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?

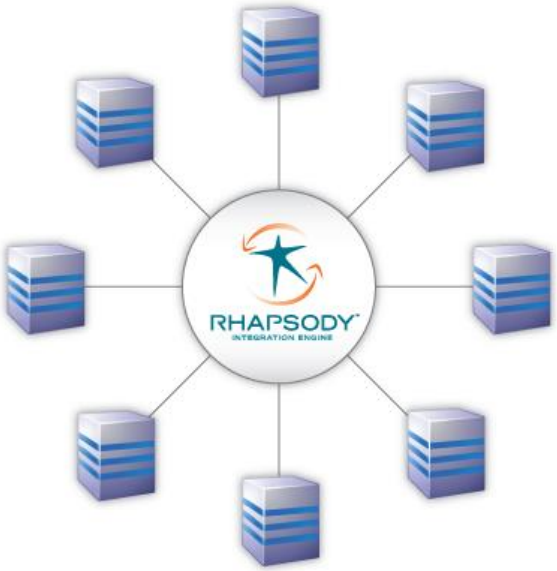
- **Provides an ‘all-in-one’ interfacing solution for health enterprises requiring comprehensive messaging between information systems.**
- **Manages and streamlines message exchange between:**
  - Applications
  - Databases
  - External systems

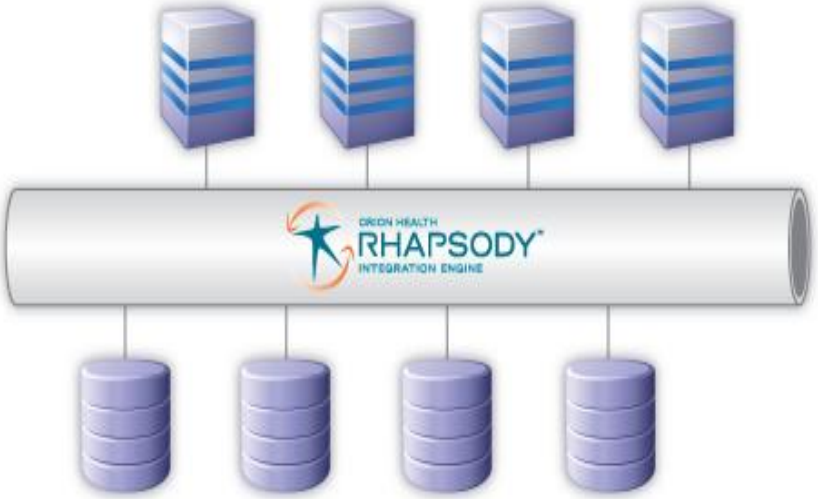
Messages

- **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

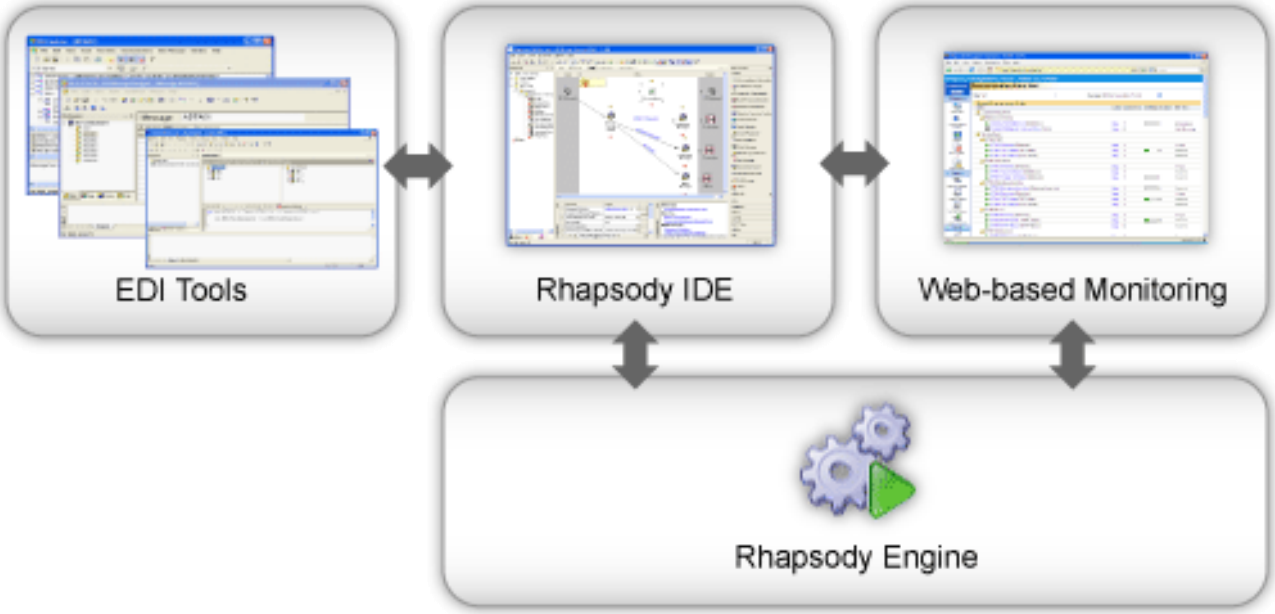




Business Benefits

- **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

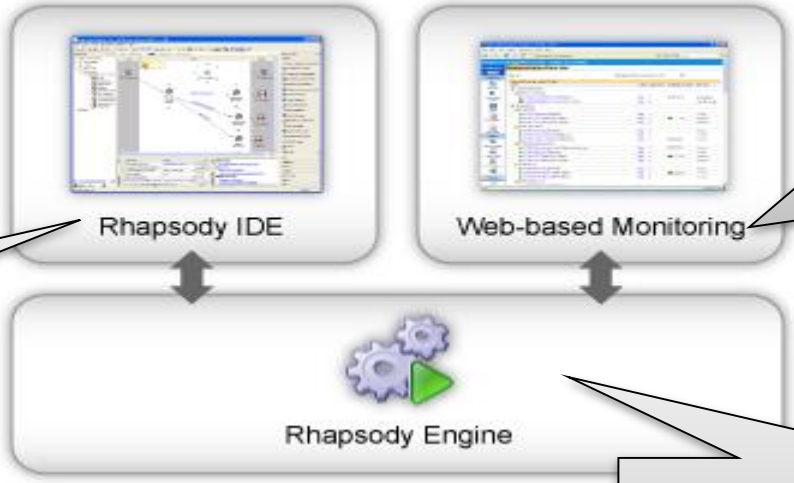
Rhapsody Architecture



Rhapsody System Overview

Integrated Development Environment

Management Console



- ✓ Web based
- ✓ Multiple browser support

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

Runtime Engine

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

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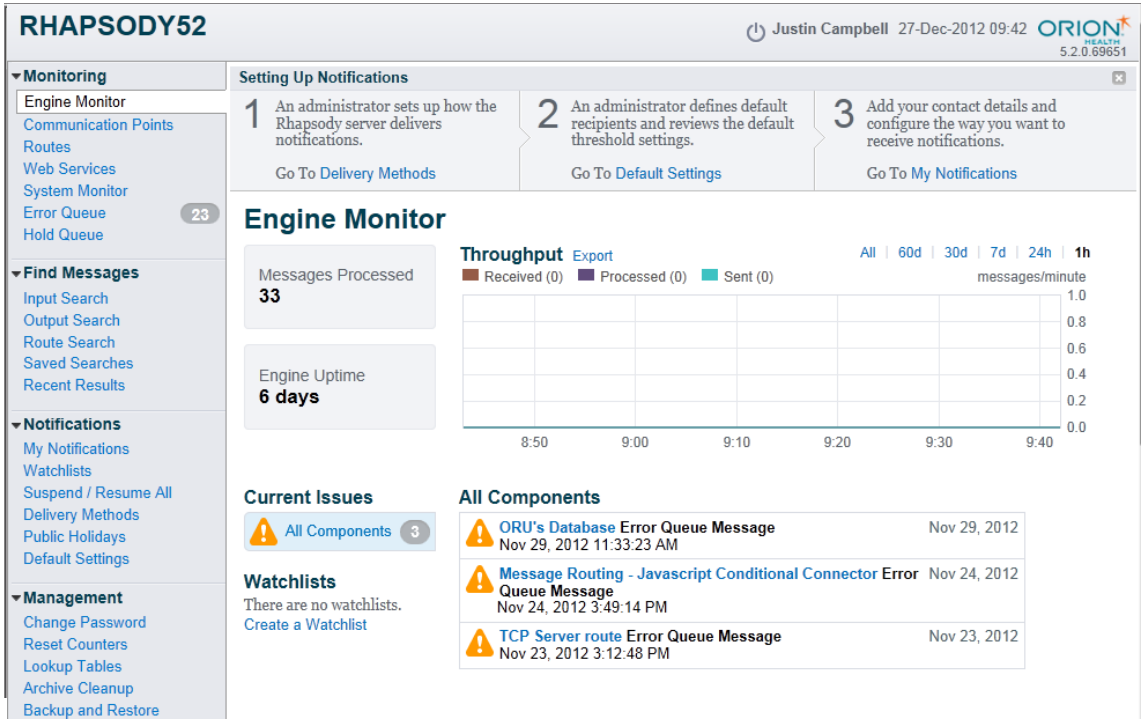
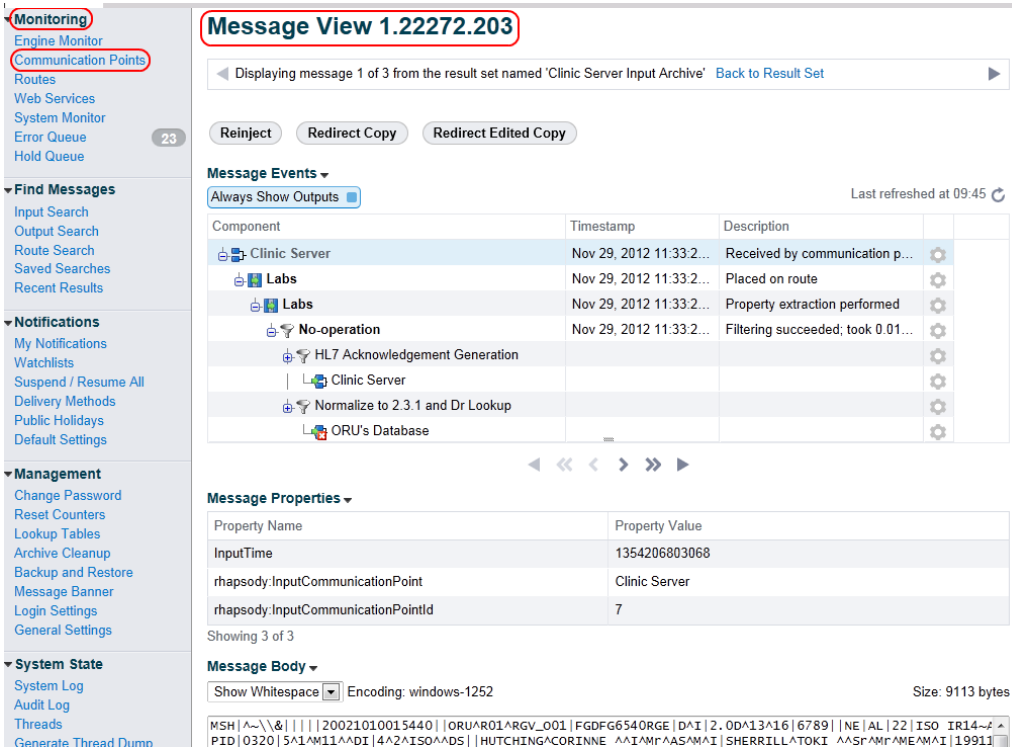
Rhapsody Tools

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



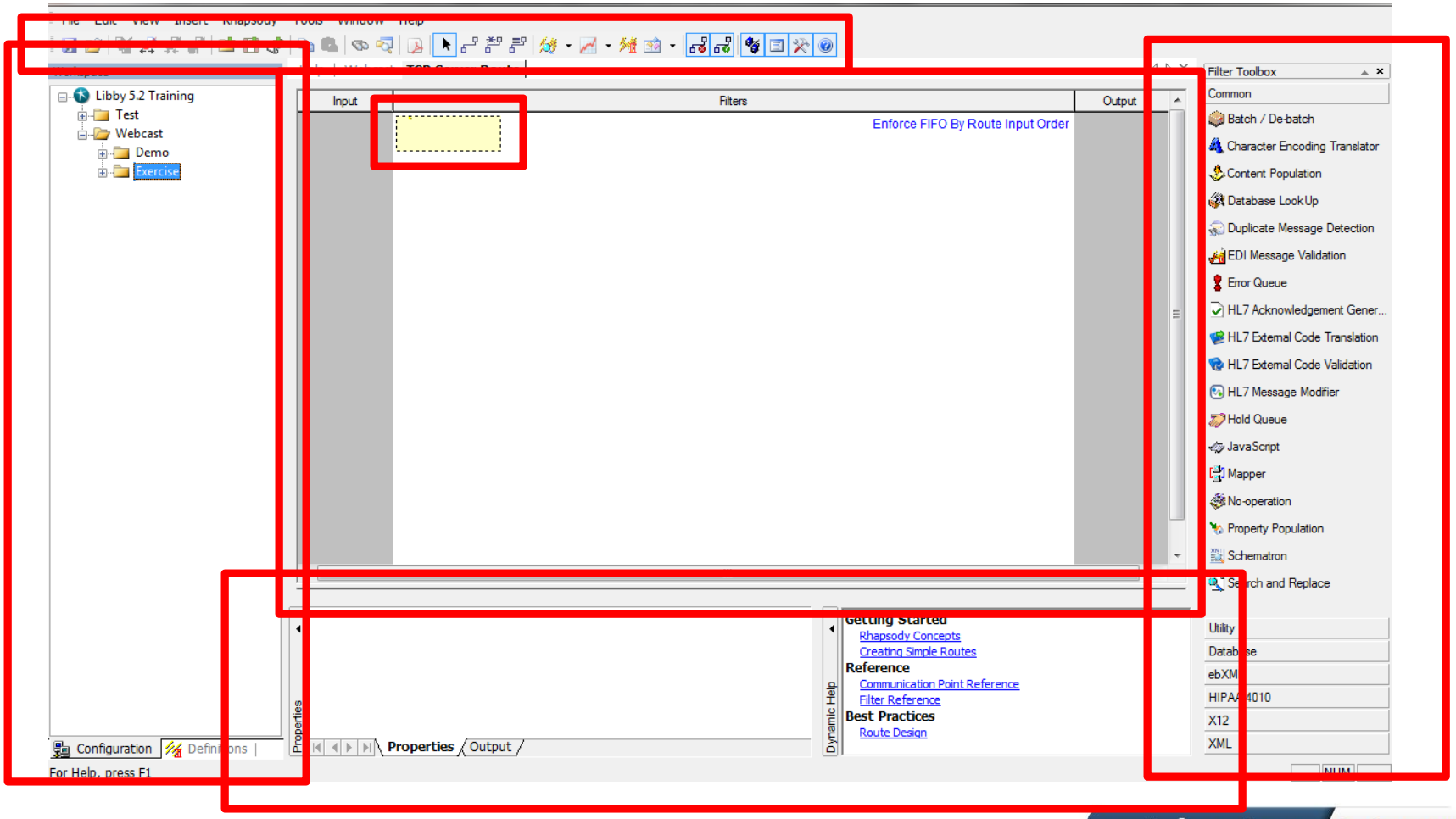
Message Log <-> Monitoring – Comm Point/Route



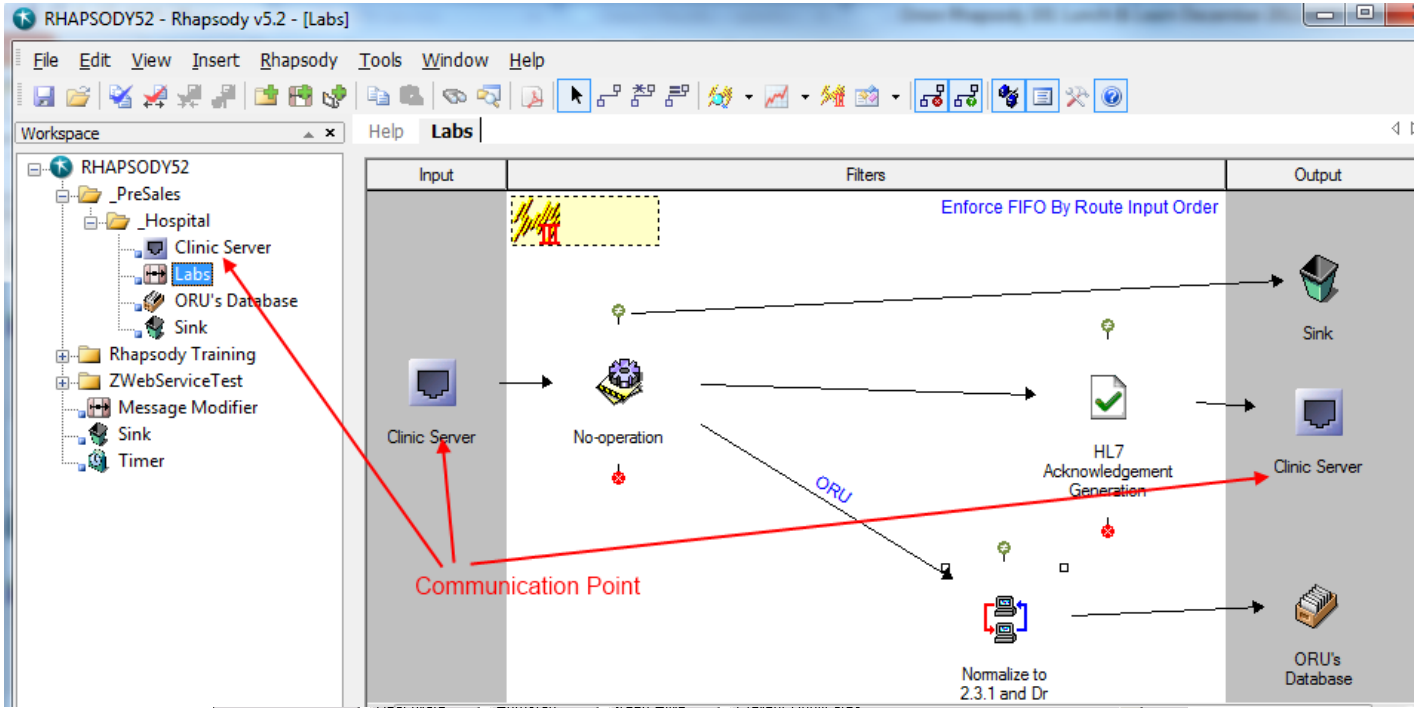
Key Concepts of a Route

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

Rhapsody IDE

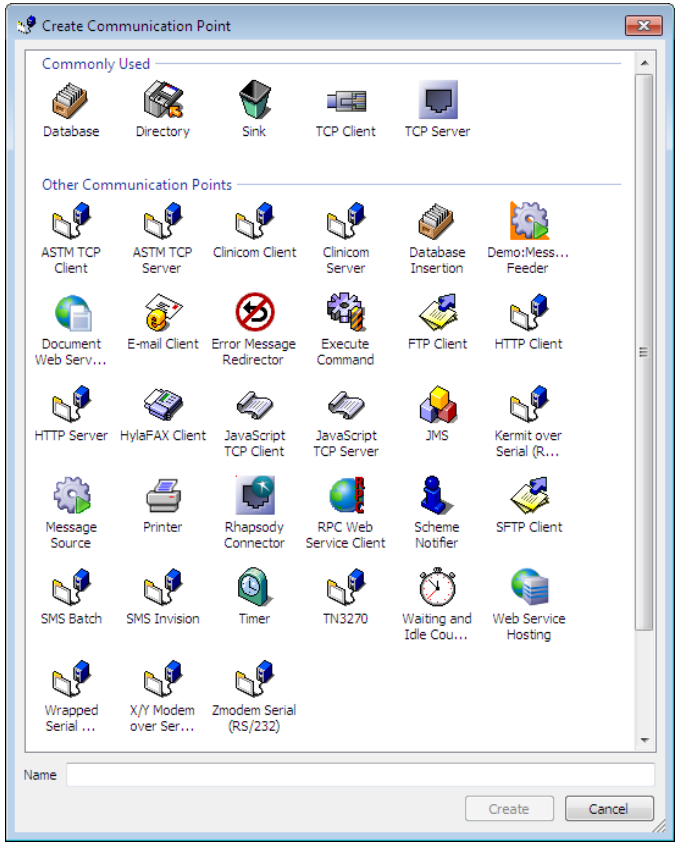


Systems <-> Communication Points



Communication Point

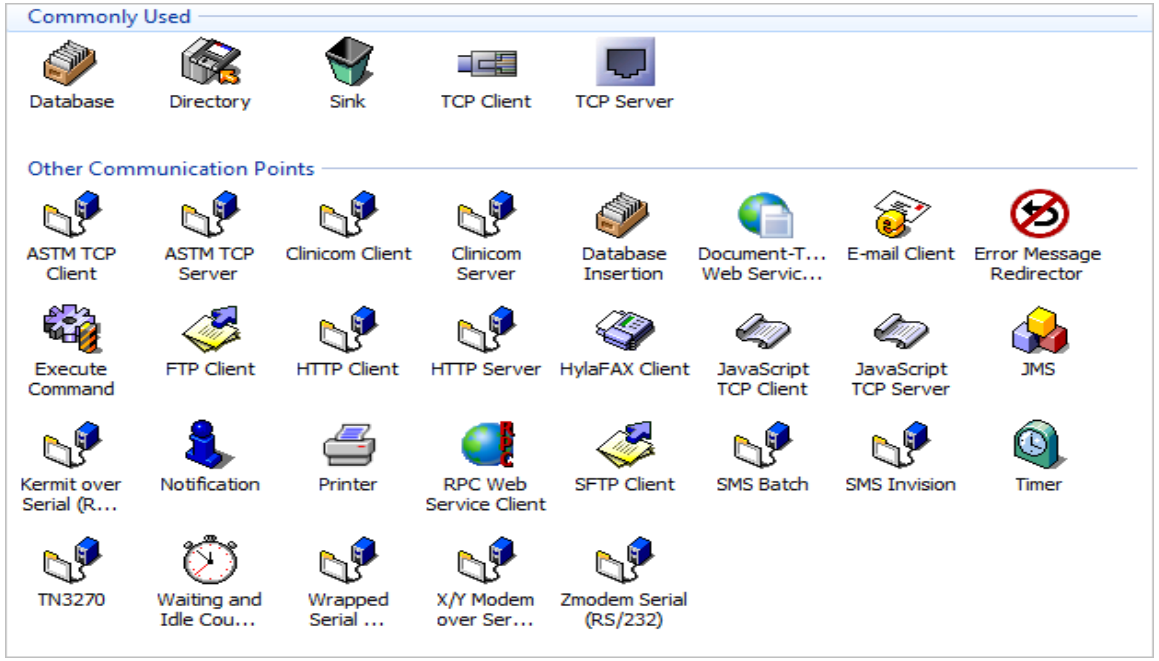
- **The connection between Rhapsody and one or more external systems.**
  - Messages arrive at an Input communication point.
  - Are passed to one or more Output communication points and are sent to the receiving application(s).



Communication Points

Numerous protocols are available, including:

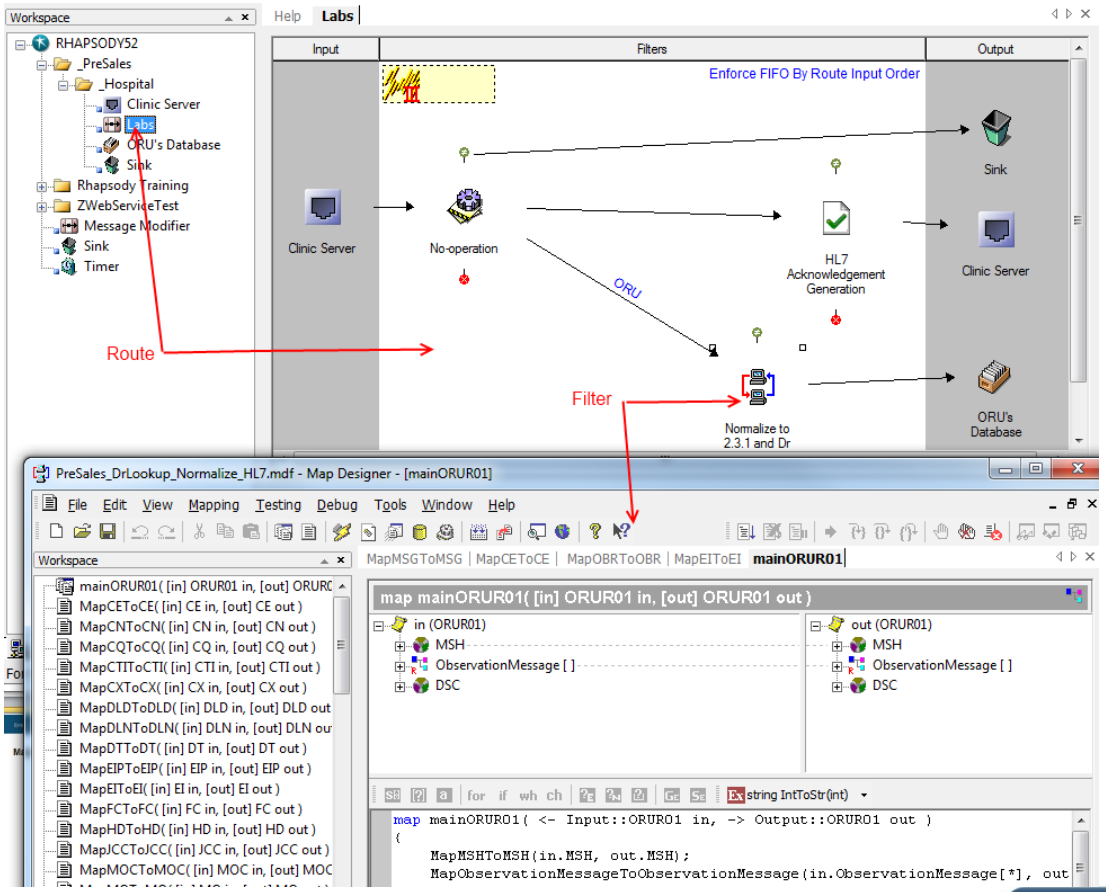
- TCP Client/Server
- HTTP Server/Client
- Database
- File and Email
- Web Services
- FTP/SFTP
- Command-line programs



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

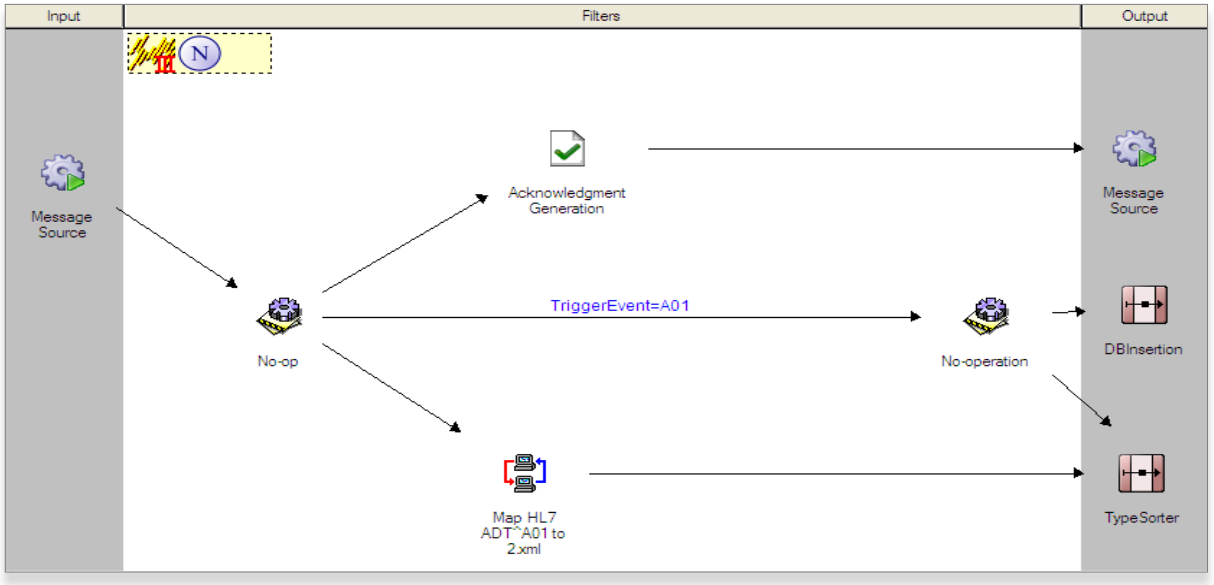
- **Determines the direction and flow of messages through the route**
  - From the Input communication point
  - Through any configured filters
  - To the Output communication point
- **Three types of connectors**
  - Standard
  - Conditional
  - JavaScript

Routes, Filters, and Connectors

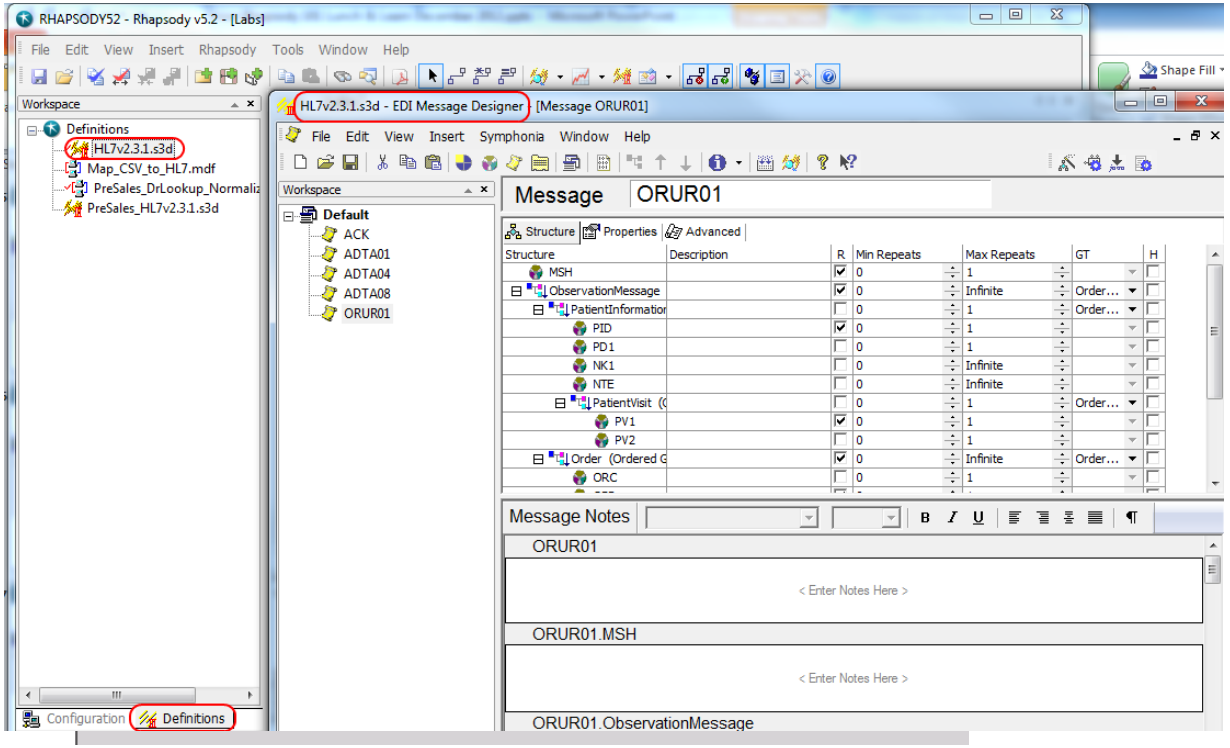
A Route defines an interface and how messages flow from input to output.

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.

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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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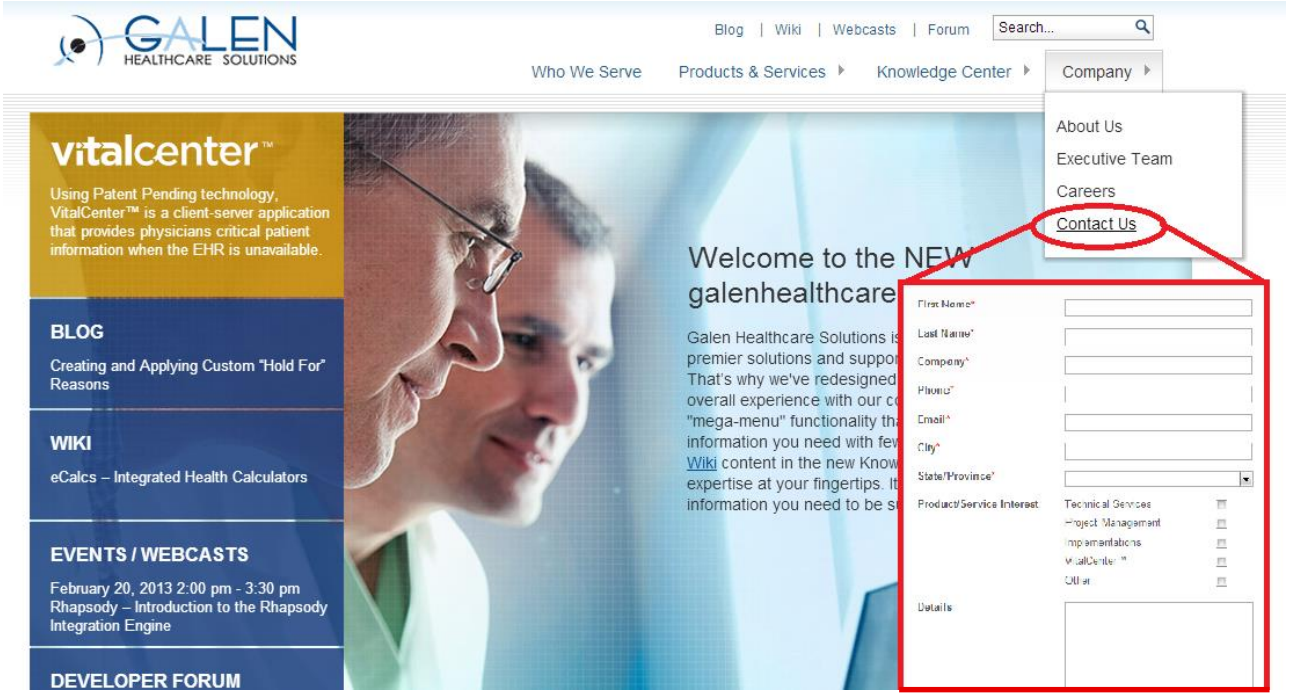

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