CICS Family Overview

Andrew Bates
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IBM CICS© User Conference 2009

Agenda

- A short celebration ☺
  - Quick Birthday Quiz
  - Some Milestones to Reminisce to…

- Meet the CICS Family
  - CICS Transaction Server
  - CICS Transaction Gateway, TXSeries & CICS Tools

- Other Products in the CICS Ecosystem
  - PD Tools & Rational Developer for System z

- What the Future Holds…
  - CICS Focus Areas
  - Agile Development Programs

Happy Birthday

CICS

!!!

Quick Birthday Quiz !!
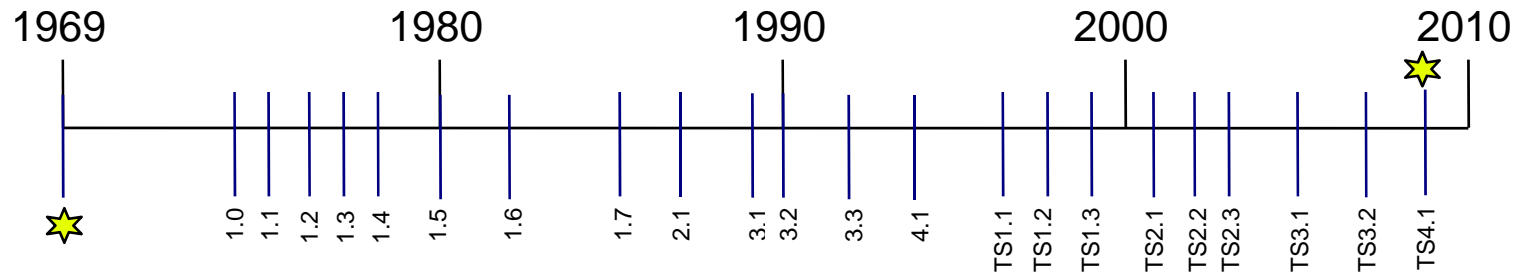

- In   of 1969, IBM announced the System/360 Customer Information Control System program product.

- The basic control system modules needed up to   ,000 bytes of core storage.

- A system supporting:
  - *50 hardcopy terminals*
  - *3 file data sets*
  - *100 programs*
  - *50 transaction types,*
  - *50 queues*

  …needed about another   ,000 bytes for tables and work areas.

- All that was yours for $ 00 a month.

"   is probably the most successful piece of software of all time...It is the mainstay of business computing throughout the world...Millions of users unknowingly activate   every day, and if it were to disappear the world economy would grind to a halt."

- Phil Manchester, Personal Computer Magazine

Things to do by the time you are 40....

1969	1980	1990	2000	2010

Version markers along timeline: 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 2.1 3.1 3.2 3.3 4.1 TS1.1 TS1.2 TS1.3 TS2.1 TS2.2 TS2.3 TS3.1 TS3.2 TS4.1

'69 CICS was born

'74 CICS OS/VS 1.0

'75 CICS OS/VS 1.1

'76 CICS OS/VS 1.2

'77 CICS OS/VS 1.3

'78 CICS OS/VS 1.4

'80 CICS OS/VS 1.5

'82 CICS OS/VS 1.6

'85 CICS OS/VS 1.7

'87 CICS MVS 2.1

'89 CICS MVS/ESA 3.1

'90 CICS MVS/ESA 3.2

'92 CICS MVS/ESA 3.3

'94 CICS MVS/ESA 4.1

'96 CICS TS 1.1

'97 CICS TS 1.2

'99 CICS TS 1.3

'01 CICS TS 2.1

'02 CICS TS 2.2

'03 CICS TS 2.3

'05 CICS TS 3.1

'07 CICS TS 3.2

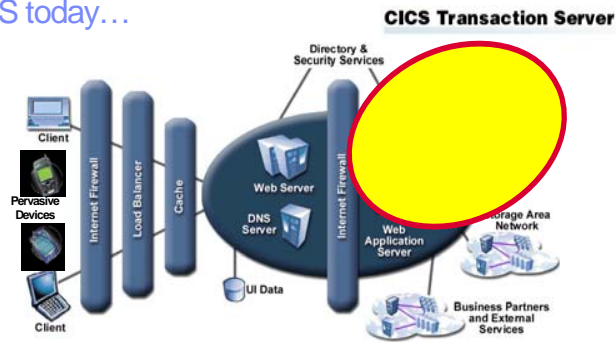'09 CICS TS 4.1

(and that was just the beginning…)

Meet the CICS Family
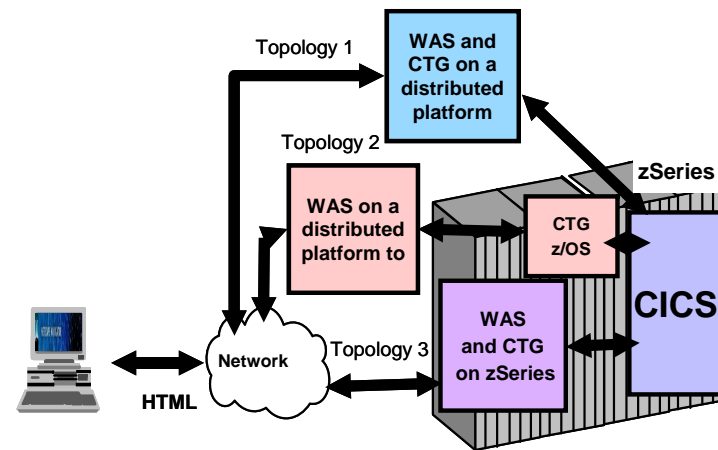
CICS Transaction Server

The worlds most popular transaction processor
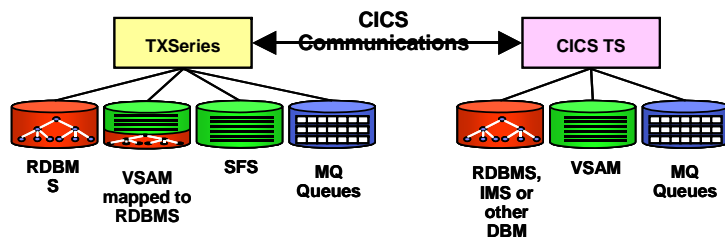
CICS today…

CICS Transaction Gateway

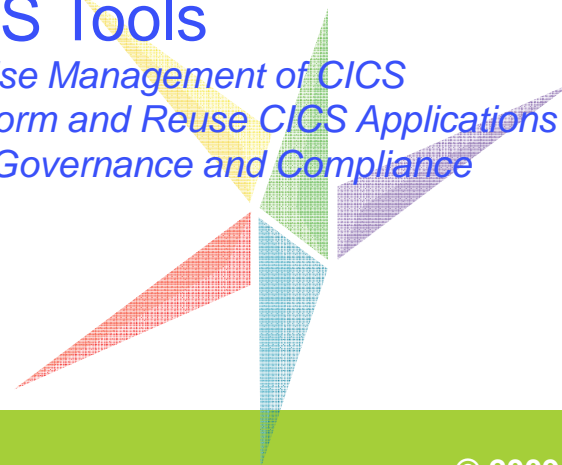*The most popular connector from WebSphere to CICS*

TXSeries

IBM's popular distributed CICS offering

CICS Tools

Optimise Management of CICS
Transform and Reuse CICS Applications
CICS Governance and Compliance
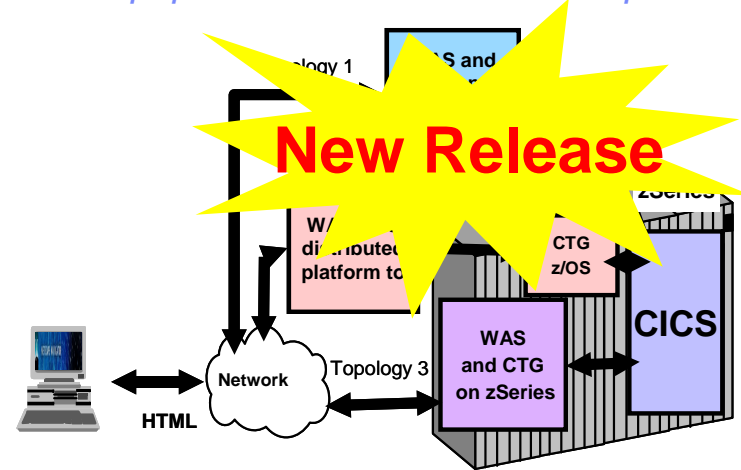
Meet the CICS Family

CICS Transaction Server
The worlds most popular transaction processor

CICS today…

CICS Transaction Server

Client

Internet Firewall

Load Balancer

Cache

Pervasive Devices

DNS Server

Web Application Server

Storage Network

Client

UI Data

Business Partners and External Services

New Version

CICS Transaction Gateway
The most popular connector from WebSphere to CICS

Topology 1

WAS on distributed platform to

CTG z/OS

zSeries

Network

Topology 3

WAS and CTG on zSeries

CICS

HTML

New Release

TXSeries
IBM popular distributed CICS offering

CICS TS

RDBMS

VSAM mapped to RDBMS

SFS

MQ Queues

RDBMS, IMS or other DBM

VSAM

MQ Queues

New Version

CICS Tools
Optimise Management of CICS
Transform and Extend CICS applications
CICS Governance

New Versions

Meet the CICS Family

CICS Transaction Server
The worlds most popular transaction processor

CICS today…

New Version

CICS Transaction Gateway
The most popular connector from WebSphere to CICS

New Release

TXSeries
IBM ... ... CICS offering

New Version

CICS Tools
Optimise Man... ...
Transform and ...
CICS Govern...

New Versions

CICS Transaction Server

- CICS TS V4
  - ▶ Managed beta since January 2008
  - ▶ Announced April 28th 2009,
  - ▶ Open Beta since March 31st 2009
 - ▶ **Generally Available since June 26th 2009 !!!**

New Version

- CICS TS V3
  - ▶ Continues to be Fastest Version uptake in our history
  - ▶ Key business attraction is Web Service Enablement
  - ▶ SOA Reuse of existing CICS Services and Applications
  - ▶ Early exposure to V4 function through Supportpacs and Feature Pack

- CICS TS V2
  - ▶ Announced withdrawal from marketing of CICS TS V2.3 effective Jan 14th 2008
  - ▶ Announced end of service of CICS TS V2.3 effective September 30th 2009
  - ▶ CICS TS V2.2 and below is out of support

CICS Transaction Server 4.1

CICS TS 4.1
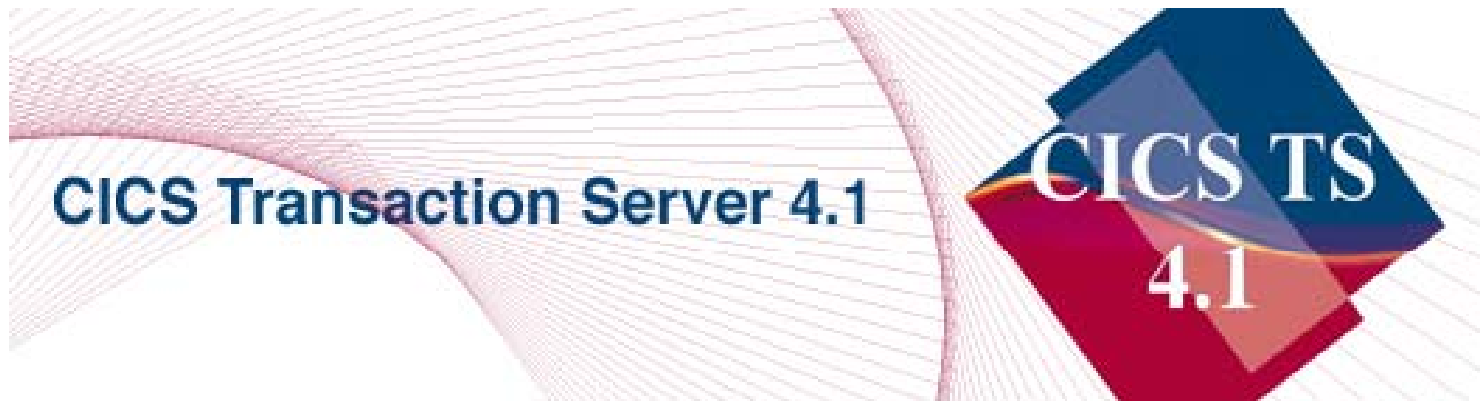
- **Designed to help you address three key business issues:**
  - ▸ the need to **compete** in an increasingly challenging financial climate,
  - ▸ the need to **comply** with corporate, industry, and national regulatory requirements
  - ▸ the need to **control** costs and other key aspects of your IT processes.

- **CICS TS V4.1 truly takes CICS to the next level**
  - ▸ New Modern Image
  - ▸ CICS Explorer helps remove Skills and Complexity Barriers
  - ▸ Packed with Traditional Value
  - ▸ Platform for new modern programming models

- **Not quite ready to upgrade from CICS TS V3?**
  - ▸ No problem, you can use the freely available SupportPacs to accelerate technology adoption

More on this soon…..

CICS Transaction
Server V4.1 for z/OS

Technical Overview

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Software Engineer, zCICS
Development

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More on this
soon…..

Upgrading and
Migrating your
IBM CICS Systems

Pradeep Gohil
CICS Software Engineer
gohilpr@uk.ibm.com

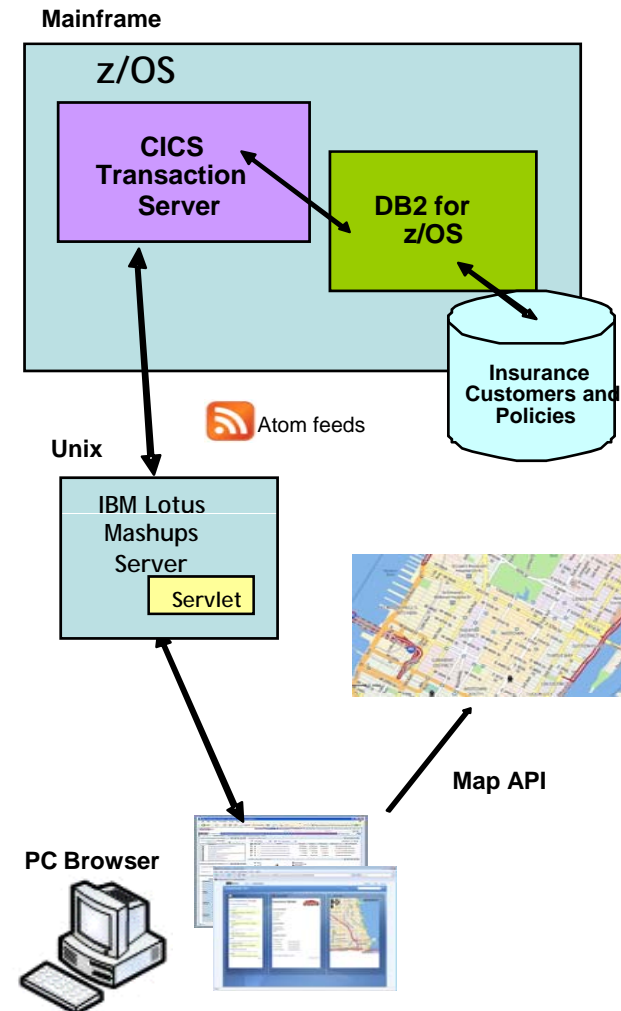IBM CICS© User Conference 2009

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CICS TS V4.1 - Compete

- **Native support for Web 2.0 technologies**
  - ▶ RESTful Web services
  - ▶ Atom support
- **Service Component Architecture**
- **Application Bundles**
- **Web services enhanements**
  - ▶ Web services addressing
  - ▶ Improvements to XML data mappings

- **Business Event Processing**

CICS Web 2.0 ATOM Feeds

- **Enable CICS applications to**
  - ▶ Provide live information for Web 2.0 consumption
  - ▶ Integrate with related data
  - ▶ Give full picture in a single holistic view
- **Make new kinds of applications based on up-to-date content and information**
  - ▶ Decision-support tools for knowledge workers
  - ▶ Composite user interfaces for expert workers
  - ▶ Information feeds & widgets to consumers for use in their own mashups
- **Develop using WebSphere sMash or Rational Developer for z with EGL**
- **In CICS V3, use SupportPac CA8K to generate feeds**

High level architecture: CICS Atom feeds

More on this soon…..

IBM CICS SOA Roadmap and V4.1 Highlights

Pradeep Gohil
CICS Software Engineer
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CICS TS V4.1 - Comply

- **Corporate Governance**
  - ▶ Non-invasive event emission to feed business event processing products like WebSphere Business Events, and business dashboards like WebSphere Business Monitor
    - ▪ CICS event tooling based on CICS Explorer

- **IT Governance**
  - ▶ Improved management of resource definitions
  - ▶ Exploitation of Identity Propagation
  - ▶ Security improvement for DB2 users
  - ▶ Enhanced JVM environment for system components

- **SOA Governance**
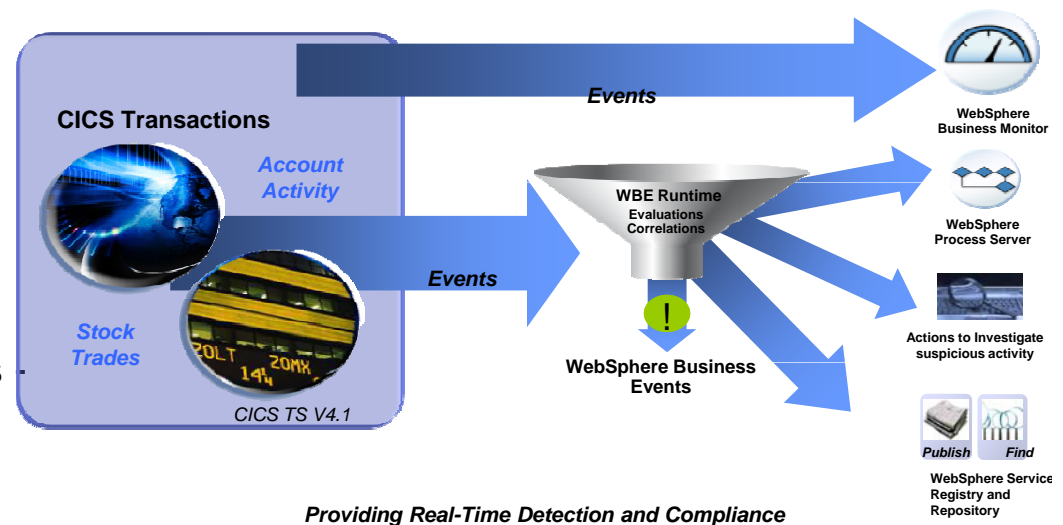 - ▶ Full support for WSRR to publish and read Web service descriptions

CICS Event Processing

- **Enable CICS applications to**
  - ▸ Produce CICS events for consumption by WebSphere Business Events
  - ▸ Point of integration to BPM portfolio

- **Display CICS events on a business dashboard**
  - ▸ Non-intrusive instrumentation of programs - event emission
  - ▸ Near real-time analysis and alerts
  - ▸ Quick identification & response to out of line situations
  - ▸ Application designers instrument the behaviour of applications non-intrusively
  - ▸ Extend application business value safely with a short, optimized delivery cycle
  - ▸ Reduced risk, cost and time to implement change

CICS Transactions

Account Activity

Stock Trades

CICS TS V4.1

Events

Events

WBE Runtime
Evaluations
Correlations

WebSphere Business Events

!

WebSphere Business Monitor

WebSphere Process Server

Actions to Investigate suspicious activity

Publish   *Find*

WebSphere Service Registry and Repository

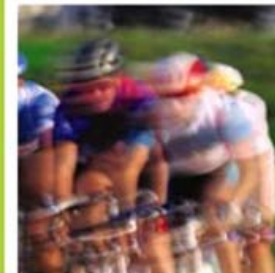*Providing Real-Time Detection and Compliance*

Capture mainframe event sources for smarter business outcomes

More on this soon…..

IBM CICS and Events: Concepts and Event Specifications

Pradeep Gohil
CICS Software Engineer
gohilpr@uk.ibm.com

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CICS TS V4.1 - Control

- **Systems management**
  - ▶ CICS Explorer - the New Face of CICS
  - ▶ RESTful SPI Server enablement for universal exploitation
  - ▶ CICS system management client API
  - ▶ Software Development Kit (SDK) for customer and ISV extensions
  - ▶ New system programming commands for managing CSDs
  - ▶ Improvements in CICS monitoring
  - ▶ Dynamic Workload Management for high volume customers
  - ▶ Enable Tivoli end-to-end tooling via DLAs and CCMDB
- **Sub-system enhancements**
  - ▶ IPIC support for Transaction Routing, non-terminal STARTs
  - ▶ IP V6 support
  - ▶ WebSphere MQ queue-sharing groups

Increase Productivity with the CICS Explorer

- Simplified access to CICS
  - ▶ Extending the success of eclipse based Explorers to CICS
  - ▶ Delivering revolutionary integration of development, administrative, and operations tools

- Shorter development cycles

- Faster time to market

- Improve productivity and protect service-levels

- New staff are effective more quickly

- Reduced cost of ownership for key CICS applications
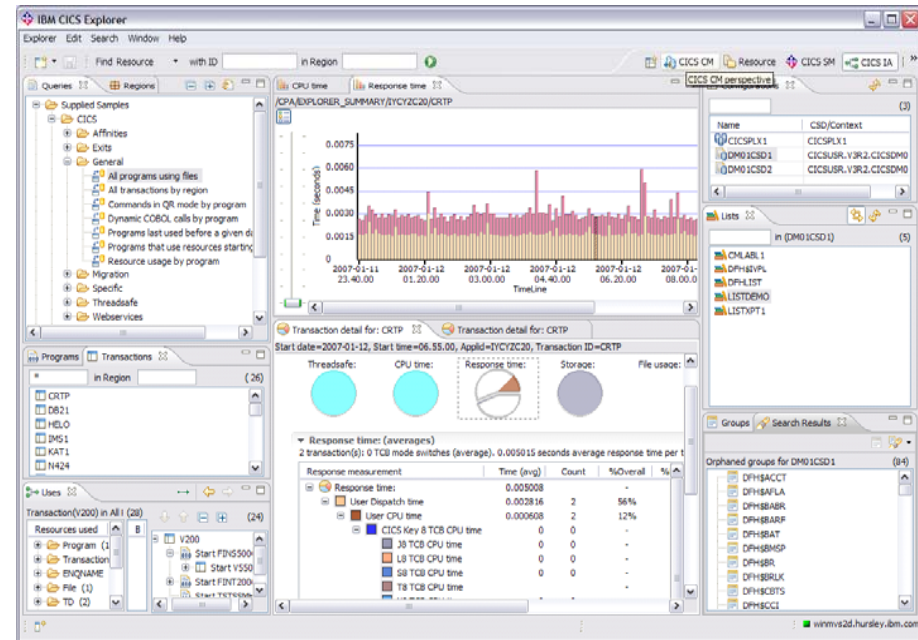
New version now fully supported!

- "1000 times better than the previous UI."
  - Customer

- "I believe it will be greatly received in our environment. Two of our development groups are keen to try it as soon as it becomes available." - Independent Software Vendor

More on this soon…..

IBM CICS® Explorer and tools:
The Whole Exceeds the Sum of the Parts

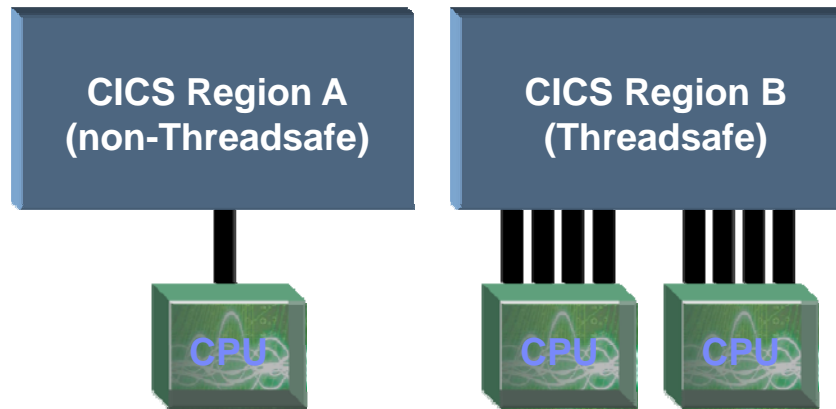Andrew Bates
Business Development Manager

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A quick word about Threadsafe

- **What is Threadsafe?**

**CICS Region A
(non-Threadsafe)**

**CICS Region B
(Threadsafe)**

CPU

CPU CPU

CICS Transaction Server introduced Threadsafe processing as a facility to increase throughput while reducing processing costs for your CICS business transactions.

- **Why should you care?**

Merrill Lynch   **Real Results**

▸ Saved enough CPU to introduce major new service without capacity upgrade

▸ Saved chargeback costs of over $500,000 for one application

▸ Response Time Savings of up to 37% for one application

▸ CPU Usage savings of up to 65% for one application

Figures presented by a Merrill Lynch VP at IMPACT 2008

Customer Reference

HUK-COBURG
Aus Tradition günstig

- **Company**
  - ▸ One of the largest insurance companies in Germany, offering a range of insurance and home loan products. It insures more than 8.5 million clients.

- **Challenge**
  - ▸ HUK-COBURG needed to reduce CPU usage in its IBM System z9® to cut operating costs. Upgrades had to be performed without adversely affecting its business.

- **Solution**
  - ▸ Implemented threadsafe following guidance provided at CICS Threadsafe workshop and hands-on usage of the IBM CICS tools (CICS PA, CICS IA, & CICS CM.

- **Benefit**
  - ▸ "We've embraced threadsafe functionality to help us cut our CPU usage by 550 MIPs, or about US$440,000 in annual operating expense - which really proves the efficacy of IBM CICS technology."

WSC14077-USEN-00

More on this soon…..

Threadsafe
Conversion
Techniques for CICS
Applications
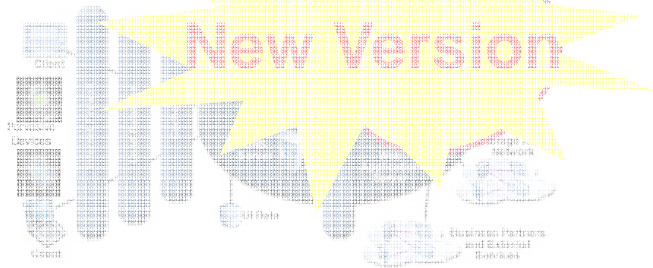
Noel Javier C. Sales

Software Engineer zCICS
Development

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Meet the CICS Family

CICS Transaction Server
The worlds most popular transaction processor

CICS Transaction Gateway
The most popular connector from WebSphere to CICS

New Version

New Release
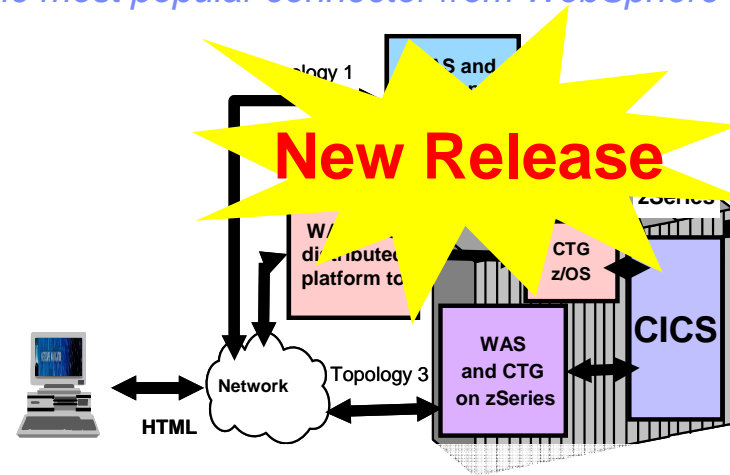
TXSeries
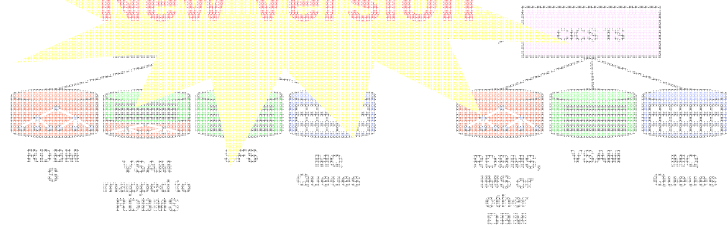
New Version

CICS Tools

New Versions

CICS Transaction Gateway V7.2

New Release

CICS Transaction Gateway is IBM's strategic connector from WebSphere to CICS, production proven in over a thousand customer environments

Key Characteristics:

- High performing, security-rich and scalable

- Standard JCA interface is strategic and provides best Qualifes of Service

- Minimal or no changes required for CICS applications to leverage value in an SOA

New with CICS Transaction Gateway 7.2

- Improved business flexibility, delivered through transactional support across a balanced CICS environment

- New CICS connectivity for remote clients in C runtime, enabled for exploitation within .NET environment

- Enhanced systems monitoring API, providing for integration with CICS Explorer

Topology 1

WAS and CICS TG on a distributed platform

Topology 2

WAS on a distributed platform to

CICS TG z/OS

CICS
Putting the S in SOA

Network

Topology 3

WAS and CICS TG on System z

HTML

More on this soon…..

Strategic Options for IP Modernization

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Meet the CICS Family

CICS Transaction Server

The worlds most popular transaction processor
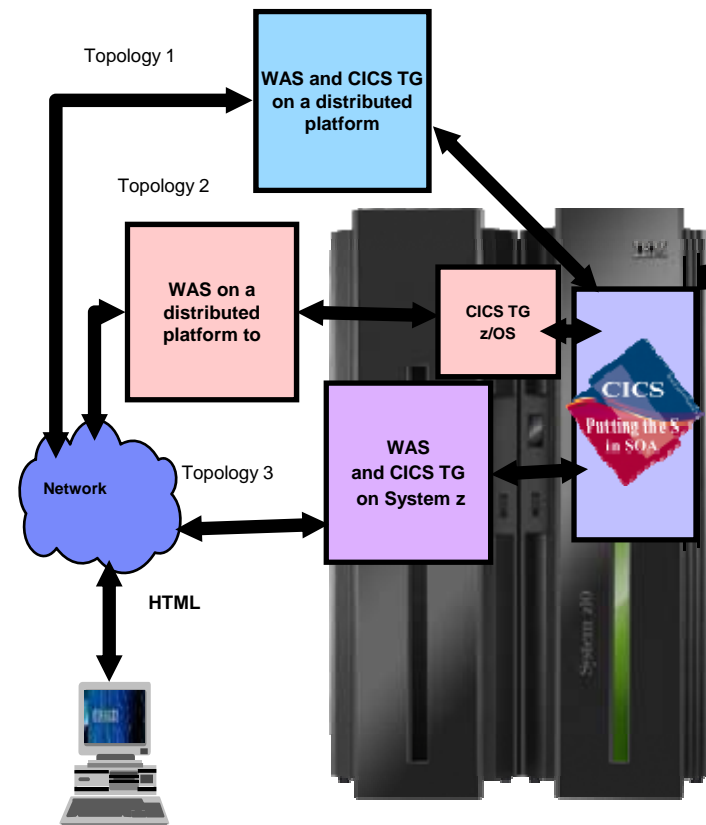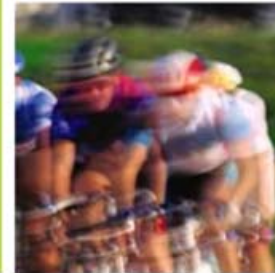
CICS today...

CICS Transaction Server

New Version

CICS Transaction Gateway

The most popular connector from WebSphere to CICS

New Release

TXSeries

IBM ... CICS offering

New Version

CICS TS

| RDBMS | VSAM mapped to RDBMS | SFS | MQ Queues | RDBMS, IMS or other DBM | VSAM | MQ Queues |

CICS Tools

Optimise Man...
Transform and ...
CICS Govern... New Versions
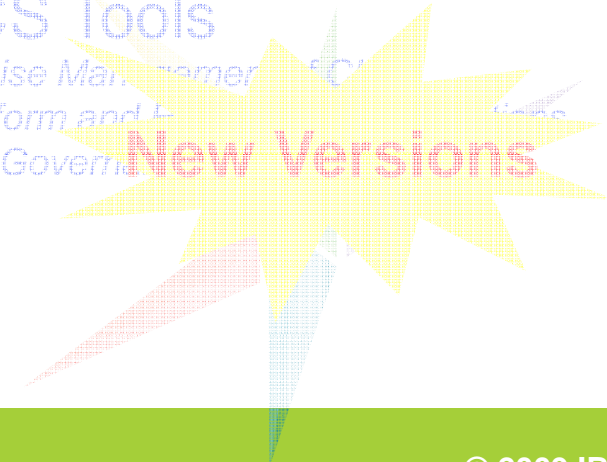
TXSeries for Multiplatforms V7.1

New Version

TXSeries runs and supports CICS Transactions on Distributed platforms

Key Characteristics:

- An application deployment platform for C, C++, Java, COBOL and PL/I applications

- Supports a subset of CICS API

- Integrated inside RDz as part of a local application development environment
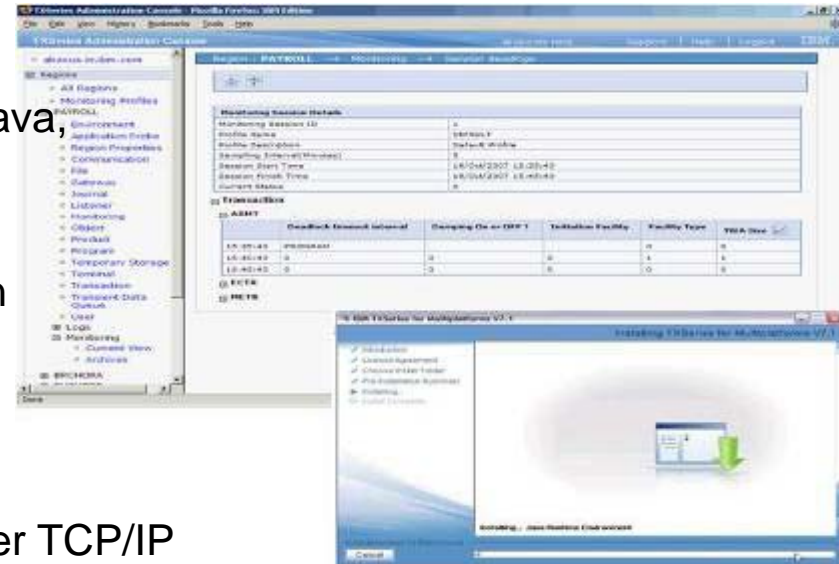
New with TXSeries V7.2

- Simplified Interoperability with CICS and CTG over TCP/IP

- Support for Channels and Containers

- Enhanced TXSeries Admin Console

- Improved system resilience and debugging

Statement of Direction

Announcement 209-040 (17th March 2009)

➤ "IBM intends, during the second half of 2009, to deliver new inbound SOAP interface support specifically for, TXSeries to support the standard-based in bound SOAP interface for application integration. This capability will then allow TXSeries-based applications to be integrated into an SOA environment, enabling them to be made available as services."
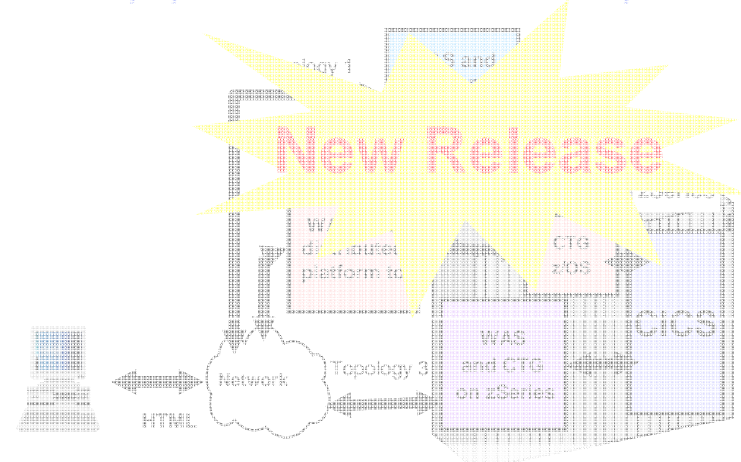
Meet the CICS Family

CICS Transaction Server
The worlds most popular transaction processor

CICS Transaction Gateway
The most popular connector from WebSphere to CICS

New Version

New Release

TXSeries

New Version

CICS Tools
Optimise Management of CICS
Transform and Extend CICS Applications
CICS Governance

New Versions
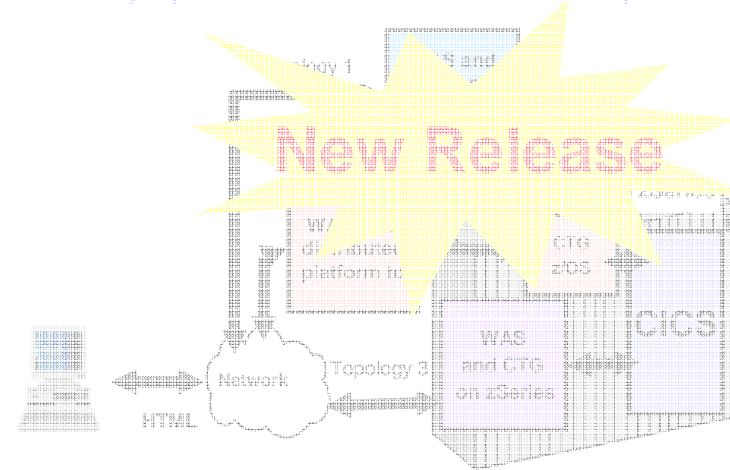
CICS Tools

CICS Interdependency Analyzer (IA)
- **Collect active application inventory for efficient resource understanding**

New Version coming soon

CICS Configuration Manager (CM)
- **Administrating and maintaining CICS resource definitions**

New Version

CICS Performance Analyzer (PA)
- **Batch performance reporting/analysis for tuning and capacity planning**

New Version

CICS VSAM Transparency (VT)
- **Enable VSAM to DB2 migration without changes to existing applications**

CICS VSAM Recovery (VR)
- **Automate the recovery of lost VSAM data**

New Release

CICS Batch Application Control (BAC)
- **Manage state of file resources from a batch program**

IBM Session Manager (ISM) and CL/SuperSession (CL/SS)
- **Access to multiple z/OS applications from a single terminal**

New Version coming soon

CICS OTTO (OTTO)
- **Optimize outbound 3270 data streams to improve performance**
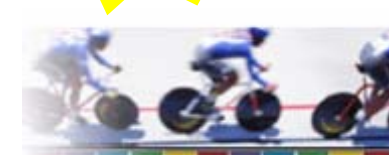
The Future Runs on CICS Tools

More on this soon…..

IBM CICS® Explorer and tools: The Whole Exceeds the Sum of the Parts

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Business Development Manager

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PD Tools V9

File Manager for z/OS

- **Data management tool supporting key file structures like VSAM, DB2, CICS, and IMS**

New Version

Fault Analyzer for z/OS

- **Helps you rapidly pinpoint cause of failed application (abends)**

New Version

Debug Tool for z/OS

- **Source code debugging to improve development productivity**

New Version

Application Performance Analyzer for z/OS

- **Monitor performance at the application level**

New Version

Workload Simulator for z/OS and OS/390

- **Regression and Load testing of interactive z/OS applications**

Optim Move for DB2

- **Export and import related sets of DB2, IMS, VSAM and sequential data**

And yet more new versions coming soon!

IBM Rational Developer for System z V7.5

New Release

Eclipse Based Platform for Enterprise (Cobol, PL/I. C/C++, Java) Applications

Key Characteristics:

- Provides Local and Host based Application Development platform for CICS

- Integrates with host Source Control Managers (eg SCLM)

- Supports cross platform debugging

- Supports Web Service creation and Service Flow Modelling for CICS

New CICS support in RDz V7.5

- Integration with CICS Explorer

- Application Deployment Bundles

- Service Composition Tooling

- Tooling for CICS Events

- Integration with IBM PD Tools

Disconnected -vs- Connected

Configurable Editor

MVS PDS members

USS Command Shell

TSO Command Shell

Data set characteristics

JES subsystem view
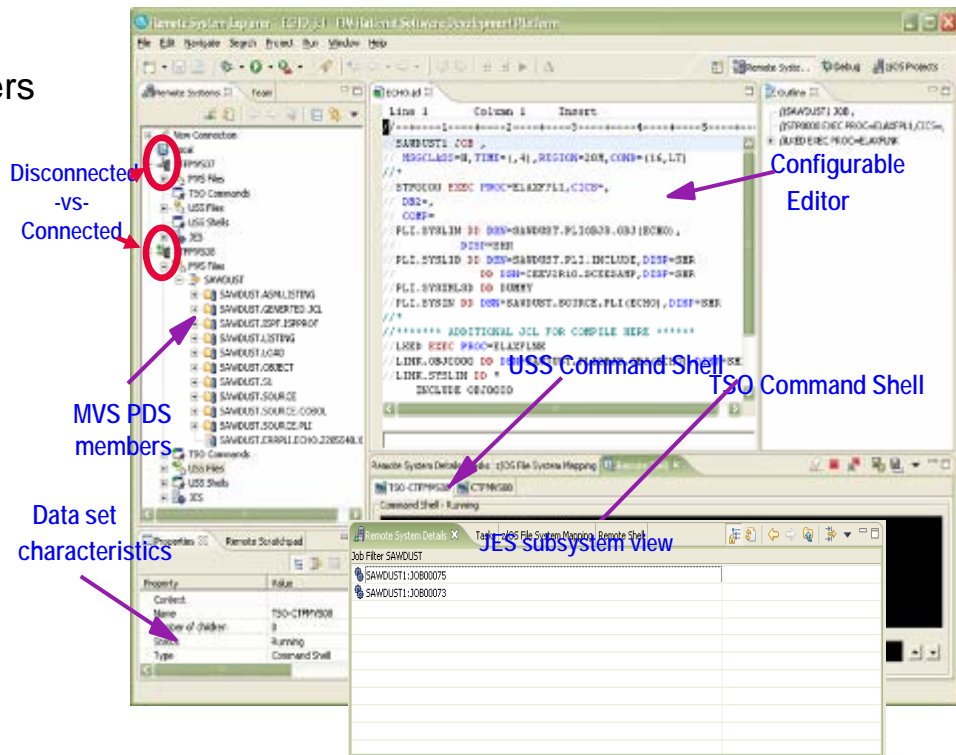
A completely unique suite of integrated Application Development and Problem Determination tooling for System z …

Modern, end-to-end application development and debugging for System z

Made possible through IBM's unique Rational Developer for z integration

Fault Analyzer	Debug Tool	Application Performance Analyzer	File Manager

Application Languages
COBOL, PL/I, ASSEMBLER, C++, MQ Series

BATCH	IMS	CICS	DB2	WAS/z
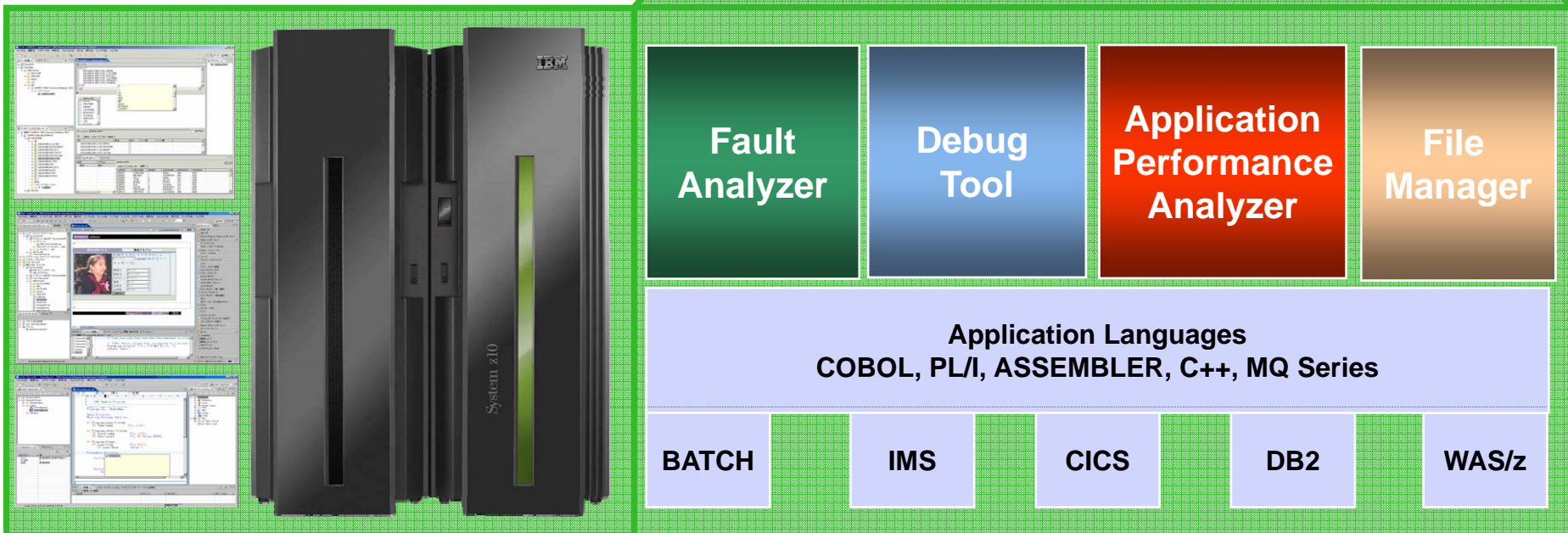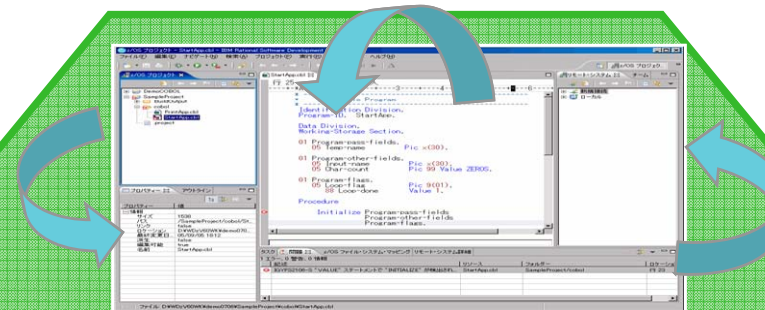
(STILL) NOBODY ELSE IN THE MARKET HAS THIS TODAY!

IBM PD Tools rated #1 in marketplace (again)

IBM PD Tools win top spot in Software Strategies analyst report

2009 Strategic Comparative Assessment z/OS® PDT Tool Suites

Strategic Comparison Factors

◄ Highest Rated   Lowest Rated ►

Strategic Comparison Factors	High				Low
Suite Currency, Exploit. / Release Frequency/ SOA:	91 IBM	Compuware	Macro 4	CA	40 Serena
Multiple Subsystems Coverage/ Main Product:	93 IBM		Macro 4 CA	Compuware	40 Serena
Software TCO & Licensing Options:	89 IBM		Macro 4	CA	54 Compuware Serena
Suite Breadth, Features, Functions, etc.:	95 IBM Compuware		Macro 4 CA		36 Serena
Vendor Service & Support Capabilities & Coverage:	93 IBM	Compuware	Macro 4 CA		44 Serena
Vendor Strategic Focus on PDT Tools Growth:	89 IBM Compuware		Macro 4 CA		38 Serena

© 2009 Software Strategies   ◯ Relative Position Within Group Score Range (H to L)

Software Strategies z/OS® PDT Suites/Vendors
Strategic Comparison Rankings – December 2008

	December 2008		July 2007* TWS & Rank	TWS Change (& % change) 2008 from 2007
Rank	z/OS® PDT Vendor	Total Weighted Score (TWS)+		
# 1	IBM	11,285	10,330 (# 1)	+955 (+9.2%)
# 2	Compuware	9,453	8,505 (# 2)	+948 (+11.1%)
# 3	Macro 4	9,127	7,825 (=# 3)	+1,302 (+16.6%)
# 4	CA	8,330	7,825 (=#3)	+505 (+6.5%)
# 5	Serena Software	5,286	5,315 (# 5)	-29 (-0.5%)

+See Section 4 & Appendix D Figure D1, page 42 for details
*From our July 2007 2nd Edition White Paper
Weightings changed for December 2008, to reflect changing user needs, see Figure D1.

January 2009 Analyst Report – Software Strategies

More on this soon…..

Developing and Debugging CICS Programs Using Rational Developer for System z (RDz)

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More on this soon…..

Transaction
Debugging
Using Dumps

Noel Javier C. Sales
Software Engineer zCICS
Development

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What does the future hold for CICS...

- **Internal Focus Areas:**
  - ▶ Continue Building on Existing CICS Strengths
  - ▶ Continue Encouraging the Development of Modern CICS Applications
  - ▶ Continue to Open CICS up to New Technologies and new Business Models
  - ▶ Continue to Leverage the Broader IBM Portfolio for a complete solution

- **External Focus Areas:**
  - ▶ Image and Vitality
  - ▶ Skills
  - ▶ Cost
 - ▶ Support for the ecosystem

Come and talk to us….

….we are taking requirements for the next release of CICS TS now.

Agile Delivery and Responsiveness

- **Expect CICS Explorer enhancements every 90 days**

- **Expect CICS Tools, CICS Transaction Gateway and TXSeries to continue on roughly annual release cycles**

- **Interval between CICS releases continues to be 18-24 months….**

- **However:**

  ‣ **<u>New Agile development methodology adopted</u>**
    - Iterative Development Process
    - Scenario based testing
    - Continuous Beta Testing

  ‣ **<u>Early delivery via supportpacs to gain early customer validation and feedback</u>**
    - WebServices in CICS TS V2 and V3
    - WSRR supportpac in CICS V3.2
    - Events supportpac in CICS V3.2
    - Web 2.0 ATOM feed supportpac in CICS V3.2
    - PHP Scripting supportpac in CICS V3.2
    - CICS Explorer for V3.1 and 3.2

Ongoing Beta programs

- **Innovation around an old concept…**
  - ▸ Beta programs are one of the best ways to ensure Day 1 quality
  - ▸ CICS TS 4.1 closed beta and ISV partner program started in Jan 2008
    - ▪ Regular iterations of beta code using agile development process
    - ▪ 30 customers and 40 ISVs
  - ▸ CICS TS V4.1 open beta available from March 2009
    - ▪ 150+ participants
    - ▪ Up from 100+ participants for CICS TS V3.2 open beta
- **Why is this important?**
  - ▸ Length of the beta program
  - ▸ Testing in 'real' customer environments
  - ▸ Means CICS TS 4.1 is ready for you today
- **Get Involved:**
  - ▸ Open beta program for CICS TS V4.1 closes end July 09
  - ▸ Register your interest in future CICS beta programs:
    - ▪ CICSEP@uk.ibm.com
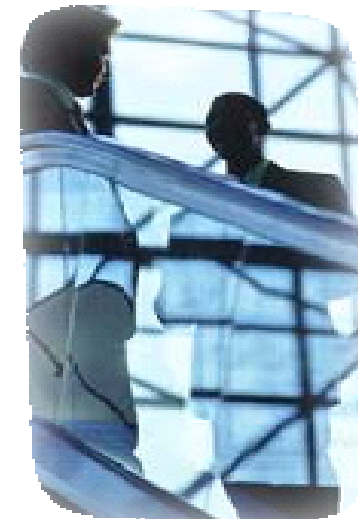
Summary

- **We wished CICS a very happy 40th Birthday**
  - ▸ (and found out how old some of us are ☺)

- **We Met the CICS Family**
  - ▸ CICS Transaction Server
  - ▸ CICS Transaction Gateway, TXSeries & CICS Tools

- **We Met some of other Products in the CICS Ecosyster**
  - ▸ PD Tools & Rational Developer for System z

- **We looked what the Future holds for CICS**
  - ▸ CICS Focus Areas
  - ▸ Agile Development Programs
  - ▸ How you can get involved

Thank You

Any Questions?

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