



**Include Complex IMS Transactions in New Business Applications
and Reduce IMS CPU by 30 %**

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IMS is the system of record



IMS systems for banks
(ATM, loans,
account management)



IMS systems for insurance
(Claims &
policy management)



**IMS systems for
manufacturing**



IMS systems for finance



IMS systems for medical



IMS systems for Airline

IMS and Fortune companies

- ❑ **75%** of Fortune 1000 companies use IMS
- ❑ Thousands of companies globally use IMS
- ❑ Most users are not aware that information on their applications come from IMS



The very reliability and transparency of IMS systems can make it nearly invisible to architects.

- ❑ Not using IMS to the fullest advantage
- ❑ They are not aware they can integrate new technology with IMS data and transactions.
- ❑ They may recommend other options, not knowing they can integrate without changing the underlying IMS applications

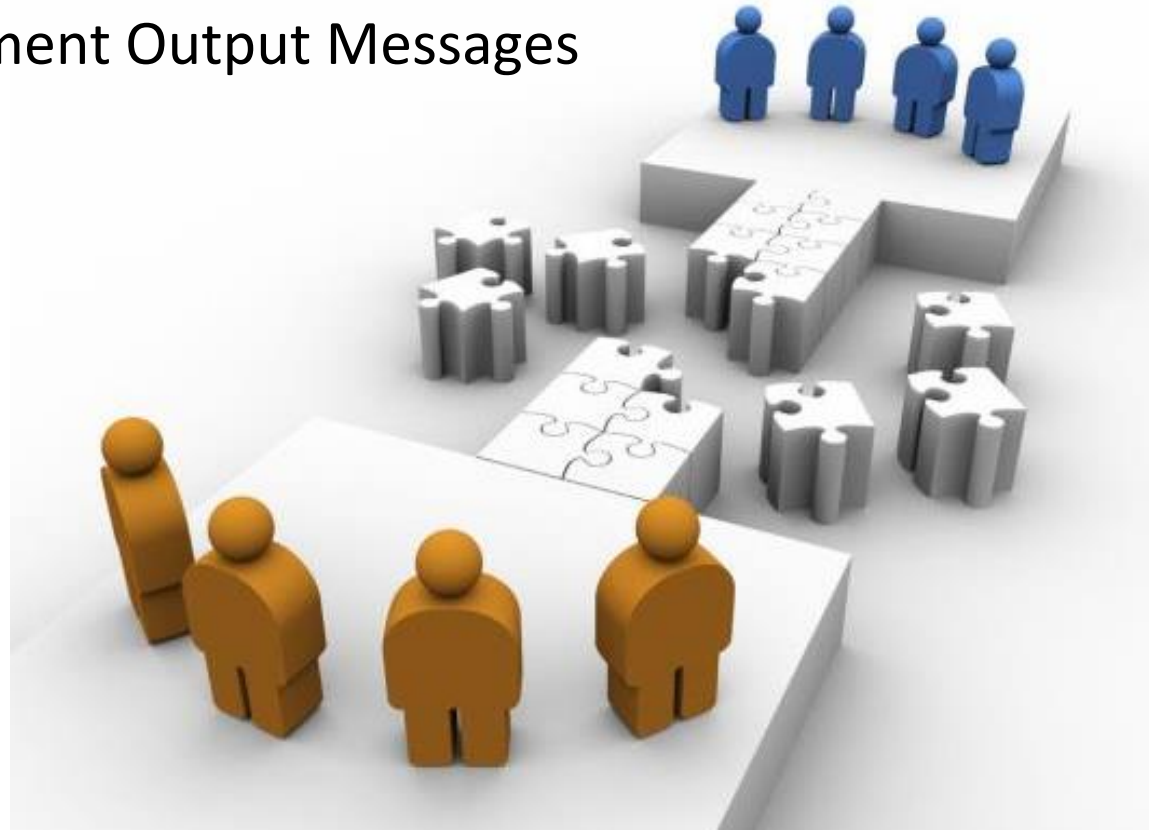


Today's business needs

- ❑ Self-service, Mobile/cloud, BYOD, BI/BA
- ❑ Real-time access to enterprise data residing on any platform
- ❑ Integrated views of related information
- ❑ Customer and business focused IT (360 degree view)
- ❑ Build and deploy apps rapidly (*App Mentality*)
- ❑ Industry standards (IFX,ACORD,SWIFT...)
- ❑ Integration between IMS & distributed systems
- ❑ Common tools & skills
- ❑ Big Data (**IMS?**)



- ❑ Conversational Transactions
- ❑ Multiple Segment Output Messages
- ❑ IMS as Client



Conversational transactions

Conversational transaction processing allows you to retain message continuity from a **given terminal**, even when the program that processes the conversation is not retained in storage throughout that conversation.

Conversational transactions

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- Message Continuity?
- Terminal?
- Conversations?
- Storage?

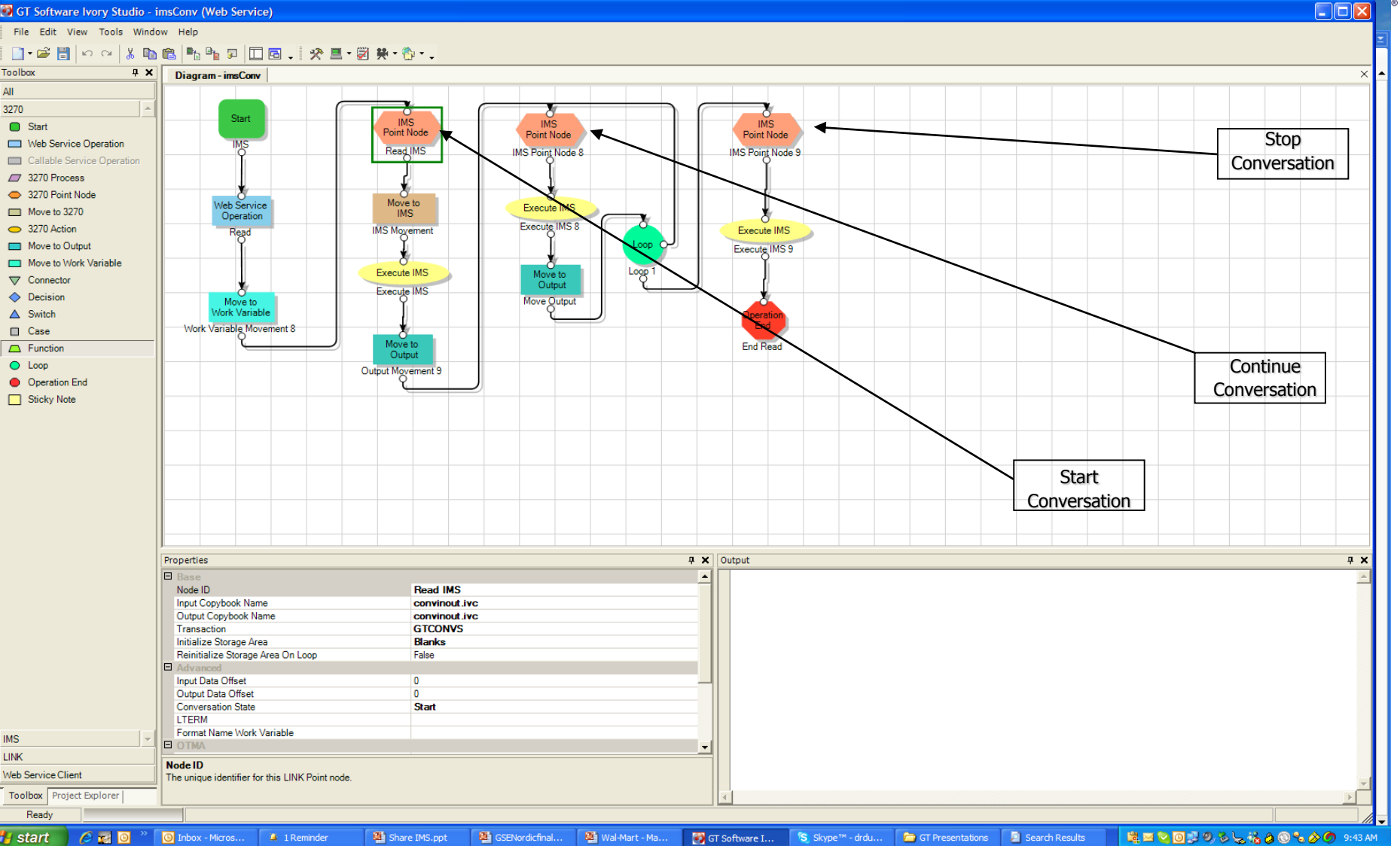
Conversational Transactions



- Run transaction (possible save state(SPA))
- Run another transaction (retrieve state SPA, save state SPA)
- Loop
- Run Transaction (end conversation)

- Issues?

IMS Conversational Tran as a Service



Multiple Segment Output Transactions



- ❑ Run transactions
- ❑ Get output
- ❑ PA1 through pages, or get logical pages

❑ Issues ?

Multiple Segment Output Transactions



Input

| | |
|------|------|
| LLZZ | DATA |
|------|------|

Output

| | |
|------|------|
| LLZZ | DATA |
|------|------|

Multiple Segment Output Transactions



Input

| | |
|------|------|
| LLZZ | DATA |
|------|------|

Output

| | |
|------|------|
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |

Multiple Segment Output Transactions

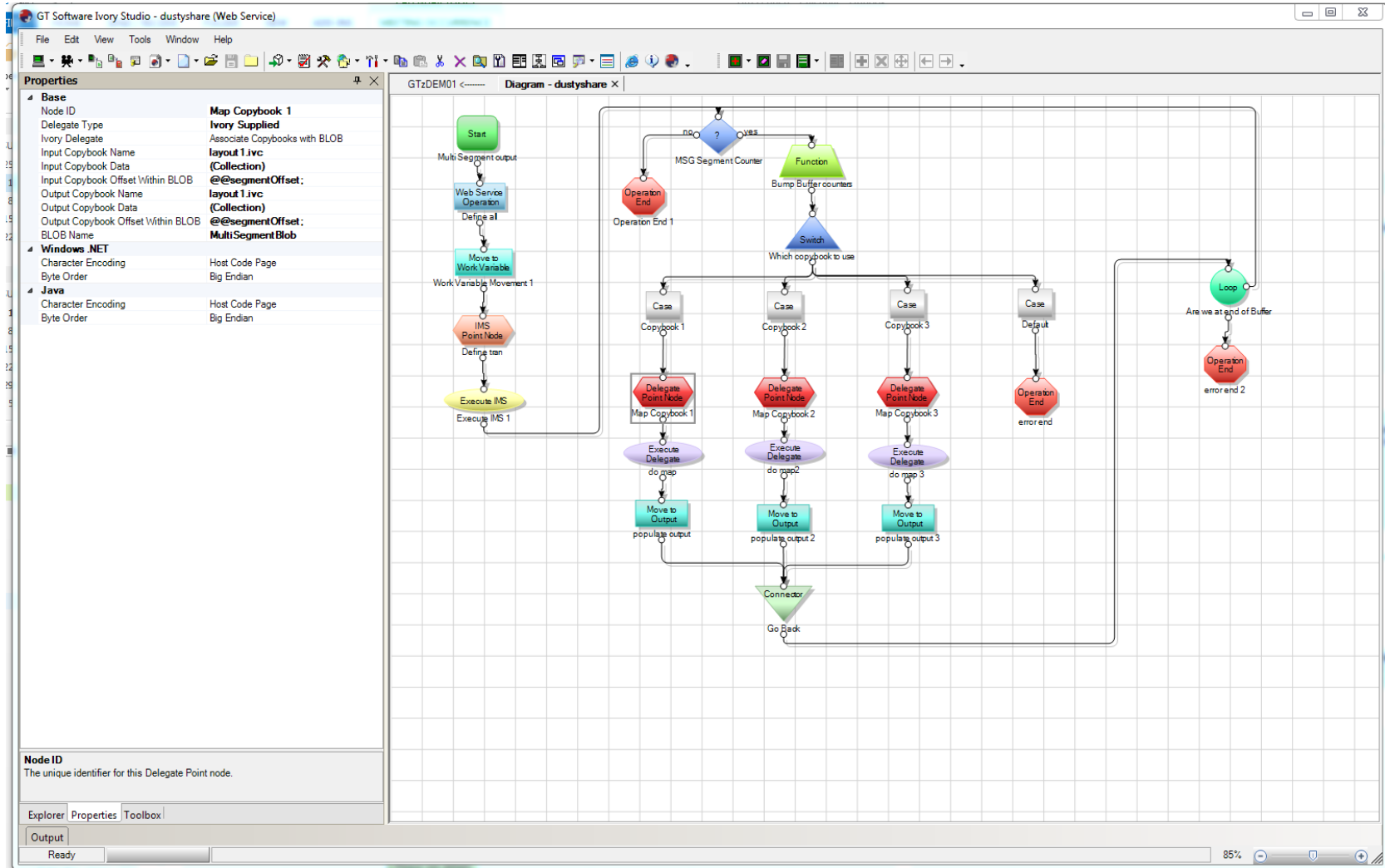
Input

| | |
|------|------|
| LLZZ | DATA |
|------|------|

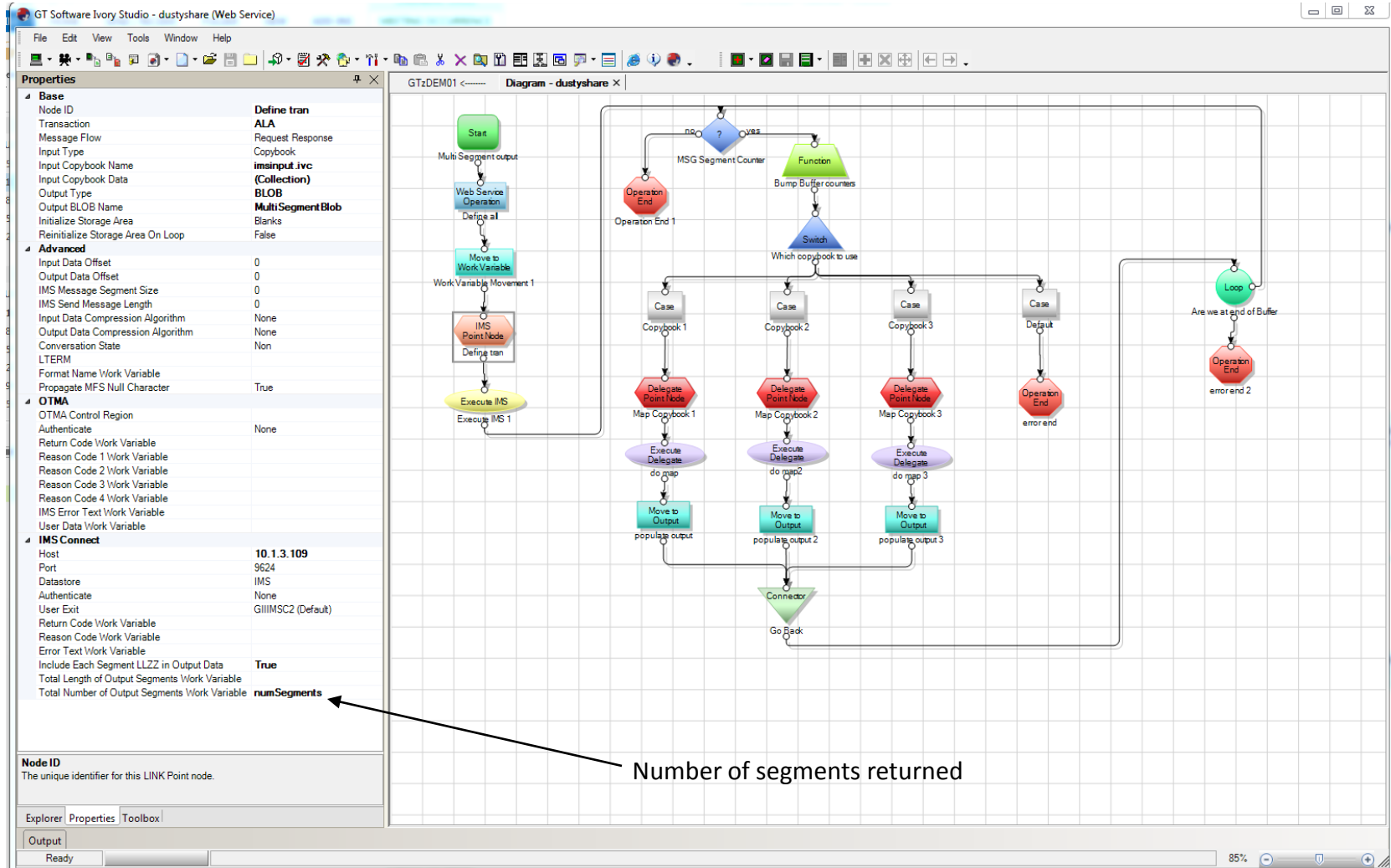
Output

| | |
|------|------|
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |
| LLZZ | DATA |

Multiple Segment Output Transactions



Multiple Segment Output Transactions

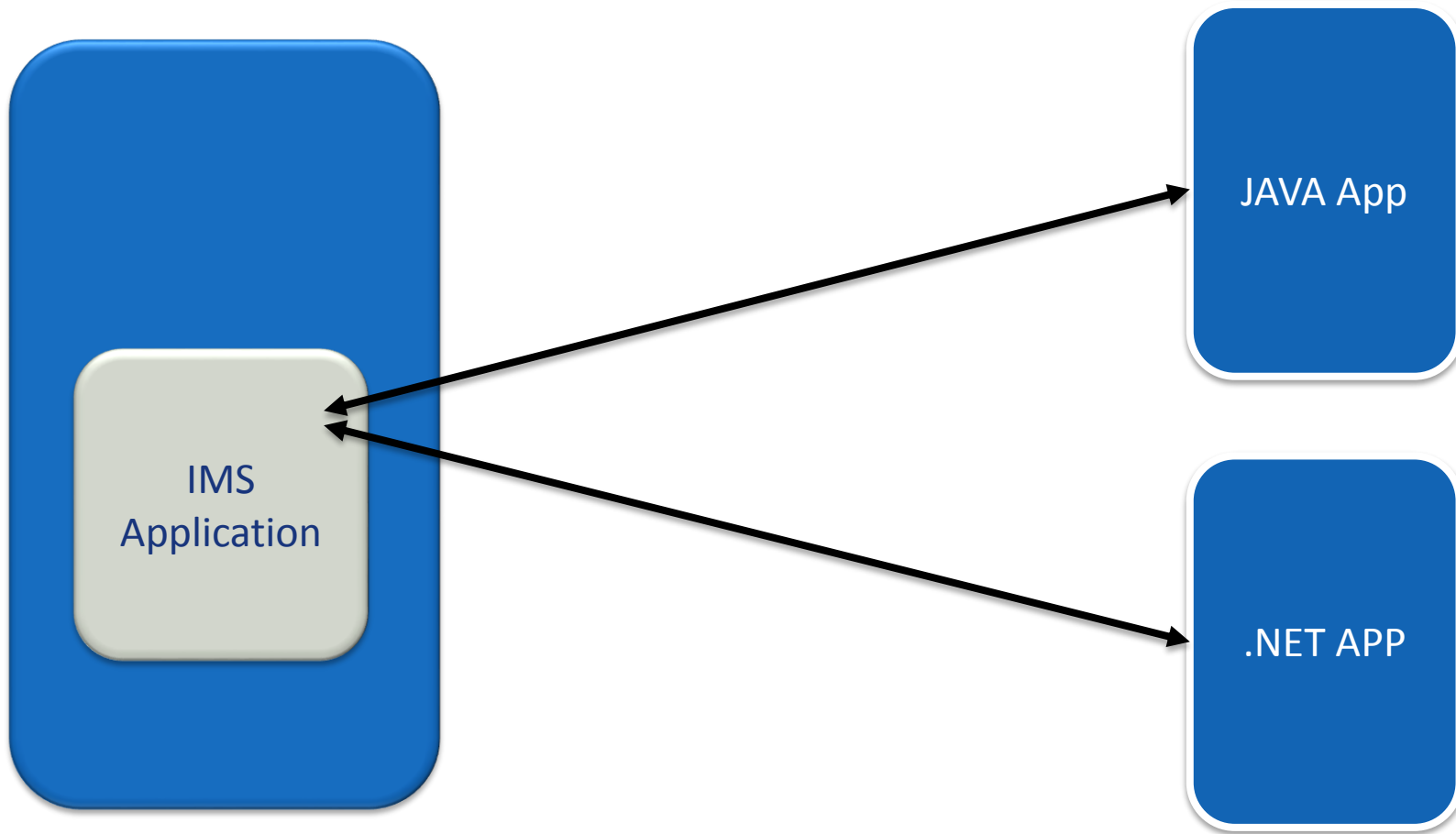


The screenshot displays the GT Software Ivory Studio interface. On the left, the Properties window is open, showing the configuration for a transaction named 'dustysare (Web Service)'. The 'Advanced' section is expanded, and the 'Total Number of Output Segments Work Variable' is set to 'numSegments'. An arrow points from this property to the 'numSegments' label in the diagram.

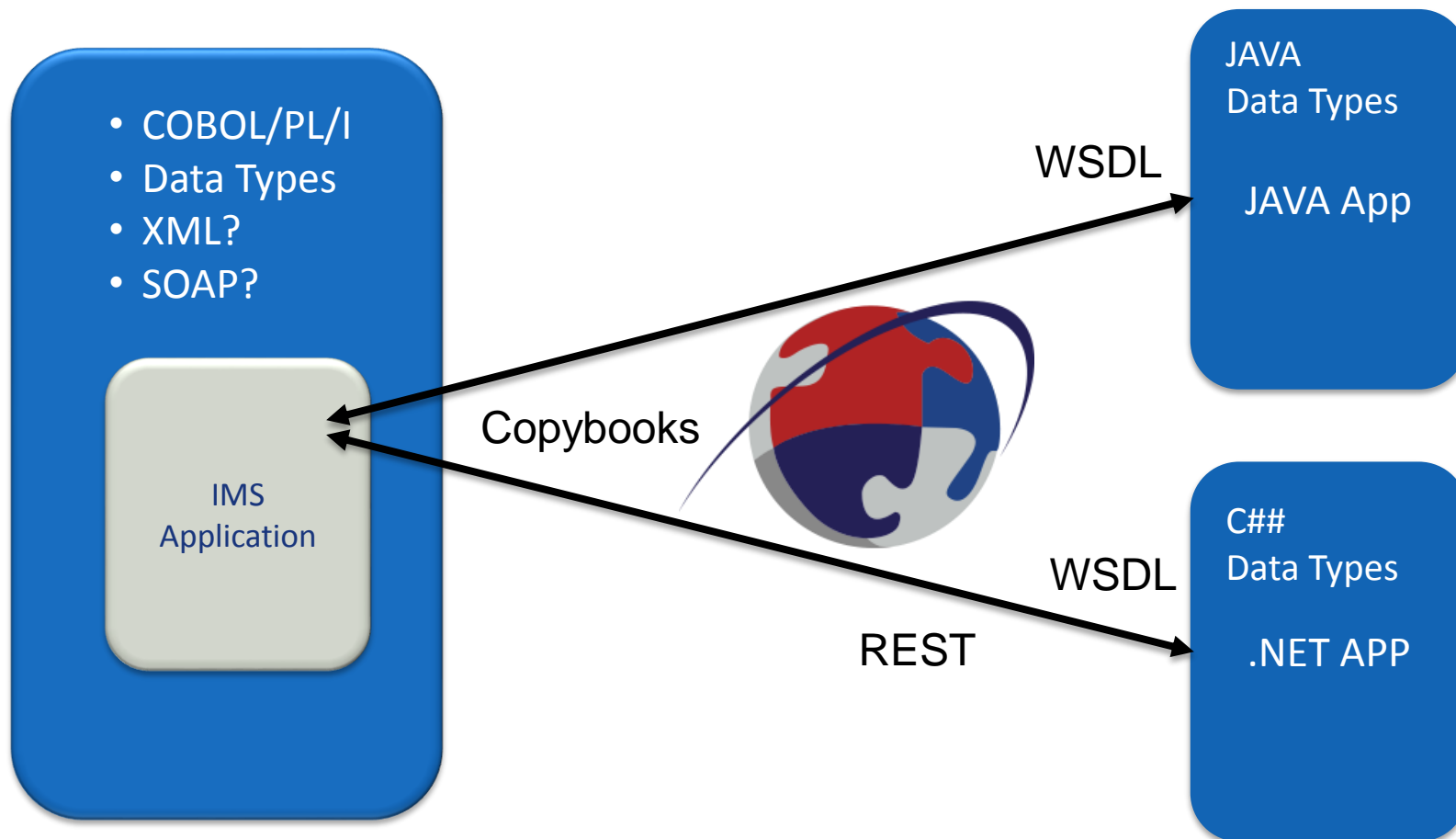
The main diagram, titled 'Diagram - dustysare', illustrates the flow of a transaction. It starts with a 'Start' node leading to a 'Multi Segment output' node. This is followed by a 'Web Service Operation' and a 'Define a1' node. The flow then moves to 'Move to Work Variable' and 'Work Variable Movement 1'. An 'IMS Point Node' is used to 'Define tran', leading to 'Execute IMS' and 'Execute IMS 1'. A decision diamond labeled 'MSG Segment Counter' branches the flow into 'no' and 'yes' paths. The 'no' path leads to 'Operation End 1'. The 'yes' path leads to a 'Function' node 'Bump Buffer counters', followed by a 'Switch' node 'Which copybook to use'. This switch leads to four 'Case' nodes: 'Copybook 1', 'Copybook 2', 'Copybook 3', and 'Default'. Each case leads to a 'Delegate Point Node' (Map Copybook 1, 2, 3) and an 'Execute Delegate' node (do map 1, 2, 3). These lead to 'Move to Output' nodes (populate output, 2, 3). A 'Connector' node 'Go Back' loops back to the 'Switch' node. The 'Default' case leads to 'Operation End error end'. A 'Loop' node 'Are we at end of Buffer' leads to 'Operation End error end 2'.

Number of segments returned

IMS talking to distributed apps



IMS talking to distributed apps



- IMS applications talking to distributed applications



- IMS Applications calling mobile or cloud applications
- IMS Applications calling in native language (COBOL, PL/1)
- IMS Application does not worry about XML/SOAP
- IMS Application can be orchestrated

Use standards



- New Mainframe applications leveraging standards
 - New services can leverage industry standards (IFX, SWIFT, ACORD, etc.)
 - Applications can use company specified standards and mappings (XSD's, WSDL)
 - Services can easily be mapped in Ivory[®] Studio that will handle difficult data types.

IMS applications calling other distributed apps

Must use existing resources

Must not require many products or installs



Must be easy to call

Must not be intrusive or cause changes


IMS applications in native language



IMS applications calling in native language (COBOL,PL/1)

- ❑ No new COBOL XML Coding
- ❑ No knowledge of SOAP or XML required
- ❑ Communication in native language(looks like subroutine call)
- ❑ Must be easy to create interface from IMS
- ❑ Must be Secure (SSL,AT-TLS, WS-*)
- ❑ No requirement for ICAL

Schema, WSDL & more

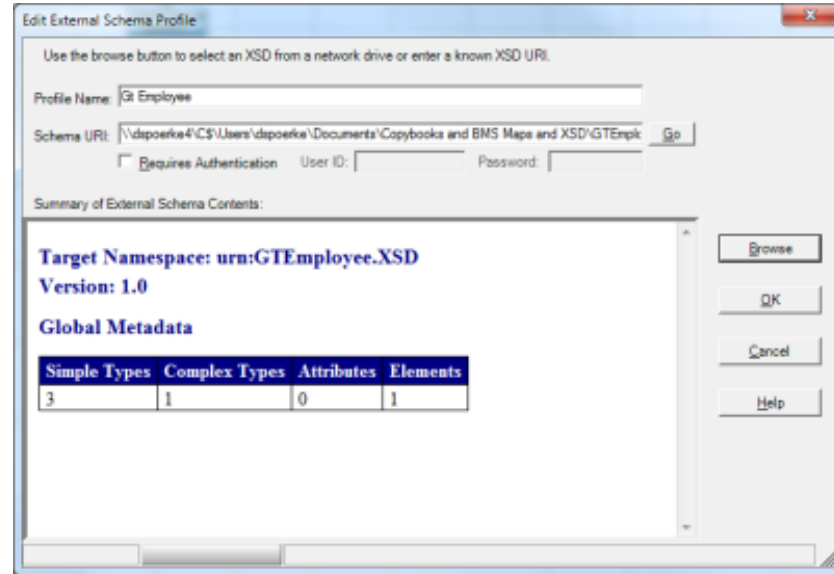


Properties

- Base**
 - Mode ID: Get Stock Purchase Data
 - Web Service Operation: calcshares
 - Message Flow: Request/Response
 - SOAP Inputs: (Collection)
 - SOAP Outputs: (Collection)
 - Input Variables: (Collection)
 - BOGs: (Collection)
 - Description: Operation does a three step service
 - SOAP Header Inputs: (Collection)
 - SOAP Header Outputs: (Collection)
 - Comparator: Sequence
- Reference WSDL**
 - WSDL Location: [Empty]
 - Reference Web Service: [Empty]
 - Reference Web Service Port: [Empty]
 - Reference Web Service Operation: [Empty]
- Advanced**
 - Request Wrapper Namespace: urn:demo:TMS
 - Request Wrapper Name: calcshares
 - Response Wrapper Namespace: urn:demo:TMS
 - Response Wrapper Name: getdata
 - Response XML StyleSheet URI: [Empty]
 - REST Response Format: [Empty]
 - Allow HTTP GET Requests: XML
 - Operation Level Work Variable Initials: [Empty]
- WSDL Location**

This property allows you to specify a reference WSDL from which the Web Service Name, Web Service Operation, SOAP inputs, and SOAP outputs will be initially populated.

Explorer | Toolbox | Properties



Edit External Schema Profile

Use the browse button to select an XSD from a network drive or enter a known XSD URI.

Profile Name:

Schema URI:

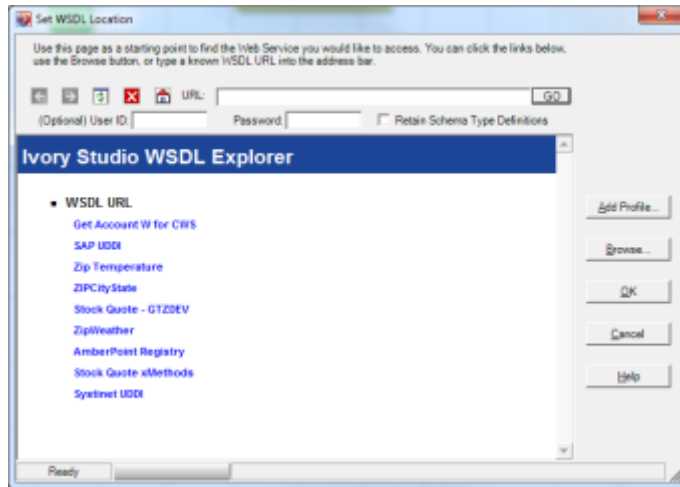
Requires Authentication User ID: Password:

Summary of External Schema Contents:

Target Namespace: urn:GTEmployee.XSD
Version: 1.0

Global Metadata

| Simple Types | Complex Types | Attributes | Elements |
|--------------|---------------|------------|----------|
| 3 | 1 | 0 | 1 |



Set WSDL Location

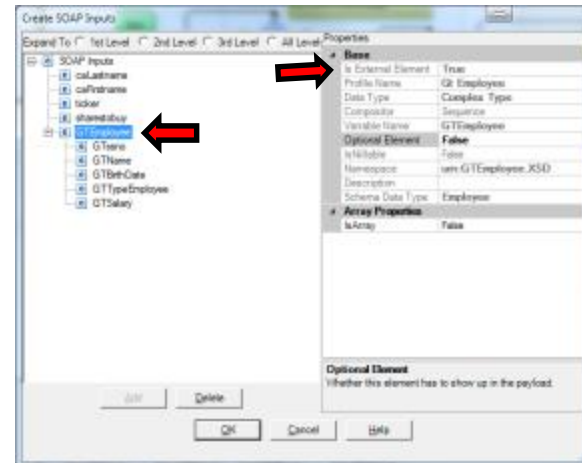
Use this page as a starting point to find the Web Service you would like to access. You can click the links below, use the Browse button, or type a known WSDL URL into the address bar.

(Optional) User ID: Password: Retain Schema Type Definitions

Ivory Studio WSDL Explorer

- WSDL URL
 - [Get Account W for CBS](#)
 - [SAP UDDI](#)
 - [Zip Temperature](#)
 - [ZIPCityState](#)
 - [Stock Quote - GTZDEV](#)
 - [ZipWeather](#)
 - [AmberPoint Registry](#)
 - [Stock Quote xMethods](#)
 - [Syntnet UDDI](#)

Ready



Create SOAP Inputs

Expand To: 1st Level 2nd Level 3rd Level All Levels

SOAP Inputs

- caLastname
- caFirstname
- ssbnr
- ssnrstbup
- ssnrstbup** (Selected)
- GTname
- GTbrnDate
- GTtypeEmployee
- GTSalary

Basic

- is Container Element: True
- Profile Name: Gt_Employee
- Data Type: Complex Type
- Comparator: Sequence
- Variable Name: GTEmployee
- Optional Element: False
- is Nullable: False
- Namespace: urn:GTEmployee.XSD
- Description: [Empty]
- Schema Data Type: Employee
- is Array: False

Optional Element
Whether this element has to show up in the payload.

Ivory callable service wizard

- ❑ Imports WSDL from distributed service
- ❑ No knowledge of SOAP or XML required
- ❑ Generates the required COBOL/PL/I Artifacts
- ❑ Creates a project to handle delivery and transformation
- ❑ Generates a sample routine to guide the user
- ❑ No other software required
- ❑ Minutes instead of days



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CPU Usage Reduction.....





- Is your **IMS System** costing you too much?
- Are running out of **CPU** capacity on your mainframe?
- Do you have high monthly licensing **costs**?
- Do you need **eXtra performance**?
- Legally?

How Does It Work?



zXP is a performance enhancing technology that is focused on increasing online transaction throughput, while gaining additional benefits, namely:

- Reduced z/OS Monthly Licensing Costs
- Online transaction performance increase by up to 70%
- Simple product installation
- **No** IPL or major system configuration
- z/OS and COBOL IMS, NATURAL and HOGAN Compatible
- **NO** modification to transaction code or runtime
- **30%** Average CPU Reduction

zXP Results – IMS Online Environment

| TRAN | AVG CPU DECREASE USING ZXP | | |
|------|-------------------------------|------------|------------|
| | CYCLE 1 | CYCLE 2 | CYCLE 3 |
| A | 67% | 64% | 71% |
| B | 32% | 41% | 47% |
| C | 61% | 56% | 58% |
| D | 60% | 65% | 68% |
| E | 70% | 63% | 67% |
| F | 56% | 54% | 49% |
| G | 21% | 22% | 21% |



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