re-THINK

IMS

IMS Application Development

COBOL Workshop

July 2009

IBM Software Group

Getting More Out of Your IMS Applications

Lowering the cost of IMS application development and delivery

An IBM Proof of Technology

Powered by IMS Development @ Silicon Valley Lab, California

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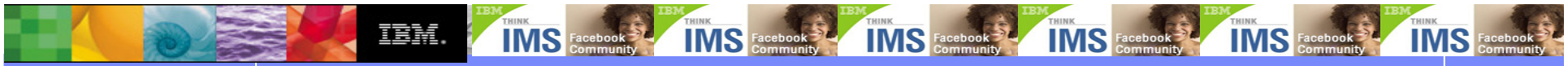
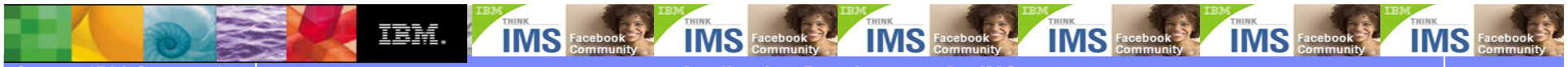


Welcome!

- Introductions
- Workshop overview
- Workshop topics
- Enterprise Modernization means business: the value of modernizing IMS applications.
- The mainframe: still the heartbeat of your IT
- How Rational lowers the cost of enterprise modernization
- IMS application development enhancements
- Today's workshop environment and student laptops
- Today's agenda



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Presenters

- Evgueni Liakhovitch

- Nancy Stein

- Richard Tran

Workshop Overview

- Objectives:
  - Learn how to more easily understand, analyze, modify, enhance, and extend your current COBOL applications for IMS by providing:
    - An update on the latest in IMS application development features
    - An update on the latest System z application development tools
    - An opportunity to test drive and use these new features and tools
- Workshop Attendees
  - Application developers who are responsible for maintaining and enhancing COBOL applications in IMS
  - Application architects
  - Anyone else?

Workshop Topics

➢ *Understanding the value of your IMS applications*

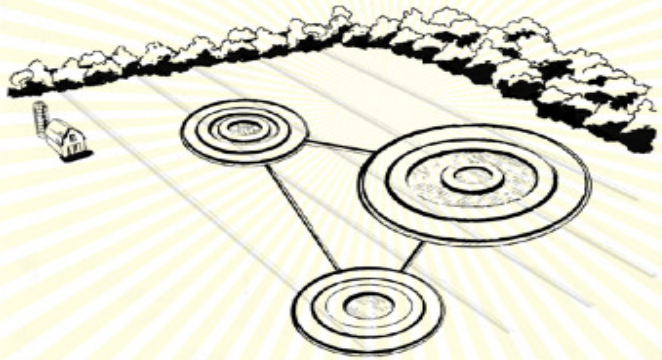
- Easier IMS application and data analysis - get a better understanding of what you currently have:
  - ➢ Visualize your IMS databases using the DLI Model utility (***demo***)
  - ➢ Analyzing your COBOL and PLI applications using Rational Asset Analyzer (***hands-on***)

- Easier application development:
  - ➢ Rational Developer for System z (RDz) overview (**demo**)
  - ➢ Using RDz for rapid COBOL and PLI application development (**hands-on**)
  - ➢ Using RDz to edit, compile, link, run, and debug a COBOL and PLI application (**hands-on**)

- IMS MFS Web enablement – replacing 3270 green screens (**demo**)
- IMS, COBOL, and Java: IMS Interoperability Support
- Wrap up and next steps!

If you believe what our competitors have been saying, here's another myth for you:

The mainframe
is responsible for the worldwide crop circle phenomenon.



Truth is, IBM System z® runs circles around our competitors' non-mainframe solutions. With System z virtualization and up to 100% utilization for sustained periods, you can also significantly reduce your TCO.*

Separate myth from truth. ibm.com/software/truez

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The mainframe continues to be vital, integral, strategic

- Businesses today still rely on billions of lines of mainframe code.
- Billions more lines of mainframe code are added every year to existing mainframe applications.
- It is estimated that $5 Trillion worth of applications -- critical business assets -- reside on today's IBM mainframe systems.
- These applications represent the heart of your customer, product, supply-chain, and critical business data.

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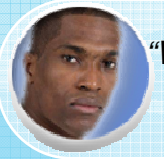
Enterprise Modernization means business



"We don't understand the effort, risk, and impact of modernizing our legacy software portfolio"

"Our skills gap just seems to keep growing. How do we stay current with all the language and technology changes?"

"Our architecture has evolved to be too complex and convoluted– we need to be flexible and agile, to simplify."

"Our development teams are being asked to do more with less – and to deliver more quickly. Tooling gets more expensive every year."

Application Challenges

- Lost application knowledge
- Architectural complexity
- Regulatory and compliance risks

People Challenges

- Skills erosion
- New technologies emerge constantly
- Unattractive, low productivity IDEs
- Steep learning curve due to platform/language-unique tools

Cost Challenges

- Budget constraints
- Incompatible tools and processes across platforms
- Increased costs for tooling
- Shortened delivery cycles

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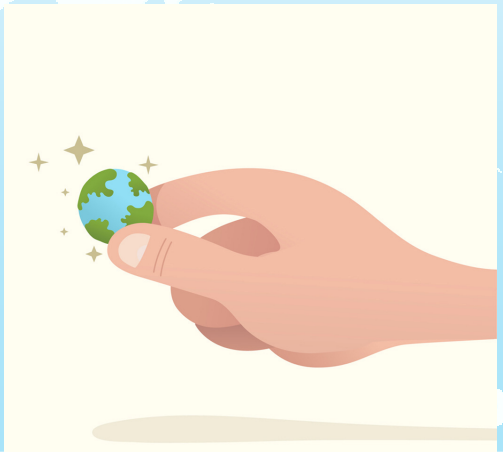
Enterprise Modernization can help you to:

- Avoid the significant risks and costs associated with re-writing applications; industry average costs to develop new software is estimated to be up to $100US *per line of code*.
- Preserve intellectual capital that was developed as part of the mainframe application. If you can preserve 1000 lines of existing code, that reuse reflects a savings of between *$80,000 and $100,000.*
- Use the mainframe applications as part of a web-services architecture, such as SOA
- Gain the agility, flexibility, and productivity required to respond to marketplace dynamics and changing business needs.



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IMS can help by:

- Being **flexible**: whether you are working with COBOL, PLI, Java – we have tools to help you preserve your investment
- Promoting **interoperability** – COBOL, Java, SQL, you can code in and call from any of these languages.
- Providing **free education**, such as this application development workshop
- Establishing regional **IMS User Group** to facilitate sharing and support
- Promoting the new IMS application development communities on **developerWorks, Facebook,** and **Rational Cafés.**

…..breathing new life into your COBOL and PLI applications for IMS….

How IBM Rational solutions for System z can help

- **Cost**: Customers who purchase IMS Version 10 receive 2 Rational Developer for System Z (RDz) licenses (each valued at $8000US)
- **Cost and productivity**: RDz performed a survey of approximately 50 customers and gathered data that showed:
  - ~15% improvement in mainframe developer productivity[1]
  - Some tasks that previously took 4 hours could be accomplished in 1 hour
  - Workstation syntax checking reduced host CPU usage 50%-80%[1]
- **Tooling and personnel:**
  - Reduce training costs by providing a more attractive IDE for new hires
  - Code assist for COBOL, PL/I, C/C++; Visual editors for BMS and MFS maps
- **Energy savings**: One retailer used a single IBM System z9 to replace 200 Sun systems, reducing energy requirements by 97%.
- **Availability**: System Z maintains 99.999% availability; downtime costs are estimated to be $3 Million US per hour / $50,000 US per minute.

[1] Aggregation of results from a productivity study conducted by IBM mainframe customers.

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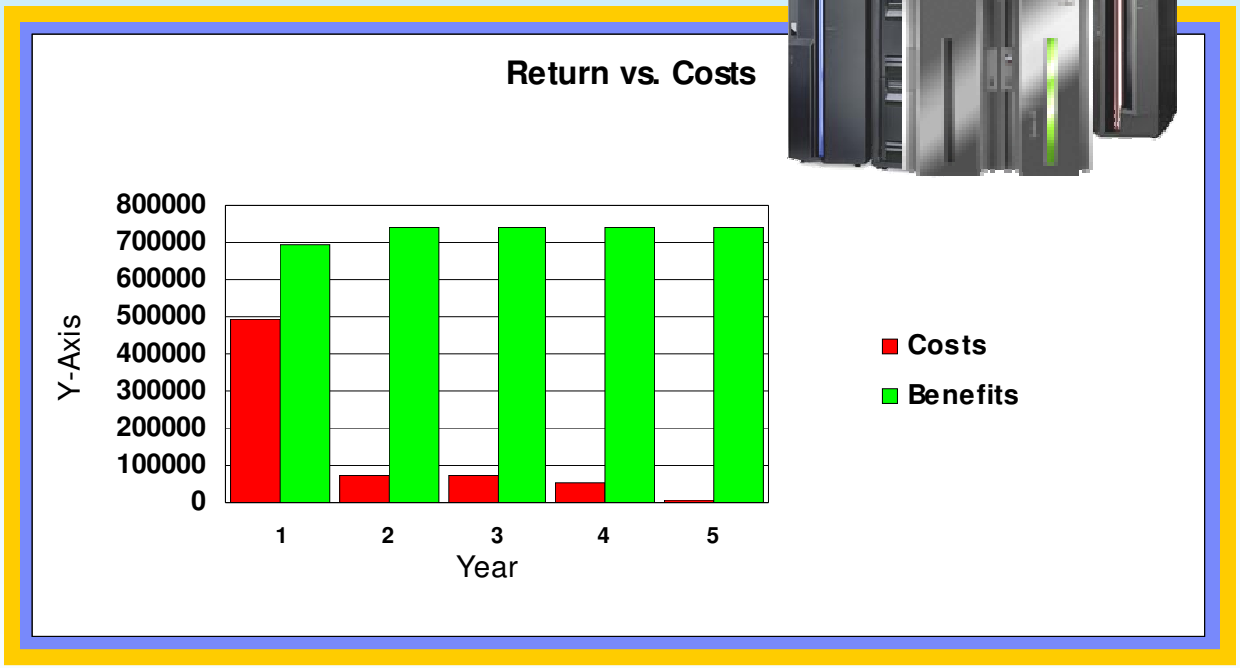
Rational: return on investment pays off

- Costs include:
  - Software
  - Subscription
  - Education
  - Setup/Admin Staff
  - Support Staff
  - Hardware
- Benefits (Return) include:
  - Compile CPU Savings
  - TSO CPU Savings
  - Productivity



If you believe what our competitors have been saying, here's another myth for you:

The mainframe
is responsible for alien abductions.

Our competition will say just about anything to snatch you away.
Truth is, IBM System z® can lower your TCO, requiring as little as 30% of the power of a distributed server farm running equivalent workloads.*

Separate myth from truth. ibm.com/software/truez

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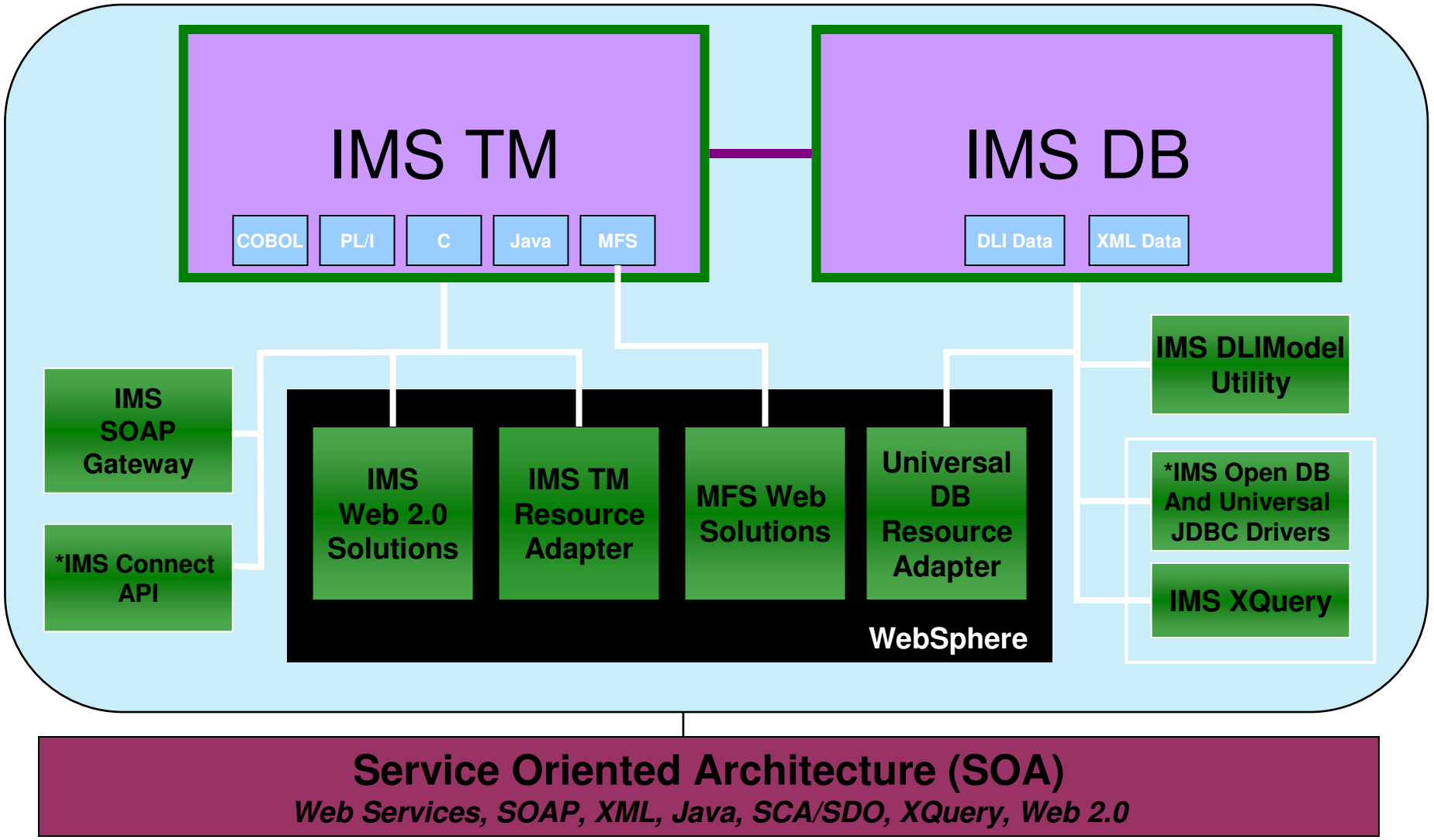
What's New in IMS



IMS and solution-level application development enhancements

- Expanded IMS Language Support
  - IMS applications can be written in C, C++, C#, Java, COBOL, and PLI
- Expanded IMS Database Access
  - IMS databases can be accessed directly using SQL or DLI calls
- Expanded run-time support
  - IMS applications accessing IMS databases can be run on Windows, Linux, UNIX and z/OS
- Improved programmer productivity using an Eclipse-based IDE
  - Use a single development environment across platforms
- Reduced application development costs
  - Offload programming tasks from the mainframe to the workstation

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Today's workshop environment

- IBM is providing shared student laptops
  - Each laptop is configured to run Remote Desktop Connection
  - Each laptop can access the required tools and IMS by connecting to the Enterprise Modernization for System z (EM4Z) Sandbox
  - We are connecting to an IMS server in Dallas, Texas
- Display COBOL application
  - IMS batch program that reads a VSAM data set and display its contents
  - Program includes dynamic call and a static call to two other COBOL programs

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Today's workshop agenda

8:30 – 9:00	*Breakfast and Registration*	
9:00 – 9:30	Understanding the value of your IMS Applications	Nancy Stein
9:30 – 10:00	Visualizing your IMS databases with the DLI Model Utility	Evgueni Liakhovitch
10:00 – 10:45	Analyzing your COBOL and PL/I applications with Rational Asset Analyzer	IBM Rational
10:45 – 11:00	*Break*	
11:00 – 3:00	Using RDz for COBOL / PL/I application development (*includes 30 minutes for lunch*)	Evgueni Liakhovitch
3:00 – 3:15	*Break*	
3:15 – 3:45	Easily Web-enabling your applications and 3270 green screens	Richard Tran
3:45 – 4:30	IMS, COBOL, Java, and SQL: IMS Interoperability Support	Richard Tran
4:30 – 4:45	Workshop close and next steps	Nancy Stein

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