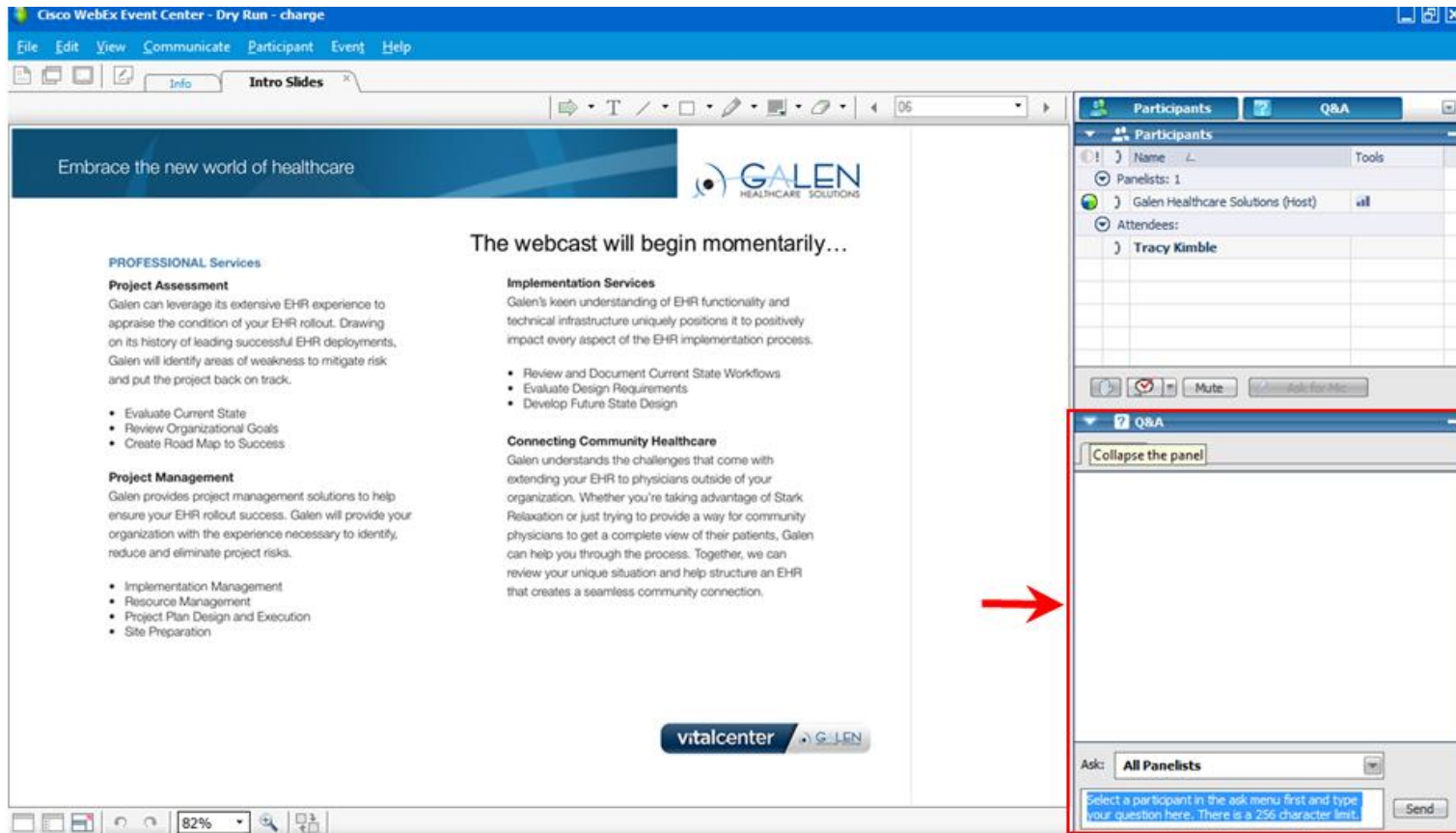


Your phone has been automatically muted. Please use the Q&A panel to ask questions during the presentation!



The screenshot shows a Cisco WebEx Event Center window titled "Cisco WebEx Event Center - Dry Run - charge". The main content area displays a presentation slide with the following text:

Embrace the new world of healthcare

**PROFESSIONAL Services**

**Project Assessment**  
Galen can leverage its extensive EHR experience to appraise the condition of your EHR rollout. Drawing on its history of leading successful EHR deployments, Galen will identify areas of weakness to mitigate risk and put the project back on track.

- Evaluate Current State
- Review Organizational Goals
- Create Road Map to Success

**Project Management**  
Galen provides project management solutions to help ensure your EHR rollout success. Galen will provide your organization with the experience necessary to identify, reduce and eliminate project risks.

- Implementation Management
- Resource Management
- Project Plan Design and Execution
- Site Preparation

**Implementation Services**  
Galen's keen understanding of EHR functionality and technical infrastructure uniquely positions it to positively impact every aspect of the EHR implementation process.

- Review and Document Current State Workflows
- Evaluate Design Requirements
- Develop Future State Design

**Connecting Community Healthcare**  
Galen understands the challenges that come with extending your EHR to physicians outside of your organization. Whether you're taking advantage of Stark Relaxation or just trying to provide a way for community physicians to get a complete view of their patients, Galen can help you through the process. Together, we can review your unique situation and help structure an EHR that creates a seamless community connection.

The webcast will begin momentarily...

At the bottom of the slide, there are logos for "vitalcenter" and "GALEN HEALTHCARE SOLUTIONS".

On the right side of the interface, there is a "Participants" panel and a "Q&A" panel. The "Q&A" panel is highlighted with a red border and contains the following text:

Q&A

Collapse the panel

Ask: All Panelists

Select a participant in the ask menu first and type your question here. There is a 256 character limit.

Send

A red arrow points from the main content area towards the Q&A panel.

# Advanced HL7: CDA/CCD

Presented by: Kim Tremblay

August 2014

# Welcome

- HL7 V3
- XML
- RIM
- Data Types
- What is a CDA?
- Goals/Benefits of a CDA
- HL7 V3 Hierarchical Structure
- What is a CCD?
- CDA Structure
- Review CCD
- CDA Tools
- Meaningful Use

## What is HL7 V3?

- Health Level Seven (HL7) version 3 is a standard for exchanging messages among information systems that implement healthcare applications.
- Strives to improve the version 2 process and its outcomes.
- Like HL7v2, it is often event driven.
- Messages are based on an XML encoding syntax.
- Model-based methodology.

## What is XML?

- XML is Extensible Markup Language
- Defines a set of rules for encoding documents in a format that is both human-readable and machine-readable
- Structure and format are conveyed by markup which is embedded into the information

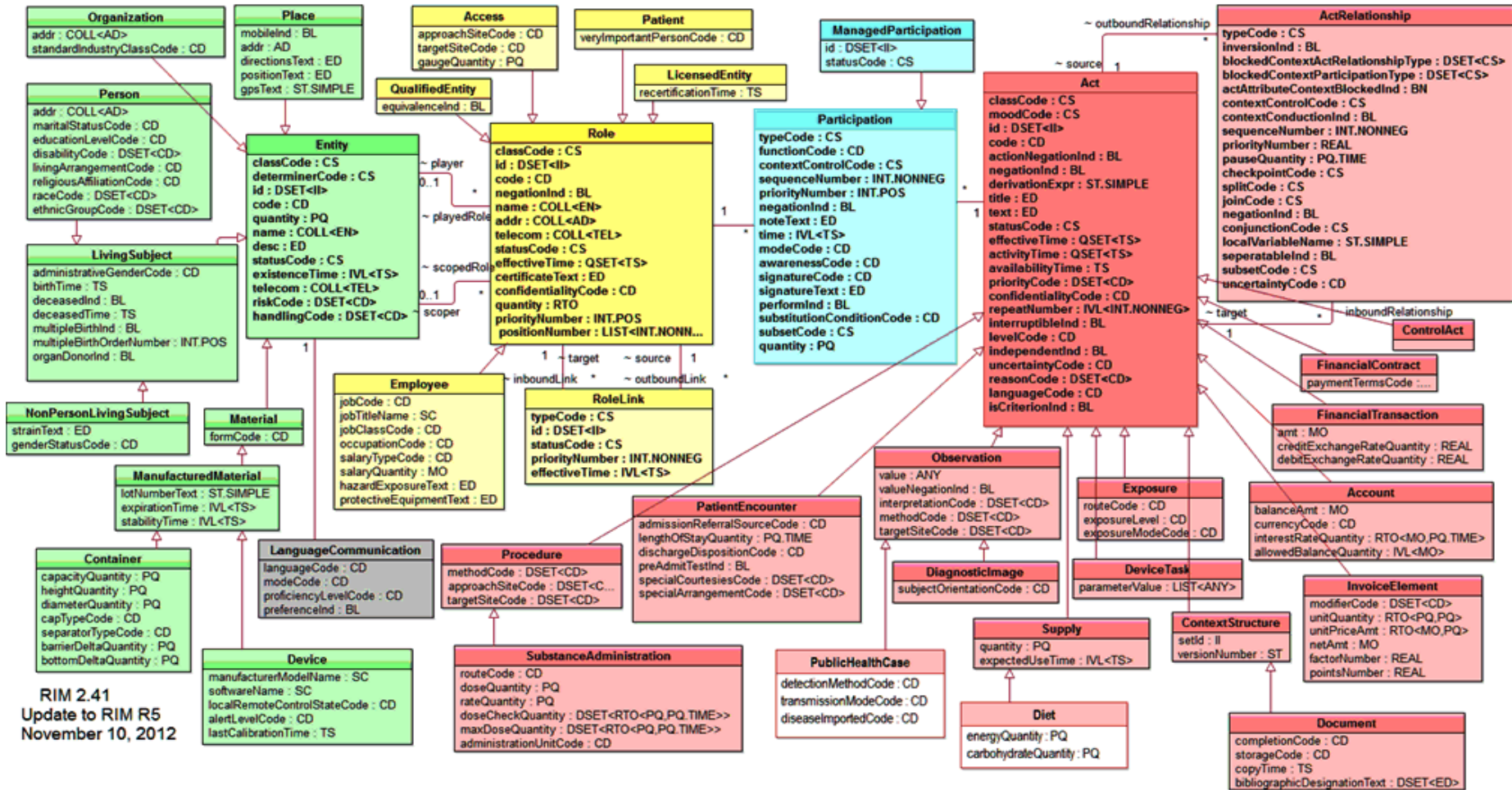
## Reference Information Model (RIM)

- XML cannot be used alone
- Cornerstone of the HL7 v3 development process.
- RIM is a large pictorial representation of clinical data and identifies the life cycle of events that a message or groups of related messages will carry.
- V3 Messages and Documents are derived from the RIM.
- Gave an object oriented approach to the HL7 messaging standard.

## RIM cont'd.

- **Six core classes:**
  - Act – Actions
  - Act\_Relationship
  - Participation
  - Role
  - Role\_link
  - Entity

# Reference Information Model (RIM)





## Data Type

- **PN**
  - **Name for a person**

```
<name>  
<given>Jane</given>  
<family>Smith</family>  
<suffix>Jr</suffix>  
</name>
```

## What is a CDA?

- XML-based markup standard intended to specify the encoding, structure, and semantics of clinical documents for exchange
- Introduces the concept of incremental semantic interoperability
- Most recent version is Release 2
- R2 allows for greater encoding complexity, but still allows for lower level encoding used in CDA R1
- Can include text, images, sounds and other multimedia content

## What is a CDA cont'd?

- Examples: Discharge Summary, Imaging Report, Admission & Physical, Pathology Report, or any content that potentially carries a signature.
- No standard for transportation of documents
- Must have six characteristics:
  1. Persistence
  2. Stewardship
  3. Authentication
  4. Wholeness
  5. Context
  6. Human Readability

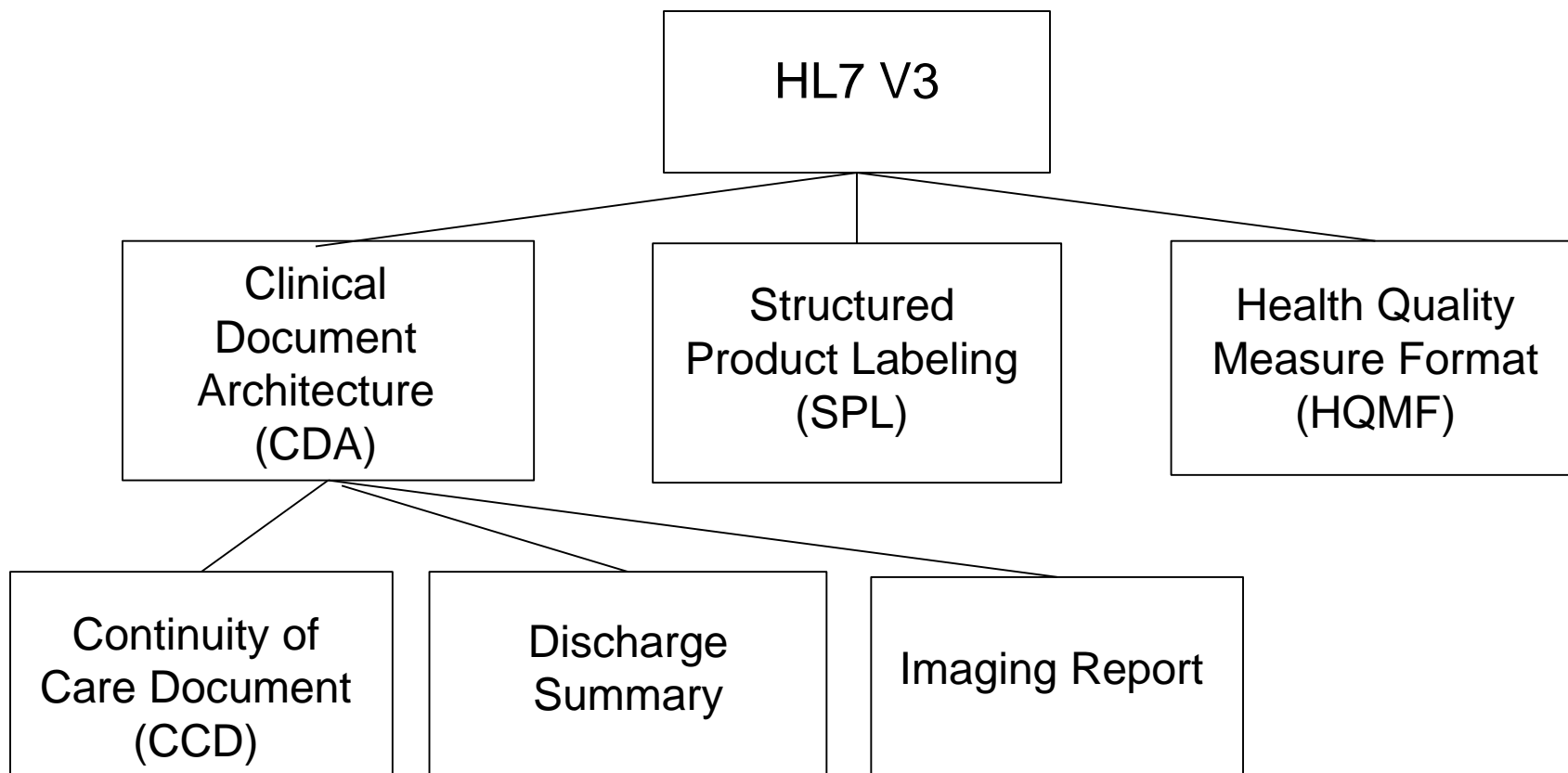
## What is a CDA cont'd?

- CDAs can be simple or complex
- Can consist of:
  - CDA Header + NonXMLBody
  - CDA Header + Structure Body with Text Section(s)
  - CDA Header + Structured Body with Text and Entry section(s)
- Used worldwide

## Goals/Benefits of CDA

- Give priority to delivery of patient care
- Reduce technical barriers for implementation
- Can be reused in multiple applications
- Supports the exchange of clinical documents between providers involved in the care of a patient
- Supports the re-use of clinical data for public health reporting, quality monitoring, patient safety and clinical trials

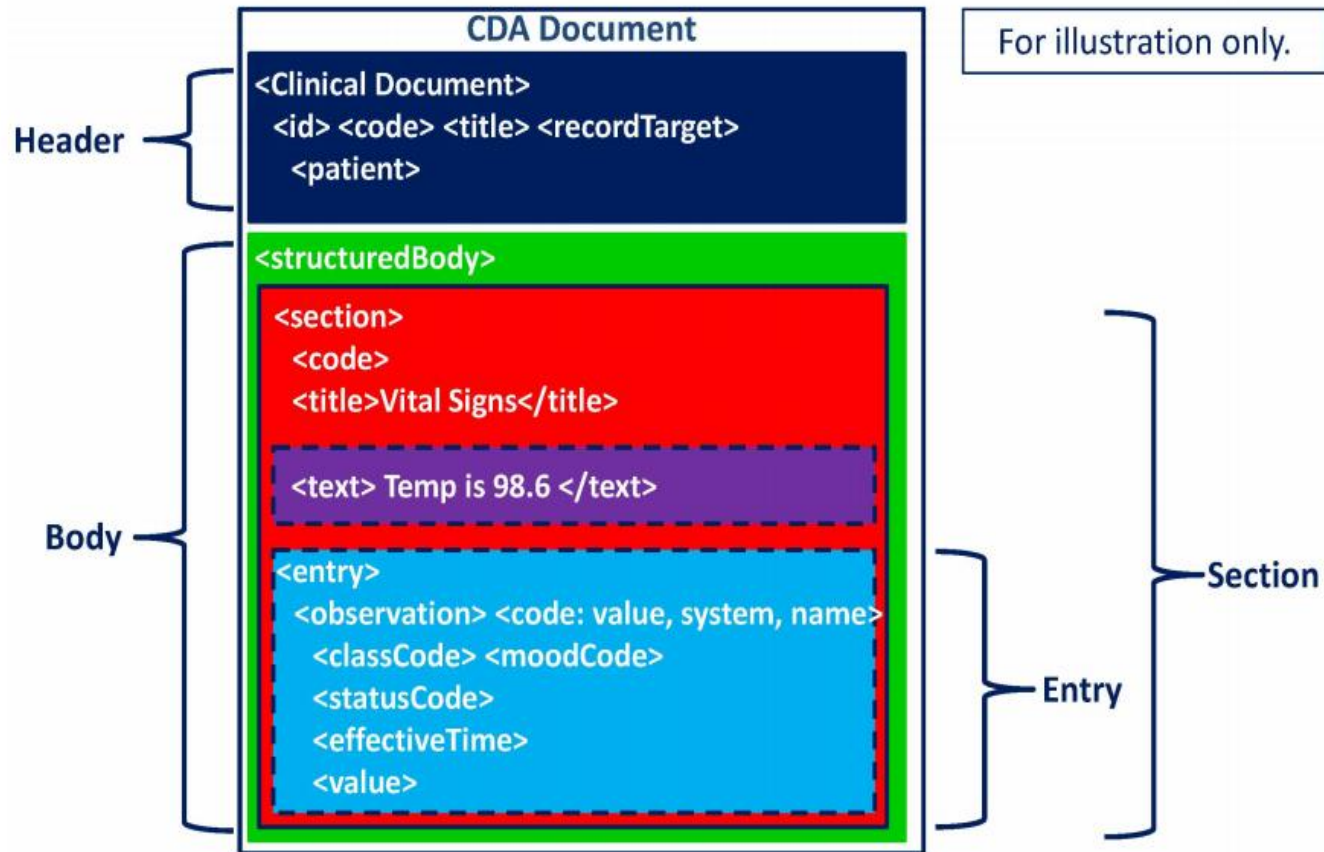
# HL7 V3 Hierarchical Structure



## Continuity of Care Document (CCD)

- Most commonly known and used CDA template.
- Continuity of Care Record (CCR) + CDA = CCD
- Uses encoded XML.
- Human readable consist of paragraph, list, and/or table
- Machine readable has observation, procedure, organizer

# CDA Document Layout





## CDA Header

- **Document Information**
  - Version of document
  - Document type
  - Confidentiality code
  - Date/time event was initiated or when the encounter was created

## CDA Header

- **Encounter Data**
  - setting in which the document occurred
- **Service Actors**
  - Authenticator
  - Those intended to receive document
  - Document originators
- **Service Targets**
  - Patient
  - Participants (ex. Family members)

## Sections

- **Consist of:**
  - Human readable
  - Machine readable

# Entries

- **Represent the structured computer-processable components within a document section.**
- **Each section can have many entries or none at all.**
- **Sample entries**
  - Observation
  - Procedure
  - Substance Administration

## CDA Tools

- **CDA Validation**
  - <http://cda-validation.nist.gov/cda-validation/validation.html>
  - <https://www.lantanagroup.com/validator/>
  - <http://sitenv.org/web/site/c-cda>
- **Notepad++**
- **XML Notepad**

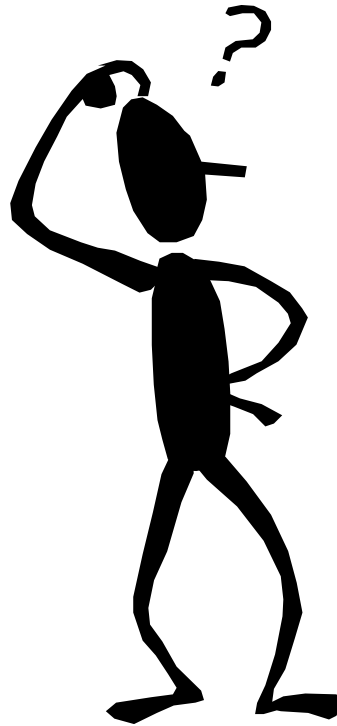
## Meaningful Use

- Stage 1 – CCD and CCR were both selected as acceptable extract formats for clinical care summaries
- Stage 2 – The selected standard is Consolidated Clinical Document Architecture (C-CDA)
- C-CDA includes nine document types, one of which is the CCD not CCR.

## CCD uses

- Citizens conversion
  - What is entailed
- Reach out to Carolina
- Drew custom CCD
  
- More pictures
- Compare CCD/CDA/CCR

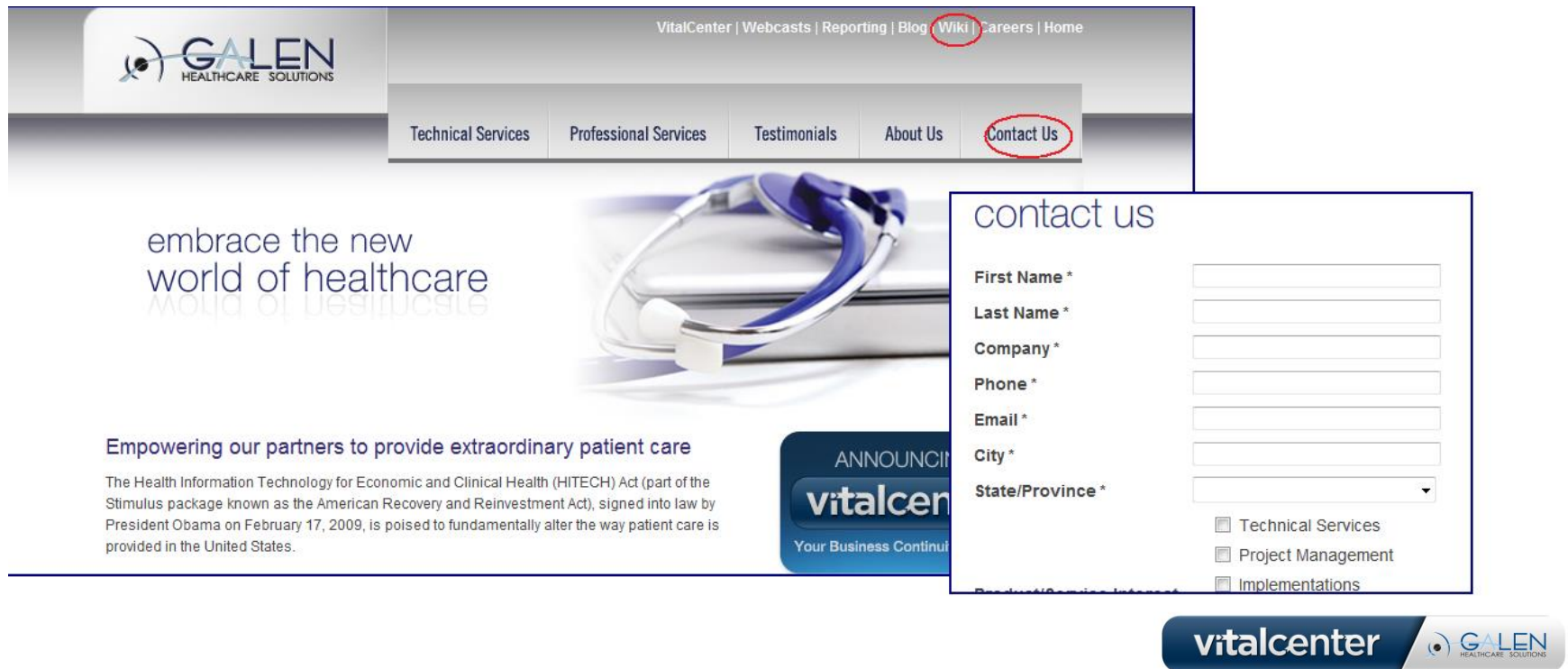
## Q&A





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

You can contact us through our website at [www.galenhealthcare.com](http://www.galenhealthcare.com)



The screenshot shows the Galen Healthcare Solutions website. The top navigation bar includes links for VitalCenter, Webcasts, Reporting, Blog, Wiki, Careers, and Home. A secondary navigation bar contains links for Technical Services, Professional Services, Testimonials, About Us, and Contact Us. The main content area features the slogan "embrace the new world of healthcare" and a section titled "Empowering our partners to provide extraordinary patient care" with text about the HITECH Act. A "vitalcenter" logo is also present. A "contact us" form is overlaid on the right side, containing fields for First Name, Last Name, Company, Phone, Email, City, and State/Province, along with checkboxes for Technical Services, Project Management, and Implementations.

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The Health Information Technology for Economic and Clinical Health (HITECH) Act (part of the Stimulus package known as the American Recovery and Reinvestment Act), signed into law by President Obama on February 17, 2009, is poised to fundamentally alter the way patient care is provided in the United States.

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