

Galen Public Webcast: Orion Rhapsody 101

Presented by: Jamie Titak

Outline

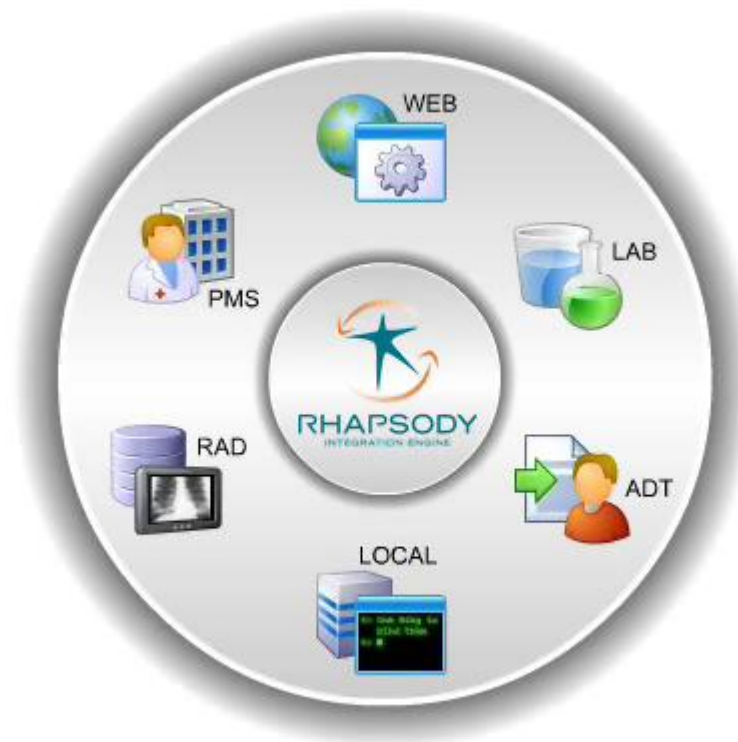
- **Healthcare Interface Engine Market**
- **What is Rhapsody**
- **Architecture, Benefits & System Overview**
- **Key Components of Rhapsody**
 - Communication Points
 - Route
 - Filter
 - Connector
 - Message Definition
 - Environment Variable
- **Build Rhapsody route from scratch**
- **Show example of pre-built interface**

Healthcare Interface Engine Market

- [*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*](#)

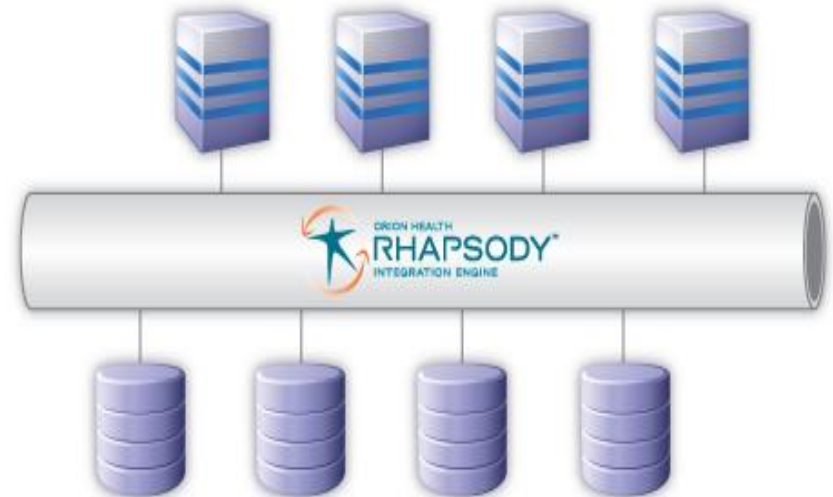
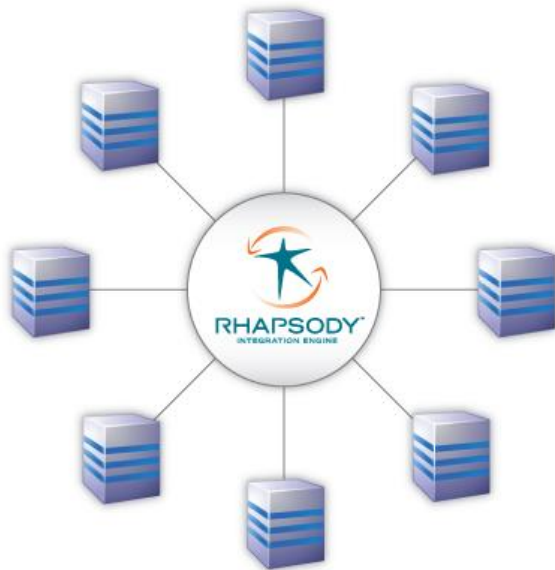
What is Rhapsody?

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



What is Rhapsody?

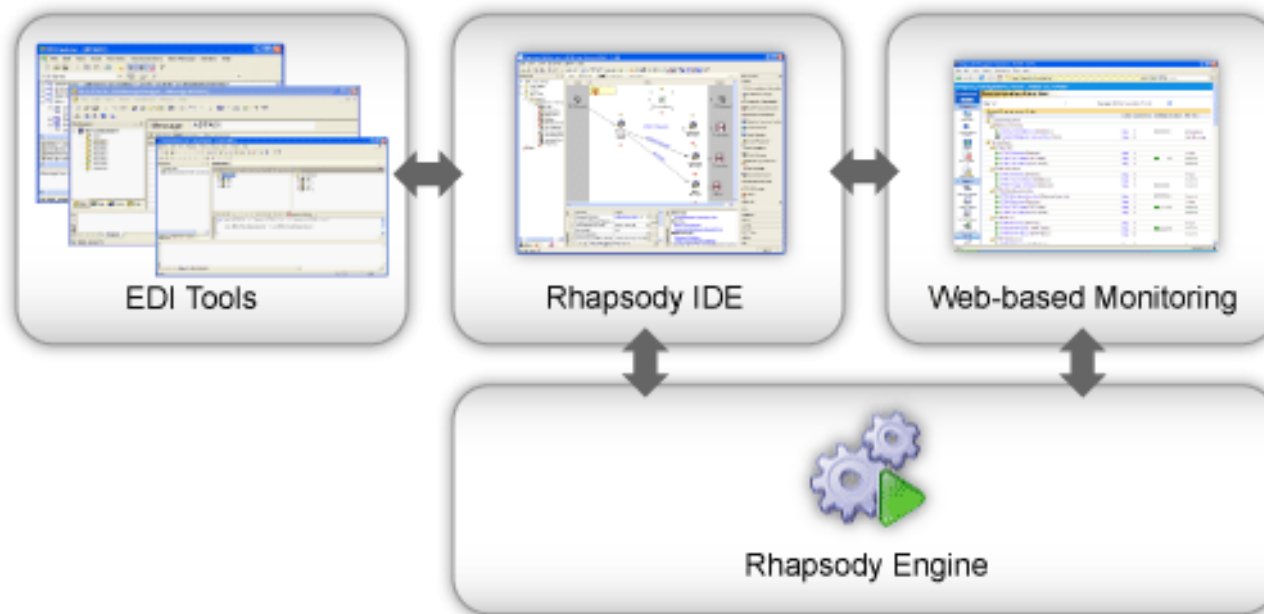
Hub and Spoke Integration Engine and SOA Healthcare Service Bus



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

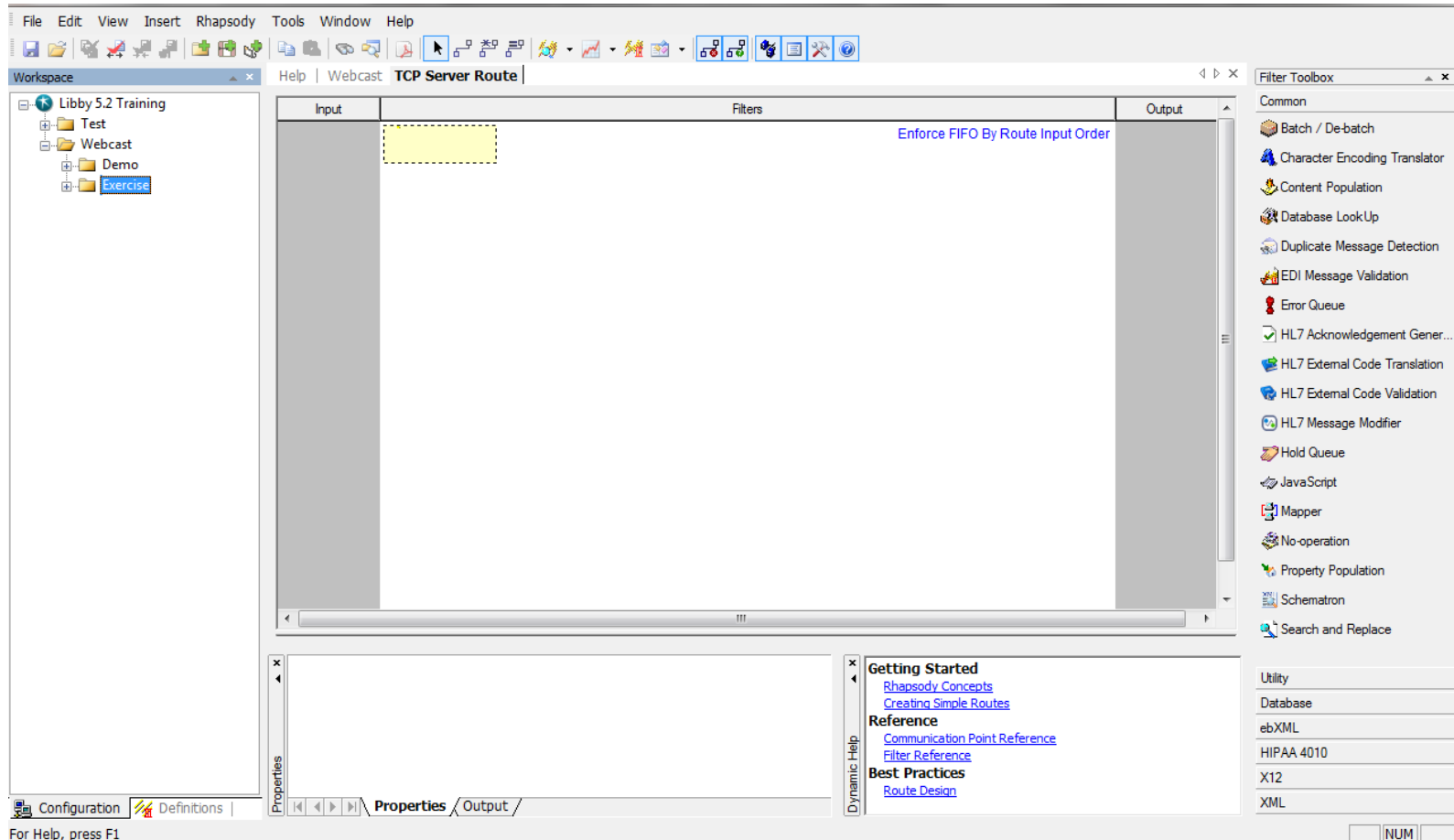
Rhapsody Architecture



Rhapsody EDI Tools

Application	Purpose
XSD Generator	Generates XSD from XML file
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

Rhapsody IDE



The screenshot displays the Rhapsody IDE interface. The main workspace is titled 'TCP Server Route' and is divided into three columns: 'Input', 'Filters', and 'Output'. A yellow dashed box is visible in the 'Input' column. The 'Filters' column contains the text 'Enforce FIFO By Route Input Order'. The 'Output' column is empty. On the left, a 'Workspace' pane shows a tree structure with 'Libby 5.2 Training' as the root, containing sub-items 'Test', 'Webcast', 'Demo', and 'Exercise'. The 'Exercise' item is selected. Below the workspace, there are tabs for 'Configuration', 'Definitions', and 'Properties'. The 'Properties' tab is active, showing a 'Dynamic Help' pane with links to 'Getting Started', 'Reference', and 'Best Practices'. On the right, a 'Filter Toolbox' pane lists various filters, including 'Batch / De-batch', 'Character Encoding Translator', 'Content Population', 'Database LookUp', 'Duplicate Message Detection', 'EDI Message Validation', 'Error Queue', 'HL7 Acknowledgement Gener...', 'HL7 External Code Translation', 'HL7 External Code Validation', 'HL7 Message Modifier', 'Hold Queue', 'JavaScript', 'Mapper', 'No-operation', 'Property Population', 'Schematron', and 'Search and Replace'. At the bottom right, there is a 'NUM' button.

File Edit View Insert Rhapsody Tools Window Help

Workspace Help Webcast TCP Server Route

Libby 5.2 Training

- Test
- Webcast
- Demo
- Exercise

Input Filters Output

Enforce FIFO By Route Input Order

Filter Toolbox

Common

- Batch / De-batch
- Character Encoding Translator
- Content Population
- Database LookUp
- Duplicate Message Detection
- EDI Message Validation
- Error Queue
- HL7 Acknowledgement Gener...
- HL7 External Code Translation
- HL7 External Code Validation
- HL7 Message Modifier
- Hold Queue
- JavaScript
- Mapper
- No-operation
- Property Population
- Schematron
- Search and Replace

Utility

Database

ebXML

HIPAA 4010

X12

XML

NUM

Configuration Definitions Properties

Dynamic Help

- Getting Started
 - [Rhapsody Concepts](#)
 - [Creating Simple Routes](#)
- Reference
 - [Communication Point Reference](#)
 - [Filter Reference](#)
- Best Practices
 - [Route Design](#)

For Help, press F1

Rhapsody Management Console

- https://<server_name>:8444

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
- 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

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

Received (0)

Processed (0)

Sent (0)

messages/minute

Current Issues

All Components 3

Watchlists

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

All Components

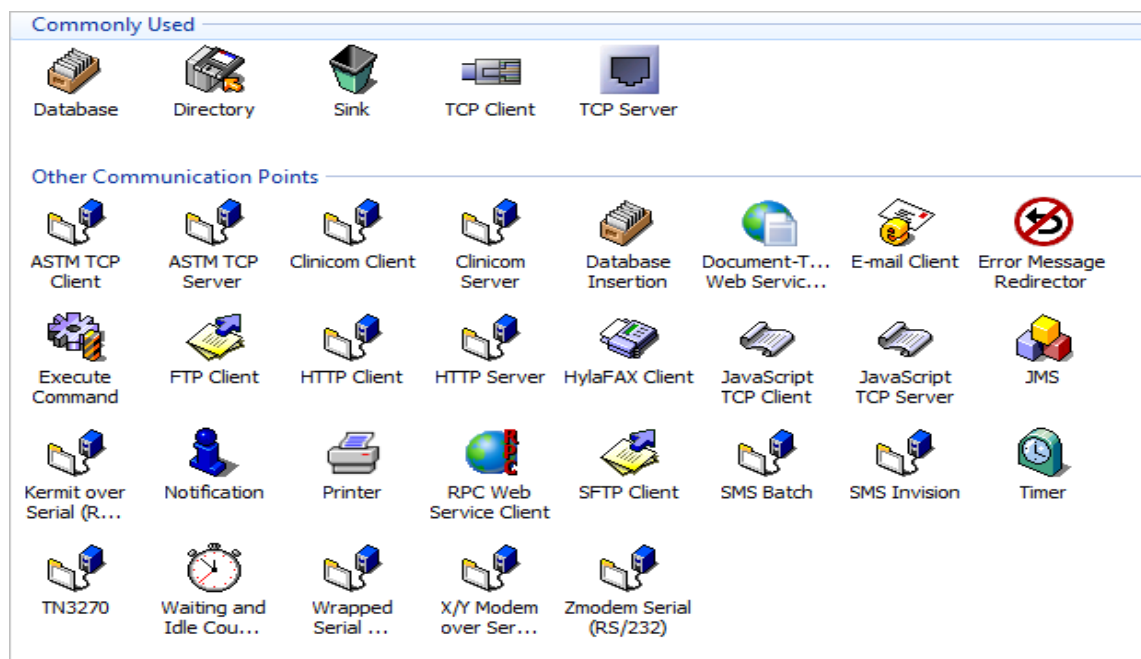
	ORU's Database Error Queue Message Nov 29, 2012 11:33:23 AM	Nov 29, 2012
	Message Routing - Javascript Conditional Connector Error Queue Message Nov 24, 2012 3:49:14 PM	Nov 24, 2012
	TCP Server route Error Queue Message Nov 23, 2012 3:12:48 PM	Nov 23, 2012

Key Concepts of a Route

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

Communication Points

- 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

Message Processing Types

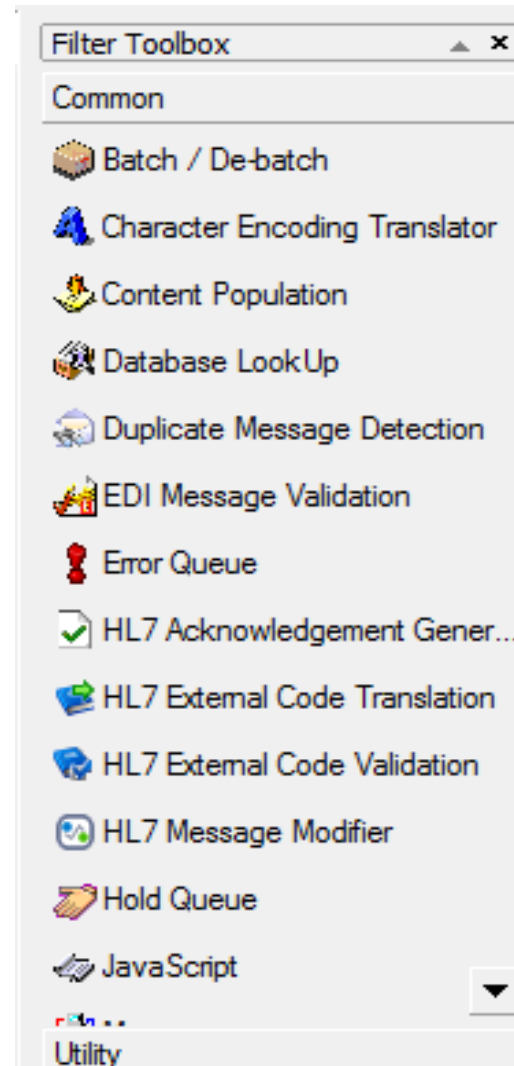
- **Bi-directional-** Asynchronous message processing, Messages can be sent and received simultaneously.
- **Out -> In-** Synchronous message processing, when a message is sent, the communication point waits for a response before sending the next message.
- **In -> Out-** Synchronous message processing, when a message is received, the communication point will refuse to accept further messages until a response has been sent.
- **Input-** Can only be used to receive messages.
- **Output-** Can only be used to send messages.

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 translate messages**
- **Filters 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

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

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.

Sample Route Demo

For the Galen take on industry news, EHR developments, interesting solutions we have developed, and new Galen products check out our blog...

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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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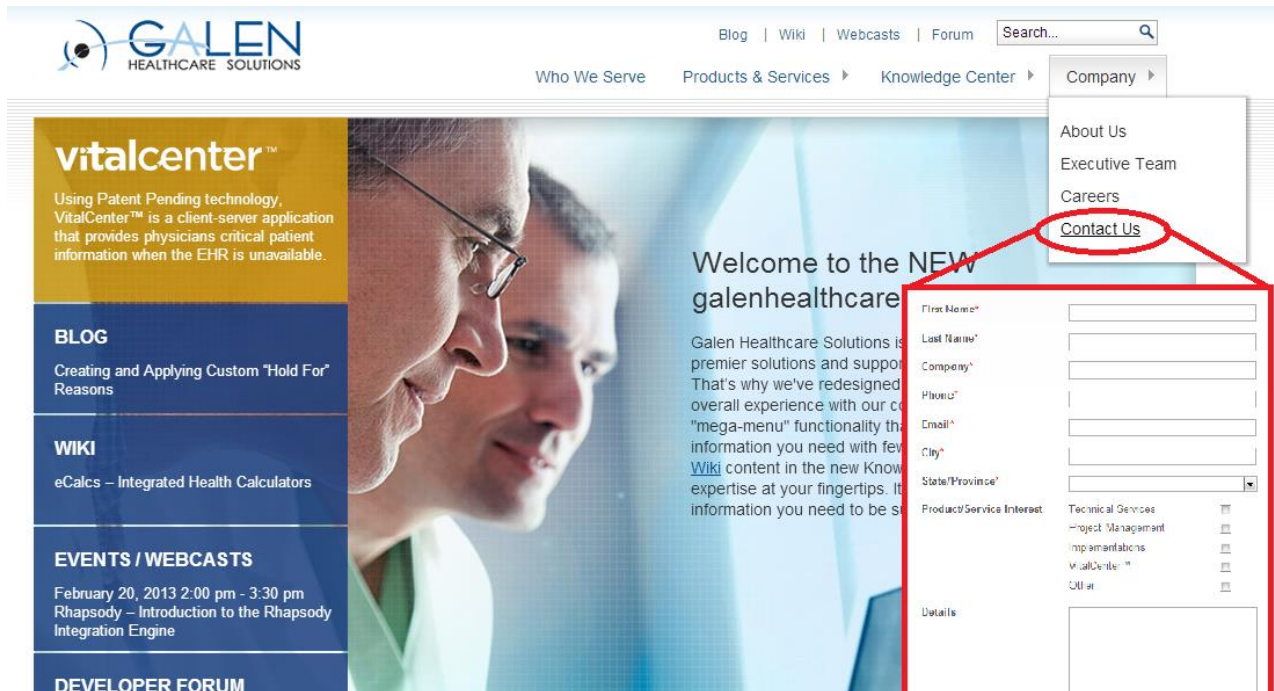
Tags

Adoption **Allscripts**
Allscripts Consultants
Allscripts Conversion **Allscripts**
Enterprise EHR
Allscripts PM Business Continuity
Business Intelligence Clinical
Conversion **ConnectR** crystal
Reports **Custom Reports**

blog.galenhealthcare.com

Thank you for joining us today, for additional assistance....

You can contact us through our **NEW** website at www.galenhealthcare.com



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

DEVELOPER FORUM

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Questions?