Advancing Interoperability, Patient Safety, and Efficiency with the Microsoft Connected Health Platform Open Toolkits

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What is the Connected Health Platform?

Connected Health Platform Open Toolkits

Resources and QA
Terminology

**Connected Health Framework Architecture and Design Blueprint**

- offers a set of vendor-agnostic best practices and guidelines for building the next generation of interoperable e-Health solutions based on a service-oriented architecture (SOA) and industry standards – ranging from within health organizations to regional, national and cross-agency systems.

**Microsoft Connected Health Platform**

- is the Microsoft technology offerings including toolkits, solution accelerators, and prescriptive architecture, design, and deployment guidance for e-Health solutions built on the open extensible and agile principles of the Connected Health Framework Architecture and Design Blueprint.

Connected Health Platform Toolkits
Guidance, Tools, and Solution Accelerators

- Address specific problems in the health domain
  - Document Sharing, Patient Safety, Interoperability

- Can be used as building blocks for e-Health solutions

- Use common tools and technologies

- For IT Professionals and Developers

http://www.microsoft.com/HealthICT
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What is the Connected Health Platform

Connected Health Platform Open Toolkits

Resources and QA
Connected Health Platform Open Toolkits

- Microsoft Health Common User Interface (MSCUI)
- Clinical Documentation Solution Accelerator (CDSA)
- Cross-Enterprise Document Sharing XDS.b (IHE)
Microsoft Common Health User Interface (MSCUI)

http://www.mscui.net
For Designers, Application Developers and Patient Safety professionals

- Provides rigorously researched and tested UI Guidelines
- Provide pre-built controls and samples
- Extensible framework for Design Guidance and Controls
- Enables the community to guide on-going development of guidelines and controls

Faster, Easier Development of Clinical UI
Impact and Influence

**Design Guidance for Patient Name Input and Display (excerpt)**
- The display must present the Family name in all uppercase letters to clearly distinguish it from the Given name.
- The display must separate the Family name and Given name using a comma to further establish that the Family name is being placed first.
- The display must include parentheses around the Title to separate and distinguish it from the other name elements.

**Design Guidance for Date Display (excerpt)**
- Display the month textually, not numerically.
- Display the month with only the first letter in capitals.
- Display the year value numerically using four digits.

**Software Toolkit ‘NameLabel’ Control**
- CORDERO, Thelma (Ms)
- CORDERO, Thelma (Ms)
- CORDERO, Thelma (Ms)

**Software Toolkit ‘DateLabel’ Control**
- 02-Apr-2002
Clinical Documentation Solution Accelerator

- Allows definition and creation of clinically encoded documents from template libraries
- Uses Microsoft Common User Interface guidance and controls
- Based on Microsoft Word
- Provides Connectivity to cloud services such as Terminology or Drug Reference Data Services
- Supports open standards such as HL7 CDA, Web Services and OOXML
Why CDSA?

- Addresses the following themes:
  - **Ease Of Use & Productivity**
    - Harness user’s knowledge of common tools
  - **Interoperability**
    - Facilitates storage of data in industry standard formats (such as CDA)
  - **Data Quality**
    - Allows access to clinical data sources (such as SNOMED CT encoding services) directly from the document surface
  - **Data Re-use**
    - The data, once encoded, can be used for additional benefits such as powering Business Intelligence
CDSA Video
IHE Cross-Enterprise Document Sharing (XDS.b)

http://www.microsoft.com/HealthICT
Cross-Enterprise Document Sharing (IHE XDS.b)

- XDS.b is an Integration or Implementation Profile
- Building block for health information exchange solutions
- Focus on interoperability
- Timely patient data at point of care
- Microsoft developed and submitted web services interface specifications
What Is Supported?

- The latest release from IHE Connectathon 2010 implements the following transactions/profiles:
  - Provide and Register Document Set-b ITI-41
  - Register Document Set-b ITI-42
  - Registry Stored Query ITI-18
  - Retrieve Document Set ITI-43
  - Patient Identity Feed ITI-44
  - ATNA Logging and Secure Node
  - Consistent Time (CT) Client

Interoperability Testing at the IHE Connectathon 2010 in Chicago, US
1. LIS user posts clinical document packages to the Repository

2. Repository registers the documents metadata and pointer with the Registry

3. Health professionals search for documents with specific information

4. Health professionals retrieve documents from Repository(ies)

**XDS Document (Metadata):**
- Type
- Patient
- Author
- Facility
- Authenticator
- ...

**Adapters:** Tools: Auditing - Reporting
Access - Configuration
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What is the Connected Health Platform
Connected Health Platform Open Toolkits
Resources and QA
Connected Health Platform Open Source Resources

- Microsoft Health Common User Interface (MSCUI)
  - Microsoft Public License (MS-PL): [http://mscui.codeplex.com/license](http://mscui.codeplex.com/license)
  - Main site: [http://www.mscui.net](http://www.mscui.net)
  - Toolkit: [http://mscui.codeplex.com](http://mscui.codeplex.com)

- IHE Cross-Enterprise Document Sharing XDS.b
  - Microsoft Public License (MS-PL): [http://ihe.codeplex.com/license](http://ihe.codeplex.com/license)
  - Main site: [http://www.microsoft.com/HealthICT](http://www.microsoft.com/HealthICT)
  - Toolkit: [http://ihe.codeplex.com](http://ihe.codeplex.com)

- Clinical Documentation Solution Accelerator (CDSA)
  - Reference License for CDSA Toolkit: [http://code.msdn.microsoft.com/cdsa/Project/License.aspx](http://code.msdn.microsoft.com/cdsa/Project/License.aspx)
  - Main site: [http://www.mscui.net/CDSA.htm](http://www.mscui.net/CDSA.htm)
  - Toolkit: [http://code.msdn.microsoft.com/cdsa](http://code.msdn.microsoft.com/cdsa)
Additional Resources

- **MSCUI**
  - Patient Journey Demonstrator: [http://pjd.mscui.net/default.htm](http://pjd.mscui.net/default.htm)
  - Overview Videos: [http://www.mscui.net/Showcase/Demonstrators.aspx](http://www.mscui.net/Showcase/Demonstrators.aspx)
    - Pediatric Secondary Care – Patient Admission
    - Pediatric Secondary Care – Patient Review
    - Secondary Care – ‘Nursing Now’ View
    - Secondary Care – Care Pathways

- **CDSA Startup Videos**
  - Developer Overview [download .wmv file](#)
  - Constructing a template using existing controls [download .wmv file](#)
  - Creating a simple control [download .wmv file](#)
  - Customizing the layout of an existing control [download .wmv file](#)
  - Creating Rich-editing experiences using WPF based controls [download .wmv file](#)
  - Creating a WPF based list control [download .wmv file](#)
  - Mapping your document data to a Custom XML format [download .wmv file](#)
  - Prepopulating your document with data from another system [download .wmv file](#)

- [XDS.b Developer Whitepaper](#)
HealthVault Open Source Resources

- **Community Promise**
- **Open Source SDKs**
  - Java: [CodePlex](http://www.codeplex.com)
  - Ruby: [RubyForge](http://www.rubyforge.org)
  - Python: [Google Code](http://code.google.com)
  - PHP: [SourceForge](http://sourceforge.net)
- **Reference License .NET SDK**
  - [http://msdn.microsoft.com/healthvault](http://msdn.microsoft.com/healthvault)
Questions