

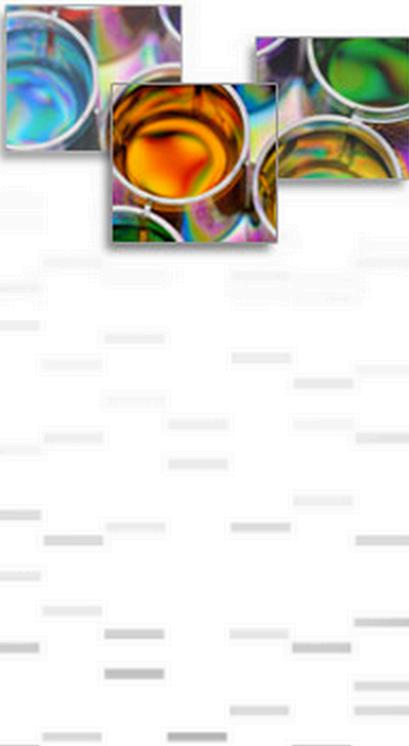
# Read only SMART-FHIR façade for i2b2

Kavi Wagholar, MD PhD

Harvard Medical School  
Massachusetts General Hospital (MGH)  
[kwagholar@mgh.harvard.edu](mailto:kwagholar@mgh.harvard.edu)  
[i2b2.fhir.org](http://i2b2.fhir.org)

## Software

- i2b2 Software
- i2b2 Community Wiki
- i2b2 JIRA Bug Tracker
- Archived Source Code
- Contributed
- Tutorial
- Guestbook \*
- Statistics \*



## i2b2 Software

Use the links below to access the software repository where you will find the project source code, executable files, XSD files, PDF files and more.

Current Version  
**1.7.06**  
[Release Notes](#)

### Web



#### i2b2 Web Client

Launch the AJAX web client in your web browser



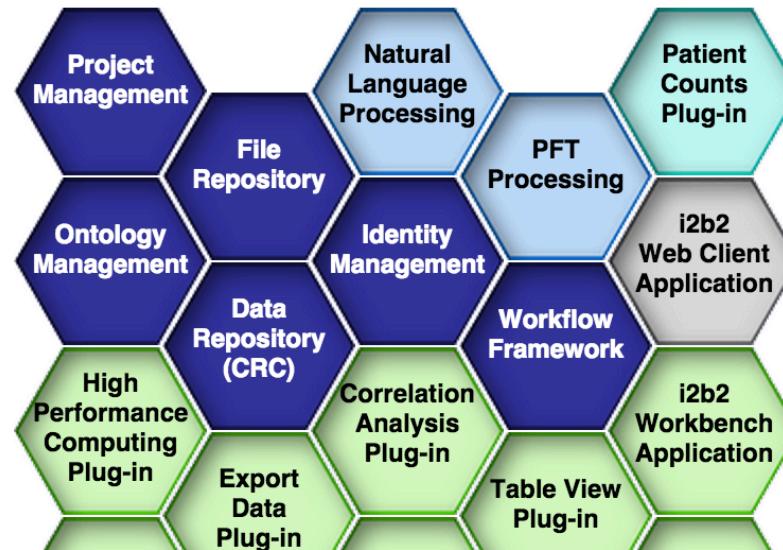
### Documentation

 View By: [Cells](#) | [List](#) | [Search](#)

Enter a keyword below to filter the list of available documents:

Key

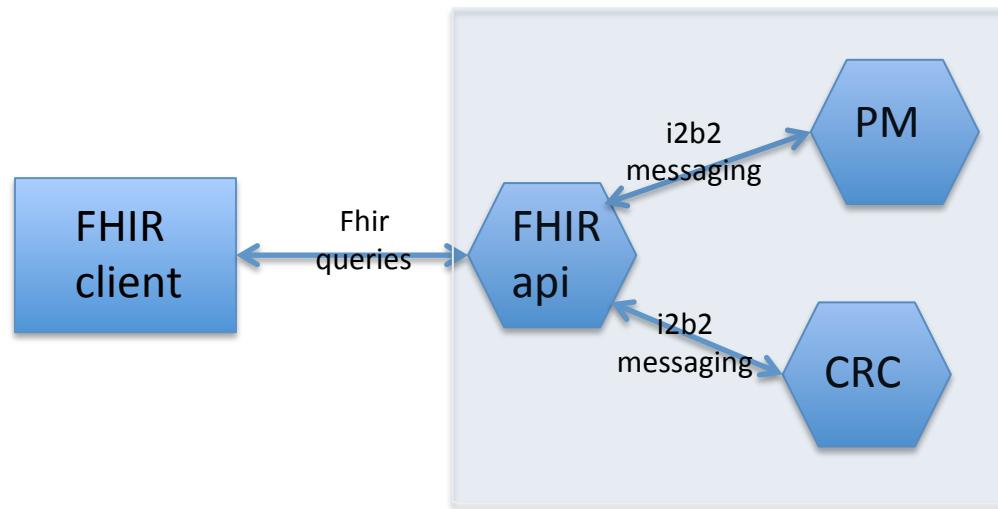
<span style="background-color: #000080; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	i2b2 Core Cell	<span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	i2b2 Optional Cell	<span style="background-color: #9ACD32; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	Workbench/Plug-in
<span style="background-color: #D3D3D3; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	Web Client	<span style="background-color: #00FFFF; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	CRC Plug-in		

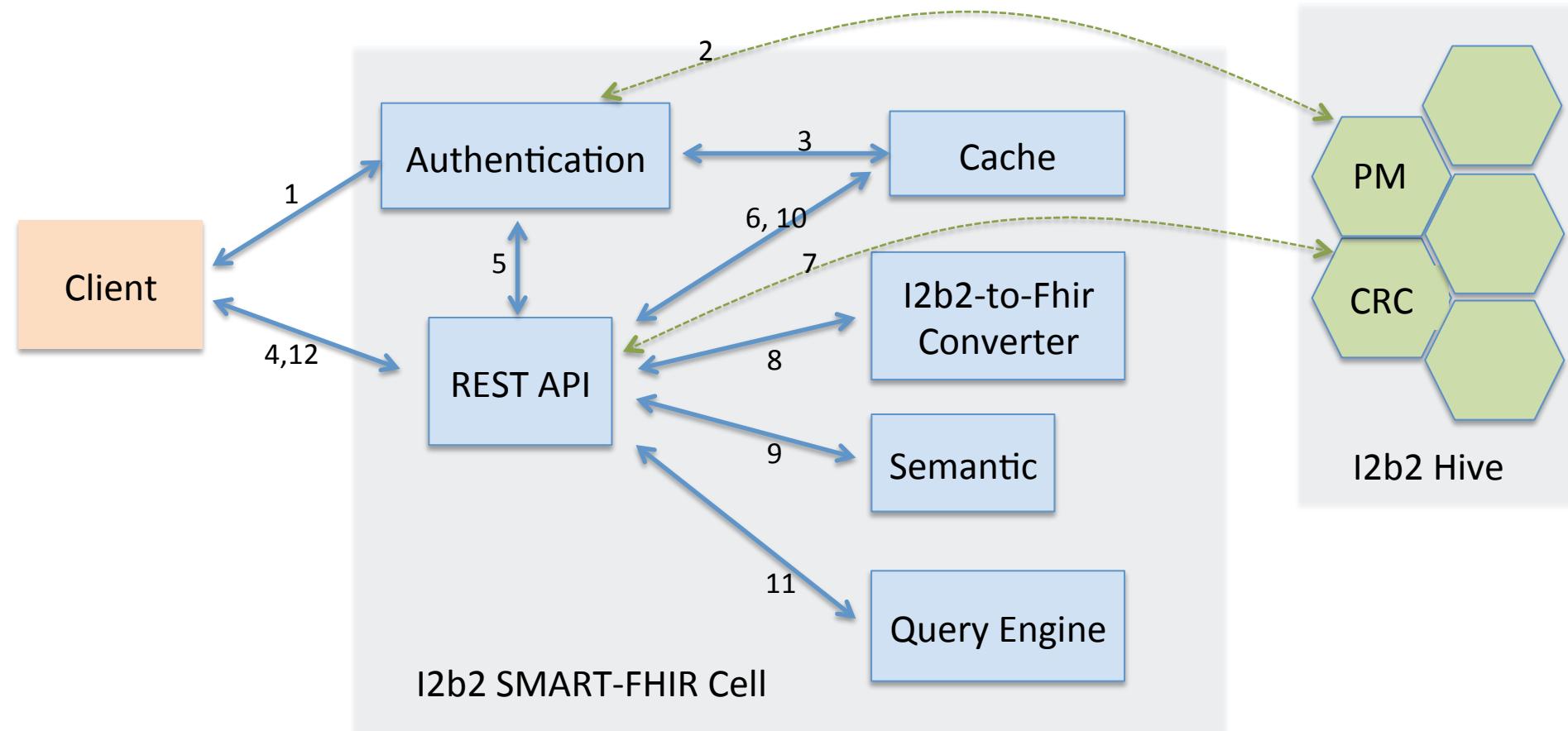


i2b2 Hive

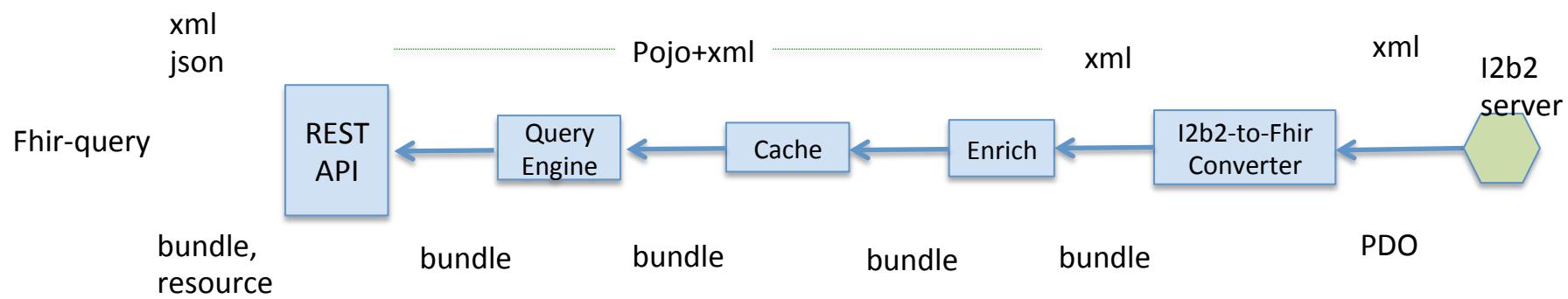
## i2b2

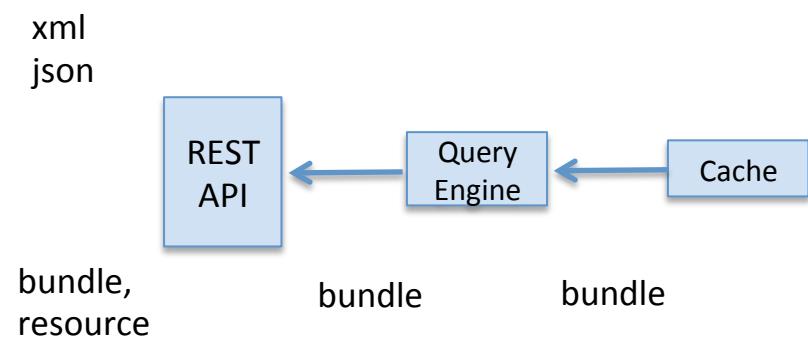
- More than 140 installations worldwide
- Major academic institutions and hospitals
- Identifying cohorts for clinical research
- Several i2b2 instance connect in network
- Potential for running SMART-on-FHIR apps

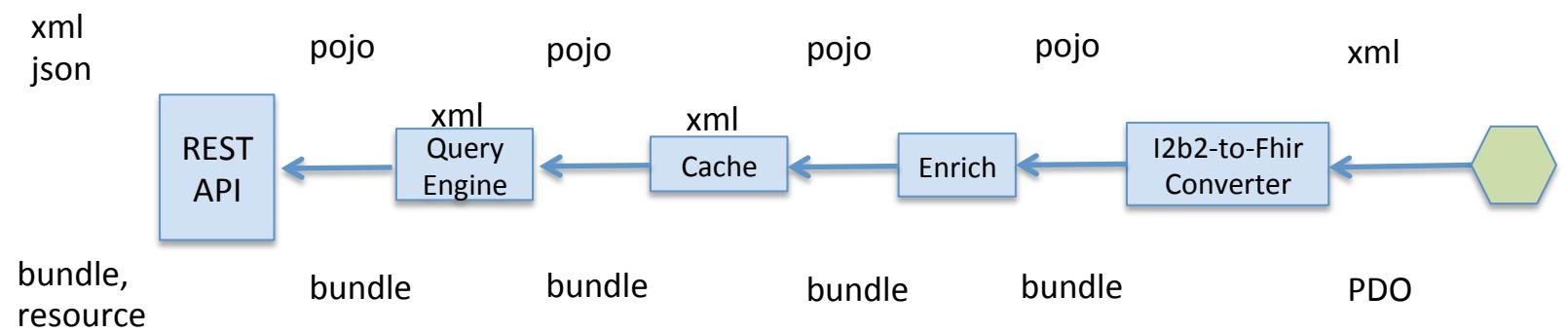




Java EE7, JAXB, JAXRS







# Mapping i2b2 medication observations to FhirResources

```

<observation>
  <concept_cd name="Albuterol Sulfate 4mg ">NDC:00005306343
  </concept_cd>
  <modifier_cd>@</modifier_cd>
  <instance_num>1</instance_num>
</observation>

```

```

<observation>
  <concept_cd name="Albuterol Sulfate 4mg ">NDC:00005306343
  </concept_cd>
  <modifier_cd>MED:FREQ</modifier_cd>
  <instance_num>1</instance_num>
  <valuetype_cd>T</valuetype_cd>
  <tval_char>QD</tval_char>
</observation>

```

```

<observation>
  <concept_cd name="Albuterol Sulfate 4mg ">NDC:00005306343
  </concept_cd>
  <modifier_cd>MED:ROUTE</modifier_cd>
  <instance_num>1</instance_num>
  <valuetype_cd>T</valuetype_cd>
  <tval_char>PO</tval_char>
</observation>

```

```

<observation>
  <concept_cd name="Albuterol Sulfate 4mg ">NDC:00005306343
  </concept_cd>
  <start_date>2009-03-09T00:00:00.000Z</start_date>
  <modifier_cd>MED:DOSE</modifier_cd>
  <instance_num>1</instance_num>
  <valuetype_cd>N</valuetype_cd>
  <nval_num>4</nval_num>
  <units_cd>mg</units_cd>
</observation>

```

1 → MedicationPrescription xmlns="http://hl7.org/fhir" <dateWritten value="2009-03-09T00:00:00"/> <patient><reference value="Patient/1000000001"/></patient> <medication><reference value="Medication/1000000001-10"/></medication> <dosageInstruction> <timingSchedule> <repeat> <frequency value="1"/> <duration value="1"/> <units value="d"/> </repeat> </timingSchedule> <route> <coding> <system value="http://snomed.info/sct"/> <code value="26643006"/> <display value="Oral route"/> <primary value="true"/> </coding> </route> <doseQuantity> <value value="4"/> <units value="mg"/> <system value="http://unitsofmeasure.org"/> </doseQuantity> </dosageInstruction> </MedicationPrescription>

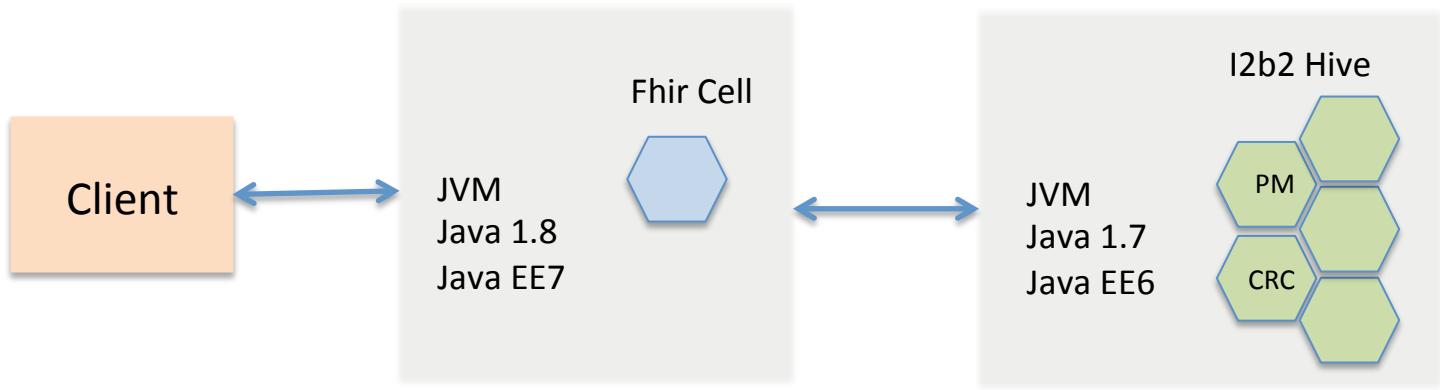
2 → Medication xmlns="http://hl7.org/fhir" <name value="albuterol sulfate 4 mg ORAL TABLET"/> <code> <coding> <system value="http://../NDC"/> <code value="00005306343"/> <display value="Albuterol Sulfate 4mg"/> <primary value="true"/> </coding> <coding> <system value="http://www.nlm.nih.gov/research/umls/rxnorm"/> <code value="197318"/> <display value="albuterol sulfate 4 mg ORAL TABLET"/> </coding> </code> </Medication>

3 → MedicationPrescription <Medication xmlns="http://hl7.org/fhir" <name value="albuterol sulfate 4 mg ORAL TABLET"/> <code> <coding> <system value="http://../NDC"/> <code value="00005306343"/> <display value="Albuterol Sulfate 4mg"/> <primary value="true"/> </coding> <coding> <system value="http://www.nlm.nih.gov/research/umls/rxnorm"/> <code value="197318"/> <display value="albuterol sulfate 4 mg ORAL TABLET"/> </coding> </code> </Medication>

4 → MedicationPrescription <Medication xmlns="http://hl7.org/fhir" <name value="albuterol sulfate 4 mg ORAL TABLET"/> <code> <coding> <system value="http://../NDC"/> <code value="00005306343"/> <display value="Albuterol Sulfate 4mg"/> <primary value="true"/> </coding> <coding> <system value="http://www.nlm.nih.gov/research/umls/rxnorm"/> <code value="197318"/> <display value="albuterol sulfate 4 mg ORAL TABLET"/> </coding> </code> </Medication>

5 → MedicationPrescription <Medication xmlns="http://hl7.org/fhir" <name value="albuterol sulfate 4 mg ORAL TABLET"/> <code> <coding> <system value="http://../NDC"/> <code value="00005306343"/> <display value="Albuterol Sulfate 4mg"/> <primary value="true"/> </coding> <coding> <system value="http://www.nlm.nih.gov/research/umls/rxnorm"/> <code value="197318"/> <display value="albuterol sulfate 4 mg ORAL TABLET"/> </coding> </code> </Medication>

6 → MedicationPrescription <Medication xmlns="http://hl7.org/fhir" <name value="albuterol sulfate 4 mg ORAL TABLET"/> <code> <coding> <system value="http://../NDC"/> <code value="00005306343"/> <display value="Albuterol Sulfate 4mg"/> <primary value="true"/> </coding> <coding> <system value="http://www.nlm.nih.gov/research/umls/rxnorm"/> <code value="197318"/> <display value="albuterol sulfate 4 mg ORAL TABLET"/> </coding> </code> </Medication>



## **I2b2-SMART-FHIR cell team**

- Kavi Wagholarikar, MD PhD
- Joshua C. Mandel, MD
- Jeffery G. Klann, PhD
- Nich Wattanasin
- Michael Mendis
- Kenneth D. Mandl
- Shawn N. Murphy

Massachusetts General Hospital

Harvard Medical School

Partners Healthcare

Children's Hospital Boston

[kwagholarik@mgh.harvard.edu](mailto:kwagholarik@mgh.harvard.edu)