

# Galen Public Webcast: Orion Rhapsody 101

Boston, MA

# Outline

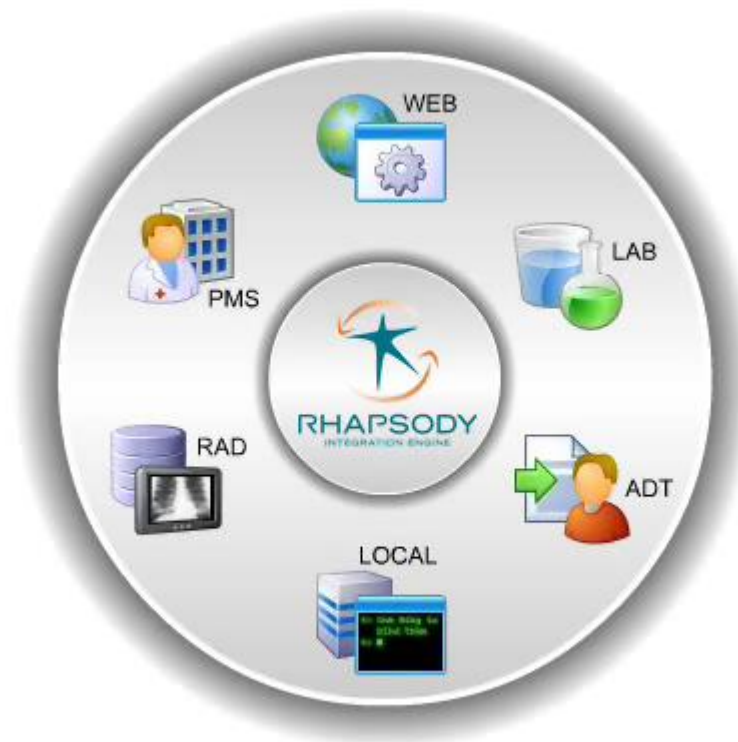
- **Healthcare Interface Engine Landscape**
- **What is Rhapsody**
- **Architecture, Benefits & System Overview**
- **Key Concepts**
  - Communication Points
  - Route
  - Filter
  - Connector
  - Message Definition
  - Environment Variable
- **Communication Management**
- **Rhapsody Examples of Use**

## Healthcare Interface Engine Landscape

- [\*Mirth Connect\*](#)\*
- [\*Interfaceware Iguana\*](#)\*
- [\*Microsoft BizTalk Server\*](#)\*
- [\*Siemens OPENLink\*](#)\*
- [\*Corepoint Integration Engine\*](#)\*
- [\*Orion Health Rhapsody\*](#)\*
- [\*MD Link HL7 Integration & Interface Engine\*](#)\*
- [\*Intersystems Ensemble\*](#)\*
- [\*Lawson Cloverleaf Integration Engine\*](#)\*
- [\*McKesson Pathways\*](#)\*
- [\*Sun Oracle Java CAPS \(eGate\)\*](#)\*
- [\*Qvera Interface Engine\*](#)\*
- [\*Sunrise Elink – Allscripts\*](#)
- [\*Sybase E-Biz Impact\*](#)
- [\*Epic Bridges\*](#)
- [\*GE ConnectR\*](#)
- [\*NextGen Rosetta Interface Engine\*](#)

## What is Rhapsody?

- **Integrate and communicate between various, often incompatible, systems.**



## What is Rhapsody?

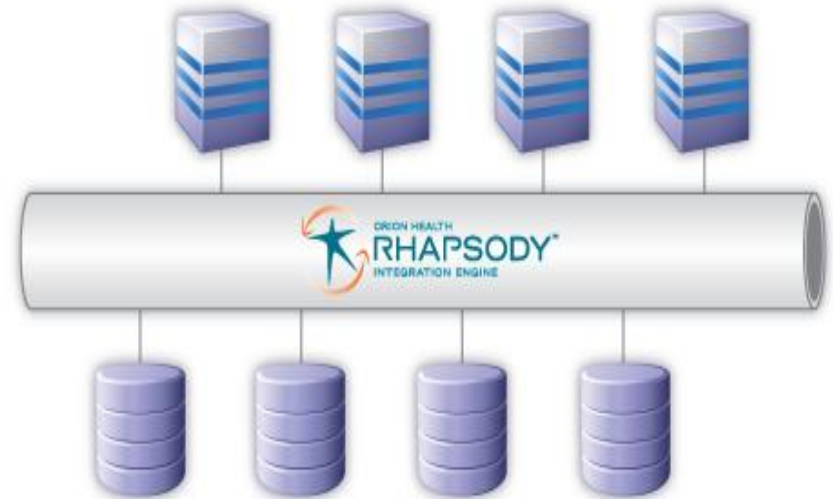
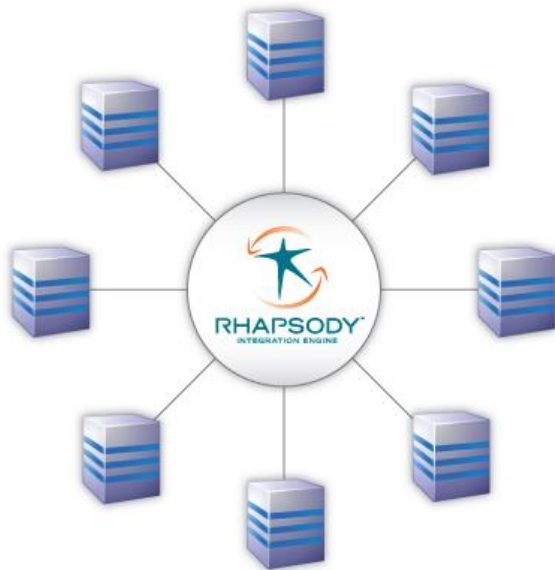
- **Provides an 'all-in-one' interfacing solution for health enterprises requiring comprehensive messaging between information systems.**
- **Manages and streamlines message exchange between:**
  - Applications
  - Databases
  - External systems

# Messages

- **The basic unit of data processed by Rhapsody.**
- **May contain arbitrary binary data, but frequently conforms to a messaging standard:**
  - ASTM
  - HL7
  - EDIFACT
  - X.12
  - HIPAA
  - XML
  - User-defined flatfile structure
  - NCPDP

## How is Rhapsody Used?

### Hub and Spoke Integration Engine and SOA Healthcare Service Bus

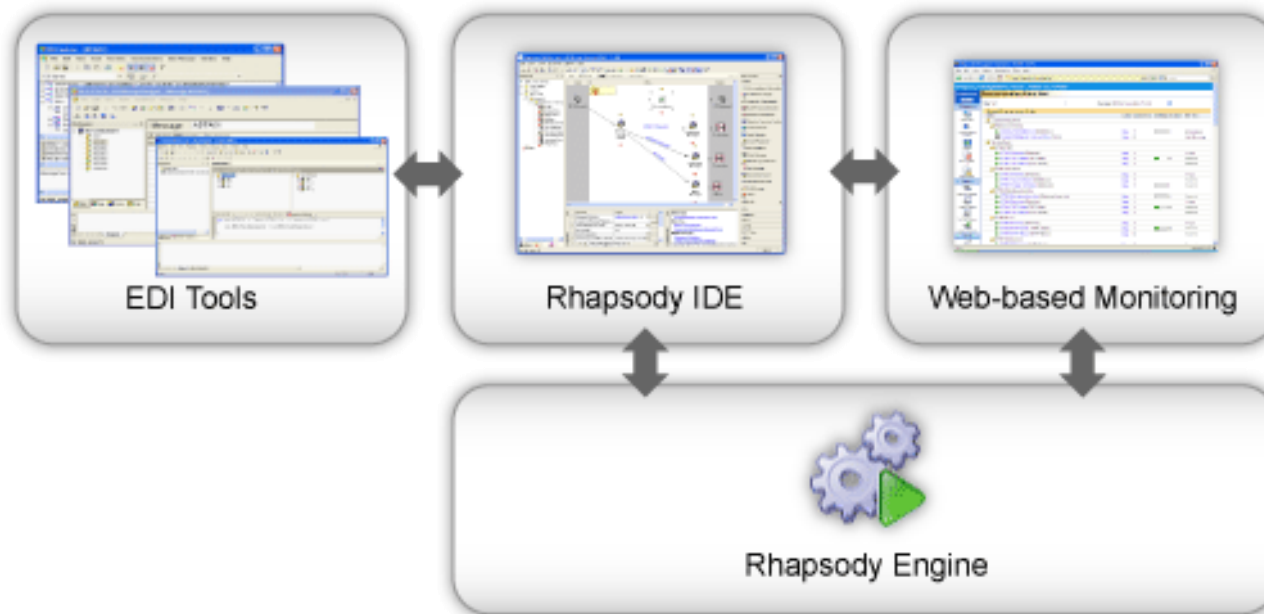


## Business Benefits

- **Integrates, automates and streamlines** business processes and data exchange
- Achieves **seamless data exchange**, including via fax or email.
- **Simplification** of creation and management of interfaces



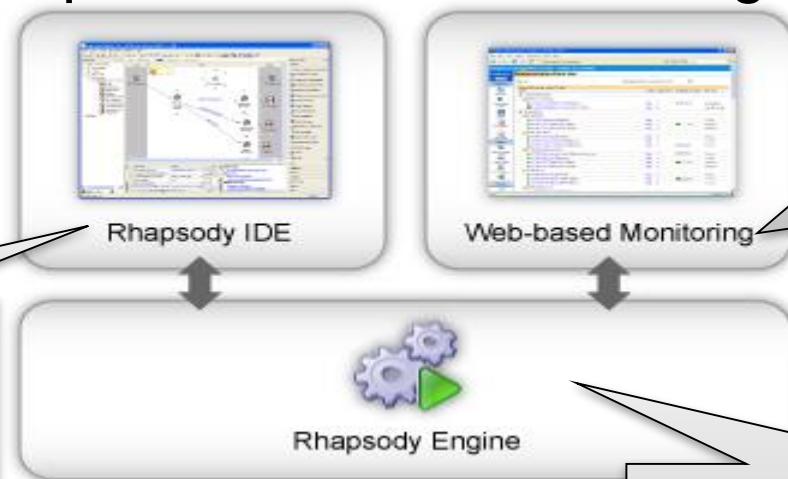
# Rhapsody Architecture



# Rhapsody System Overview

## Integrated Development Environment

## Management Console



- ✓ Build Interfaces
- ✓ Drag and drop
- ✓ Windows platforms

- ✓ Web based
- ✓ Multiple browser support

## Runtime Engine

- ✓ Java (32 & 64 bit support)
- ✓ High Performance
- ✓ Windows
- ✓ HPUX / AIX / Linux / Solaris

## Rhapsody Tools

Application	Purpose
Rhapsody IDE (Development Environment)	Configure Rhapsody
Rhapsody Management Console	Manage Rhapsody, view messages and logs
EDI Message Designer	Design EDI message formats for use in configuring Rhapsody
Map Designer	Define how messages map from one format to another
EDI Explorer	Create and Test EDI Messages

# Monitoring <-> Rhapsody Management Console

**RHAPSODY52**
Justin Campbell 27-Dec-2012 09:42 **ORION**  
5.2.0.69651

**Monitoring**

- Engine Monitor
- Communication Points
- Routes
- Web Services
- System Monitor
- Error Queue **23**
- Hold Queue

**Find Messages**

- Input Search
- Output Search
- Route Search
- Saved Searches
- Recent Results

**Notifications**

- My Notifications
- Watchlists
- Suspend / Resume All
- Delivery Methods
- Public Holidays
- Default Settings

**Management**

- Change Password
- Reset Counters
- Lookup Tables
- Archive Cleanup
- Backup and Restore

**Setting Up Notifications**

- An administrator sets up how the Rhapsody server delivers notifications.  
[Go To Delivery Methods](#)
- An administrator defines default recipients and reviews the default threshold settings.  
[Go To Default Settings](#)
- Add your contact details and configure the way you want to receive notifications.  
[Go To My Notifications](#)

**Engine Monitor**

Messages Processed  
**33**

Engine Uptime  
**6 days**

**Throughput** Export

Received (0)

Processed (0)

Sent (0)

All | 60d | 30d | 7d | 24h | 1h

messages/minute

**Current Issues**

All Components **3**

**Watchlists**

There are no watchlists.  
[Create a Watchlist](#)

**All Components**

<b>ORU's Database Error Queue Message</b>	Nov 29, 2012
<b>Message Routing - Javascript Conditional Connector Error Queue Message</b>	Nov 24, 2012
<b>TCP Server route Error Queue Message</b>	Nov 23, 2012

# Message Log <-> Monitoring – Comm Point/Route

**Monitoring**

- Engine Monitor
- Communication Points**
- Routes
- Web Services
- System Monitor
- Error Queue
- Hold Queue

23

**Find Messages**

- Input Search
- Output Search
- Route Search
- Saved Searches
- Recent Results

**Notifications**

- My Notifications
- Watchlists
- Suspend / Resume All
- Delivery Methods
- Public Holidays
- Default Settings

**Management**

- Change Password
- Reset Counters
- Lookup Tables
- Archive Cleanup
- Backup and Restore
- Message Banner
- Login Settings
- General Settings

**System State**

- System Log
- Audit Log
- Threads
- Generate Thread Dump

**Message View 1.22272.203**

◀ Displaying message 1 of 3 from the result set named 'Clinic Server Input Archive' [Back to Result Set](#) ▶

Reinject Redirect Copy Redirect Edited Copy

**Message Events**

Always Show Outputs Last refreshed at 09:45

Component	Timestamp	Description	
Clinic Server	Nov 29, 2012 11:33:2...	Received by communication p...	⚙
Labs	Nov 29, 2012 11:33:2...	Placed on route	⚙
Labs	Nov 29, 2012 11:33:2...	Property extraction performed	⚙
No-operation	Nov 29, 2012 11:33:2...	Filtering succeeded; took 0.01...	⚙
HL7 Acknowledgement Generation			⚙
Clinic Server			⚙
Normalize to 2.3.1 and Dr Lookup			⚙
ORU's Database			⚙

◀ ◀◀ ◻ ▶▶ ▶▶ ▶

**Message Properties**

Property Name	Property Value
InputTime	1354206803068
rhapsody:InputCommunicationPoint	Clinic Server
rhapsody:InputCommunicationPointId	7

Showing 3 of 3

**Message Body**

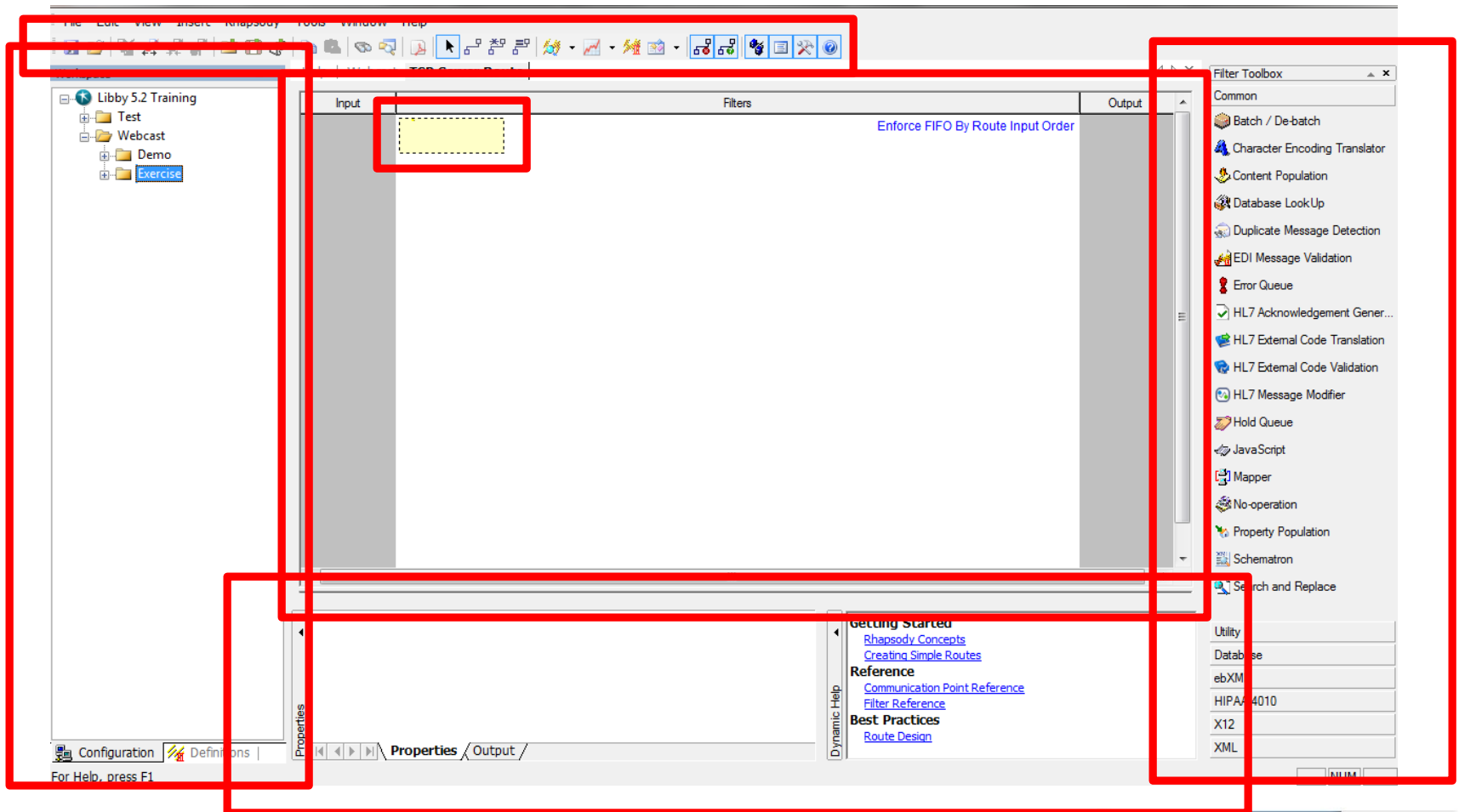
Show Whitespace Encoding: windows-1252 Size: 9113 bytes

```
MSH|^~\&|||20021010015440||ORU^R01^RGV_001|FGDFG6540RGE|D^I|2.0D^13^16|6789|NE|AL|22|ISO IR14~^
PID|0320|5^1^M11^ADI|4^2^ISO^ADS||HUTCHING^CORINNE ^^I^M^A^S^A^I|SHERRILL^TOKI ^^S^P^M^A^M^A^I|1991|
```

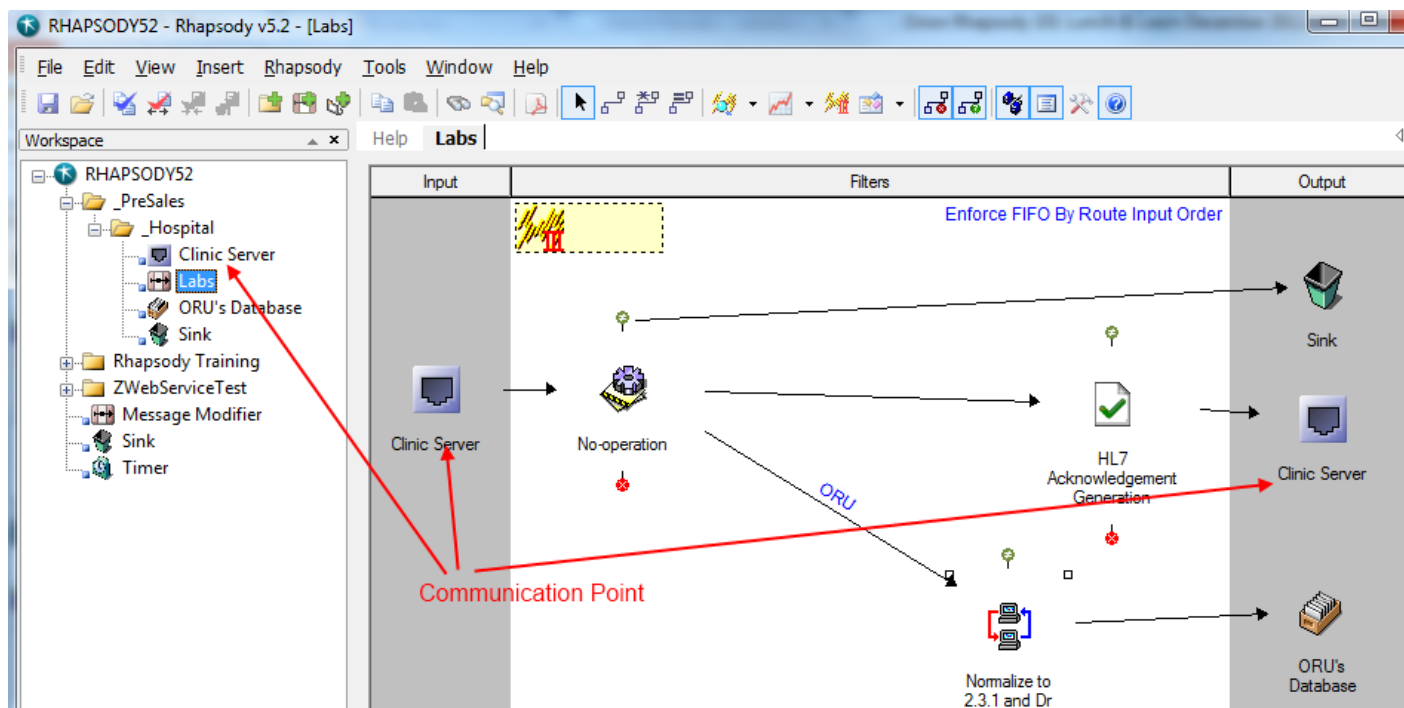
## Key Concepts of a Route

- **Communication Point**
- **Route**
- **Filter**
- **Connector**
- **Message Definition**
- **Environment Variable**

# Rhapsody IDE



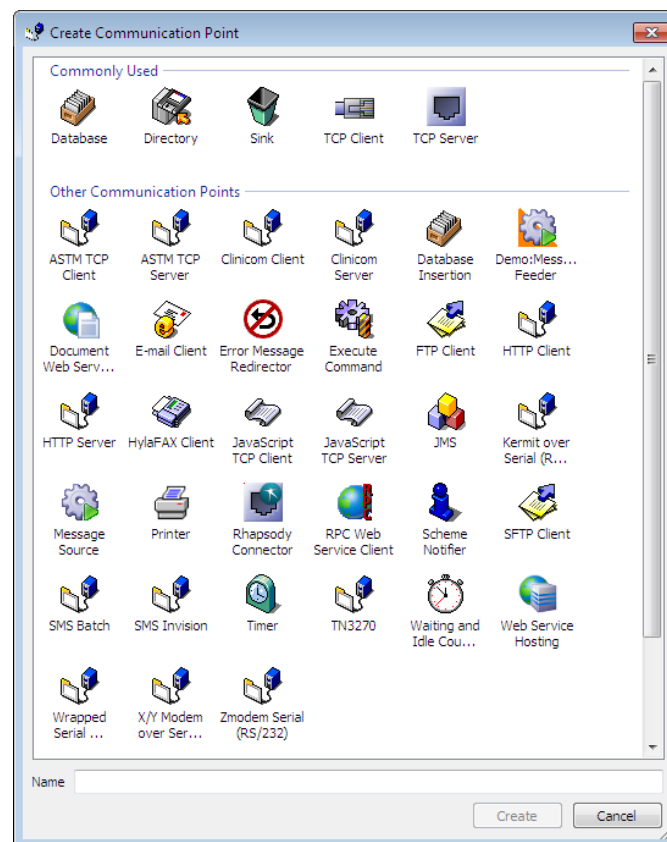
# Systems <-> Communication Points





# Communication Point

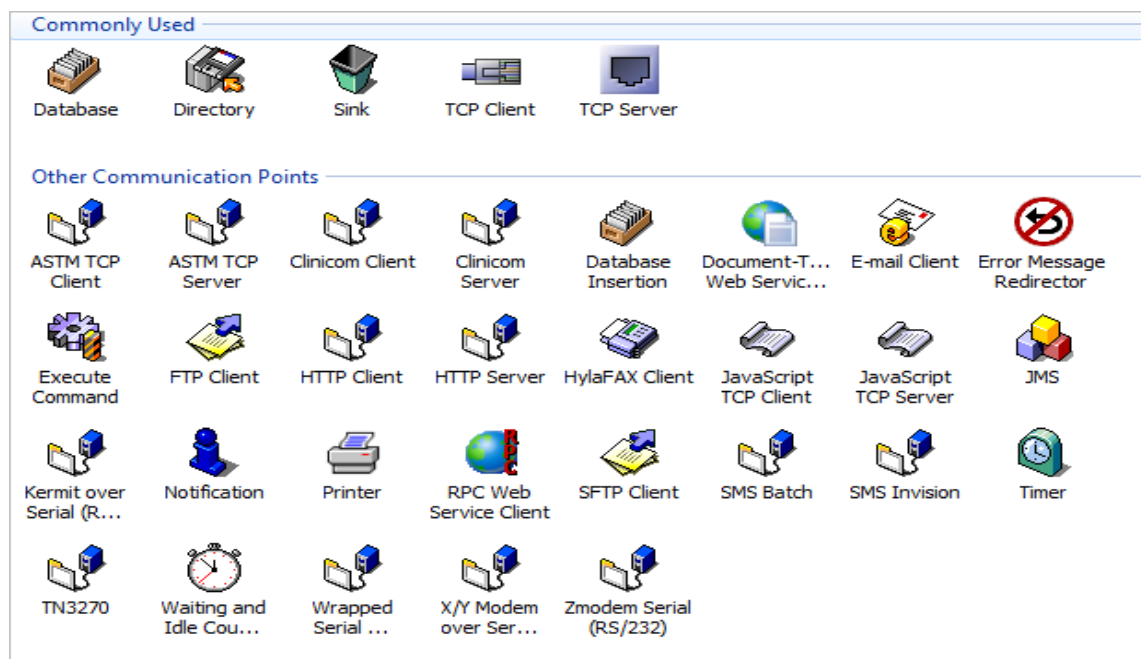
- **The connection between Rhapsody and one or more external systems.**
  - Messages arrive at an Input communication point.
  - Are passed to one or more Output communication points and are sent to the receiving application(s).



## Communication Points

Numerous protocols are available, including:

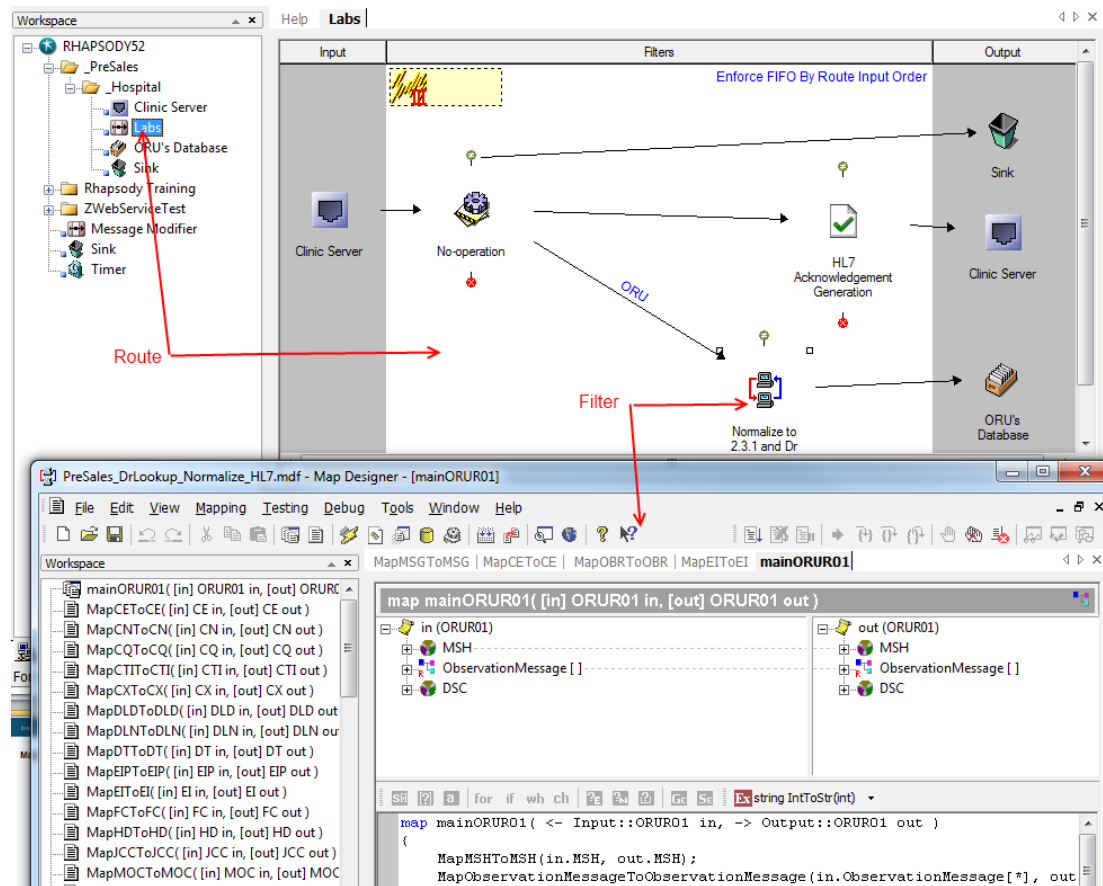
- TCP Client/Server
- HTTP Server/Client
- Database
- File and Email
- Web Services
- FTP/SFTP
- Command-line programs



# Common Communication Points

- **Database**
  - Allows information to be saved to or accessed from a database.
- **Directory**
  - Picks up and sends files to a specified directory.
- **Sink**
  - Immediately discards any messages that it receives. Similar to the Recycle Bin, but it is permanent.
- **TCP Client and Server**
  - Sends and receive data via TCP
- **Web Service**
  - Use web services to communicate with other applications

# Mapping <-> Routes



# Route

- **Determines how messages travel from Input to Output communication points.**
- **A route has:**
  - Input communication points to receive messages.
  - Output communication points to which it delivers messages.
- **Messages flow from left to right.**
- **Between communication points, a route may contain any number of filters.**

# Filter

- **Used to process messages in some way.**
- **This can be as simple as passing the input to the output, or as complicated as converting an XML message to a PDF document.**
- **Filters are always contained in routes**

## Common Filters

- **No-operation**
  - Passes all messages (unchanged) from input to output.
- **JavaScript**
  - Executes the JavaScript to process messages as they pass through the Rhapsody engine.
- **Mapper**
  - Maps one or more input messages to an output message.
- **Database Lookup**
  - Enables information to be retrieved from JDBC-accessible data sources and inserts that information into the message in accordance with its message properties.

# Connector

- **Determines the direction and flow of messages through the route**
  - From the Input communication point
  - Through any configured filters
  - To the Output communication point
- **Three types of connectors**
  - Standard
  - Conditional
  - JavaScript

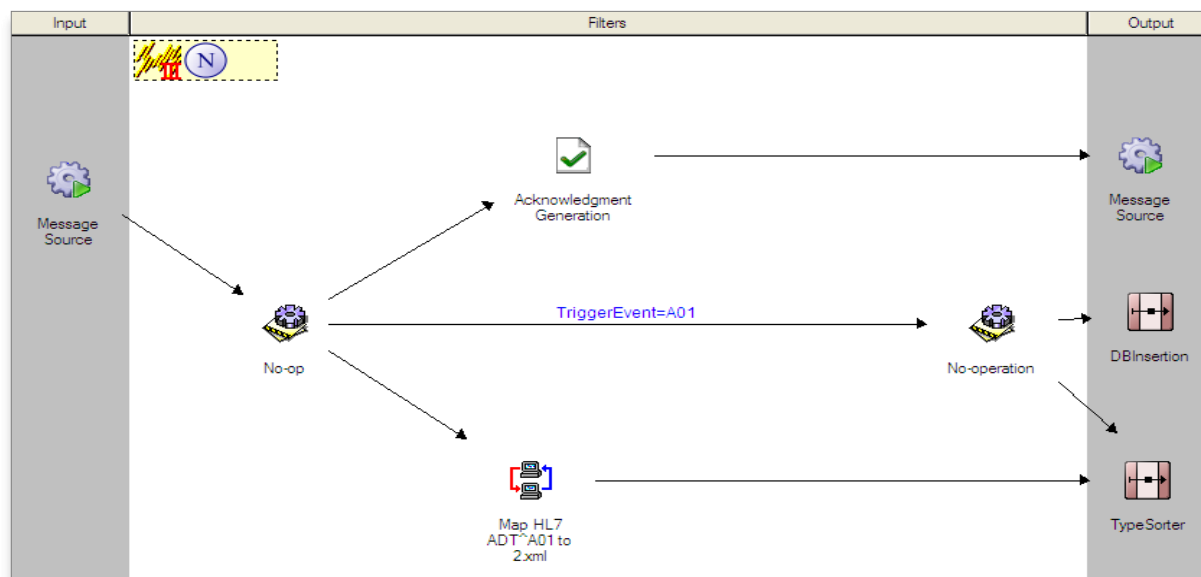


## Routes, Filters, and Connectors

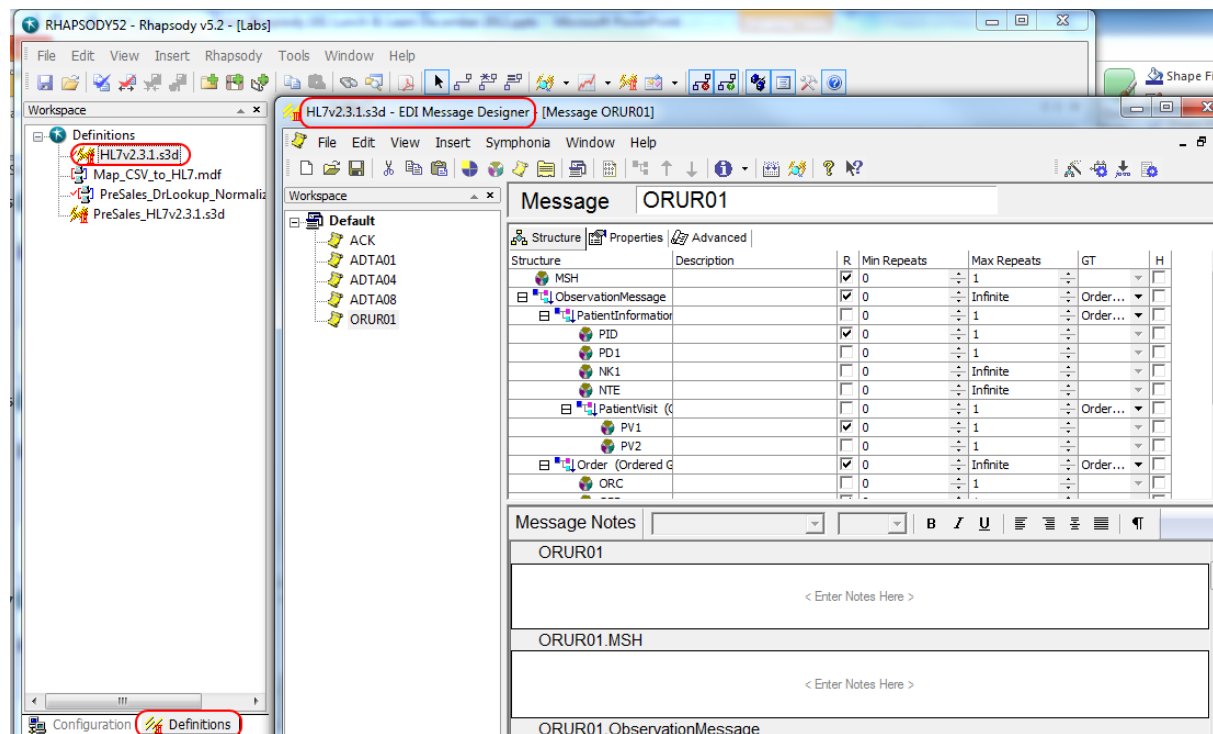
**A Route defines an interface and how messages flow from input to output.**

**A Filter formats and processes messages. Examples include:**

- mapping,
- code translation
- database lookup
- encoding
- Compression
- Encryption
- batching



# Message <-> Message Definition



## Message Definition

- **Defines the structure of the messages being processed.**
- **Allows Rhapsody to read and manipulate message data.**
- **Different message definitions are used for different message types.**
  - XML messages typically use a W3C XML Schema (\*.xsd).
  - EDI messages typically use a Rhapsody EDI message definition (\*.s3d).

## Environment Variable

- **Enables properties used in multiple places or environments to be easily changed.**
  - For example, Development, Test and Production.

# RHAPSODY TOUR

# Summary

- **Interface Overview**
- **Rhapsody Product Overview**
- **Showcase Rhapsody Features**
- **Tour of Rhapsody Features**
- **Built Custom Route in Rhapsody**
- **Overview of ADT Route**
- **Questions...**

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### The Three Types of Organizations that Need New EHRs

Posted by Christopher.Libby on February 18, 2013 under Business Intelligence, Data Conversion, Electronic Health Record, General, Healthcare IT, Implementations, Industry News, Meaningful Use, Uncategorized Edit

The era of electronic health records has arrived and opportunities for innovative uses of data are plentiful for providers and vendors alike. Fueled by financial incentives from the government as well as meaningful use requirements, organizations that best position their data to help providers deliver patient centered care will flourish. Physician organizations are also becoming larger through growth, acquisitions, and mergers. These growth milestones provide organizations opportunities to reflect on the capabilities of their current medical record system in order to decide if their current system will keep them competitive in the future. These are the three types of organizations that will be purchasing a new Electronic Health Record (EHR) system in 2013.

#### The New EHR Adopter



Category	Percentage
Unregistered Professionals	38%
Medicare Registrants	43%

Buying a new EHR is not cheap which may explain why many smaller physician practices have held out on the investment as long as they could. Only around 20% of providers are attesting to Meaningful Use in the US. However, government mandates and incentives are forcing providers to overcome their resistance to EHRs. While larger practices initially lead the charge into the digital

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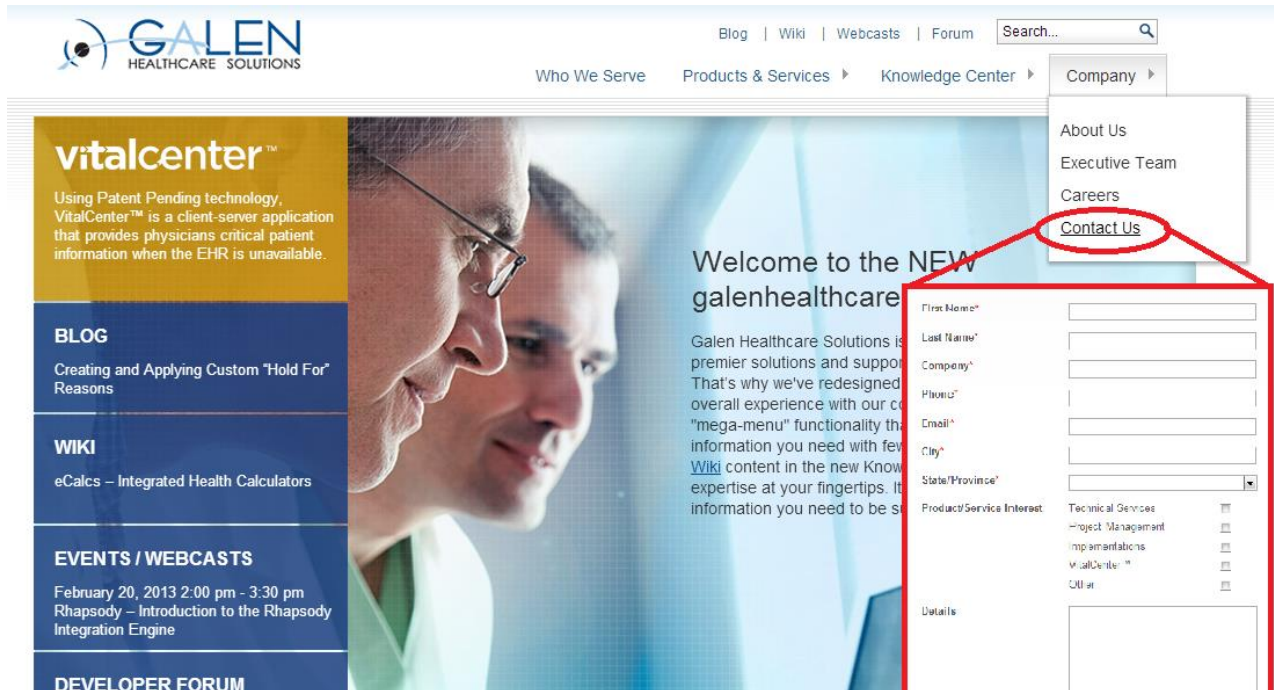
### Tags

Adoption **Allscripts**  
**Allscripts Consultants**  
Allscripts Conversion **Allscripts**  
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Allscripts PM Business Continuity  
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The screenshot displays the Galen Healthcare Solutions website. The header includes the company logo, navigation links (Blog, Wiki, Webcasts, Forum), a search bar, and a 'Company' dropdown menu. The 'Contact Us' option in the dropdown is circled in red. Below the dropdown, a red box highlights the contact form, which includes fields for First Name, Last Name, Company, Phone, Email, City, State/Province, and a list of product/service interests (Technical Services, Project Management, Implementations, VitalCenter, and CUI). A 'Details' section is also present at the bottom of the form.

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**vitalcenter™**  
Using Patent Pending technology, VitalCenter™ is a client-server application that provides physicians critical patient information when the EHR is unavailable.

**BLOG**  
Creating and Applying Custom "Hold For" Reasons

**WIKI**  
eCalcs – Integrated Health Calculators

**EVENTS / WEBCASTS**  
February 20, 2013 2:00 pm - 3:30 pm  
Rhapsody – Introduction to the Rhapsody Integration Engine

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