

Infoway Conformance Services in Canada

Supporting the Implementation of pan- Canadian Standards

Project Overview for OHT

April 14, 2008

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Key Messages

- We are making good progress in developing processes and tooling to assist our jurisdictions in implementing “Conformant” solutions
- There is a recognition amongst our jurisdictions and within Infoway that there is a need for conformance testing to ensure alignment
- Our approach is founded on international standards
- In Canada we are committed to leveraging work of others

Conformance Services Vision

To support the successful implementation of pan-Canadian Standards within projects through the provision of conformance testing artefacts and tooling.

- To improve the consistent implementation of pan-Canadian Standards
- To reduce the effort required to implement pan-Canadian Standards
- To reduce the cost of implementing pan-Canadian Standards

Strategic Intent of Conformance Services:

- Ensure that there is a national service to support the vendor conformance and certification of iEHR, public health and EMR solutions.

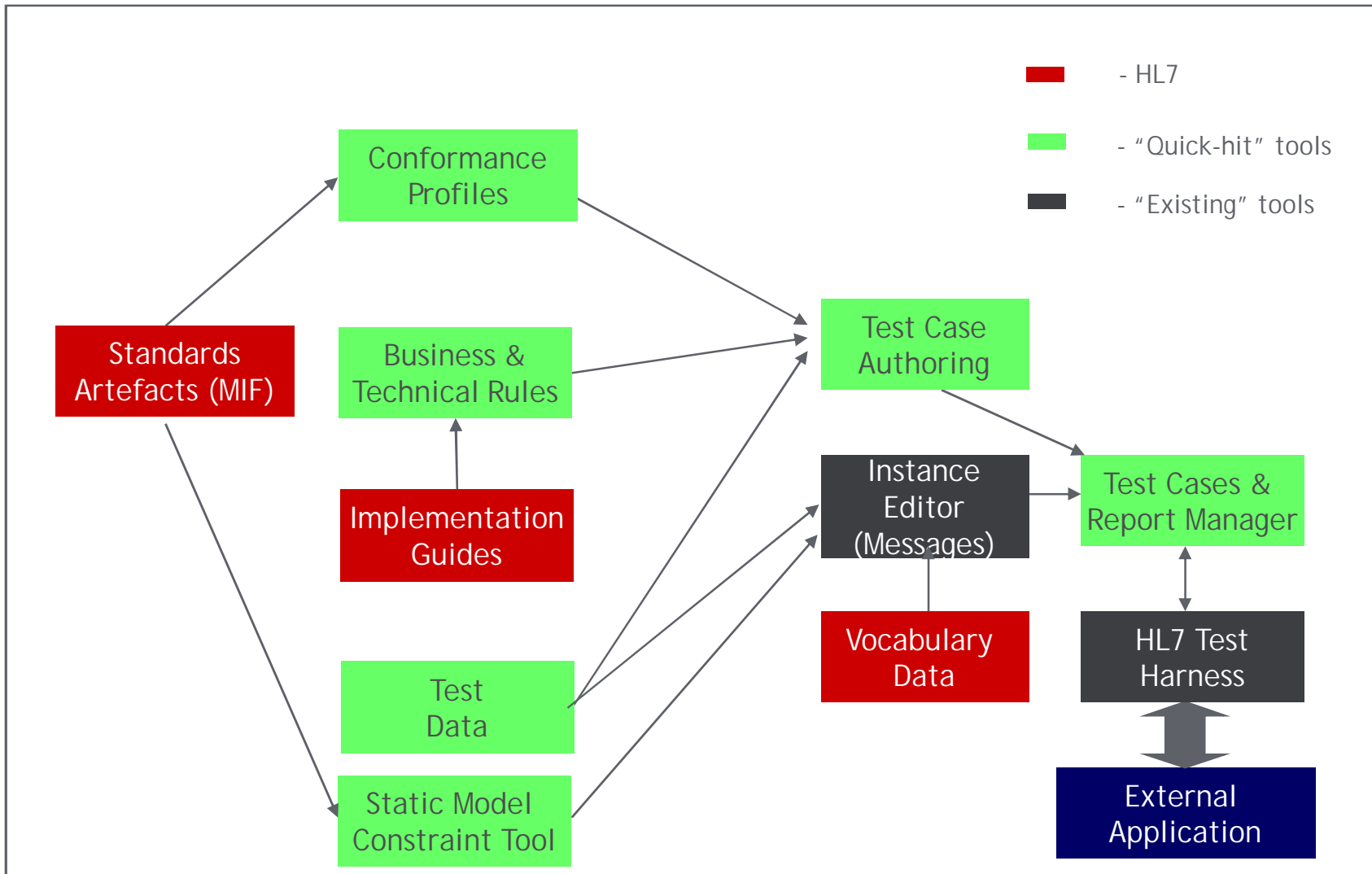
Activities

- Tactical Implementation Support Project
 - Prototype, Document & Learn
 - Conformance testing is not well understood !
 - Build Methods & Processes with stakeholder input
 - Build tooling & leverage
 - Standards – HL7 v3, LOINC, SNOMED, XDS-I
 - Tooling – Eclipse Instance Editor; HL7 Test Harness; Infoway developed tools for Test Authoring & integration
 - Component model – integration is key!
 - Sharing of testing artefacts – huge value to stakeholders

Benefits

- Financial savings through reduced duplication of efforts in test authoring
- Financial savings through tools based test message development
- Breadth of testing improved through increased quantity and quality of test cases
- Depth of testing improved through consistent test rules and tooling
- Improved consistency in the implementation of pan-Canadian standards

Conformance Constructs – End-to-End Process



Tooling Components – Infoway Developed

Application	Description	Current State	Plans
Business Rules Manager	<ul style="list-style-type: none"> Maintains Business Rules with links to conformance profiles (pCCP or ICP) 	<ul style="list-style-type: none"> Prototype developed and being used in two jurisdiction projects (artefacts retained) 	<ul style="list-style-type: none"> Once validated by jurisdictions, migrate application layer to open source. Same for data layer
Conformance Profile Manager	<ul style="list-style-type: none"> Provides the ability to browse pan-Canadian Conformance Profiles 	<ul style="list-style-type: none"> Provides linkage and traceability back to standard 	<ul style="list-style-type: none"> as above
Static Model Constraint Tool	<p>Newly developed tool which can be used to constrain pan-Canadian MIFs by capturing changes to models, as well as capturing traceability information</p>	<ul style="list-style-type: none"> Provides linkage and traceability back to standard Tool being validated with jurisdictions 	<ul style="list-style-type: none"> Take to HL7 and share with international community Needs to be re-platformed, most likely into Eclipse
Test Case Manager & Authoring	<ul style="list-style-type: none"> Maintains Test Cases with links to "tested artefacts" (i.e. Business Rules, pCCPs, ICPs, transactions and interactions) and Test Data Elements 	<ul style="list-style-type: none"> Provides central linkage between standards, business rules and messaging Being validated with jurisdiction projects 	<ul style="list-style-type: none"> Once validated by jurisdictions, migrate application layer to open source, lasting solution. Same for data layer
Test Cases & Reports Manager	<ul style="list-style-type: none"> Provides the ability to run reports on different data sets within the pCCT tools such as Conformance Profiles, Business Rules and Test Cases etc. 	<ul style="list-style-type: none"> Developed using COTS, open to use by other COTS 	<ul style="list-style-type: none"> Continued development of reports to meet jurisdiction needs

Major Tooling Components

Application	Description	Current State	Plans
Instance Editor	<ul style="list-style-type: none"> HL7 V3 Eclipse Editor application to create Conformance Test Scenario Files, Message Fragments and Parameter Files as XML output. 	<ul style="list-style-type: none"> Open source available thru SourceForge & Eclipse Completed first round of enhancements and reposted to Open Source forums in December RFP on the street for additional enhancements (June & September releases) 	<ul style="list-style-type: none"> All development to be reposted back to open source forums Additional enhancement development anticipated & required Potential opportunity for OHT?
HL7 Test Execution	<ul style="list-style-type: none"> The application which can act as a test harness, executing HL7 V3 messaging against a back end EHR system, or a PoS system 	<ul style="list-style-type: none"> Previous Infoway investment in jurisdiction project Open source available through SourceForge (.Net solution) Working with jurisdictions to demonstrate and test capability 	<ul style="list-style-type: none"> Additional enhancements identified to provide tighter integration Potential opportunity for OHT?

Lessons Learned

There is no “Easy Button”...

In order to get to a conformance test, you need to start with the Profile, know what the business rules are and create test data and message instances that will then test a scenario

Once you have done this for every business and technical scenario, only then can you think about performing a conformance test

By our simple calculations, this will be thousands and thousands of test cases!



Current Developments

- Tooling Components
 - Infoway pan-Canadian Conformance Tools (pCCT)
 - Only available to Canadian jurisdictions
 - Instance Editor
<http://forums.infoway-inforoute.ca/PCCT/Public/HL7%20Instance%20Editor/?14@138.QfByaF7Kfka.6@>
 - Test Harness
<http://forums.infoway-inforoute.ca/PCCT/Public/HL7%20Test%20Harness/?14@138.QfByaF7Kfka.6@>
 - Integration improvements
 - Tighter integration between components
 - Work with jurisdictional partners on integration with COTS tools (e.g. Borland, etc)
- Documentation
 - Public information sharing through Infoway Forums, including demos and recorded Webex presentations
 - Pan-Canadian Conformance Tools (pCCT) User Manual
 - Eclipse HL7 V3 Instance Editor - Getting Started document
 - HL7 V3 Example Instance Generation user manual

<http://forums.infoway-inforoute.ca/PCCT/Public/?14@146.6flwaFAFfw3.4@>



Thank-you

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