## HeD Pilots Project Summary

## OpenCDS

## Pilot Team

## *David Shields – lead developer*

There may be participation from other contributors to OpenCDS, but that will be partly dependent on what we plan to do.

## Goal of the Pilot

## *Please include a write up or create a Visio diagram of what you intend to show/prove/support during the pilot process. Make this an actionable statement with specifics. Also include in this description what you hope to gain from this pilot.*

The goal of the pilot will be to demonstrate that a rule described by HeD Use Case 1 can be successfully consumed by OpenCDS. There are two levels that we can address in OpenCDS:

* Metadata compliance
  + At this level, OpenCDS would search in its KnowledgeRepository (KR) for a KnowledgeModule (KM) matching the specifications in the HeD Use Case 1 artifact (HeD UC1). This KM in the OpenCDS KR would have been previously constructed using the OpenCDS Authoring tools (Drools Guvnor). If a matching KM is found, it will be executed against submitted data, and results examined. The OpenCDS team is planning on supporting this level, as a minimum. We can wrap this demo in a MirthConnect wrapper to grab the input data from and return the output result to any of the following:
    - * Database query
      * Web socket
      * File
      * Email
* Construction of executable run-time module
  + At this level, OpenCDS would support the execution of a KM based on the HeD UC1 artifact, and would execute it against submitted data in real-time, returning a result message as defined in the HeD artifact. The capability of doing this is dependent on the availability of a compiler or execution engine for the HeD artifact. OpenCDS would be very interested in partnering with other pilot members in wrapping their execution engine / compiler in the standards-based OpenCDS run-time service.
  + We could also assist in wrapping this demo in a MirthConnect wrapper as described in the metadata compliance option above.
  + The possible approaches to doing this include any of the following:
    - Development of a compiler for HeD UC1 which produces a Drools executable package as a KM, since OpenCDS natively executes KMs using Drools.
    - Development of a compiler for HeD UC1 which produces an executable module for an inferencing engine other than Drools. We can assist with writing an adapter for OpenCDS which would supply the input interface for vMR structured data, and return the output.
    - Development of an execution engine in Java which directly executes an HeD UC1 artifact. OpenCDS includes the hooks to use an inferencing engine other than Drools, and that could be a purpose built engine to directly execute an HeD UC1 artifact. OpenCDS would supply the input interface for vMR structured data, and return the output.

## What portions of the IG are you Piloting

## *Please use this section to document what parts of the IG your are intending to pilot. Please be as specific as possible. This should include any of the examples you intend to pilot (ECA Rules, Documentation Templates, Order Sets)*

We are initially interested in piloting ECA Rules, but would also consider partnering with someone else who is developing Documentation Templates or Order Sets.

## Identify the Use Case Actors Involved:

## *A pilot may involve the following participants from the healthcare ecosystem:* (*For example):*

## *Laboratories, Vendors, Standards Organizations, System Integrators*, *EHR Vendors, Physicians/Providers, Payors, Patients etc.*

Since our mission is to support standards-based CDS, we would directly work with Standards Organizations, as required. Beyond that, our use case would be applicable to any system (EHR, Laboratory, Physician, Patient PHR, System Integrators, etc.) working with health-related data that needs to be evaluated for some health-related purpose.

## Minimum Configuration

## *What is your current set up? What will you be using to conduct the pilot? For example:*

## *An ambulatory Electronic Health Record (EHR) system, A transport system being used in Production environments, A security system being used in Production environments, Standards (and any types of mappings you suspect you will need, a database (which one/type), Any type of interface between 2 different systems etc.*

We have existing systems used in production, and testing/development systems available for the pilot. Using MirthConnect we can interface with just about anything. We natively support vMR structured data as input, but are currently mapping from databases and HL7 v2 lab reports into the vMR structure. We have mapping from CCD under development.

## Timeline

## *What is your proposed timeline given we want to wrap up pilots by end of April/Mid May at the latest? (see Appendix A for more detailed timeline and activities) As a high level reminder here are the overarching tasks per month – please document in more details your plans*

## *January – Kick off and Logistics*

## *February: Start Pilots*

## *March: Continue with Pilots*

## *April: Conclude Pilots*

Timeline is dependent on who we partner with. If we stop with the Metadata Matching step, we will plan to conclude by April.

If there is any interest in supporting the development of a compiler / alternate inferencing engine, we would want to work out a timeline jointly with the partner.

## Success Criteria

## *What will you/your organization use to determine the success of this pilot? This needs to be quantitative and not subjective in as much as possible. (For example: Successfully implement 1 ECA Rule showing successful execution from the EHR system)*

We would regard the ability to identify and execute one OpenCDS Guvnor KM based on the HeD UC1 artifact as a basic success.

We would regard a demo with a partner of one or more HeD UC1 artifact compiled for Drools, or executing against an alternate inference engine as a major and outstanding success.

## In Scope/Out of Scope

## *If you already know what will be in and out of scope for your pilot (beyond the IG or the UC) please document it here: (for example in scope – working with 1 vendor – out of scope customizing the ECA Rules to include a trigger event from a Documentation template)*

## Questions/Needs

## *Please include those items you wish to consider any questions you have or hope the pilot addresses. Additionally, please include those items you need in order to succeed*.*(we will try to accommodate as many of these needs as possible within the scope of ONC, S&I and HeD)*

We need a partner to do the most interesting pilot.

## Helpful References

## Use Case 1: <http://wiki.siframework.org/Health+eDecisions+Use+Case>

## Implementation Guide for UC 1: <http://wiki.siframework.org/Health+eDecisions+Harmonization+and+Standards+%28Implementation%29> (see the “Final Consensus and Harmonization”)

## Pilots Wiki Page: <http://wiki.siframework.org/Health+eDecisions+Pilots>