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VisualAge Generator An Update

***Leverage existing skills to build
robust e-business systems
quickly***

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WebSphere™ Platform for e-Business

Customer and Partner Applications

Foundation Accelerators

Development

VisualAge for Java

WebSphere Studio

VisualAge® Generator

WebSphere Business
Components

Presentation

Provides the ability to manage the user experience at an individual, personalized level - as well as extending that experience beyond the web, utilizing voice media and pervasive devices

Deployment

Provides e-business scalability to fit any size or complexity of e-business solution, including performance management, site management, and site analysis

Integration

Provides business process automation and workflow management, as well as the ability to integrate with backend legacy systems

Foundation Extensions

Foundation

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VisualAge Generator: Overview

Rapid Development

- High level abstractions
- Target platform neutral
- Shield complexity of target system
- Interactive development & test
- Strong team programming
- Test coverage
- Wizards
- Templates, business objects
- Visual specification



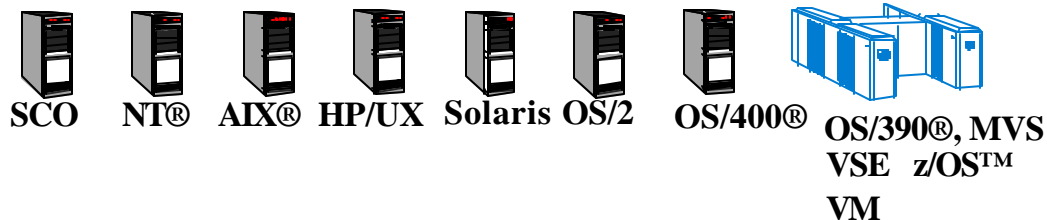
Generation

- Clients-TUI, GUI, browser
- Generate - COBOL, C++, Java, JavaBeans™, Java wrappers
- Select target platforms
- Make-Source, JCL, etc.

Windows® OS/2® TUI Java, HTML



Execute



Execution

- Exploit high-volume Transactional Systems
- Multiple execution platforms
- Database - ODBC, JDBC, native
- Communications middleware - SNA, TCP/IP, DCE
- Middleware transparency
- Scale as needed



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VisualAge Generator: Spanning the Globe!

Over 5200 Enterprise development sites using VisualAge Generator in 54 countries



Agriculture
Banking
Chemical
Construction
Distribution
Education
Energy
Finance

Government
Health Care
Insurance
Manufacturing
Media
Petroleum
Process
Publishing

Retail
Services
Software Development
Telecommunication
Transportation
University
Utilities

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VisualAge Generator V4.5 Content

- Integrated support for MQSeries®
- Java generation for server programs on Windows NT & 2000
- Enhancements to WebSphere Application Development capabilities
- Increased support for AS/400®
- Improved access to remote data during test
- VisualAge Generator Templates enhancements
- BIDI Conversion Tables Now Support Java Clients
- SQL Userid/Password Prompting Enhancement
- Windows 2000 Toleration
- Windows NT and OS/2 Installation improvements
- Support for SCO OpenServer as back-end server for Text User Interface (TUI) applications
- Support for Solaris as mid-tier and back-end server for Java and Graphical User Interface (GUI) clients





Late Additions to VisualAge Generator V4.5

- ✓ Enhancements to Map Editor (via FP2, PQ41261)
- ✓ Support for Linux/390 as Web Application Server (via FP2)
- ✓ Improvements in invocation of batch programs in MVS batch (host PTF, PQ45178)
- ✓ Optimization of VisualAge Generator runtime services initialization (host PTF, PQ44780)
- ✓ Additional option for IMSTM applications that allows not to clear screen at EZECLOSE (via FP2, PQ44170)
- ✓ Ability to specify error/recovery routine when transaction name cannot be resolved (PQ44427)
- ✓ Improved deployment of VisualAge Generator Gateway Servlet in J2EE-enabled application server (via FP2, PQ45177)
- ✓ Support for Relative Record Number support on AS/400 (via FP2, PQ44582)
- ✓ Improvements to RACF[®]/IMS logon (PQ49468)
- ✓ Addition of "find" function in table content editor (PQ52862)
- ✓ Addition of line number and cross references (PQ51940)





Enhancements to VisualAge Generator Map Editor

- ✓ Show mode status (edit or field) in the status area
- ✓ Show initial string value for constant fields in the field list window
- ✓ Enable "field properties" on the define menu when in edit mode
- ✓ Provide hot key combinations to switch between edit mode and field mode
- ✓ When inserting fields when in edit mode (using ctrl+3 or ctrl+6), editor should remain in edit mode
- ✓ Provide option to automatically select fields (instead of block) when doing a selection
- ✓ Available in V4.5 Fixpack 2





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Support for Linux/390 as Web Application Server

- ✓ No code changes were required
- ✓ Simply copy the two jar files from the OS/390 Host Services product to the Linux/390 LPAR.
- ✓ Available in V4.5 Fixpack 2

The IBM logo, consisting of the letters 'IBM' in a bold, sans-serif font, with horizontal lines through the letters. The logo is positioned at the bottom of a vertical banner on the left side of the slide, which also contains a wireframe globe and a computer mouse.

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Improvements in invocation of batch programs in MVS

- ✓ Allow programs generated for IMS, IMS/BP, MVSBATCH, and TSO to call subprograms generated for MVSBATCH.
- ✓ Commit/rollback processing and error reporting will be performed in accordance with the environment for the first generated program on the call stack.
- ✓ The customer is responsible for ensuring that the MVSBATCH program does not use any functions that are not allowed in the target environment.
- ✓ Any defects that occur when running with programs generated for two different environments must be recreated with all programs generated for the same environment before they can be reported.
- ✓ Available via host PTF for PQ45178





Optimization of VisualAge Generator Run-time Services Initialization

- ✓ When a non-VisualAge Generator (VG) MVS BATCH or IMS/BMP program calls generated subprograms, run-time services initialization/termination is performed on each call. The performance burden is heavy.
- ✓ Provide a set of wrapper programs for MVS BATCH and IMSBMP and link editor JCL that can be linked as the initial entry point of any non-VG program.
- ✓ The wrappers will initialize run-time services, call the non-VG main entry point, and terminate on exit from the non-VG program.
- ✓ Environment-specific wrapper programs are provided for the MVS Batch, IMSBMP, IMSVS, and TSO environments
- ✓ The wrapper passes the parameters it receives onto the customer program, and passes the return code from the customer program back to the caller of the wrapper.
- ✓ Available via host PTF for PQ44780.





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Option to not clear screen at EZECLASE

- ✓ Allow a customer to avoid clearing the screen on an EZECLASE in an IMS main transaction program by specifying generation option /RT=EZENOLNS when the program is generated.
- ✓ In IMS, VisualAge Generator automatically sends a "clear screen" message at the end of the program. This caused a conflict for customers with common error checking routines (e.g. for security) that send their own messages to the screen.
- ✓ If an error occurs, the error message and the clear screen both get sent, resulting in an IMS error about conflicting messages.
- ✓ Available in V4.5 Fixpack 2

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Error/Recovery Routine for Bad Transaction Name

- ✓ Today: If a program enters a bad IMS transaction name, the program will abnormally terminate.
- ✓ Change: Have an option whereby the customer can specify the name of an error/recovery routine to transfer control to for a bad transaction name.
- ✓ Available in V4.5 Fixpack 2.





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Improve Deployment of Gateway Servlet

- ✓ Provide a web application archive file (war) to simplify deployment of the VisualAge Generator Gateway Servlet in a J2EE-enabled application server.
- ✓ The WebSphere Application Server has a way of processing war files (a zipped directory structure) to make it easier to install web applications.
- ✓ The application server uses the VisualAge Generator provided XML file as an instruction for installing the web application and for specifying a URL.
- ✓ The trigger for the gateway servlet's invocation by the web application server is the user's specifying a URL.
- ✓ Available in V4.5 Fixpack 2

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Relative Record Number Support

- ✓ Access to Relative Files in Remote VSAM environments via all I/O options supported in VisualAge Generator
- ✓ Ability to define ITF Resource Associations for OS/400 Relative Files
- ✓ Ability to define RAF definitions for Relative Files on OS/400
- ✓ Multiple users can access the same file in remote VSAM environments
- ✓ Access to Alternate Index files as well as Primary Files
- ✓ Ability to define Record ID item with types other than BIN (Available only in V4.5 Fixpack 3)
- ✓ Remote VSAM requires the record ID item to have a BIN datatype. ITF will convert other types to BIN so runtime results can be tested via ITF
- ✓ Available in V4.5 Fixpack 2





User Authentication for VisualAge Generator Gateway Servlet on OS/390

Before:

- ✓ When logon page supplied, authentication takes place when user has invoked web transaction
- ✓ For expired or invalid passwords, must debug through trace files

After:

- ✓ With logon-check class, and also supply "expired password page" to prompt user for new password.
- ✓ If no "expired password page" supplied, error page is displayed and user conversation ended.
- ✓ For errors other than expired password, logon page redisplayed with error message
- ✓ Can make same web transactions available to all users via same userid/password combination with no logon page.
- ✓ Available in V4.5 Fixpack 3



Additional Items

- ✓ PQ52862 - Provide "find" function in table content editor

"Find" push button is added to the table content editor that enable users to search for character or string in the table contents.

- ✓ PQ51940 - Print listing will now have line number for each function statement and cross references with line numbers in program structure.

- ✓ Available in V4.5 Fixpack 3





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Items Under Development

- ✓ Support Linux/xSeries™ as a Web Application Server for VG web transactions (Red Hat & SuSe distributions)
- ✓ Support use of VG with WebSphere Application Server 4.0 and VisualAge for Java 4.0
- ✓ Allow generated IMS applications to identify a PCB by name
- ✓ Operate the Interactive Test Facility in EBCDIC mode
- ✓ Provide new APIs for users who want to modify their VisualAge for Java-based VG repositories
- ✓ Improve the performance of generated programs on Windows NT, AIX, and Solaris servers (9x on WinNT)
- ✓ Modification of VG web transaction tooling to use STRUTS architecture
- ✓ Production of portlets and portlet JavaServer Pages(JSPs), in addition to servlets & JSPs
- ✓ Provide Security exits for web transactions
- ✓ Verify compatibility with Windows/XP

Note that these represent potential product improvements with no committed release dates.



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Dynamic PCB Addressing

- ✓ Allow generated IMS applications to identify a PCB by name

Note that these represent potential product improvements with no committed release dates.

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Operate ITF in EBCDIC Mode

- ✓ Operate the Interactive Test Facility in EBCDIC mode

Note that these represent potential product improvements with no committed release dates.

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New APIs for Envy Customization

- ✓ Provide new APIs for users who want to modify their VisualAge for Java-based VisualAge Generator repositories
- ✓ Available via APAR PQ52786 in Fixpack 3

Note that these represent potential product improvements with no committed release dates.

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Use STRUTS Architecture for web transactions

- ✓ Modification of VisualAge Generator web transaction tooling to use STRUTS architecture

Note that these represent potential product improvements with no committed release dates.

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Support for WebSphere Portal Server

- ✓ Production of portlets and portlet JSPs, in addition to servlets & JSPs

Note that these represent potential product improvements with no committed release dates.

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Security Exit for Web Transactions

- ✓ Production of portlets and portlet JSPs, in addition to servlets & JSPs

Note that these represent potential product improvements with no committed release dates.

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VisualAge Generator V4.5 Information Sources

- VisualAge Generator Web Site
 - ▶ www.software.ibm.com/ad/visgen
- VisualAge Generator News Group
 - ▶ news://news.software.ibm.com/ibm.software.vagen
- VisualAge Generator Customer Newsletter
 - ▶ To subscribe:
www.ibm.com/software/ad/visgen
and follow related links



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VisualAge Generator V4.5 Newsletter Articles

- Accessing VSAM Files on VSE
- More DB2® for OS/390 Hints and Tips
- Generating Java and JSPs using VisualAge Generator V4.5
- IMS newsletter, Commonwealth of Kentucky

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VisualAge Generator Service Offerings

- Education - Introduction, Transition
- Installation & Customization
- Developing e-business applications
- Migrations
- Quickstarts
- Design Reviews
- Mentoring
- Templates Customization

AIM Services:

websphere_consulting@us.ibm.com

VisualAge Generator Business partners:

<http://www-4.ibm.com/software/ad/visgen/services/thirdserv.html>

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Upcoming VisualAge Generator Conferences

- ✓ VisualAge Generator Germany, September 24, 2001
- ✓ Nordic GUIDE, September 26-28, 2001
- ✓ VisualAge Generator Users Group (U.S.), October 17-19, 2001
- VisualAge Generator International Symposium, November 15-16, 2001
- VisualAge Generator Australia, March 6-8 2002
- Nordic GUIDE, May 22-24, 2002



Some Dates to Remember

| | |
|-----------------|-------------------|
| V4.0 fixpack 2 | October 31, 2000 |
| V4.5 fixpack 1 | December 12, 2000 |
| V4.0 fixpack 2T | December 19, 2000 |
| V4.5 fixpack 2 | May 8, 2001 |
| V4.0 fixpack 3 | August 13, 2001 |
| V4.5 fixpack 3 | in progress |

End of Service - VisualAge Generator Developer:

| | |
|------|---|
| V2.2 | January 31, 2001 |
| V3.0 | January 31, 2001 |
| V3.1 | January 31, 2001 |
| V4.0 | September 30, 2001 March 31, 2002 |

End of Service - VisualAge Generator Host Services

| | |
|------|--------------------|
| V1.1 | September 30, 2001 |
|------|--------------------|

End of Service - CSP/370:

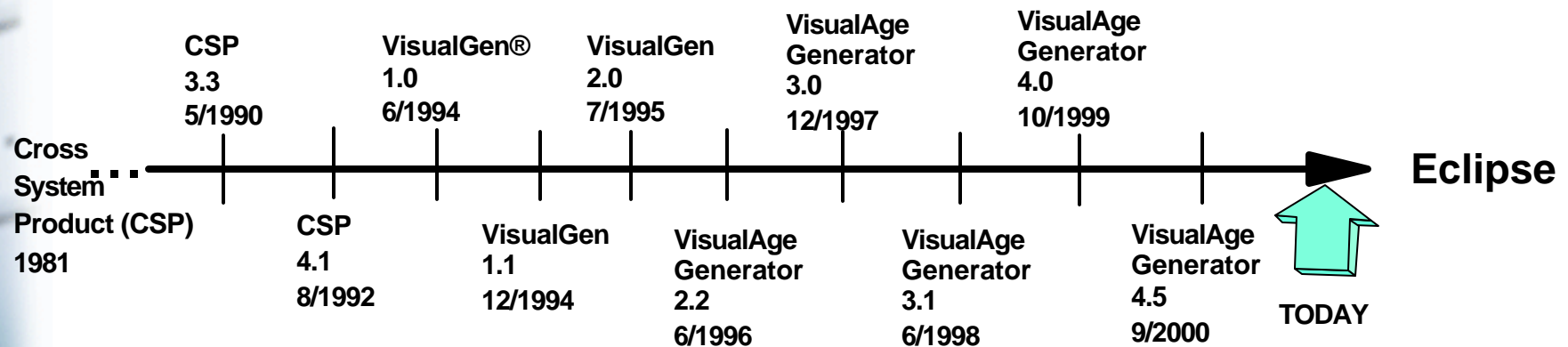
| | |
|------|-------------------|
| V4.1 | December 31, 2001 |
|------|-------------------|



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VisualAge Generator History

Preserving the value of your investment



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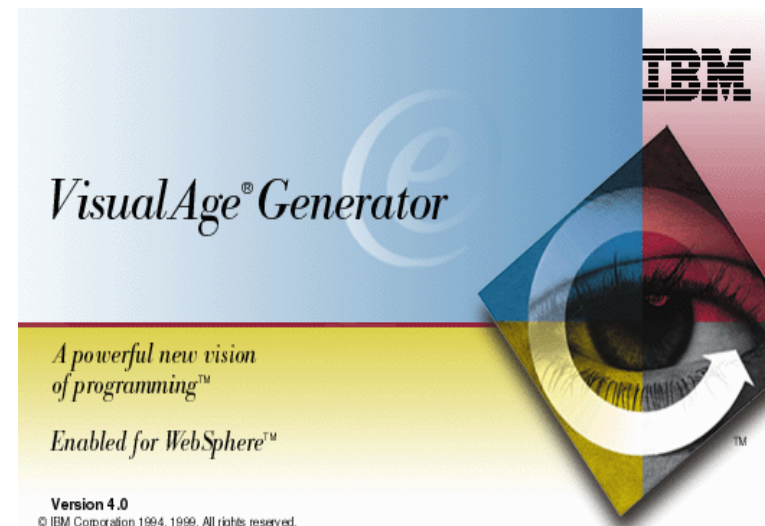
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Summary

► VisualAge Generator has an exciting future!

- ★ Key componentry in the IBM AD Tools initiatives
- ★ Cool new capabilities will continue to be added

► Exemplifies IBM's commitment to providing complete tooling for e-business





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