Enabling Clinical Information Sharing: Standards & Testing Demo
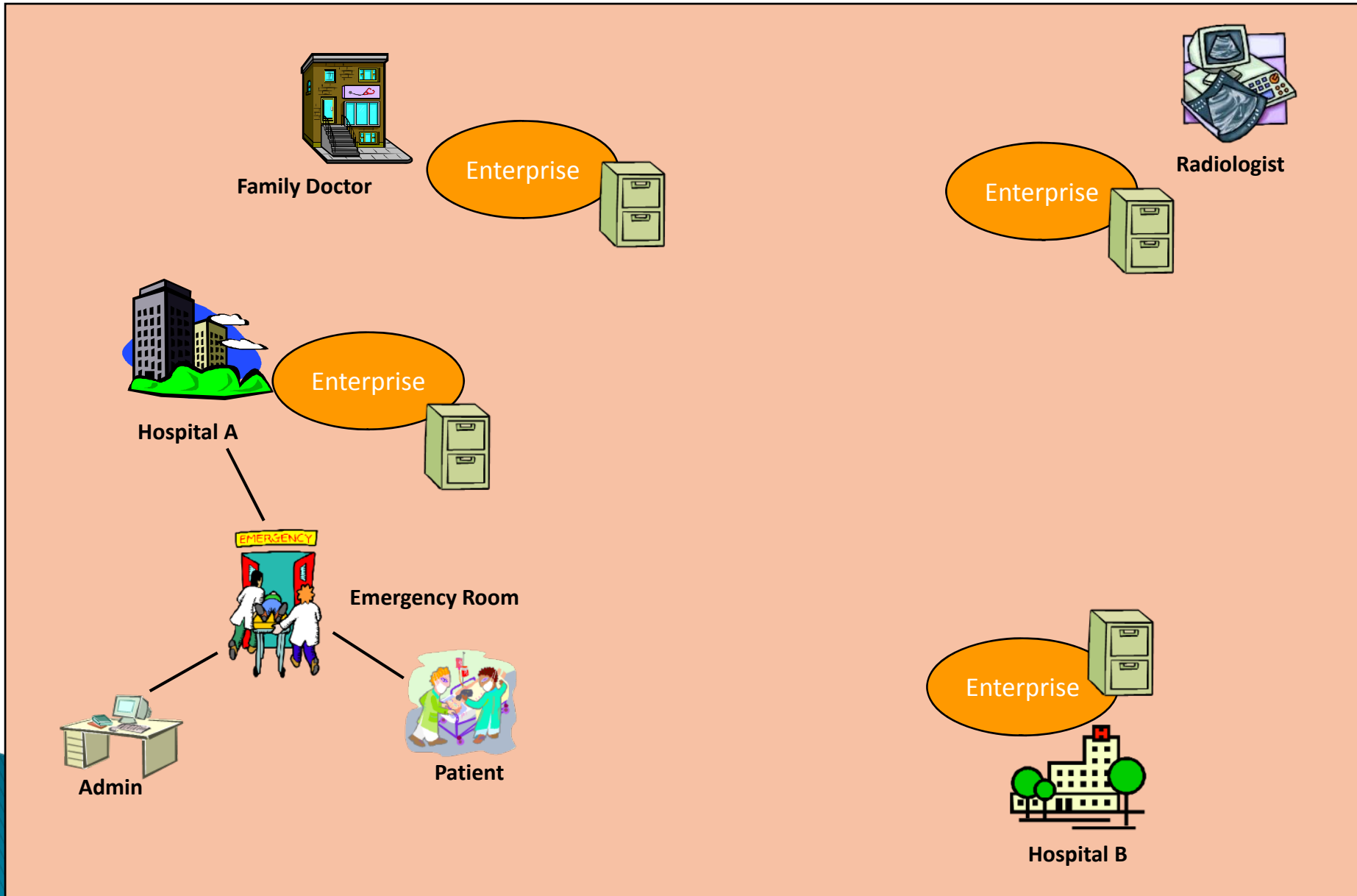
Bill Majurski

Project Lead, Infrastructure Integration
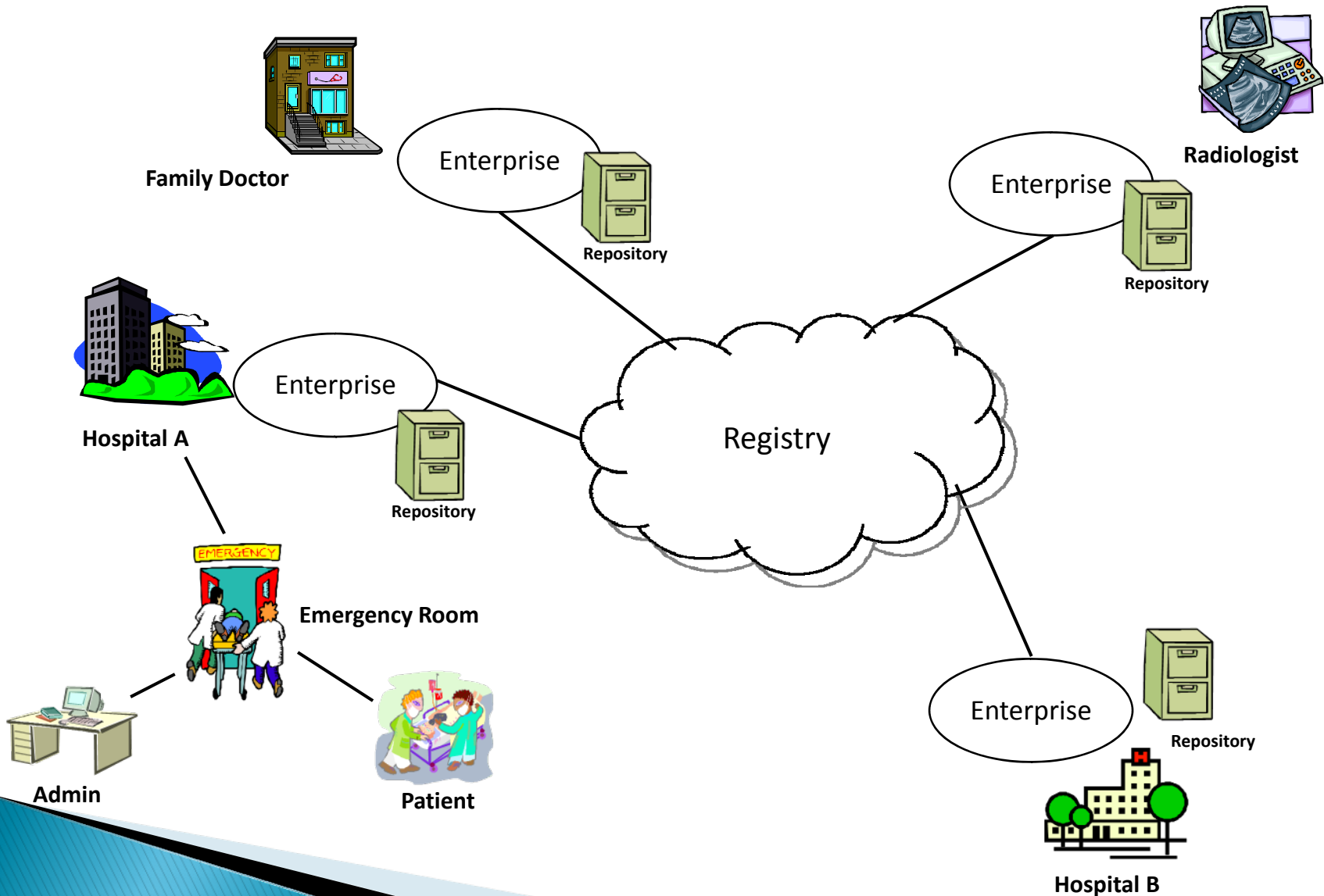
Software & Systems Division

Information Technology Laboratory
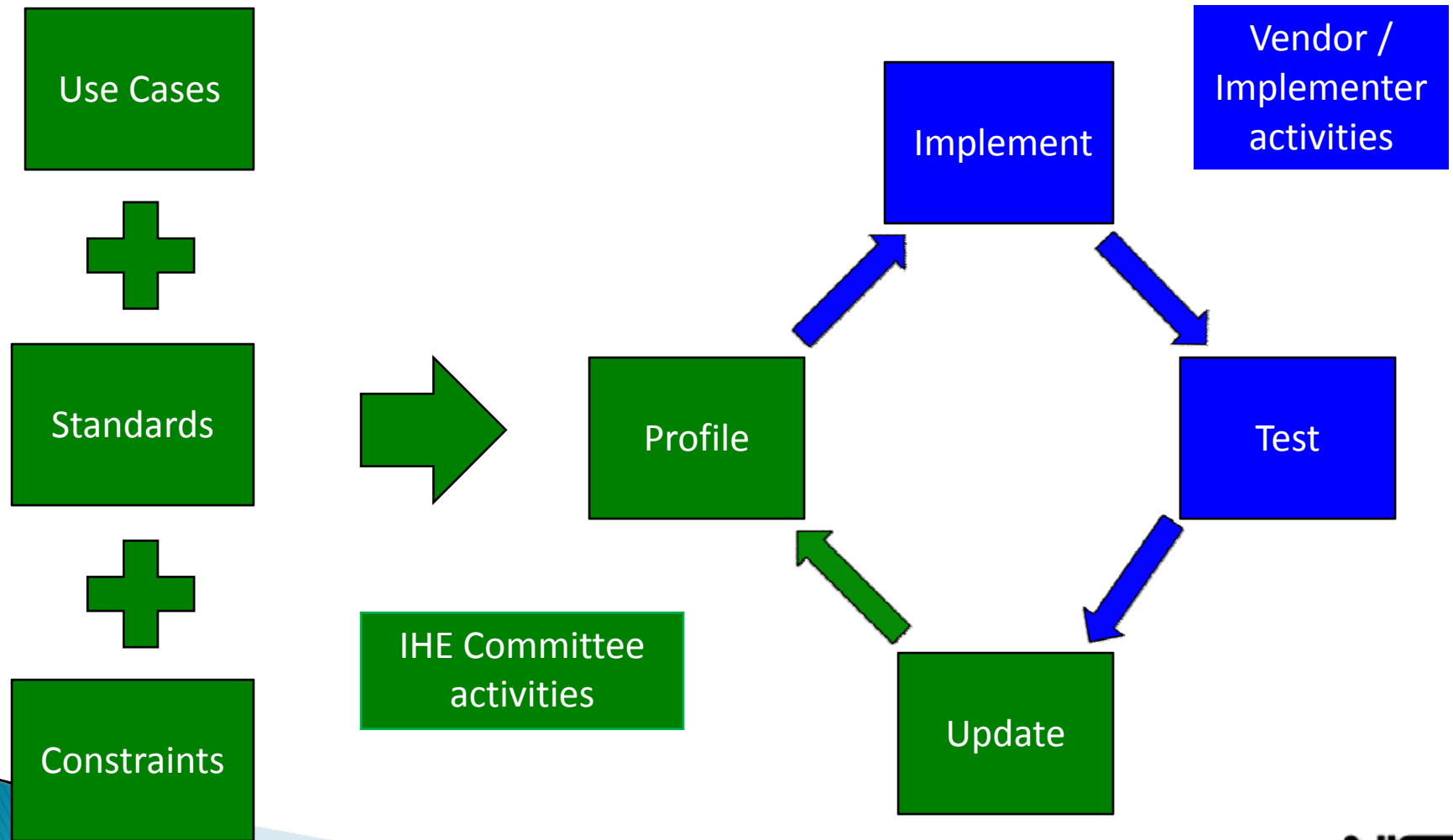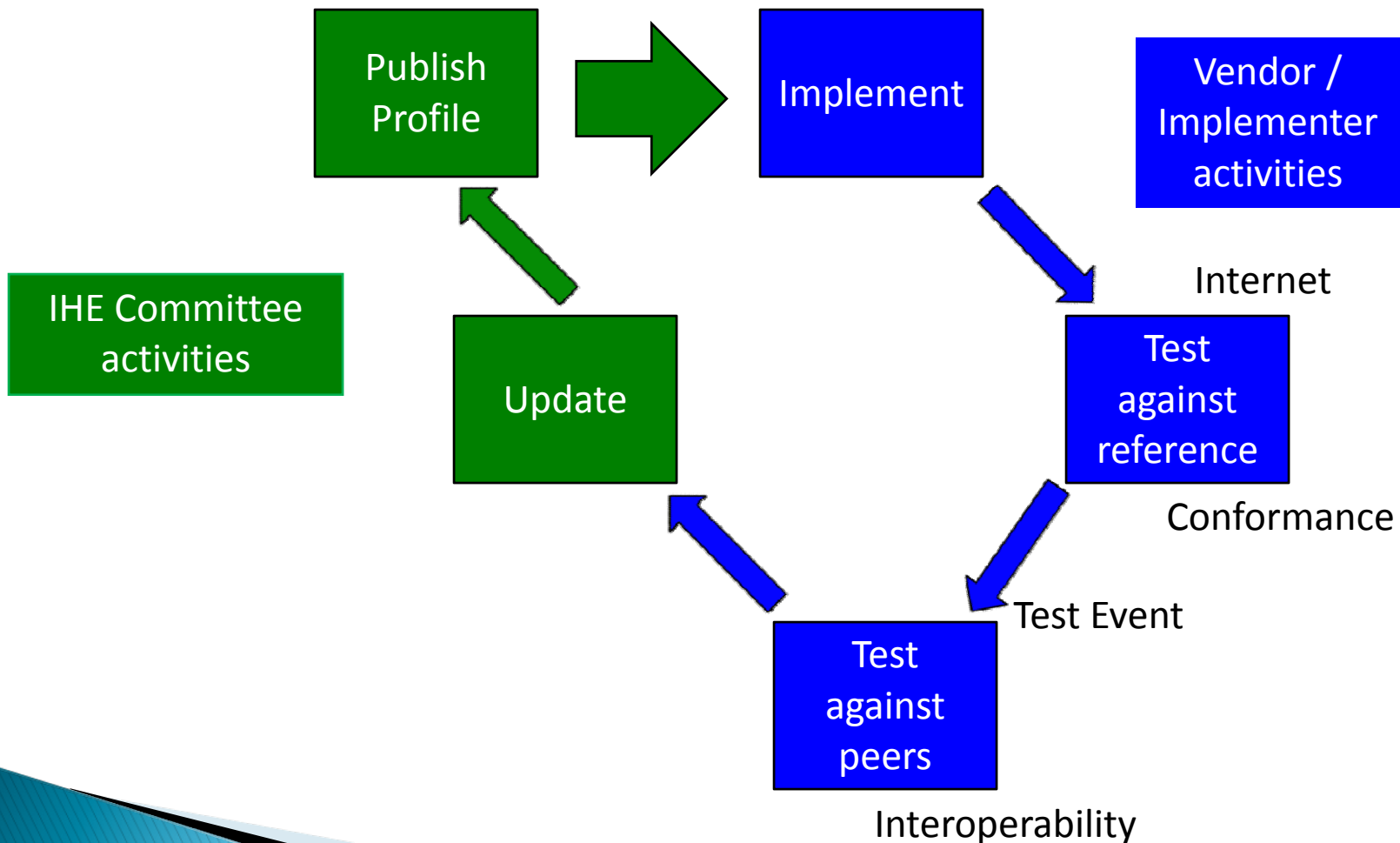
A Healthcare Community

XDS within a Community

How it began

- Industry need identified – Electronic availability of patient information to healthcare providers
- Prototype developed
  - Refine concepts & engage community
  - Standard from e-commerce adapted for healthcare
- IHE adoption of concept
  - Authored profile & known as key subject-matter-expert
- Collaborate with early adopters to refine profile
- NIST Prototype evolves into:
  - Reference implementation
  - Test tool
- Technology expansion / adoption / real world use

NIST
National Institute of Standards and Technology

IHE Profile Development Approach

Use Cases

+

Standards

+

Constraints

→

Profile

Implement

Test

Update

Vendor / Implementer activities

IHE Committee activities

NIST
National Institute of Standards and Technology

Focus on Testing

Demo Focus: Simple Test Scenario

Family Doctor (IBM)

Enterprise

Radiologist

Enterprise

Repository

NIST Test Tools

NIST Registry/Repository Reference Implementation

Enterprise

Hospital A

Repository

EMERGENCY

Emergency Room

Admin

Patient

Enterprise

Repository

Hospital B
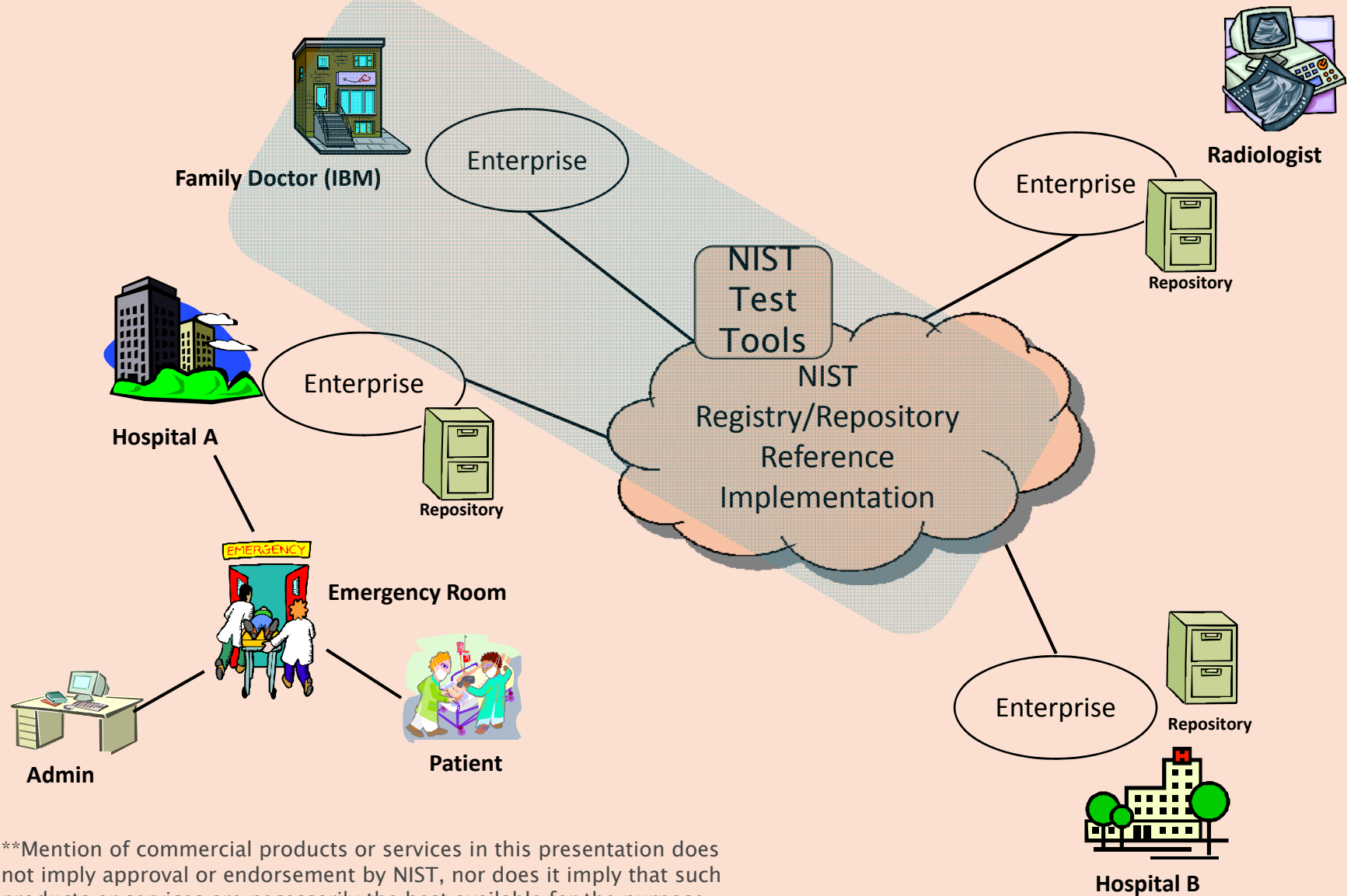
**Mention of commercial products or services in this presentation does not imply approval or endorsement by NIST, nor does it imply that such products or services are necessarily the best available for the purpose.

Jump to demo…

Where is XDS today?

- In the U.S. – adopted by HITSP, CCHIT, and the NHIN; implemented in emerging U.S. Health Information Exchanges
- Part of national healthcare infrastructure plans in
  ◦ U.S., Canada, France, Austria, Germany, South Korea, South Africa
- Also major developments in Italy, China, Japan, Australia
- Between 50 and 60 vendors test XDS each year
  ◦ GE Healthcare, IBM, Agfa, Siemens Healthcare, Microsoft, Misys/Allscripts, Intel, Oracle
- About a dozen product announcements in the last 18 months
- Vendor implementations (at test events) over last 5 years
  ◦ Registry 29
  ◦ Repository 49
  ◦ Client 70

NIST Contribution

- Original prototype that demonstrated effective use of existing e-Commerce standard into healthcare environment
- Co-authored all 7 IHE profiles: Base profiles plus expansions
- Develop/maintain reference implementation for 5 of the profiles
- Develop/maintain test facilities
- Reference implementation is open source and used heavily
- Continue as a primary architect of new developments
    - Ongoing committee work
    - Research on future extensions
- NIST reference implementation/test tools used globally at test events each year. NIST serves as testing lead in U.S. & Europe