IMS Product Development
Call to the Field

e-business powered by IMS

IMS

the world depends on it

Bob Gilliam

IMS Product Manager

October 29th, 2002

35 Years and still leading the industry !!!

IMS

Web Services

JDBC Access

> 2500 Transactions Per Second

Internet Access

2000+

> 1000 Transactions Per Second

Concurrent Image Copy

> 11000 Transactions Per Second

Extended Terminal Option (ETO)

APPC/IMS

Shared Message Queues

Multiple Systems Coupling (MSC)

Remote Site Recovery

Local Hot Standby DBMS (XRF)

Data Base Concurrent Update From Multiple User/ System

Parallel Systems N-Way Data Sharing

Exploit MP Architecture

2-way Data Sharing

Batch

DBMS

Two Phase Commit

1968

Deadlock Detection

HALDB (High Availability Large Database)

HALDB

Large Database

- Databases are partitioned

  - Up to 1001 partitions per database

  - Partitions have up to 10 data set groups
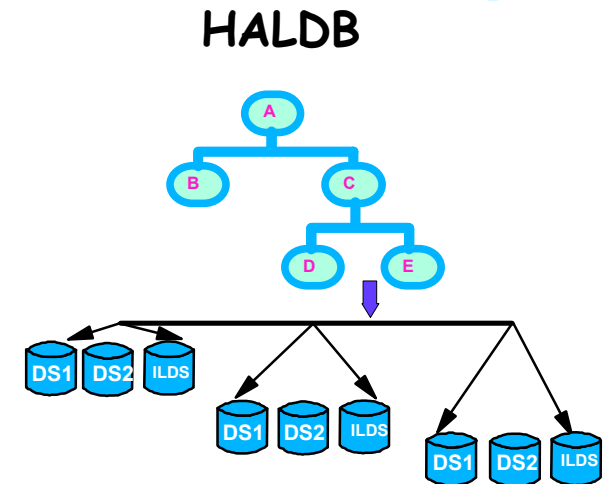
High Availability Database

Up to 10,010 data sets per database!

(Greater than 40 terabytes)

- Partition independence

  - Allocation, authorization, reorganization, and recovery are by partition

- Self healing pointers

  - Reorganization of partition <u>does not require</u> changes to secondary indexes or logically related databases which point to it

  - Prefix Resolution, Prefix Update, and secondary index rebuilds are eliminated

IMS Java for Integrated e-business Application Development/Connectivity

- ## Application programmer productivity
  - Java access to IMS input/output message queues
  - JDBC to access IMS data
  - Uses Visual tools for development

JDBC = Interoperability for Application Developers

- ## Enhancements
  - **New Java Dependent Region support for Persistent Reusable Java Virtual Machine**
  - **JDBC access to IMS DB from CICS/390 Java applications, DB2/390 Stored Procedures, and Websphere applications**
  - **COBOL - Java Interoperability in Java dependent regions**

IMS Is <u>Ideal</u> For e-business

- **IMS is ideally suited to be the backbone of your e-business solutions:**

  - **IMS is secure**
    - z/OS and IMS offer significant security options
  - **IMS is scalable with high performance**
    - The Internet can introduce unpredictable volumes
    - IMS already drives the worlds largest workloads
  - **IMS is highly available**
    - The Internet requires 24 x 7 x 365
  - **e-business with IMS offers investment protection**

Linux enabled !!!
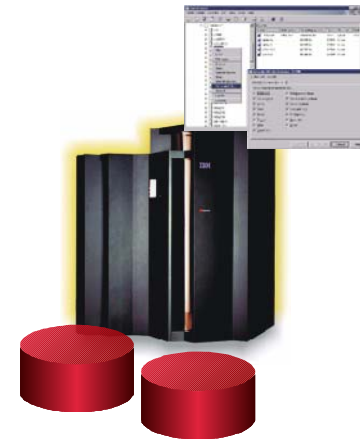*... run your e-business applications on Linux and connect through IMS Connect*

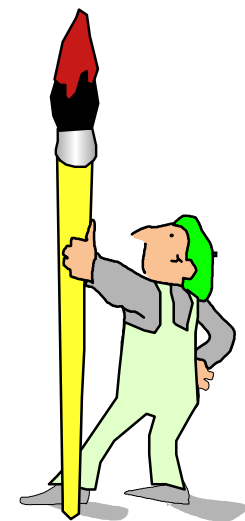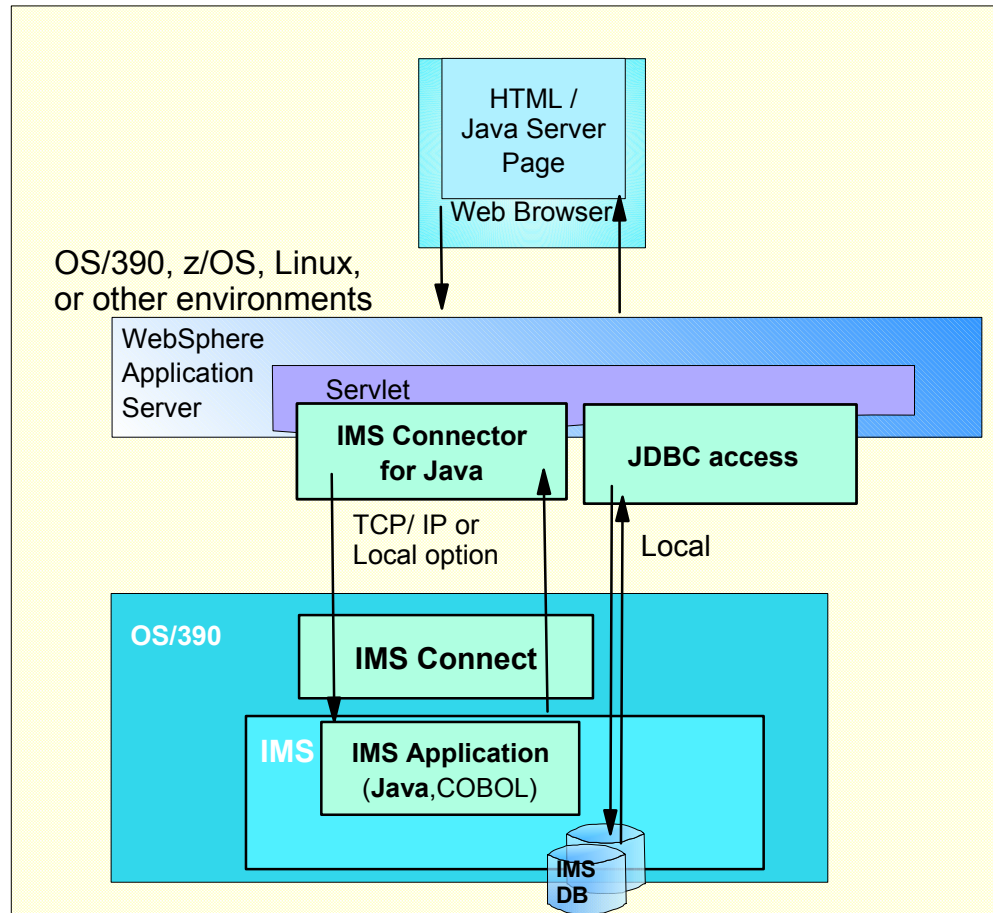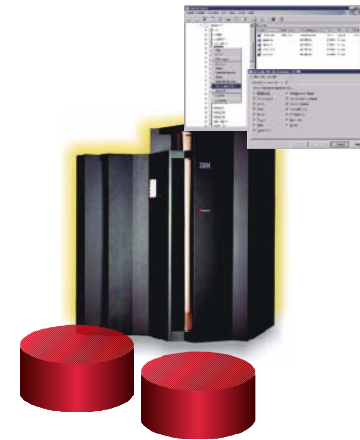# *IMS V8 - General Availability*

- **Information "Integration" with New Application Development/Connectivity**
  - ✓ **Support of Persistent Reuseable JVM for improved tooling**
  - ✓ **Support for latest JAVA and SQL Standards**
  - ✓ **Integration with Websphere**
  - ✓ **Enhanced XML Support of Messages**

- **Manageability**
  - ✓ **Management View across Sysplex**
    - ► Single Point Of Control (SPOC)
    - ► DB2 Control Center Integration
  - ✓ **Enhanced Recovery**
  - ✓ **Sysplex Terminal Options**

- **Scalability in Performance/Capacity/Availability/Recovery**
  - ✓ **Increased performance with Shark DASD**
    - – **MSC throughput**
    - – **OLDS logging**
  - ✓ **Increasing FastPath Areas from 240 to 2048**
  - ✓ **CSA reduced usage by almost 50%**
  - ✓ **Shutdown 20% faster, Startup to ready state over 50% faster**

Application Development/Enablement

HTML /
Java Server
Page

Web Browser

OS/390, z/OS, Linux,
or other environments

WebSphere
Application
Server

Servlet

**IMS Connector
for Java**

JDBC access

TCP/ IP or
Local option

Local

OS/390

IMS Connect

IMS   **IMS Application**
(Java,COBOL)

IMS
DB

IMS *e-* business

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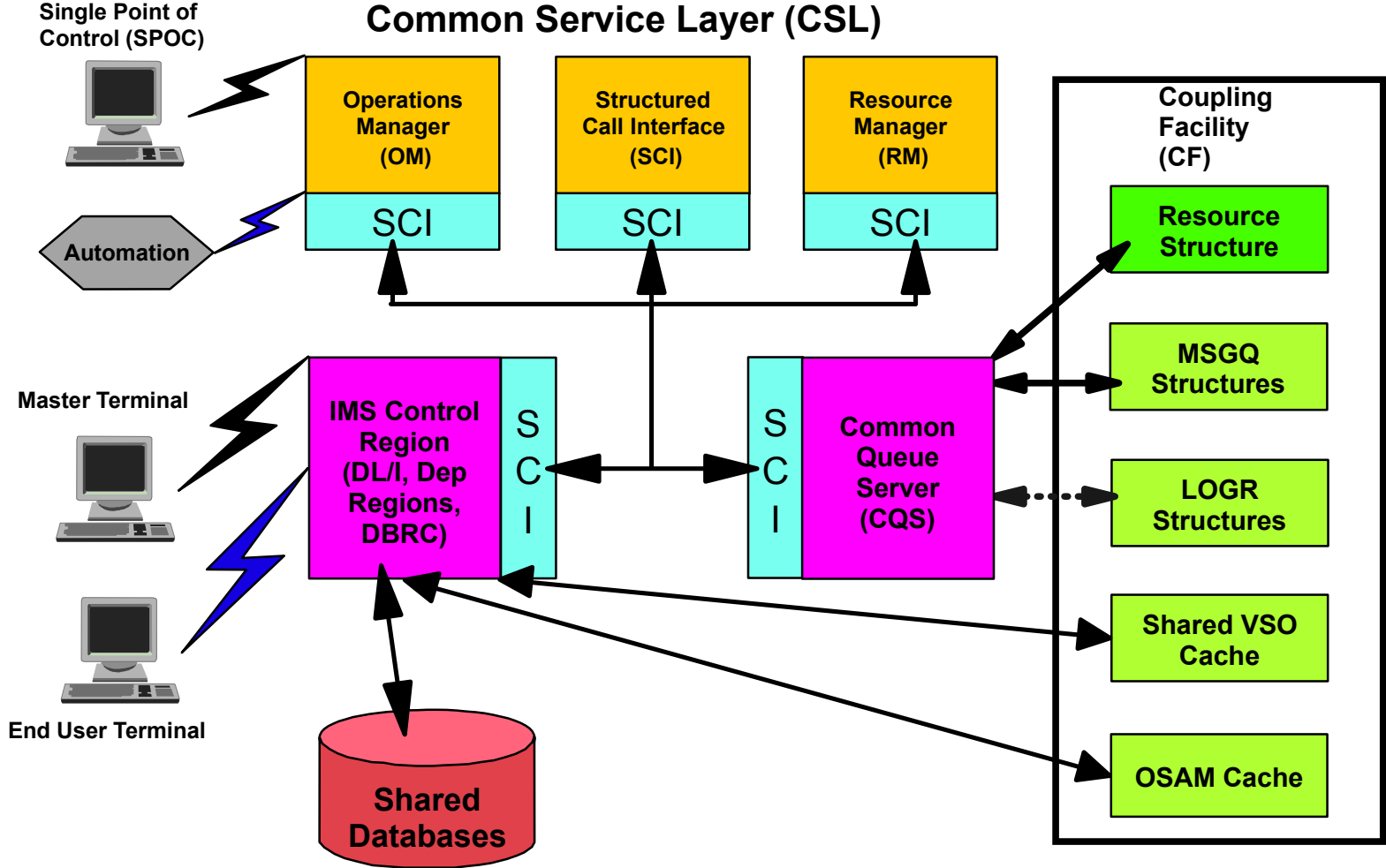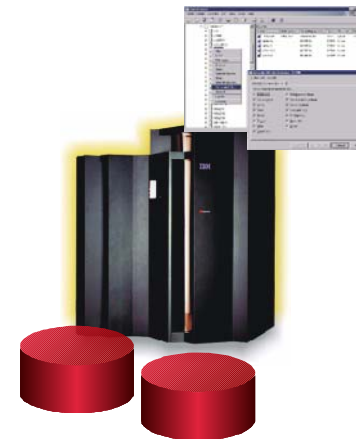 - ✓ Enhanced XML Support of Messages

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IMS V8 Sysplex Management

Single Point of Control (SPOC)

Common Service Layer (CSL)

Coupling Facility (CF)

Operations Manager (OM)	Structured Call Interface (SCI)	Resource Manager (RM)
SCI	SCI	SCI

Automation

Resource Structure

MSGQ Structures

Master Terminal

IMS Control Region (DL/I, Dep Regions, DBRC)	S C I

S C I	Common Queue Server (CQS)

LOGR Structures

Shared VSO Cache

End User Terminal

Shared Databases

OSAM Cache

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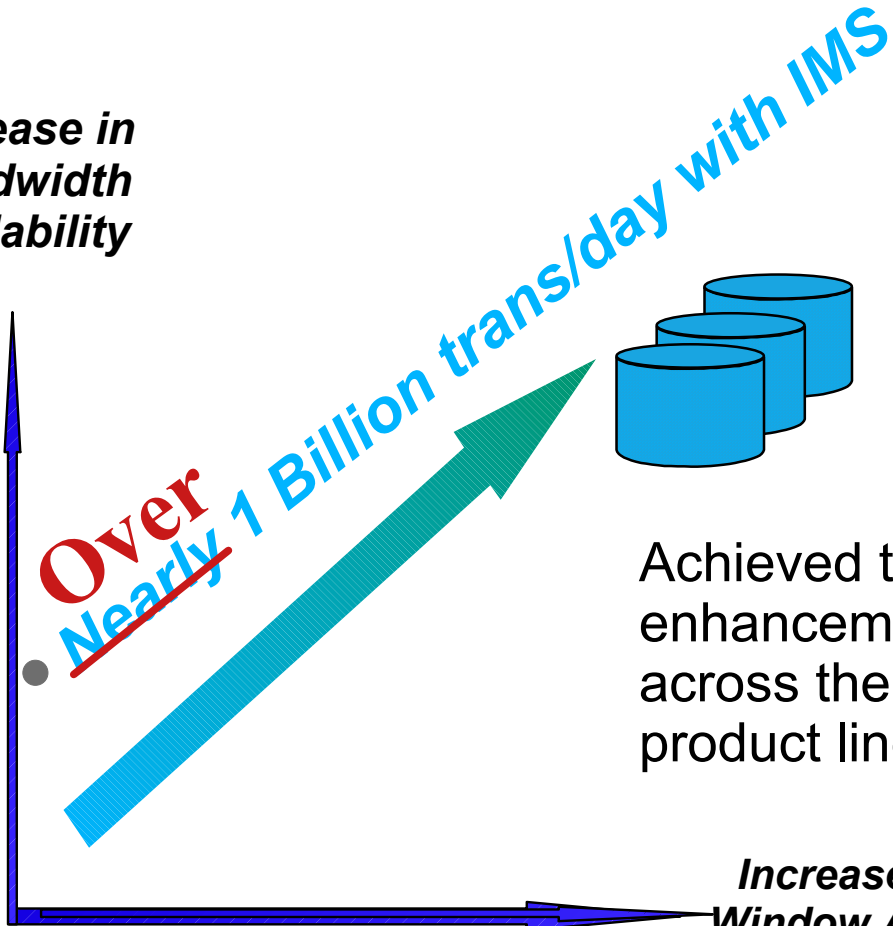 - ✓ Increased performance with Shark DASD
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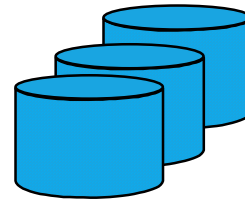
IMS Scaling with SHARK

Performance/CapacityAvailability/Recovery'/

Increase in Bandwidth Availability

IMS tight integration with IBM Storage Take advantage of PAV !!

Over Nearly 1 Billion trans/day with IMS

Achieved thru enhancements across the IBM product line.

Increase in Batch Window Availability

IMS Tools Portfolio

Database Administration

- ▶ *IMS High Performance Unload 5655-E06*
- ▶ *IMS High Performance Load 5655-E07*
- ▶ *IMS High Performance Prefix Resolution 5655-I15*
- ▶ *IMS Index Builder V2R3 5655-E24*
- ▶ *IMS Parallel Reorganization V2 5655-F74*
- ▶ *IMS High Performance Pointer Checker 5655-E09*
- ▶ *IMS Data Base Repair Facility 5655-E03*
- ▶ *IMS High Performance Sysgen Tool 5655-F43*
- ▶ *IMS Command Control Facility 5655-F40*
- ▶ *IMS ETO Support 5655-E12*
- ▶ *IMS Library Management Utilities 5655-E04*
- ▶ *IMS Advanced ACBGEN 5655-E05*
- ▶ *IMS Sequential Randomizer Generator 5655-E11*
- ▶ *IMS Compression - Extended 5655-E02*
- ▶ *IMS Data Base Control Suite V2R2 5655-F76*
- ▶ *IMS Fast Path Basic Tools 5655-E30*
  - ● DEDB Unload/Reload
  - ● DEDB Pointer Checker
  - ● DEDB Tuning Aid
- ▶ *IMS Fast Path Online Tools V2 5655-F78*
  - ● Online Pointer Checker
  - ● Online Data Extract
  - ● Online Area Extend
- ▶ *IMS HALDB Conversion Aid 5655-I01*
- ▶ *IMS Batch Backout Manager 5697-H75*

Manage Automate Monitor Tune...
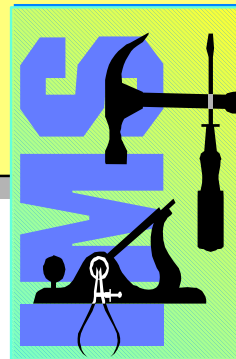
Performance Management

- ▶ *IMS Performance Analyzer 5655-E15*
- ▶ *IMS Network Compression Facility 5655-E41*
- ▶ *IMS Queue Control Facility 5697-E99*
- ▶ *IMS Workload Router V2R3 5697-B87*
- ▶ *IMS Buffer Pool analyzer 5697-H77*

Recovery / Replication

- ▶ *IMS Image Copy Extensions 5655-J56*
- ▶ *IMS DEDB Fast Recovery 5655-E32*
- ▶ *Application Recovery Tool for IMS and DB2 Databases 5697-F56*
- ▶ *Online Recovery Service 5655-E50*
- ▶ *IMS Data Propagation 5655-E52*
- ▶ *IMS High Performance Change Accumulation 5655-F59*

Application Management

- ▶ *IMS Connect 5655-E51*
- ▶ *IMS Message Format Services Reversal Utilities 5655-F45*
- ▶ *IMS Program Restart Facility 5655-E14*
- ▶ *Batch Terminal Simulator 5655-J57*

New/Enhanced IMS Tools

Announced September 2002:

- **Application Recovery Tool for IMS and DB2 Databases V1R2** - HALDB and Sysplex Sharing enhancements

- **IMS Index Builder V2 R3** - availability/usability enhancements

- **IMS Batch Backout Manager V1** - enhances database availability

- **IMS Buffer Pool Analyzer V1** - provides information and helps determine impact of buffer pool changes

- **IMS Database Control Suite V2R2** - performance, usability, productivity, recovery, and Tools integration enhancements

- **IMS DEDB Fast Recovery V2R2** - shortens the recovery time

- **IMS Performance Analyzer V3R2** - enhances reporting, dialog and documentation.

- **IMS Batch Terminal Simulator V3** - enhanced auditing and support for Java and new technologies

- **IMS Image Copy Extensions V2** - creates new copy data sets from the IMS Image Copy data set.

- Service Stream enhancements delivering 2H2002

  - **IMS Connect V1R2 enhancements**

Additional Information on IMS Version 8

- **Available Redbooks -** http:// publib-b.boulder.ibm.com
  - ► IMS Version 8 Implementation Guide A Technical Overview of the New Features SG24-6594-00
  - ► IMS Installation and Maintenance Processes SG24-6574-00

- Download from http://www.ibm.com/software/data/ims
  - ► IMS Version 8 , a scripted Freelance or PDF presentation
  - ► IMS V8 Fact Sheet - 7 page overview
  - ► IMS V8 Release Planning Guide - 279 page in-depth description

IMS Version 8
ibm.com Introductory Promotion
North America (only)
http://www.ibmlink.ibm.com
Marketing Announcement 302-195

- Upgrade to IMS Version 8
  - ► order placed by December 13, 2002

- As a premium , receive either:
  - ► a one-day on-site Migration Assistance Package (approximate value: $6,000 USD, $9,370 CDN)

or

  - ► two enrollments at a three-day Installation and Management Workshop for IMS Version 8 at Silicon Valley Lab
    (approximate value: $5,000 USD, $7,612 CDN).
    travel and living expenses for attendees not included.

- For ordering, contact:
  - ► Your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: LE002).

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St. Louis, Missouri

IMS TECHNICAL CONFERENCES

Sept 30 – Oct 3, 2002

Products

•**IMS©**
IBM's premier transactional and hierarchical database management system for critical on-line operational and e-business applications and data.

•**IMS Connect**
A must-have tool for any IMS shop embarking on e-business, IMS Connect improves TCP/IP access and enables easier access to IMS applications and data from the internet.

•**IMS Connector for Java**
IMS Connector for Java, a component of IMS Connect, allows you to rapidly create and run Java applications to access IMS transactions over the internet through IMS Connect.

Tools and components

•**Data Management Tools**
IBM Data Management tools are specifically designed to enhance the performance of IMS and DB2 in an affordable and easy-to-use manner.

Events

→ IMS Technical Conference
Sept 30 - Oct 3, 2002
St. Louis, MO

→ EMEA IMS Technical Symposium
Oct 15-17, 2002
Koenigswinter, Germany

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