

Driving Standards for Interoperability and Personalized Healthcare

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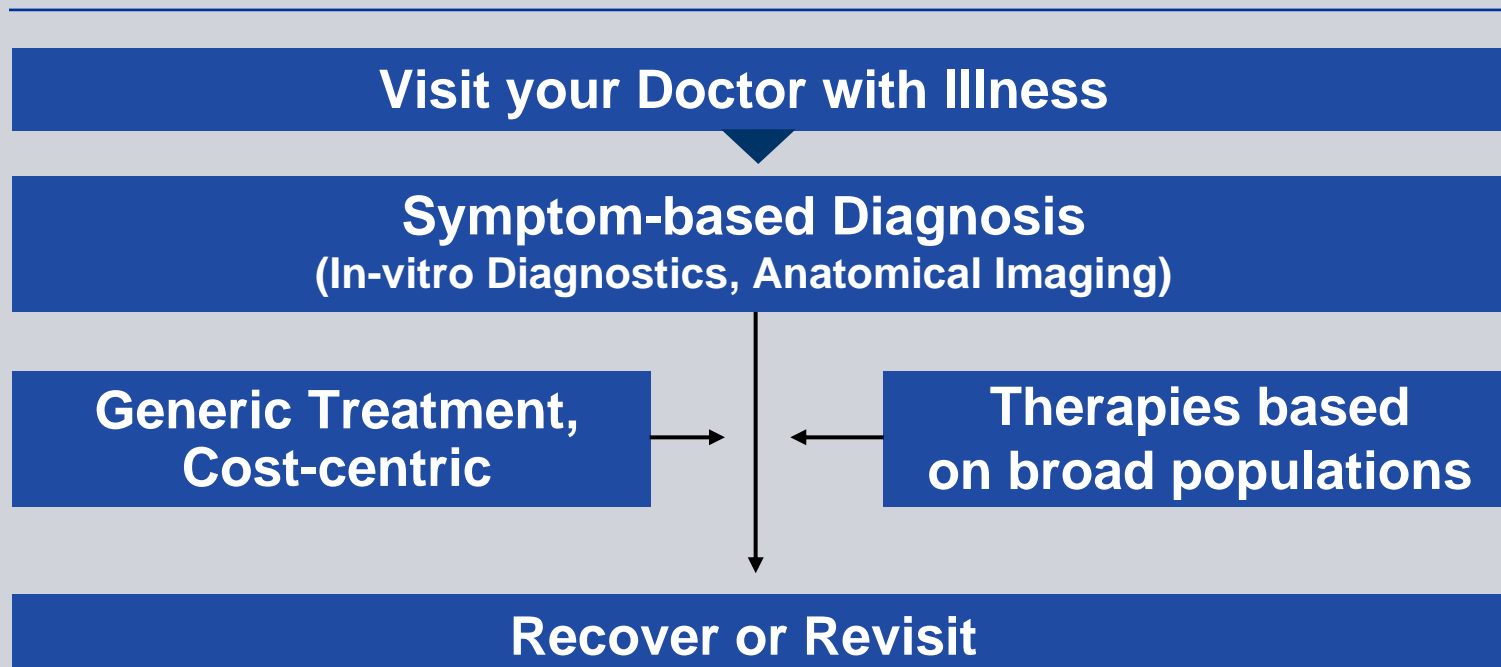
Interoperability is a core part of the business

Sector	Divisions
<p>Industry</p>  <p>How can you manufacture customized products at affordable prices?</p> <p>The Siemens answer: The intelligent factory.</p> <p>Our approach combines the best of both worlds: the flexibility of a custom-made product with the efficiency of a mass-produced one.</p> <p>Answers for industry. SIEMENS</p>	<ul style="list-style-type: none"> ■ Industry Automation ■ Motion Control ■ Building Technologies ■ Osram ■ Industry Solutions ■ Mobility
<p>Energy</p>  <p>How can you power a planet hungry for electricity without damaging it?</p> <p>The Siemens answer: Efficient energy supply.</p> <p>Our innovative 7.5 MW gas turbines and 6.5 MW gas turbines provide efficient and reliable energy for power plants.</p> <p>Answers for the environment. SIEMENS</p>	<ul style="list-style-type: none"> ■ Fossil Power Generation ■ Renewable Energy ■ Oil & Gas ■ Service Rotating Equipment ■ Power Transmission ■ Power Distribution
<p>Healthcare</p>  <p>How can disease be detected before it strikes?</p> <p>The Siemens answer: Early detection and prevention.</p> <p>Our innovative combination of high-resolution diagnostic imaging technology is one of the most powerful and precise tools for early disease detection.</p> <p>Answers for life. SIEMENS</p>	<ul style="list-style-type: none"> ■ Imaging & IT ■ Workflow & Solutions ■ Diagnostics

The World We Live In...

- The U.S. spend \$2 Trillion on healthcare – one in every four dollars is to manage Diabetes (American Chronic Disease Center - CDC)
- 170,000 Americans are still diagnosed with lung cancer every year. Only 17.5% live 5 years after diagnosis – 6 out of 10 are dead in 1 year (American Lung Association)
- We lost 58,000 men and women in the Vietnam conflict (1965-1973) (Vietnam Veterans Memorial site)
- We lose more than twice that through preventable medical errors in hospitals *per annum*... (HealthGrades Patient Safety 2004)
- Heart disease kills more American women every year, than all cancers, accidents and diabetes combined (National Woman's Health Study 2005)

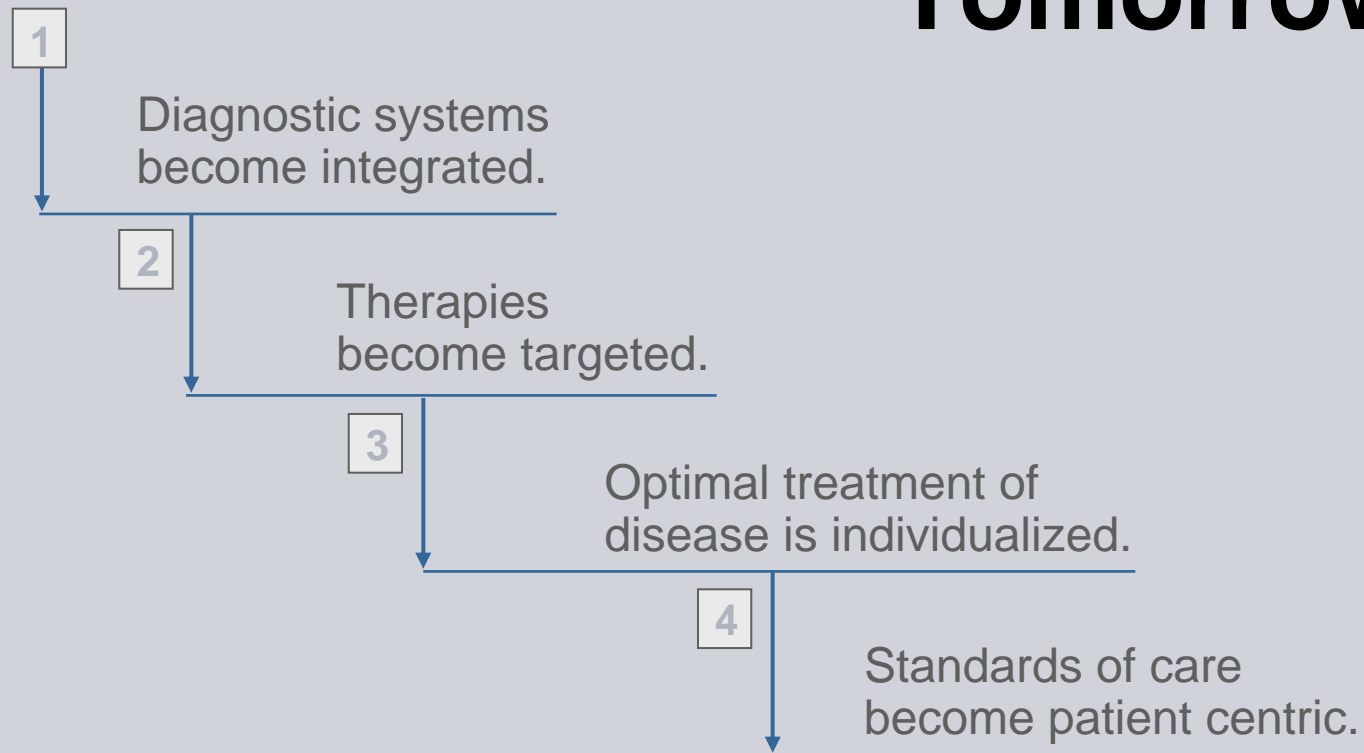
Current State of US Healthcare Model



Megatrend Changes in Healthcare

Where are we headed

Tomorrow



Why is Interoperability Important?

Patient Safety

Cost Reduction

Improved Outcomes

Operational Efficiency

Quality of Care

Information needs to be in a format that is usable and actionable



Interoperability among various hospital IT systems is needed

SIEMENS



Integrated Healthcare



A Case Study: Interoperability Between Functional Areas

Clinicals

Pharmacy

Financials



Lab

Positive Patient ID

Pathology

Radiology



Turnaround time for radiology reports is 2 hours as opposed to 24 hours due to implementation of PACS and voice recognition



- Handhelds give phlebotomists up-to-the-minute updates on test changes – and provide the correct sample at the correct time.



Thanks to Project Expert Care, MedCentral's cardiac surgery program earned a number one state ranking by HealthGrades.

Commitment and Leadership for Industry Standards

- The lessons that we learn in integrating our own equipment are shared with the healthcare community via our industry citizenship
- The goal is to share unique knowledge and expertise for the betterment of healthcare
- We also look to implement standards to the fullest extent possible within our product offerings
 - Custom solutions would add little value to Siemens or our customers



Snapshot of Siemens Leadership and Contributions

**OVER 130 INDIVIDUAL PARTICIPANTS FROM SIEMENS
CONTRIBUTING TO STANDARDS DEVELOPMENT**

Snapshot of Siemens Leadership and Contributions



- Chair – Advisory Committee
- Co-Chair – Attachments SIG
- Pjt Co-Leader – Clinical Statements TF
- Pjt Co-Leader – Dynamic Modeling TC
- Co-Chair – Financial Mgmt TC
- Board of Directors – HL7 Germany
- Co-Chair – Imaging Integ SIG
- Co-Chair – Laboratory SIG
- Co-Chair – Orders & Obs TC
- Co-Chair – Patient Care TC
- Co-Chair – Pharmacy SIG
- Co-Chair - Security TC
- Contribution involvment to many others



- Founding Member since 1998
- Held leading / co-chair positions in IHE Radiology Planning and Tech Committees
- Co-Chair position in IHE Cardiology TC
- Co-Chair positions in IHE ITI PC
- Co-Chair positions in IHE PCC
- Co-Chair positions in IHE Quality
- Past Co-Chair positions in IHE Radiation Oncology
- Co-Chair position in IHE Europe



- Co-chair position in DICOM WG-02 Projection Radiography and Angiography
- Co-chair position in DICOM WG-08 Structured Reporting
- Co-chair position in DICOM WG-12 Ultrasound
- Chair position in DICOM WG-14 Security
- Co-chair position in DICOM WG-20 Integration of Imaging and Info Systems
- Co-chair position in DICOM WG-21 Computed Tomography
- Co-chair position in the Enhanced CT-MR Task Force

Snapshot of Siemens Leadership and Contributions



IHE Promotion – User Success Stories

*Real-world “Proven Outcomes” of IHE Integration –
Siemens & other vendors’ products interact using IHE*

IHE User Success Stories: http://www.ihe.net/Resources/user_success_stories.cfm

Moving Forward – SOA Enabled Interoperability

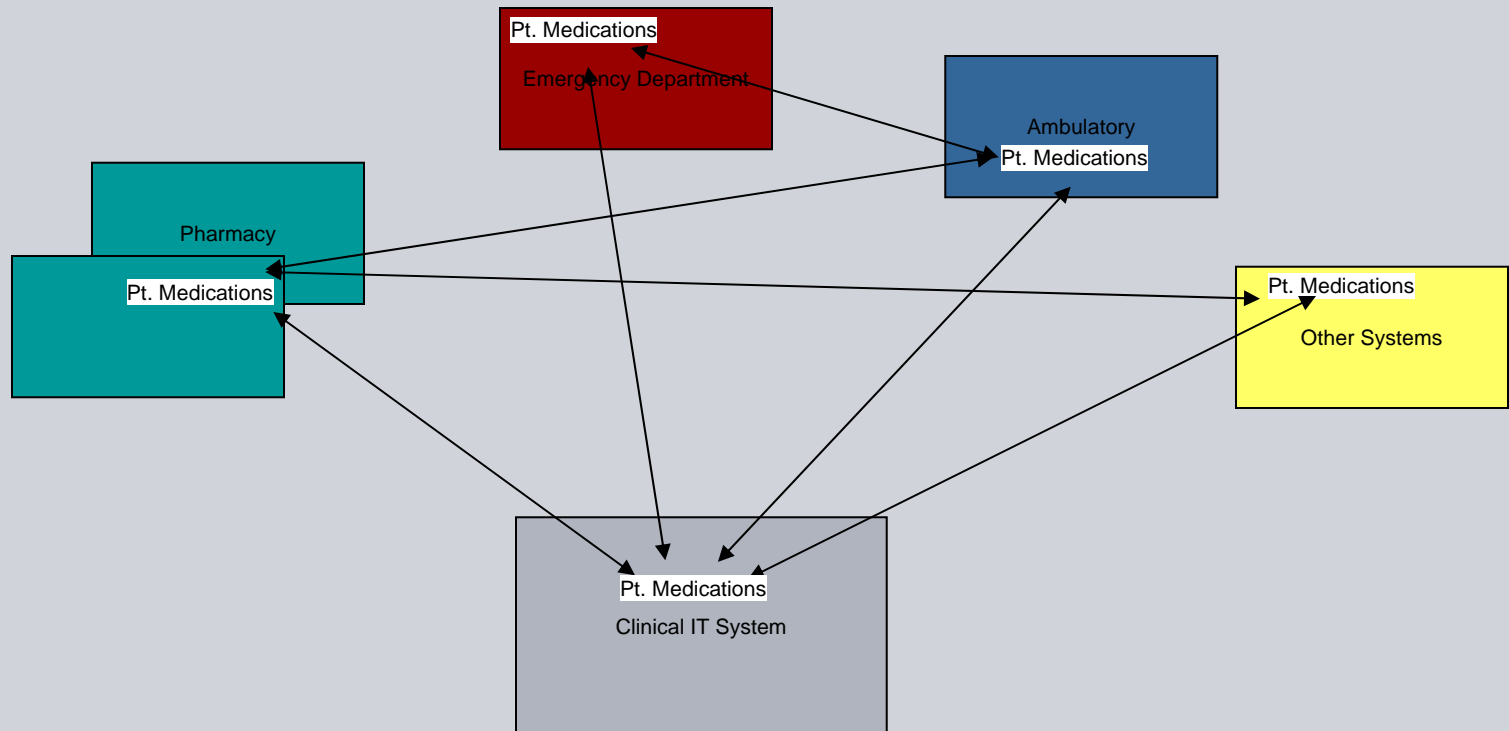
Example– Traditional Architecture Managing Patient Medication Lists

Point-to-Point integration

Any change requires updates at each system

System upgrades must consider each link

▪ = cost, time, & risk



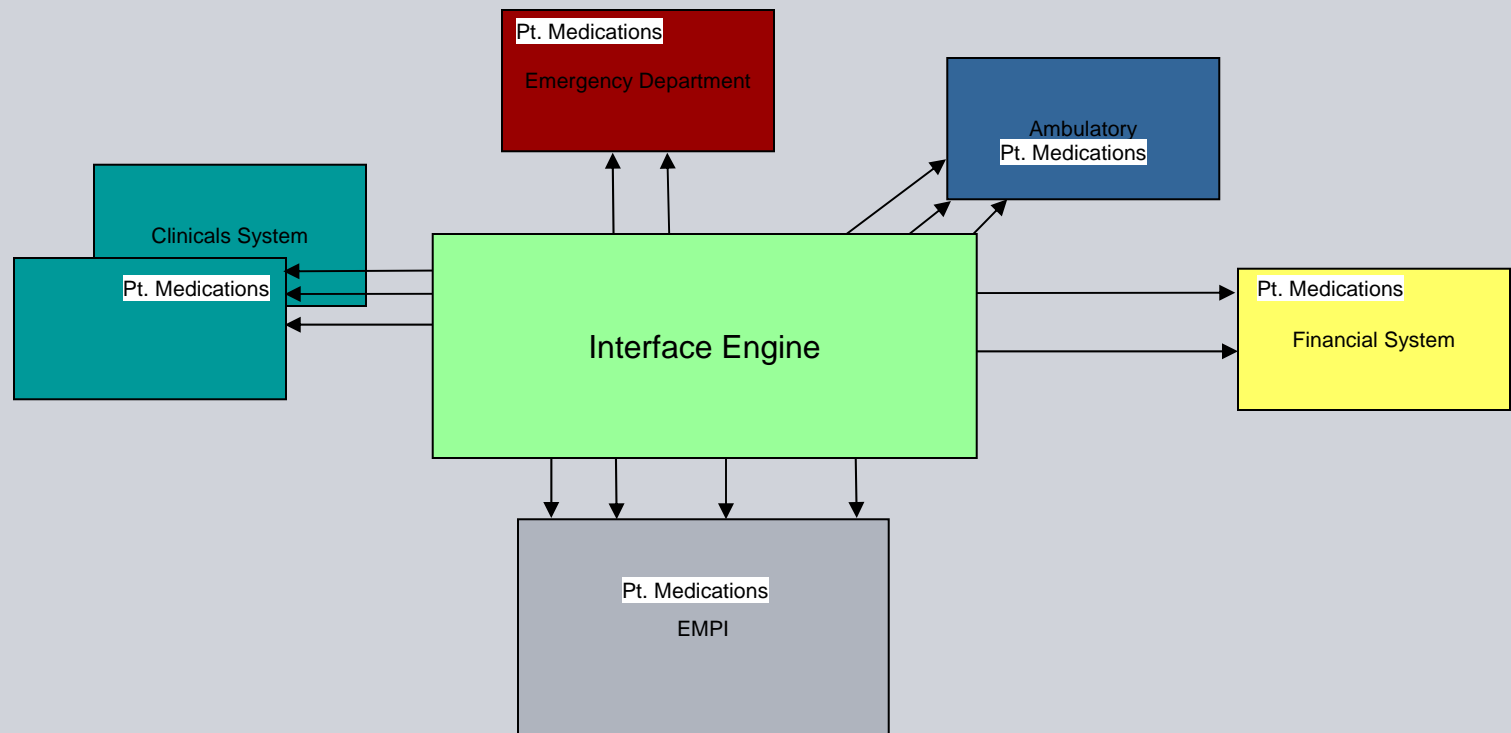
Example– Traditional Architecture Managing Patient Medication Lists

Point-to-Point integration


Any change requires reconfiguration at each system

System upgrades must consider each link


- = cost, time, & risk



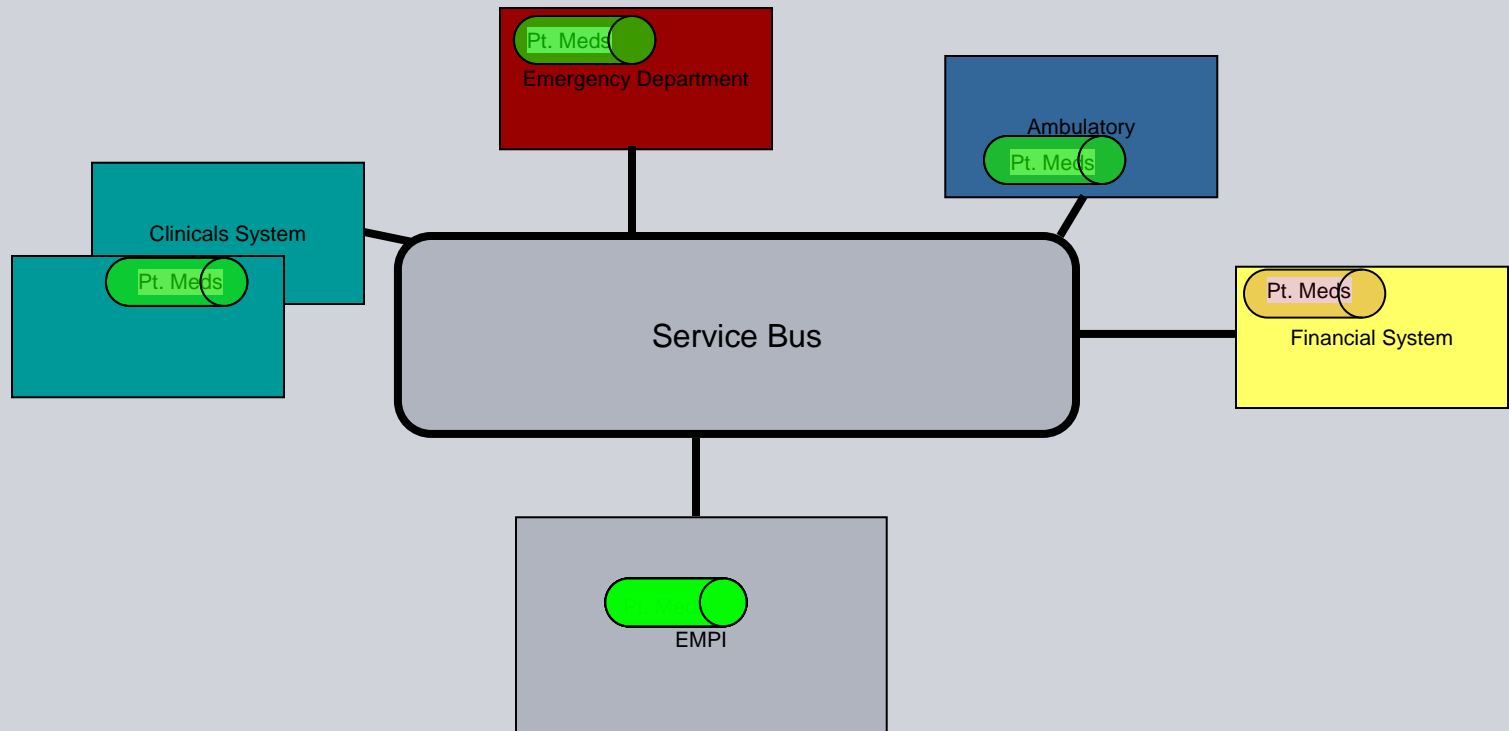
Example– Traditional Architecture Managing Patient Medication Lists

 = Medication List Service

Put a Wrapper Around (SOA Enable) Existing Code

Change is made in Med List 

Services automatically reflect update in each system



Partners Healthcare

Interoperability Requirements

Partners is comprised of: Large academic hospitals, community and specialty hospitals, community health centers, a physician network, and home health and long-term care services.

“We expect to see near term gains in our ability to create new services and insert them into our applications. Long term should lead to many services and the agility, interoperability and standardization goals.” - John Glaser, CIO, Partners HC

Healthcare IT News

Healthcare IT News

Partners, Siemens get serious about SOA

By *Bernie Monaghan, Editor* | 06/13/07 |

BOSTON – Partners Healthcare is banking on service-oriented architecture, or SOA, to boost what information technology can do.

Together with technology company Siemens Medical Solutions, Malvern, Pa., Partners has launched an SOA project that Partners CIO John Glaser says will reap benefits within 12 months and for years to come.

The primary gains, in his view, will be enhanced interoperability and the creation of new IT-based services. SOA makes it possible to individually extend, reuse and access services – software components that implement a business task or process.

“In the next 12 months we are planning to aggressively instantiate medication, problem and eventing services,” Glaser said. “We expect to see near term gains in our ability to create new services and insert them into our applications. Long term should lead to many services and the agility, interoperability and standardization goals.”

Glaser said Siemens and Partners have similar approaches and expectations concerning SOA.

“By collaborating we (Partners) should be able to accelerate the development of services that we need and reduce the cost of service creation,” he said. “I believe that SOA, while over-hyped and still immature, is a very profound shift in the way that we think about and construct applications and effect interoperability.”

Analyst firm Gartner Inc. predicts that SOA will be used in more than 60 percent of new mission-critical operational applications and business processes designed in 2007 and in more than 80 percent by 2010.

“SOA adoption is greatly beneficial from the CIO’s point of view,” says L. Frank Kenney, research director for Gartner. “To keep pace with relentless business change, IT departments are constantly under pressure to deliver more in a flat-budget situation.”

Boston-based Partners HealthCare is an integrated health system founded by Brigham and Women’s Hospital and Massachusetts General Hospital. It includes community and specialty hospitals, community health centers, a physician network, and home health and long-term care services.

Siemens and Partners plan to jointly develop clinical services within Siemens’ Soarian SOA platform.

“Bringing SOA into healthcare information technology is truly cutting-edge,” said Janet Dillone, president, Health Services, the Healthcare IT Division of Siemens Medical Solutions. “The growing pressure to embrace interoperability and integration of technology and knowledge within the framework of initiatives such as the electronic health record demands no less than a completely new approach to the development of solutions, including the evolution of SOA.”

Contacts & References

SIEMENS

Siemens *IHE* web site:

<http://www.siemens.com/IHE>

Siemens *IHE* contact e-mail:

med.ihe@siemens.com

Questions about *IHE* ?

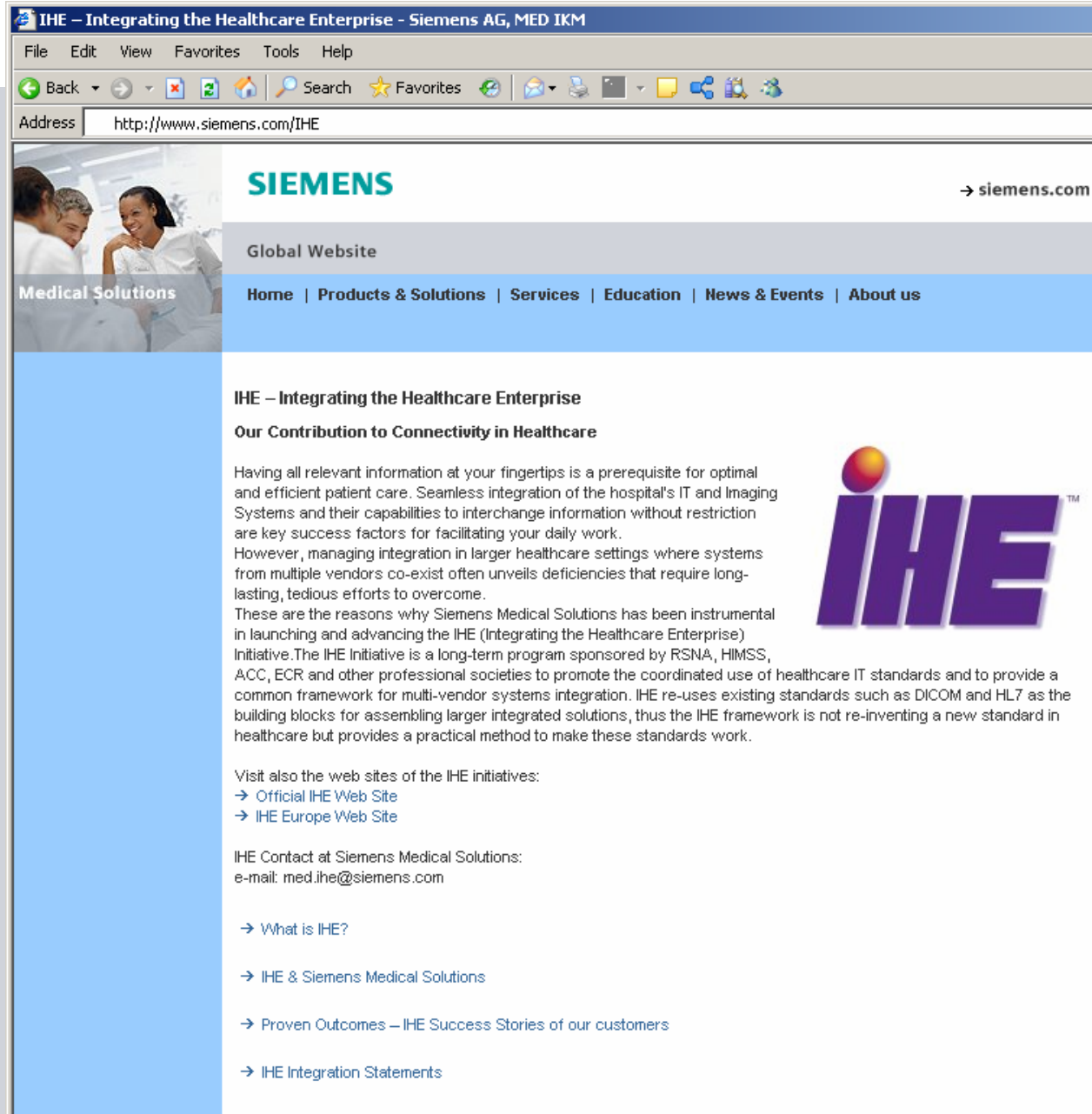
greg.killian@siemens.com

Official *IHE* web sites:

<http://www.IHE.net>

<http://www.IHE-Europe.org>

Thank you for your attention !



The screenshot shows a web browser window with the address bar displaying <http://www.siemens.com/IHE>. The page content includes the Siemens logo, a navigation menu with links for Home, Products & Solutions, Services, Education, News & Events, and About us. The main heading is "IHE – Integrating the Healthcare Enterprise" with the sub-heading "Our Contribution to Connectivity in Healthcare". The text describes the IHE initiative as a long-term program sponsored by RSNA, HIMSS, ACC, ECR, and other professional societies to promote the coordinated use of healthcare IT standards. A large "IHE" logo is visible on the right side of the page. At the bottom, there are links for "What is IHE?", "IHE & Siemens Medical Solutions", "Proven Outcomes – IHE Success Stories of our customers", and "IHE Integration Statements".

More Information

HiMSS Booth #2036

THANK YOU!