like .TmpVseRemote, BMS, Java2VSE, soap, StartApp, Test, link, link_book, PRINTAPP.cbl, STARTAPP.cbl, TIMEZONE.cbl, and Timezone.
- 5.Outline View:** The "Outline" pane at the bottom left, showing a tree view of the program structure: PROGRAM: PRINTAPP, Identification Division, Data Division, Working-Storage Section, 01 Work-Parms, 05 In-Len, 05 Char-count, 05 Out-Name, Linkage Section, and Procedure Division using Recvd-Parms.
- 6.VSE Console:** The "VSE Console" pane at the bottom, displaying a table of memory usage (MAP) with columns: AR, 0015, SPACE, AREA, V-SIZE, GETVIS, V-ADDR, and UNUSED NAME. The table lists various memory areas and their sizes.
- 7.VSE Terminal:** The central terminal window showing a VSE/ESA ONLINE prompt, a login screen with fields for USER-ID and PASSWORD, and a list of function keys (PF1-PF12, PA1-PA2, Enter, Clear, Attn, SysReq, NewLine, NextPad).

The bottom of the screenshot shows the Windows taskbar with the Start button and several open applications, including "VSE - PRINTAPP.cbl - ...", "BFS Authentication S...", "untitled - Paint", and "wdz". The system tray shows the date and time as 9:53 AM.

For a live demo of these functions, join the next LVC on March 27, 2008

(2) Analysis of applications and workflow

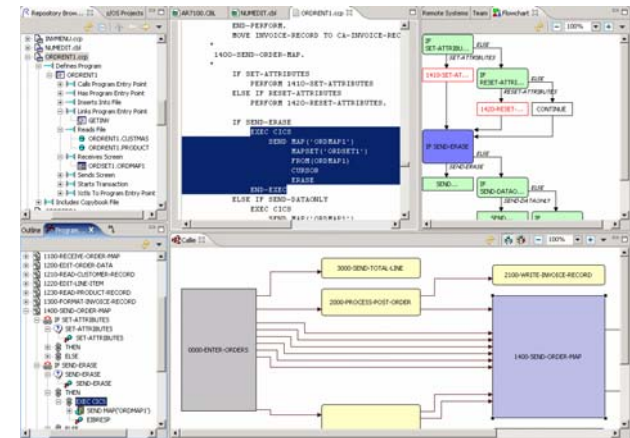
Asset Transformation Workbench Analyzer for Eclipse

- **Program analysis**
 - Program understanding: structure, relationships, logic flow
 - Data impact analysis: within and between programs

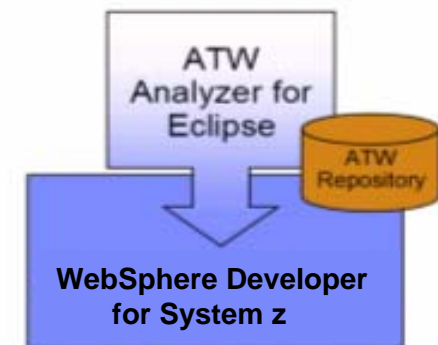
- **Find code patterns and anti-patterns**
 - Measure complexity
 - uses the source code in the central repository

- **Integrated with WebSphere Developer for System z (WDz)**
 - Adds ATW perspective to WDz
 - Synchronized with the LPEX editor in WDz

- **Built on the technology of Asset Transformation Workbench**
 - A core set of developer-oriented analysis tools
 - Can populate, share, or use an existing ATW repository



Multiple synchronized views of the program helps developers to zero in on the code that matters



ATW Analyzer for Eclipse adds five analysis views to WebSphere Developer for System z

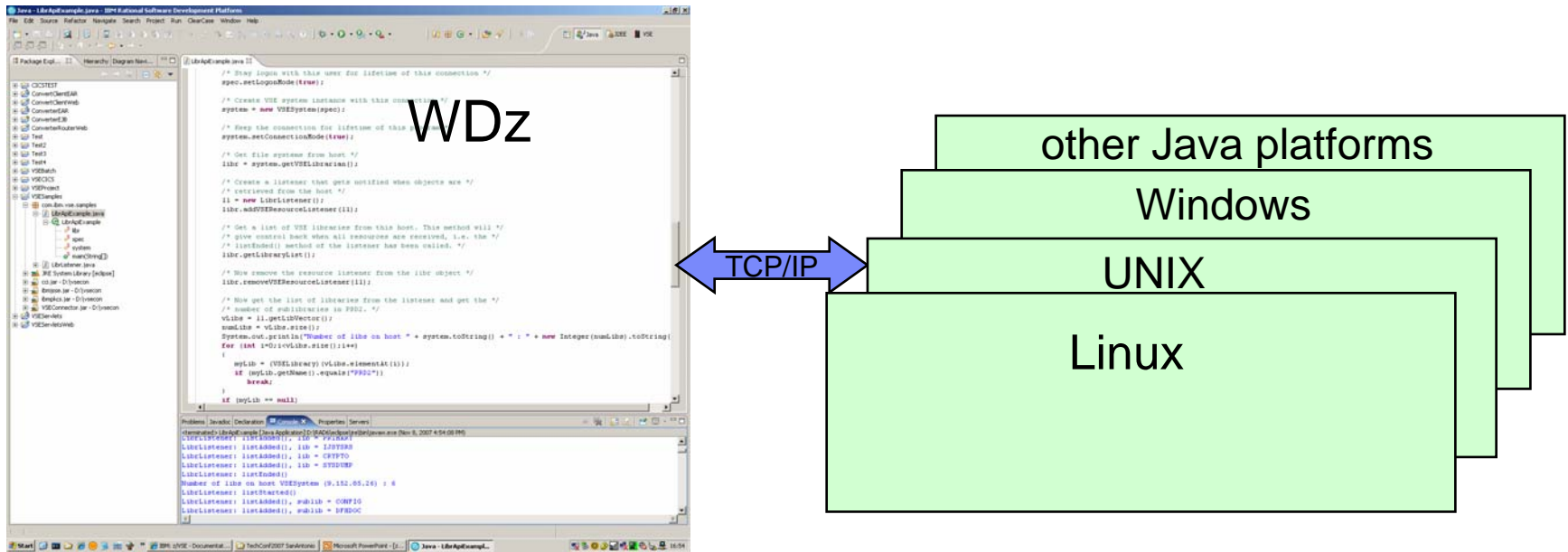
(2) Analysis of applications and workflow (sample)

The screenshot displays the IBM z/OS development environment with three main windows:

- Repository Browser (Left):** Shows a project tree for 'ORDRENT1.ccp' with various program entry points like 'Calls Program Entry Point', 'Has Program Entry Point', etc.
- Code Editor (Top Middle):** Displays COBOL code for 'ORDRENT1.ccp'. A blue highlight covers the following code block:

```
EXEC CICS  
  SEND MAP('ORDMAP1')  
  MAPSET('ORDSET1')  
  FROM(ORDMAP1)  
  CURSOR  
  ERASE  
END-EXEC
```
- Flowchart (Top Right):** A logic flow diagram showing decision points (IF SET-ATTRIBU..., IF RESET-ATTRI..., IF SEND-ERASE, IF SEND-DATAO...) and actions (1410-SET-AT..., 1420-RESET-..., SEND...). The flowchart is zoomed to 100%.
- Outline (Bottom Left):** A hierarchical list of program components, including '1100-RECEIVE-ORDER-MAP', '1200-EDIT-ORDER-DATA', and '1400-SEND-ORDER-MAP'. The 'EXEC CICS' block is highlighted in blue.
- Callie (Bottom Right):** A Callie diagram showing the relationship between programs. A large grey box labeled '0000-ENTER-ORDERS' has arrows pointing to several yellow boxes: '3000-SEND-TOTAL-LINE', '2000-PROCESS-POST-ORDER', and '2100-WRITE-INVOICE-RECORD'. A large blue box labeled '1400-SEND-ORDER-MAP' is also shown, with arrows pointing to it from the yellow boxes and the '0000-ENTER-ORDERS' box.

(3) Development of Java applications in WDz



- **Development of native Java applications**
 - for systems like UNIX, Linux, Windows or other Java platforms
 - Edit, compile and Build
 - Test the Java application in the integrated WebSphere test environment and access z/VSE resources
 - additional supported languages are C, C++, REXX
- **Development of Java applications to access z/VSE resources**
 - use of z/VSE Java-Based Connectors
 - develop SOA components to access z/VSE services

Conclusion: Development for all platforms with one tool set

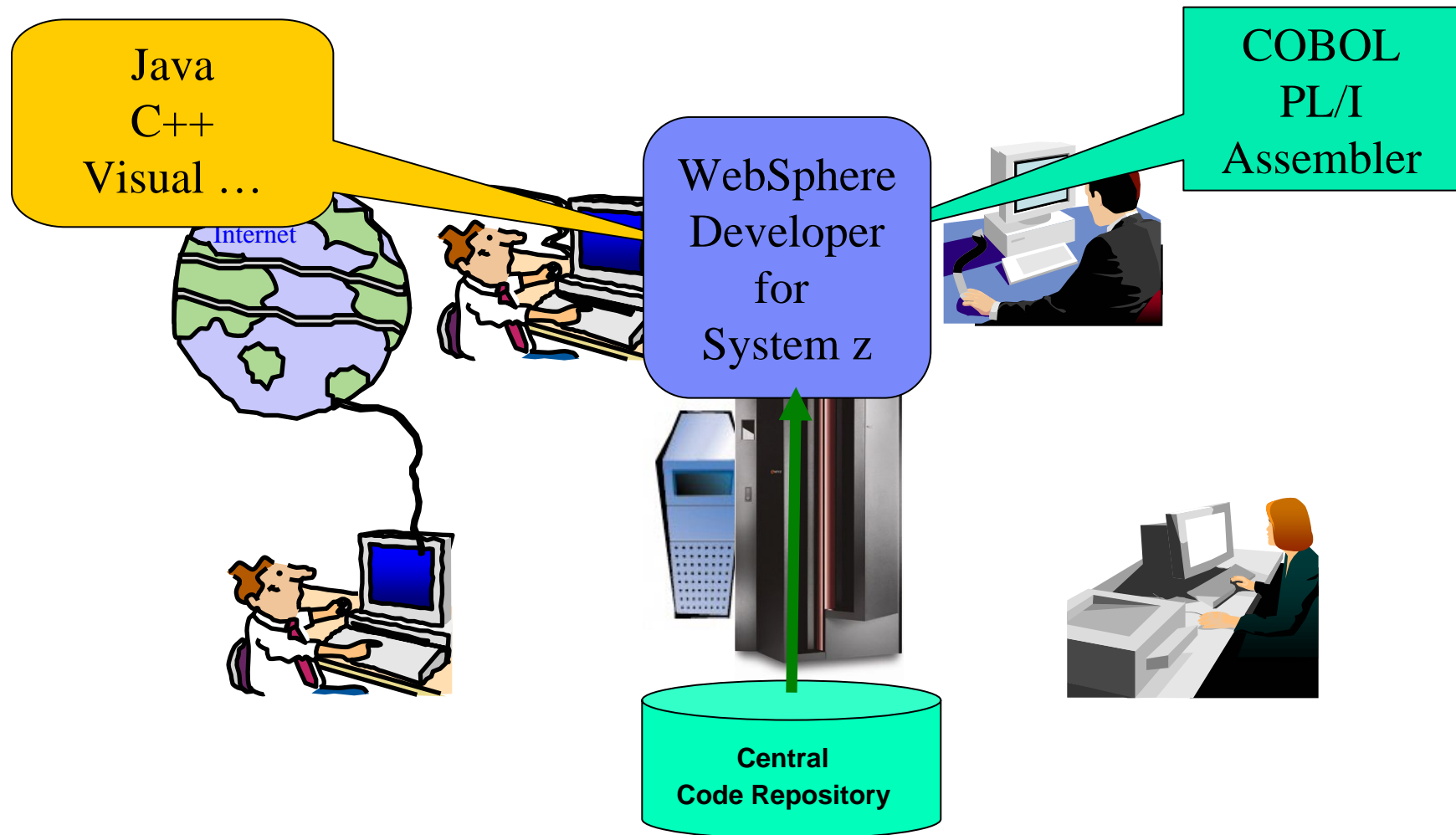
- **A modern tool set to support z/VSE development and maintenance**
 - modern editor for enhanced productivity
 - tools to analyse and optimize existent applications and workflow

- **Common framework for enterprise development**
 - standard for all developers
 - example: z/VSE with COBOL, Linux on System z with Java
 - easy skill transfer

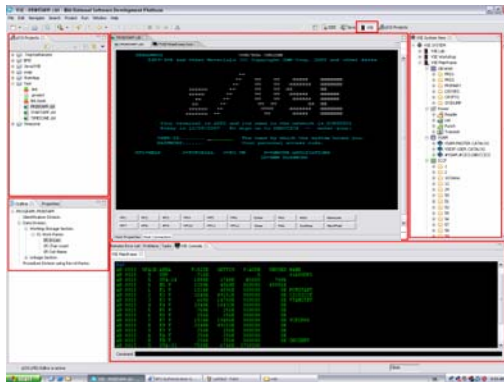
- **Open source framework**
 - commonly thought in schools and universities
 - smooth introduction of new developers to the mainframe

Summary

Eclipse – an open Integrated Development Environment for the enterprise



More Details



- **Live Virtual Class**
 - Date: March 27, 2008 – 11:00 AM ET
 - Topic: Life Demo of Development for z/VSE with WDz
 - Speaker Ingo Franzki
- Attend/Playback: <https://asp22.centra.com:443/LA/main/000000e7ce4c00000117fd1b5b00bbfe> OR
- You can also link to the class from the z/VSE Home Page at:
- <http://www-03.ibm.com/servers/eserver/zseries/zvse/>



- **Development sessions at the:
WAVV Conference**
 - Date: April 18-22, 2008
 - Location: Chattanooga, TN, Marriott Hotel
 - Details on Application Development
 - Demos at our z/VSE booth

z/VSE Additional Information

- z/VSE Home Page
<http://www.ibm.com/servers/eserver/zseries/zvse/>
- z/VSE Solutions and Utilities
<http://www-1.ibm.com/servers/eserver/zseries/zvse/solutions/>
- WDz
<http://www.ibm.com/software/awdtools/wdzseries/>
- WDz Plug-In for VSE
<http://www.qgrp.de/index.php?show=produkte&id=1&detail=wdz>



- e-business Solutions for VSE/ESA SG24-5662
- e-business Connectivity for VSE/ESA SG24-5950
- CICS Transaction Server for VSE/ESA
CICS Web Support SG24-5997
- Handbook For WebSphere (Connectors to z/OS and VSE) SG24-7042

We appreciate your comments on z/VSE: zvse@de.ibm.com