

# IMS Newsletter

## IMS Newsletter: Volume 0803

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## IBM Proudly Announces IMS 11!

On September 16, IBM® announced the plans for the IMS® 11 Quality Partnership Program, which starts on January 19, 2009. IMS continues to be a strategic product for IBM, as demonstrated by strong investments in IMS Development and Marketing, and further supported by this recent announcement.



### IMS 11 highlights include:

- Direct, distributed TCP/IP access to IMS data, both within an IMSplex or with platforms other than System z®, is provided with IMS Open Database support, enabling cost efficiencies in application growth and improved system resilience.
- Improved IMS flexibility, availability, resilience, and security through IMS Connect enhancements. IMS Connect is the TCP/IP gateway to IMS transactions, operations, and now IMS data.
- Simplified creation of Web services, Enterprise Java™ Bean (EJB) components, and JavaServer Pages (JSPs) from your existing MFS-based IMS applications. New applications can be deployed to run on WebSphere® Process Server as part of your business choreography.
- Simplified operations and improved system availability through enhanced user exits and new type-2 commands.
- Enhanced database availability from support for IMSplex-wide recovery points that are taken while the system is online.
- Usability and serviceability enhancements including Syntax Checker support for Open Database.
- System availability and overall system performance are enhanced through the use of 64-bit storage. The IMS Fast Path Buffer Manager, the Application Control Block library, and Local System Queue Area storage reduction's use of 64-bit private storage simplifies operations and improves storage utilization and performance.
- The ability to run Database Recovery Control (DBRC) on the IMS Base Primitive Environment provides it with many system services, simplifying the management and operations of Database Recovery Control.
- And many additional features and improvements that along with the zSeries platform will help you meet your IT and enterprise data center cost challenges, efficiency and resiliency goals, and flexibility needs!

IMS 11 builds on the foundation of previous IMS versions, which have formed the bedrock of information management technology for nearly four decades. Virtually unsurpassed in database and transaction processing availability and speed, the business value of IMS 11, combined with SOA, preserves and enhances on demand business enablement, growth, availability, reuse, investment protection, and systems management.

How does your IT architecture meet your business needs? How can you capitalize on the existing cost effective and highly available services just waiting to be exposed in your existing IMS systems? Reusing these highly optimized and mature services can save money and reduce business risk, and IMS 11 can help!

For more information about this historic announcement, see [www.ibm.com/ims](http://www.ibm.com/ims).

# Introducing the IMS Connect API

Kevin Flanigan, Jenny Hung IMS Connect API Developers

We are very excited to share with you information about the upcoming IMS Connect API—and to give you an opportunity to be one of the first IMS customers to take advantage of it! We in IMS product development value customer feedback and rely on it to drive our designs. If, after reading this article, you are interested in participating in a planned beta, use the contact information below to get in touch with us!

The IMS Connect API, provided in both Java and C, is intended for application developers who write client applications that interact directly with IMS Connect through TCP/IP to drive:

- IMS transactions
- OTMA-supported IMS commands
- IMS Connect-supported commands

The API simplifies interactions with IMS Connect because it handles the IMS Connect message header and interaction protocols, and TCP/IP socket connections.

Using the IMS Connect API, you can provide simple, re-usable profiles containing descriptions of the connections you want to use and the interactions you want to perform. If you want to make high-level invocations, the API provides a simple, all-inclusive method for executing interactions. This approach provides the greatest benefit to users by fully managing the use of a connection to IMS Connect and by managing the protocol for the interaction with IMS Connect. If you want direct control over your connections and interactions, similar to the control provided by IMS Connect roll-your-own (RYO) clients, the API also provides granular, lower-level calls to interact with IMS Connect and IMS. If you choose to use the lower-level calls, you miss out on the benefits of the API shielding you from managing the IMS Connect protocol for the interaction.

## Business Scenario and Value

An IMS customer wants to modernize an existing host application by adding a distributed client application front end to existing transactions, that is, an application that is external to IMS but able to access IMS transactions. Rather than using the IMS TM Resource Adapter or IMS SOAP Gate-

way, the customer writes their own client application, which communicates directly with IMS Connect to drive the IMS transactions. The new client application uses the IMS Connect API to quickly and easily build the interface logic needed to talk to IMS Connect without having to understand how to build the low-level IMS Connect headers. This allows the user to deploy new distributed client applications in a shorter timeframe to meet urgent business requirements. Overall, the API provides a light-weight solution to reduce the total cost of design, development, and test of IMS Connect client applications.

## How it works

The API loads a set of extensible profiles (Figure 1) that define the types of connection and interactions to be performed. Users must configure the profiles for their environment. The profiles shown, Connection and TMIInteraction, specify the following groups of properties:

### Connection Profile

Connection socket-related properties

SSL-related properties

invoked simultaneously. As shown in Figure 2, the API communicates with IMS Connect to not only create and destroy connections, but also to execute interactions based on the properties in the TMIInteraction profile. The IMS Connect API also manages connections with IMS Connect transparently on behalf of the application, or the application or application developer can opt to manage any needed connections to IMS Connect within the application itself.

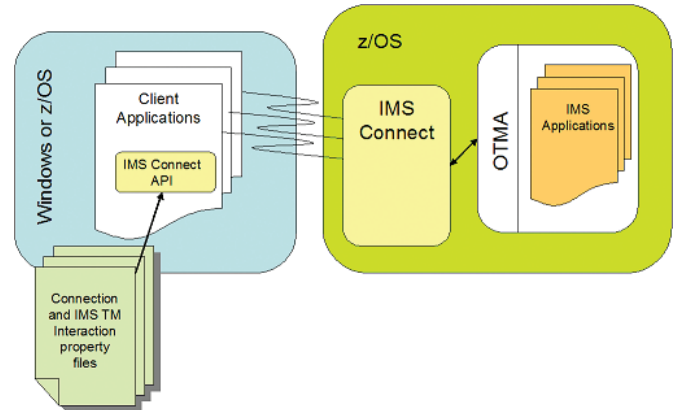


Figure 2: IMS Connect API running in client applications

Sample client applications will be provided so you can validate that your IMS Con-

## TMIInteraction Profile

Interaction-related properties

Adapter task manager-related properties

Message routing-related properties

Security-related properties

Timeout-related properties

Message encoding-related properties

Response-related properties

Tracing-related properties

Figure 1: IMS Connect API profiles

The IMS Connect API runs in the client application's address space. Multiple client applications that use the API can be

connect API environment has been installed and set up correctly. These samples can also be used as the basis for RYO client applications.

*continued on page 5...*

# The Basics of IMS and SOA

Kevin Kelly IMS Information Development, Maria Queralas IMS SOA Initiative

“It is not the strongest of the species that survives, nor the most intelligent, but rather the one most responsive to change.”

- Charles Darwin

## Why SOA?

We live and work in a competitive world, and business Darwinism is truer than ever: adapt or perish. The speed of business is rapidly increasing, and to survive you must be able to respond more quickly and cost effectively to market changes. Your enterprise must continually reinvent itself to remain successful.

The complexity of business environments is increasing, too. You depend on enterprise-class assets like IMS and DB2® (sometimes called enterprise information systems, or EISs), best-of-breed point solutions, and CRM and ERP solutions from application vendors, each of which uses its own proprietary protocols and runs on multiple platforms. All of these expert systems are making a hash out of what had once been a fairly straightforward business process. Trying to follow a business process from end-to-end can traverse many expert systems and data centers around the world. The complexity of any company's business solution is sometimes greater than the problem that generated it.

So what can you do when the next new business challenge asserts itself and you need to respond quickly in this sort of environment? Where do you start? How do you detangle the mess? You have to do SOMETHING! But what?

- You can't afford to do low-level programming every time a challenge rears its ugly head.
- You don't know if the person who originally developed the application is still working for you, and you don't know if you can find the source code.
- You have new or changed mandated government reporting in the locations where your enterprise operates.

- You need to access your assets and data from everywhere.
- You have enormous amounts of money invested in specialized EISs – you can't possibly throw that all away.
- You not only have a growing number of customized EISs and legacy systems through mergers and acquisitions, but you also have new specialized needs.
- You cannot migrate to the latest and greatest solution and abandon it all (tempting as that might be); there's no money or time to do that sort of massive rip-out-and-replace activity.

You need to anticipate and plan for change, because, ready or not, change is coming. You need a flexible solution and a flexible IT department to support it. You need SOA: Service Oriented Architecture

## When you SOA-enable your existing IMS assets, they can play a part in your company's SOA solution through:

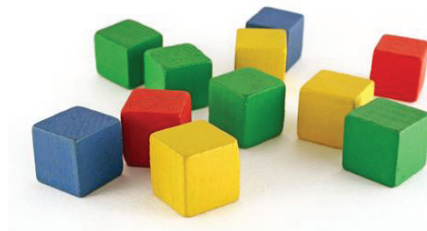
- Improved adaptability and agility: Provide more functions faster.
- Functional reusability: Reuse what you already have, and eliminate the need for large-scale rip and replace.
- Independent change management: Compose services from parts rather than write new services, and focus on configuration rather than programming.
- Interoperability instead of point-to-point integration: Loosely coupled framework, services in network.
- Orchestration rather than integration: Configuration rather than development to deliver business needs.

You have a huge investment in IMS, and you depend on its speed and reliability. By enabling SOA for your IMS assets, you can re-use your existing applications and data that have been proven over the years to be vital for your business. You need to leverage the IMS assets of your company and reuse them in the SOA world.

## So what is SOA?

SOA is a business-centric, IT architectural approach that facilitates the reuse of existing assets. SOA allows for open, standard interfaces that provide any data source solution package to access any other solution package.

SOA is the “art and science” of modeling your business processes in re-usable chunks called services. Think of services as the building blocks you had as a child. A block by itself may not seem like much, but using the same blocks, you built a house, or a car, or a spaceship.

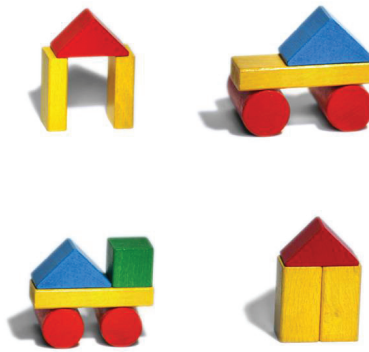


Just as the same toy block can be reused for multiple projects, SOA services can be reused to support more than one business process. And when you need to change a business process because of a new challenge, you change it in one place and it will be used consistently throughout your company.

Services are your building blocks. You determine which services are reusable for other processes. You link these services together to directly support your business processes.

SOA services are not different from services that we use daily, such as the electricity ser-

vice. When we use electricity we don't know the internals and we don't care. We only need to know two things: the voltage and how to plug in the appliances to the power source. The same idea is true for services in the SOA world. We need to know just two things: what is the input and what is the output (black box services). For instance, in your business process flow, you might determine that one service is to get a credit report from a credit reporting agency before processing a sale. You don't need to know the details of how the credit reporting agency works; you only need to know that they do the work.



There are tools that can help you to choreograph these services, but no tool or recipe can make everything work. You have to make decisions that are appropriate for your unique circumstances.

### SOA: It's a team sport

SOA is an approach, a way of thinking; it is a design philosophy. SOA is a solution that needs the collaboration of both business and IT working together. This is not business managers making demands and IT managers reflexively saying no. SOA design is about bringing everyone's skills to the table.

Business and IT managers must collaboratively identify those processes and best practices to promote as a service (and conversely to identify which processes are not worth promoting as a service).

IT can help business managers identify reusable services, and business managers can help IT understand the business processes and goals, all of which will lead to a better architecture. Creating a good SOA architecture takes time, careful planning, and flexibility. It takes a team.

SOA solutions should be incremental and built on current resources: do not try to change in one day everything that your company has built over a corporate lifetime. SOA helps you reuse a lot of what you already have but restructured with a flexible philosophy.

### In a nutshell, SOA:

- Helps bridge the Business/IT gap
- Releases business from the grip of IT
- Helps systems remain scalable and flexible while your business is growing and changing
- Focuses on business processes

### Myths and rumors about SOA

There remains some confusion around SOA: what it is and where you buy it or how you build it.

And that's the problem. SOA isn't a product you can purchase, and it doesn't require that you replace EIS systems. You don't need to rewrite existing applications to take advantage of SOA, nor do you need to overhaul your entire IT infrastructure and redesign your enterprise's business process.

SOA is often equated with Web services, and the terms are often used interchangeably. While it is true that SOA is made easier and more pervasive through the broad adoption of Web

services based upon standards and protocols, Web services and SOA are distinct. SOA is an approach to designing systems—in effect the architectural drawings or blueprint—that directs how IT resources will be integrated and which services will be exposed for use. In contrast, Web services are an implementation methodology that uses specific standards and language protocols.

### IMS at your service!

Determining the correct degree of granularity of SOA services is essential—but no one can say exactly how to do that. Taking an IMS transaction and turning it into a callable Web service (using SOAP Gateway or the IMS TM Resource adapter) does not necessarily mean that you have found the correct level of granularity.

A business process can be broken down into sub-processes, and each sub-process can break down into more sub-processes until a discrete business activity is reached: this is a service. A service is the IT codification of a discrete business activity.

The key question to consider is: how reusable is the service? If the operation the service performs can be re-used in other processes—without alteration—then you might have found the correct level of granularity.

### There are three likely models for services:

- Single operations—the service has one and only one function. This service might be too granular to become a building block.
- All-in-one services—Soup-to-nuts, this one does it all. This service is too coarse, and in fact might be an application.
- Ad-hoc services—this service is just right. The unit of reuse is the operation itself.

IBM can help you determine your services by following the IBM Service Oriented Modeling Architecture (SOMA) methodology. You might find that the IMS transactions you have can map directly to these services. The IMS SOA Integration Suite can help you:

- Expose existing IMS transactions as a Web service using the IMS TM Resource adapter
- Write new applications to access existing IMS data using the latest industry standards with the IMS DB Resource adapter
- Expose complex business flows using the IBM WebSphere Process Server
- Enable IMS applications to interoperate outside of the IMS environment through SOAP to provide and request services that are independent of platform, environment, application language, or programming model using the IMS SOAP Gateway
- Use Java programming to access your IMS database
- Use industry standards such as JDBC, XML, and XQuery to view and query your IMS database

### The benefits of using the IMS SOA Integration Suite

The IMS SOA Integration Suite offers flexibility and facilitates the reuse of existing business assets that are managed by IMS in an SOA world. Using the IMS SOA Integration Suite, you can couple the speed and reliability of IMS with the flexibility of SOA.

The IMS SOA Integration Suite offers choices in how to enable IMS applications and data for SOA reuse. You choose the option that adapts better to your company's needs. What makes SOA possible today is that the world has agreed on standards, and the IMS SOA Integration Suite allows your IMS assets to flow in the standard world.

### In summary

*In the struggle for survival, the fittest win out at the expense of their rivals because they succeed in adapting themselves best to their environment.*

~Charles Darwin

SOA liberates business constraints by structuring existing information differently so that future growth is faster, easier, and more affordable. The flexibility and agility of the IMS SOA Integration Suite functions and tools help you to respond to your customer demands for new products and services and enter new markets more quickly. SOA and IMS scalability together enable your business to grow and continue to grow. For more information about the IMS SOA Integration Suite, see [www.ibm.com/software/data/ims/toolkit/](http://www.ibm.com/software/data/ims/toolkit/).

### Introducing the IMS Connect API continued...

IMS Connect API in Java will be initially supported on Windows and z/OS®, and made available as both a web download and an SMP/E installable package.

IMS Connect API in C will be initially supported on Windows, and made available as a web download.

### Getting your hands on the IMS Connect API!

To get you started, check the IMS website at [www.ibm.com/ims](http://www.ibm.com/ims) or contact your IBM sales representative or IMS advocate to learn about our latest beta offering. Look for more details on the IMS Connect API in future newsletters!



# IMS Message Format Service in SOA World

Tram Dinh IMS MFS Development

SOA (Service Oriented Architecture), once an industry buzzword, is now firmly established in the IT landscape. According to a survey conducted for IBM by Link Group of more than 4,200 technical and business leaders at the IBM Impact 2007 event, a majority (75%) of respondents said that implementing SOA helps the business to meet the business goals.

SOA is a revolutionary computing architecture that allows business tasks to be divided into services and then combined in different ways to form a business process. Using SOA, you can achieve business flexibility and agility.

Over the last 40 years, IMS has evolved and set the pace for IT technology. Today, IMS supports Java programming language, JDBC, XML, Web Services, Web 2.0, and SOA. In this article, we will highlight the use of IMS Message Format Service (IMS MFS) SOA support. IMS MFS is one of two methods you can use to edit and format messages sent to and from terminals. IMS MFS enhancements for SOA enable you to edit and format messages sent to and from Web pages or any Web services client applications such as .NET applications, JSP applications, and more.

## IMS MFS SOA support

IMS MFS SOA support comes with the IMS TM Resource Adapter in both IMS Version 9 and IMS Version 10. IMS TM Resource Adapter is packaged with the Rational® Application Developer Version 7.5 Open Beta and can also be downloaded from: [www.ibm.com/software/data/ims/ims/components/tm-resource-adapter.html](http://www.ibm.com/software/data/ims/ims/components/tm-resource-adapter.html)

IMS MFS SOA support lets you define a service from an MFS source file to accomplish a business task. MFS source files contain:

- Device output format (DOF) information that describes the output device field locations and attributes.

The service is represented by a service description, which contains a J2C Java bean. The Java bean includes a method that submits a request to IMS to run an IMS MFS transaction. The services are bound together (using Java data binding) to transform the input message into a byte stream to send to IMS, and the output message into a data object to send back to the client. The bean is wrapped in a Web page (JSP), Web service, or EJB service to be deployed to run on IBM WebSphere Application Server Version 6.1.

## IMS MFS SOA support overview

IMS MFS SOA support uses the IMS TM Resource Adapter to communicate with IMS Connect and IMS, on both Windows® and z/OS.

The MFS SOA wizard, which is integrated into the J2C wizards in RAD V7.5, invokes the MFS SOA Importer to parse MFS source files and creates services for MFS-based IMS transactions. The MFS SOA wizard guides application developers in selecting the MFS Message Input Descriptor (MID) and Message Output Descriptor (MOD) and populating the service definition, including the XML schema for both input and output types.

The service description contains all the information required for the MFS Data Binding Generator to generate MFS J2C Java Data Binding files.

The generated J2EE artifacts are then packaged into an Enterprise Application Archive (EAR) file. An application developer or application server administrator then deploys the EAR to run on a WebSphere Application Server such as WebSphere Application Server V6.1. The deployed MFS J2C

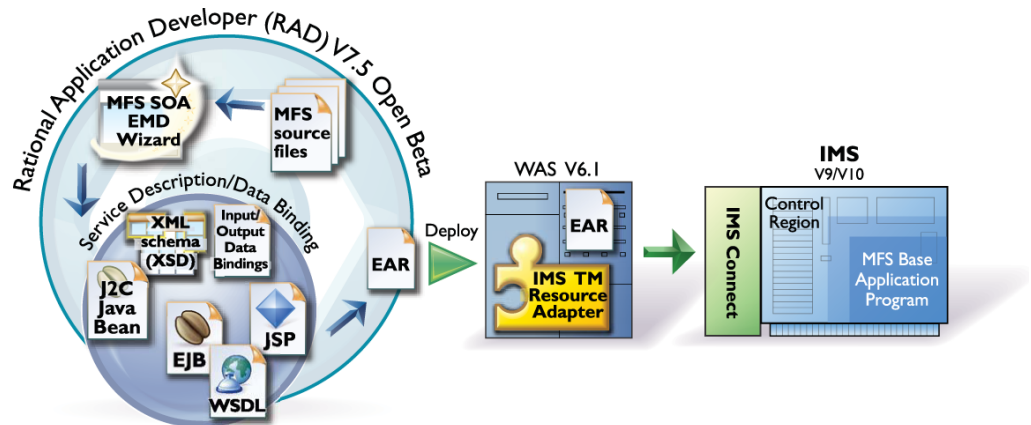
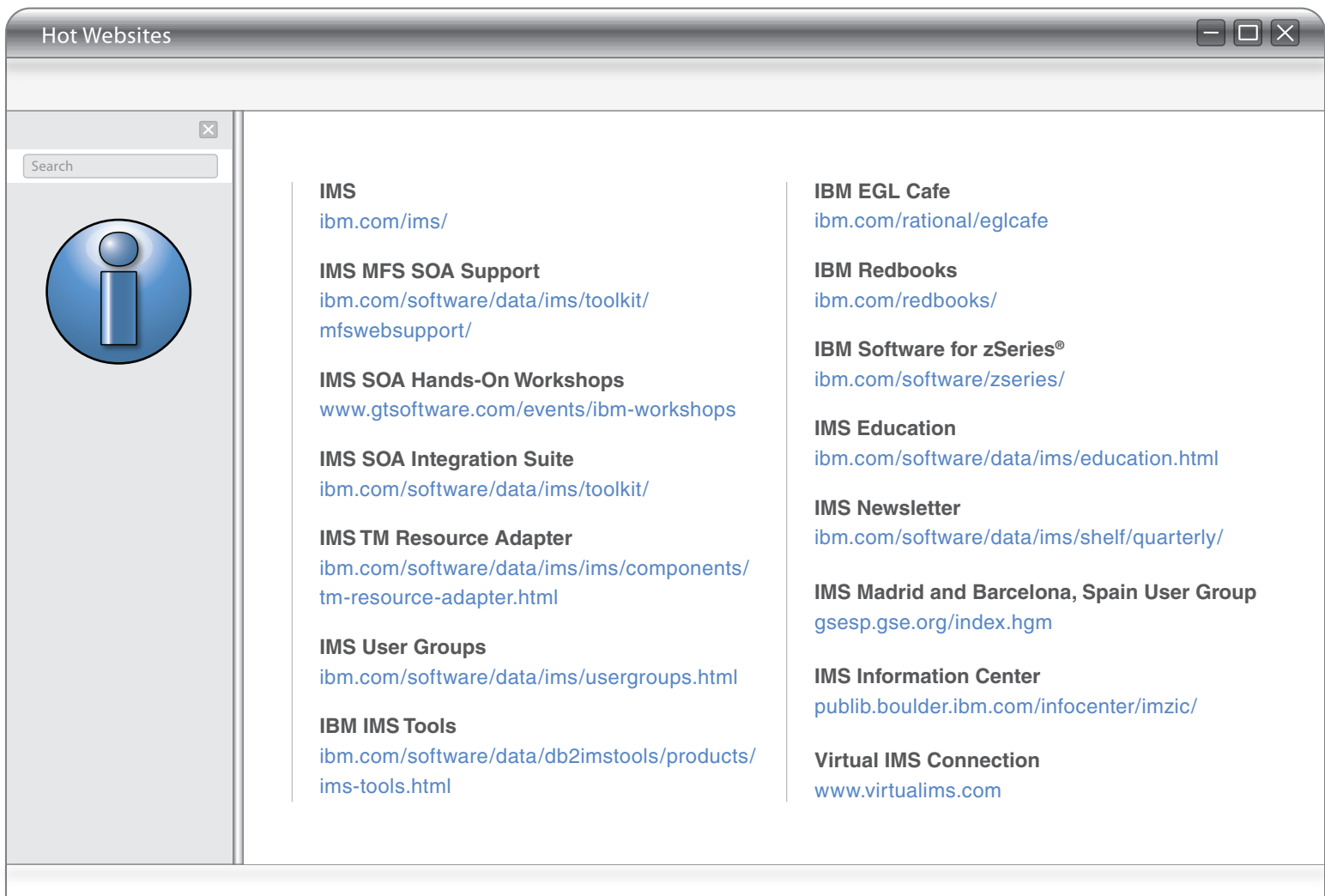


Figure 1: Configuration view of IMS MFS SOA support

## The three components of IMS MFS SOA support shown in Figure 1 are:

- The MFS SOA wizard
- MFS Service description and data binding
- Packaging and deployment of the application



The screenshot shows a web browser window with the title "Hot Websites". On the left side, there is a search bar and a large blue circular icon containing a white lowercase letter 'i'. The main content area is divided into two columns of links. The left column lists various IBM resources, and the right column lists more specific IBM services and user groups.

Link Title	URL
IMS	<a href="http://ibm.com/ims/">ibm.com/ims/</a>
IMS MFS SOA Support	<a href="http://ibm.com/software/data/ims/toolkit/mfswebsupport/">ibm.com/software/data/ims/toolkit/mfswebsupport/</a>
IMS SOA Hands-On Workshops	<a href="http://www.gtsoftware.com/events/ibm-workshops">www.gtsoftware.com/events/ibm-workshops</a>
IMS SOA Integration Suite	<a href="http://ibm.com/software/data/ims/toolkit/">ibm.com/software/data/ims/toolkit/</a>
IMS TM Resource Adapter	<a href="http://ibm.com/software/data/ims/ims/components/tm-resource-adapter.html">ibm.com/software/data/ims/ims/components/tm-resource-adapter.html</a>
IMS User Groups	<a href="http://ibm.com/software/data/ims/usergroups.html">ibm.com/software/data/ims/usergroups.html</a>
IBM IMS Tools	<a href="http://ibm.com/software/data/db2imstools/products/ims-tools.html">ibm.com/software/data/db2imstools/products/ims-tools.html</a>
IBM EGL Cafe	<a href="http://ibm.com/rational/eglcafe">ibm.com/rational/eglcafe</a>
IBM Redbooks	<a href="http://ibm.com/redbooks/">ibm.com/redbooks/</a>
IBM Software for zSeries®	<a href="http://ibm.com/software/zseries/">ibm.com/software/zseries/</a>
IMS Education	<a href="http://ibm.com/software/data/ims/education.html">ibm.com/software/data/ims/education.html</a>
IMS Newsletter	<a href="http://ibm.com/software/data/ims/shelf/quarterly/">ibm.com/software/data/ims/shelf/quarterly/</a>
IMS Madrid and Barcelona, Spain User Group	<a href="http://gse.org/index.hgm">gse.org/index.hgm</a>
IMS Information Center	<a href="http://publib.boulder.ibm.com/infocenter/imzic/">publib.boulder.ibm.com/infocenter/imzic/</a>
Virtual IMS Connection	<a href="http://www.virtualims.com">www.virtualims.com</a>

services now can access MFS-based IMS applications over the Web.

## IMS MFS SOA support and conversational MFS-based IMS transactions

IMS MFS SOA supports conversational MFS-based IMS transactions in IMS Version 10.

When one transaction contains several parts, conversational processing is needed to process a connected series of client-to-program-to-client interactions.

The MFS SOA client sends the first iteration of a conversation, which includes input messages with the transaction code, to IMS through the IMS TM Resource Adapter in WebSphere Application Server and IMS Connect. IMS processes the input data and sends output data back with a conversation ID, which is created during the process. In

the second iteration, the MFS SOA client sends input data with the conversation ID to keep the conversation going until the MFS SOA client sends a message to end the conversation.

## IMS MFS SOA support in action

Figure 2 illustrates a customer order system that contains both IMS and non-IMS data. It requires a Windows application as an interface to your IMS database. Collections of data are distributed across multiple physical locations. A distributed database is used to retrieve IMS data from IMS and to display it on the Windows user interface as needed. The distributed database is refreshed nightly from the IMS database using a batch process. A 3270 terminal is needed to enter a quote or sales data into the IMS database directly. With this design, extra effort is required to maintain multiple disparate

systems, and you don't have real-time data because the distributed database is only refreshed once every night. Additionally, you have to pay extra labor costs for the complexity of the distributed system. Finally, the 3270 terminal emulator is fairly complex and relatively expensive, and it only supports a limited number of operating systems. What are your options?

With IMS MFS SOA, J2C Services can be generated from existing MFS source files, as shown in Figure 3. The services can access IMS through a Web page, EJB, or any other Web Services

client applications. You only need a Java application to update and retrieve non-IMS data in your distributed databases, and to access IMS data from IMS through IMS MFS SOA in WebSphere Application Server. This

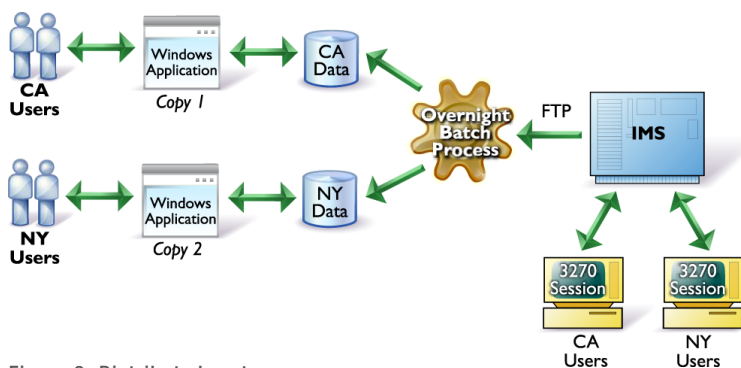


Figure 2: Distributed system

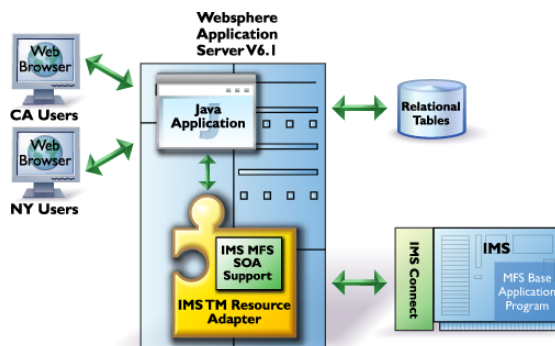


Figure 3: Centralized system

approach provides you with a more effective way to access IMS without using 3270 terminals and requiring a nightly batch process. Furthermore, you can avoid data inconsistency, reduce the cost of ownership, and have a more sustainable system.

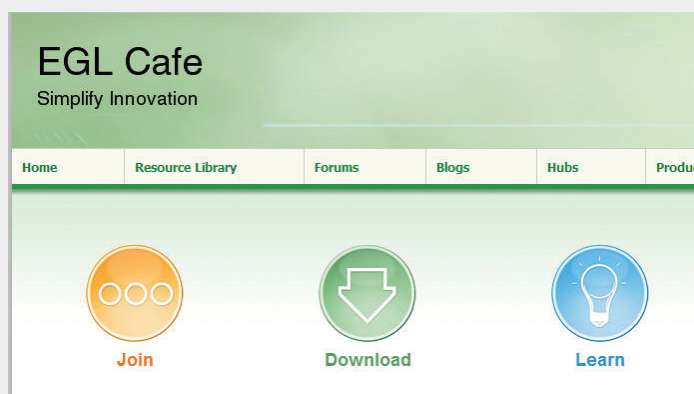
## In summary

IMS MFS SOA support provides a simpler way to build a Web-based application that delivers flexibility, open architecture, and ease of integration with other applications. This solution reduces overall cost by allowing you to reuse existing MFS-based IMS transactions in the evolving business-to-business environment without the dependency on VTAM and 3270 emulators.

For more information about IMS MFS SOA support, go to [www.ibm.com/software/data/ims/toolkit/mfswebsupport/](http://www.ibm.com/software/data/ims/toolkit/mfswebsupport/).

## IMS Speaks a New Language: EGL

Kou Mei Marketing Manager, Rational Enterprise Tools



EGL, IBM's newest business language, provides a powerful development environment for delivering innovative web and SOA solutions for IMS. EGL is a modern programming language available with an Eclipse-based IDE, Rational Business Developer, which enables business application developers to build Web-to-IMS end-to-end applications in a fraction of the time that would be required using traditional development. EGL shields developers from the intricacies of transaction, database, and network middleware, allowing them to focus on solving business problems. EGL is ideal for business-oriented development teams who value ease of learning and high productivity, but need to quickly deliver modern IMS applications and services.

EGL enables developers to build application programs that run on IMS. Depending on the requirements, the application programs can be generated in any of the following regions: a message process-

ing program (MPP) region, an IMS Fast Path (IFP) region, or a batch message processing (BMP) region. You can also write EGL programs that access DL/I databases by using many of the same EGL statements you would use to access a relational database: add, delete, get, and

replace. EGL Web applications can call EGL-generated programs deployed to IMS, thus creating a complete end-to-end Web solution written in a single language!

For more information on EGL or Rational Business Developer, visit the EGL Cafe at [ibm.com/rational/eglcafe](http://ibm.com/rational/eglcafe) or [www.ibm.com/software/rational/cafe/docs/DOC-1864](http://www.ibm.com/software/rational/cafe/docs/DOC-1864).



# Upcoming IMS Events

We hope to see you at one or more of these upcoming events! See [www.ibm.com/software/data/ims/usergroups.html](http://www.ibm.com/software/data/ims/usergroups.html) for information on how to register for any of these meetings or conferences:

## IMS regional user group meetings

- October 2, 1008 New York City
- October 14, 2008 Toronto, Ontario
- October 2008 Dallas/Forth Worth
- October 2008 GSE Spain
- October 28–29, 2008 United Kingdom

## Conferences and symposiums

- October 26, 2008 IBM Information On Demand conference, Las Vegas
- November 10–13, 2008 IMS Symposium, Bad Soden, Germany

We are happy to announce a series of IMS SOA Hands-On workshops with GT Software! See [www.gtsoftware.com/events/ibm-workshops](http://www.gtsoftware.com/events/ibm-workshops) for information on registering for one of these workshops.

## IMS and SOA hands-on workshop: Getting the Benefits from IMS and SOA Today

- October 9, 2008 Charlotte, North Carolina
- October 16, 2008 Phoenix, Arizona
- October 23, 2008 Columbus, Ohio
- November 4, 2008 Toronto, Ontario
- November 6, 2008 Bloomington, Illinois
- December 2, 2008 Glendale, California

oct.

user groups

gse  
spain

germany

10 nov.

IMS Symposium

vegas

26 oct.

IOD

9,16,23 oct.

4,6 nov.

2 dec.

IMS & SOA  
workshops

# Get IMS SOA-ready with IMS Tools

Srividhya Srinivasan Jim Martin IMS Tools Development

Service-Oriented Architecture (SOA) is all about enabling customers to respond to market changes quickly and in a cost-effective manner. The true value of SOA is realized when the focus is on optimizing business processes across the enterprise, where IMS is one component in a complex environment, instead of spending time on basic IMS tasks.

The IMS SOA solutions expose IMS to the SOA framework by providing support for Web Services, process choreography, and distributed databases. The IMS Tools portfolio is uniquely positioned to complement the SOA solutions provided by IMS and helps you get ready to embrace SOA by optimizing performance, automating processes, and in general, making it easier to manage IMS.

The focus of this article is to describe our performance-related tools, because optimizing performance can be a real challenge in an SOA environment due to the overhead incurred by the addition of several layers of protocols.

The following trio of IMS performance tools addresses the need to support dynamic and unpredictable environments associated with cooperative application architectures such as SOA. This highly integrated set of IMS tools expands on the experience of over thirty years of IMS performance reporting.

## IMS Connect Extensions

The first product in the group is IMS Connect Extensions. This relative newcomer to IMS performance reporting plays a cornerstone role in capturing the event data needed to relate IMS-centric applications to their remote partner applications when the connection is through TCP/IP, the Web, or both. All of the events needed to report all aspects of IMS transactions that access IMS applications using IMS Connect are recorded in a format that allows easy integration with the IMS log and other forms of related instrumentation data. This includes messages received from the IMS SOAP Gateway.

## IMS Performance Analyzer

The IMS Performance Analyzer has over a decade of providing IMS-specific transaction performance measurement capability. Using a wide range of input data, IMS Per-

formance Analyzer provides the type of reporting that enables tuning and problem determination of IMS environments. The inclusion of the event data published by IMS Connect Extensions allows IMS Performance Analyzer to expand its performance reporting to the TCP/IP boundary established by IMS Connect.

IMS Performance Analyzer's ability to merge event and instrumentation data from all of the key IMS components allows reporting from the IMSplex down to the individual IMS system.

## IMS problem investigator

It has long been said, "when the going gets tough, the tough get going." The third member of the group, the IMS Problem Investigator, is the tool you need when you have to find the answer to a tough IMS transaction problem. The unique ability of the IMS Problem Investigator to merge multiple sources of environmental data such as IMS, DB2 for z/OS, WebSphere MQ, and IMS Connect Extensions data allows IMS Problem Investigator to provide a detailed picture of an IMS transaction's behavior. Being able to view the lifecycle events for a transaction using a relative timeline allows you to focus your tuning and problem determination efforts quickly in the area most likely to be associated with the problem.

Working together, this trio of IMS Tools can bring some sanity to the SOA environment both now and in the future. By relating the data published by IMS Connect Extensions with the IMS log data, these IMS Tools can show both tight and loosely coupled IMS applications using SOA techniques such as synchronous and asynchronous call-out.

## Summary & future

IMS and IMS tools are evolving to help you address the challenges you face to run your business. In the near future, IMS Tools takes on the challenges of managing IMS as a consumer of services, providing open database access through IMS TM as well as integration with other IBM products through a graphical user interface. Moving forward, IMS Tools will continue to complement new and upcoming SOA-related features in IMS as well as simplify the process of managing and operating IMS.

## IMS Profile: Shyh-Mei Ho

IBM's Silicon Valley Laboratory is rather idyllically situated amidst rolling green foothills in San Jose, California, at the southernmost tip of the San Francisco Bay Area. It's not exactly what you think of when you think of Silicon Valley or high-tech.



Here, the team that is largely responsible for delivering the IMS SOA Integration Suite is hard at work, led by chief architect Shyh-Mei Ho. As chief architect, Shyh-Mei defines and sets the strategy and direction for the IMS SOA Integration Suite, providing technical leadership to a number of very talented teams. In addition to her role as chief architect, Shyh-Mei's list of achievements includes:

- Application Transformation for Enterprise Information Systems (IMS, CICS, and MQSeries)
- Creator of worldwide industry Enterprise Application Integration CAM (Common Application Metamodel) standards for data exchange between enterprise applications
- Three separate IBM Outstanding Technical Achievement Awards
- 28 patents and 37 Invention Achievement Awards
- Appointed as an IBM Information Management Master Inventor
- International recognition as an expert in SOA

We wanted to talk with Shyh-Mei about the impact that she has had for IBM and IMS in the areas of customer support, enterprise integration, and winning in the marketplace.

### One-on-one with the IMS customers

Shyh-Mei's technical strength, industry

knowledge, and intense focus on the customer have led her to play a pivotal role in enabling IMS for SOA, and in helping customers see the value in enabling their IMS environments to take advantage of SOA. We asked Shyh-Mei what she values most about working with customers.

"It's two-way. They help me see business value from their perspectives, and I assist them in how IBM and IMS can help meet their needs. I have been with IMS for 13 years, from the beginning of the On Demand era, and I know the technical functions inside and out. When a customer tells me about their issues, I usually quickly grasp what they are saying and know what we can and cannot do. I always try to be honest with them and follow through on my commitments to gain their trust and confidence."

A typical scenario tends to take place. The customer tells Shyh-Mei about their problems, often beyond an IMS scope. A possible solution comes to mind, and Shyh-Mei touches base with the extended IBM teams to brainstorm about possible solutions. Together they come up with a workable design that meets the customer's needs, and a new level of trust emerges. How important is this trustworthiness? In meeting with a major financial customer in Asia, Shyh-Mei was told they were moving entirely off of IBM. Upon learning that their primary business objective was centered around Globalization, she convinced them that System z was better positioned for Globalization than its competitors were, and her influence led to a total System z upgrade, including IMS 10 with SOA solutions.

### A captive audience of CEOs

Very often, Shyh-Mei finds herself addressing business executives about their use of IMS and the IMS SOA Integration Suite. We asked Shyh-Mei what she would say to a group of executives who were considering implementation of SOA, but had yet to be convinced that it was the right move for them.

"SOA and On Demand [solutions] are the keys to enterprise integration. Customers often have different solution packages – there is no way around that. However, using IMS to run core, mission-critical business is essential. The IMS SOA Integration Suite provides the bridge between the solution packages and their core IMS assets. These customers have invested in IMS for many years, and they can still invest in new technology. No matter how technology evolves, they know their investments in IMS are secure and can continue to leverage their IMS assets."

### Building bridges

One of the most important factors to the success of Shyh-Mei's visits is to gather the company's Application Architects and IT Specialists together in one discussion to address requirements and possible trouble points. To that end, we asked Shyh-Mei what are the three most important things IMS customers can do right now to help them succeed at enterprise application integration and SOA.

*"Firstly, understand your requirements from a business perspective. Don't worry about the technology; it plays a key role, but start with your business goals. Secondly, education is critical! IBM is here to help. We can provide seminars, workshops, and more. We want to discuss solution alternatives, tradeoffs, and your pain points. Lastly, but probably most importantly, is the need to collaborate and communicate across organizations. You will need to find the expertise from all sides of your business; plans have to be implemented across organizations. Reuse is one of the best ways to achieve the business benefits of SOA!"*

*"I am always very excited about new technology, about working with customers and their architecture, helping them get the most of their IMS investment," she remarked. "I really have a passion for what I am doing!"*

# IMS Newsletter

## Volume 0803

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## Editorial

Sandy Sherrill

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As this edition of the IMS Newsletter goes to press, we are excitedly launching the first of the IMS Regional User Groups! September 16 in Glendale, California, September 18 in Phoenix, Arizona, September 23 in Columbus, Ohio, and September 25 in Detroit, Michigan. New York, Toronto, and others will follow. For those of you who attended—thank you! We look forward to seeing you again at ongoing IMS Regional User Group meetings. If you were unable to attend, you can learn more about upcoming user group meetings at [www.ibm.com/software/data/ims/usergroups.html](http://www.ibm.com/software/data/ims/usergroups.html).

Look for photos and results of these meetings in future IMS newsletters. IBM is helping to launch these meetings, but it's you—our customers—who provide the energy to generate the momentum behind them! On behalf of the IBMers who had the privilege of participating in these first IMS Regional User Group meetings, thank you!

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