What is IHE
Integrating the Healthcare Enterprise?

Agoria
*Smart Rules, Smart Applications*

eHealth Interoperability and Standards
Brussels – October 20 2016

Charles Parisot
Chair IHE Europe Services Committee & GE Healthcare
Mission of IHE

• IHE improves healthcare by providing specifications, tools and services for interoperability

• IHE engages clinicians, health authorities, industry, and users to develop, test, and implement standards-based solutions to vital health information needs

• IHE is both international (join forces and reuse) and local (autonomous, learn, adopt, deploy and feedback)
What is IHE

• IHE uses an open, consensus-based process to engage users, providers and suppliers of health IT solutions to solve interoperability problems

• IHE is:
  – an international SDO of authorities, users and vendors
  – Profiles formally recognized by ISO TC215 (TR28380) and EU Commission (27 Profiles for procurement).
  – Fostering a robust interoperability testing ecosystem (cross-standards, open source test tooling, process rigor)
  – Directly supportive of ehealth projects (use cases, interoperability specifications, connectatathon, conformity assessment)

IHE: A forum for agreeing on how to implement standards and processes for making it happen
IHE Technical Framework

Base Standards

- OASIS
- IETF
- ISO
- CEN
- DICOM
- W3C
- IEEE
- HL7
- ITU-T
- LOINC
- IHTSDO

Profile Development and testing

IHE

Project Specific Extensions

eHealth Projects

Profiling: Combine Standards & Constrains “optionality”
What does IHE deliver?

• IHE publishes a large body of detailed specifications (Profiles) that are being implemented today by healthcare providers and regional/national platforms to enable standards-based, safe, secure and efficient health information exchange.

• IHE holds periodically test and validation events in Europe, North America and Asia to allow proper verification and validation of systems claiming conformance to IHE Profiles.
  – Connectathon (connectivity marathon)
  – Conformity Assessment of products

• IHE provides support through IHE Services (Not for profit, shared test tooling, processes and consulting).
Interoperability results from an Ecosystem

1. Identify available standards (e.g. HL7, DICOM, IETF, OASIS)
2. Document Use Case Requirements
3. Develop technical specifications
4. Testing at Connectathons
5. IHE Demonstrations
6. Products with IHE
7. Timely access to information
8. Easy to integrate products
International Growth of IHE

- Local Deployment, National Extensions
- Promotional & Live Demonstration Events
- Over 200 Organizational Members (see www.ihe.net/governance)

Pragmatic global standards harmonization + best practices sharing
IHE offers a broad collection of Profiles

- A Technical/Semantical Use Cases is addressed by a profile.
- They are specified based on robust, accepted and evolutionary standards in a series of Technical Frameworks (Volume 1 for the TF of each Domain)
- Different classes of profiles:
  - Integration (how to move the data)
  - Content (what the data conveys) and Terminology (when global)
  - Security/privacy
  - Workflow
- Complete list on: [www.ihe.net/technical_framework](http://www.ihe.net/technical_framework)
- More on specific Profiles in the following presentation
Portfolio of IHE profiles

Over 180 IHE Profiles in 14 Domains

List and overview at:

wiki.ihe.net/index.php?title=Profiles

Specifications in Technical Frameworks at:

www.ihe.net/technical_frameworks
The IHE Development Domains

18 Years of Steady Evolution 1998 – 2016

Today over 180 Profiles for Interop. within the Enterprise & National -Regional Health Info Exchange

At Home

Endoscopy since 2010
Surgery since 2014
Dental since 2010
Pathology since 2006
Eye Care since 2006
Pharmacy since 2009
Quality Research & Public Health since 2006
Patient Care Devices since 2005
Patient Care Coordination since 2004
(Healthcare) IT Infrastructure since 2003
Radiology since 1998
Cardiology since 2004
Laboratory since 2004
Radiation Oncology since 2004
Dental since 2010
Eye Care since 2006
Pharmacy since 2009
Pathology since 2006
IHE Connectathons

Each year:
- USA, January
- China, March
- Europe, April
- Korea, September
- Japan, October

Massive yearly events:
- 70-80 vendors
- 250-300 engineers
- 100-150 systems
- ........tested in 5 days
SAVE the DATE
for the next connectivity test marathon

Meet the real implementers
Attend the IHE Symposium to learn about various national ehealth programs, their use of IHE Profiles and EU strategies
More at: http://connectathon.ihe-europe.net/
IHE Profile Adoption Worldwide in Regional and National eHealth

Adopted across the world:
- Lower Austria region
- US States (Vermont, New York, Texas, Pennsylvania, etc.)
- Nagoya City
- Dutch regions
- European Cross-Border (epSOS now moving to CEF/eHDSI)
- US ehealth Exchange (Sequoia, plus Care Equality)
- US CommonWell
- France
- Austria
- Italian Regions
- Denmark Regions
- Switzerland Regions
- Luxembourg
- German Regions
- Slovenia

In deployment:
- Finland (Imaging), Denmark (PHR)
- Switzerland (Nation-wide)
- US Interop Standards Advisory
- US National Record Location Service (Surescript)
- Uruguay, South Africa, Japan
IHE Web sites

- IHE International Web site
  www.ihe.net

- IHE Profiles in Technical Frameworks:
  Overview of Profiles: http://wiki.ihe.net/index.php/Profiles
  See Volume 1 of each TF for Use cases: ihe.net/Technical_Frameworks/

- IHE Europe Web site (testing, participate, services)
  www.ihe-europe.net

- Connectathon Result:
  www.ihe.net/Events/connectathon_results.cfm

- Vendor Products Integration Statements
  https://gazelle.ihe.net/content/product-registry

- Participate to Connectathons
  http://ihe-europe.net/connectathon/connectathon