



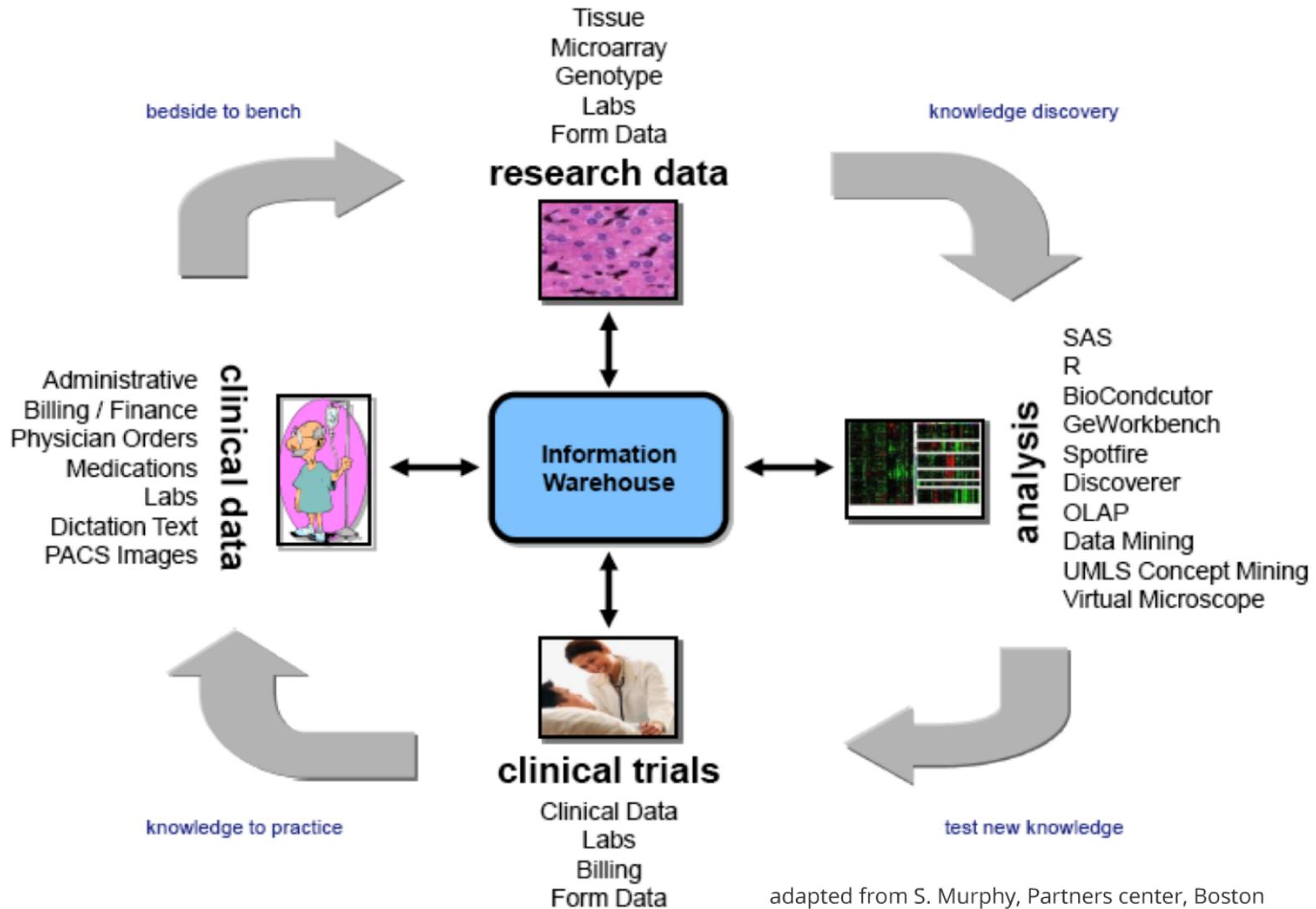
6. TMF-Jahreskongress 02.04.2014

Standardisierte Datenaufbereitung und Zusammenführung für die Forschung

TMF-Projekt V091-MI IDRT *Integrated Data Repository Toolkit*

Ulrich Sax, Thomas Ganslandt und Matthias Löbe,
Christian Bauer, Benjamin Baum, Matthias Quade,
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Sebastian Mate, Jan Christoph, Alfred Winter, Hans-Ulrich Prokosch





adapted from S. Murphy, Partners center, Boston

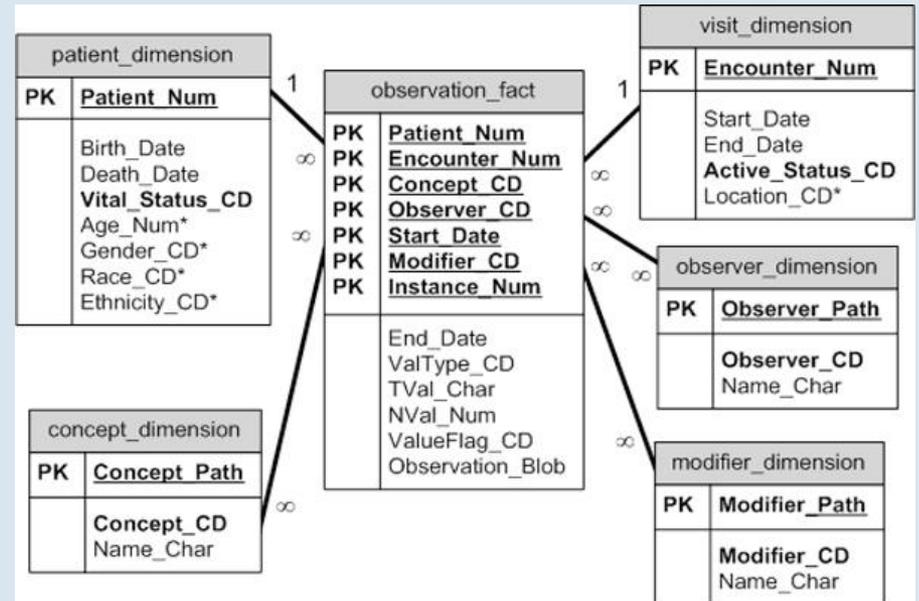
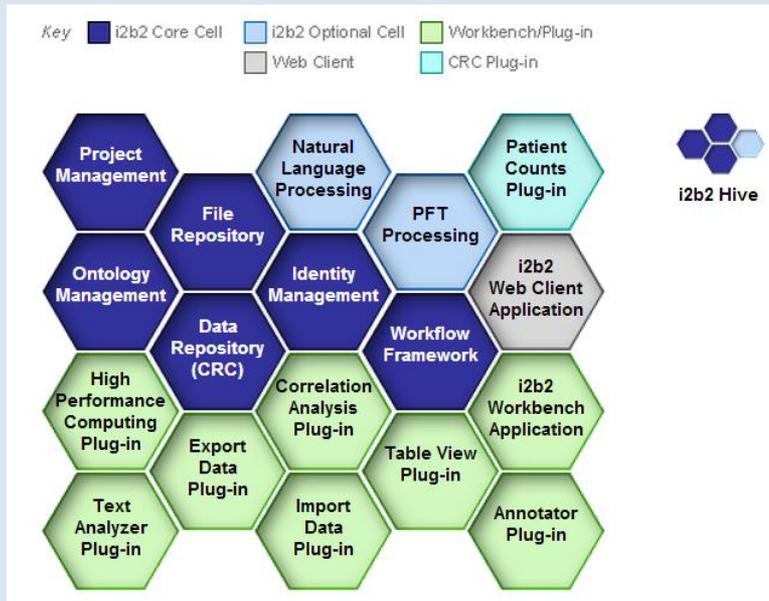
R. Bellazzi, Pavia as shown at 1st Europ. I2b2 AUG 2013

i2b2 (Informatics for Integrating Biology and the Bedside)

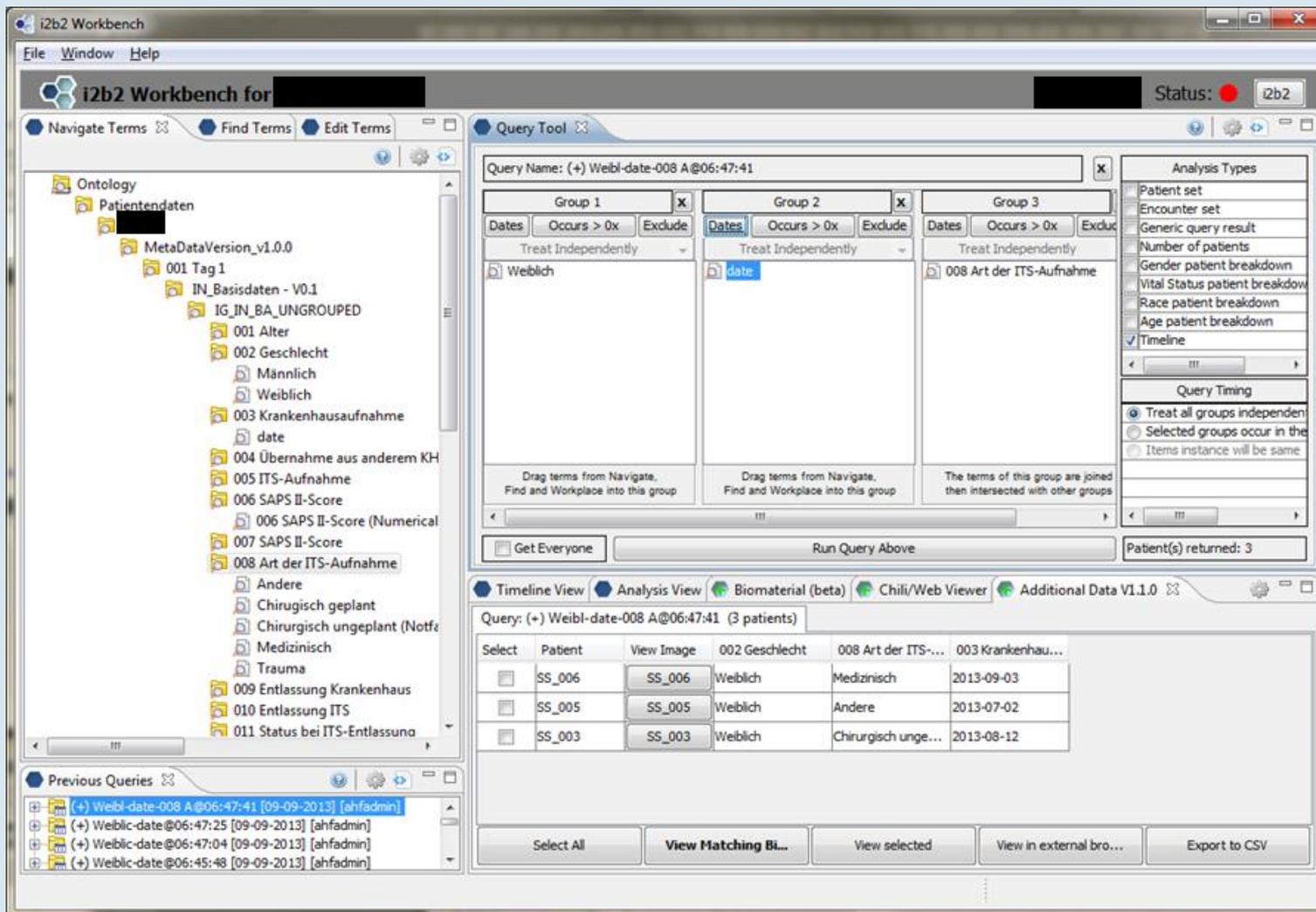
↳ Modulares Open Source Data Warehouse für medizinische Daten

↳ Design:

- ↳ Erweiterbares Hive-Design als Anwendungsserver
- ↳ Durch Plugins erweiterbare Abfragetools
- ↳ Patientendaten werden in einer großen EAV Tabelle abgelegt, spezielle medizinische Daten (Visiten, ...) werden in verlinkten Tabellen abgelegt
- ↳ Patientendaten werden durch einen hierarchischen Konzeptbaum durchsuchbar gemacht (i2b2 ontology)



i2b2 (Informatics for Integrating Biology and the Bedside)



The screenshot shows the i2b2 Workbench interface. The main window is titled "i2b2 Workbench for [redacted] Status: [red dot] i2b2". The interface is divided into several panes:

- Left Pane (Ontology):** A tree view showing the hierarchy of terms. The selected path is: Patientendaten > IN_Basisdaten - V0.1 > IG_IN_BA_UNGROUPED > 002 Geschlecht > Weiblich.
- Query Tool:** A central area with three groups:
 - Group 1: Weiblich
 - Group 2: date
 - Group 3: 008 Art der ITS-Aufnahme
 Each group has buttons for "Dates", "Occurs > 0x", and "Exclude". Below the groups are "Treat Independently" dropdowns and a "Run Query Above" button.
- Right Pane (Analysis Types):** A list of analysis types with "Timeline" selected.
- Bottom Pane (Timeline View):** Shows the query results for "Query: (+) Weibl-date-008 A@06:47:41 (3 patients)".

Select	Patient	View Image	002 Geschlecht	008 Art der ITS-...	003 Krankenhau...
<input type="checkbox"/>	SS_006	SS_006	Weiblich	Medizinisch	2013-09-03
<input type="checkbox"/>	SS_005	SS_005	Weiblich	Andere	2013-07-02
<input type="checkbox"/>	SS_003	SS_003	Weiblich	Chirurgisch unge...	2013-08-12

Navigate Terms Find Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
 - Circulatory system - 66
 - Admit Diagnosis
 - Principal Diagnosis
 - Secondary Diagnosis
 - [Acute Rheumatic fever - 0]
 - Arterial vascular disease - 6
 - [Cerebrovascular disease - 0]
 - Chronic Rheumatic heart disease - 5

Workplace

- SHARED
- demo

Previous Queries

- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]
- Female- 18-34@10:57:18 [6-14-2013] [demo]
- Laboratory_Test@10:52:05 [6-12-2013] [demo]

Query Tool

Query Name: Hypertensive di@10:17:44

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Hypertensive disease - 60								

one or more of these AND drop a term on here

Run Query Clear Print Query 1 Group New Group

Query Status

Finished Query: "Hypertensive di@10:17:44" [17.2 secs]
 Compute Time: 12 secs

Patient Set for "Hypertensive di@10:17:44"

Number of patients for "Hypertensive di@10:17:44"
 patient_count: 40

Navigate Terms | Find Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
 - Circulatory system - 66
 - Admit Diagnosis
 - Principal Diagnosis
 - Secondary Diagnosis
 - [Acute Rheumatic fever - 0]
 - Arterial vascular disease - 6
 - [Cerebrovascular disease - 0]
 - Chronic Rheumatic heart disease - 5
 - Disease of capillaries - 1
 - [Diseases of pulmonary circulation - 0]
 - Hypertensive disease - 40
 - Ischemic heart disease - 17
 - Other forms of heart disease - 35

Workplace

- SHARED
 - demo

Previous Queries

- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Results of Hypertensive di@10:17:44 [6-17-2013] [demo]
 - Patient Set for "Hypertensive di@10:17:44" - FINISHED
 - Number of patients for "Hypertensive di@10:17:44" - FINISHED
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:04:16 [6-17-2013] [demo]

Demographics

Specify Data | View Results | Plugin Help

Patient Count: 40

Age in Years

10-20	3	
20-30	4	
30-40	5	
40-50	8	
50-60	4	
60-70	10	
70-80	3	
80-90	3	

Sex

F	17	
M	23	

Race

asian	7	
black	16	
hispanic	10	
indian	3	
white	4	

Language

english	14	
german	17	
spanish	9	

Plugins

Detailed List View | Category: ALL

- ExportXLS**
This plugin populates a table of selectable concepts/observations and provides the possibility to download the result as a file.
- Demographics (1 Patient Set) - Simple Counts**
This plugin displays a demographic break-down of a Patient Set.

Navigate Terms

Find Terms

- Rx Sig
- [Alternative medicines - 0]
- Anti-infectives - 78
- Antihyperlipidemic agents - 7
- Antineoplastics - 3
- [Biologicals - 0]
- Cardiovascular agents - 19
- Central nervous system agents - 78
- Coagulation modifiers - 11
- Gastrointestinal agents - 43
- Hormones - 49
- Immunologic agents - 3
- Miscellaneous agents - 13

Workplace

- SHARED
- demo

Previous Queries

- Hyperte-Antihyp@10:20:29 [6-17-2013] [demo]
- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]
- Female-18-34@10:57:18 [6-14-2013] [demo]

Query Tool

Query Name: Hyperte-Antihyp@10:20:29

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Hypertensive disease - 40			Antihyperlipidemic agents -					

one or more of these AND one or more of these AND drop a term on here

Run Query Clear Print Query 2 Groups New Group

Query Status

Finished Query: "Hyperte-Antihyp@10:20:29" [13.4 secs]
 Compute Time: 11 secs

Patient Set for "Hyperte-Antihyp@10:20:29"

Number of patients for "Hyperte-Antihyp@10:20:29"
 patient_count: 6

Navigate Terms

Find Terms

- Blood Gases/Oximetry - 2
- CSF Chemistries - 6
- Cardiac Tests - 64
- Endocrine Studies - 40
- [Fetal Lung Maturity - 0]
- Fluid Chemistries - 3
- General Chemistries - 124
- Hemoglobin - 15
- Lipid Tests - 96
- Liver Function Tests - 113
- Lytes/Renal/Glucose - 123
- Thyroid Studies - 81
- Urine Chemistries Random - 8

Workplace

- SHARED
 - demo

Previous Queries

- Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
- Hyperte-Antihyp@10:20:29 [6-17-2013] [demo]
- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]

Query Tool

Query Name: Hyper-Antih-Lipid@10:21:37

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Hypertensive disease - 40			Antihyperlipidemic agents -			Lipid Tests - 96		
one or more of these			AND			one or more of these		
			AND			one or more of these		

Run Query | Clear | Print Query | 3 Groups | New Group

Query Status

Finished Query: "Hyper-Antih-Lipid@10:21:37" [5.4 secs]
 Compute Time: 3 secs

Patient Set for "Hyper-Antih-Lipid@10:21:37"

Number of patients for "Hyper-Antih-Lipid@10:21:37"
 patient_count: 6

Navigate Terms Find Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
- Expression Profiles Data
- Laboratory Tests
- Medications
- Procedures
- Providers
- Reports
- Visit Details

Workplace

- SHARED
 - demo

Previous Queries

- Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
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- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]

Timeline

Specify Data View Results Plugin Help

Drop a Patient Set and one or more Concepts (Ontology Terms) into the input boxes below, and then click the "View Results" tab to view a timeline showing when those concepts were observed in the selected patient set.

Patient Set: Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo] [PATIENT]

Concept(s):

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Click a concept to remove it from the list.

Plugins

Detailed List View Category: ALL

Timeline
This plugin creates a visual representation of when selected observations occur within a given patient set.

Project Request
This plugin is used to generate a request for a new project based on concepts, patients and sets..

Navigate Terms Find Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
- Expression Profiles Data
- Laboratory Tests
- Medications
- Procedures
- Providers
- Reports
- Visit Details

Workplace

- SHARED
 - demo

Previous Queries

- Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
- Hyperte-Antihyp@10:20:29 [6-17-2013] [demo]
- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]

Timeline

Specify Data View Results Plugin Help

<<< start: 1 size: 10 go >>> zoom: - + pan: < >

4/3/1997 11/11/2003 6/22/2010

Person_#1000000025__Female__76yroid__Hispanic

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Person_#1000000031__Male__50yroid__Hispanic

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Person_#1000000054__Female__66yroid__Asian

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Person_#1000000083__Female__65yroid__Black

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Plugins

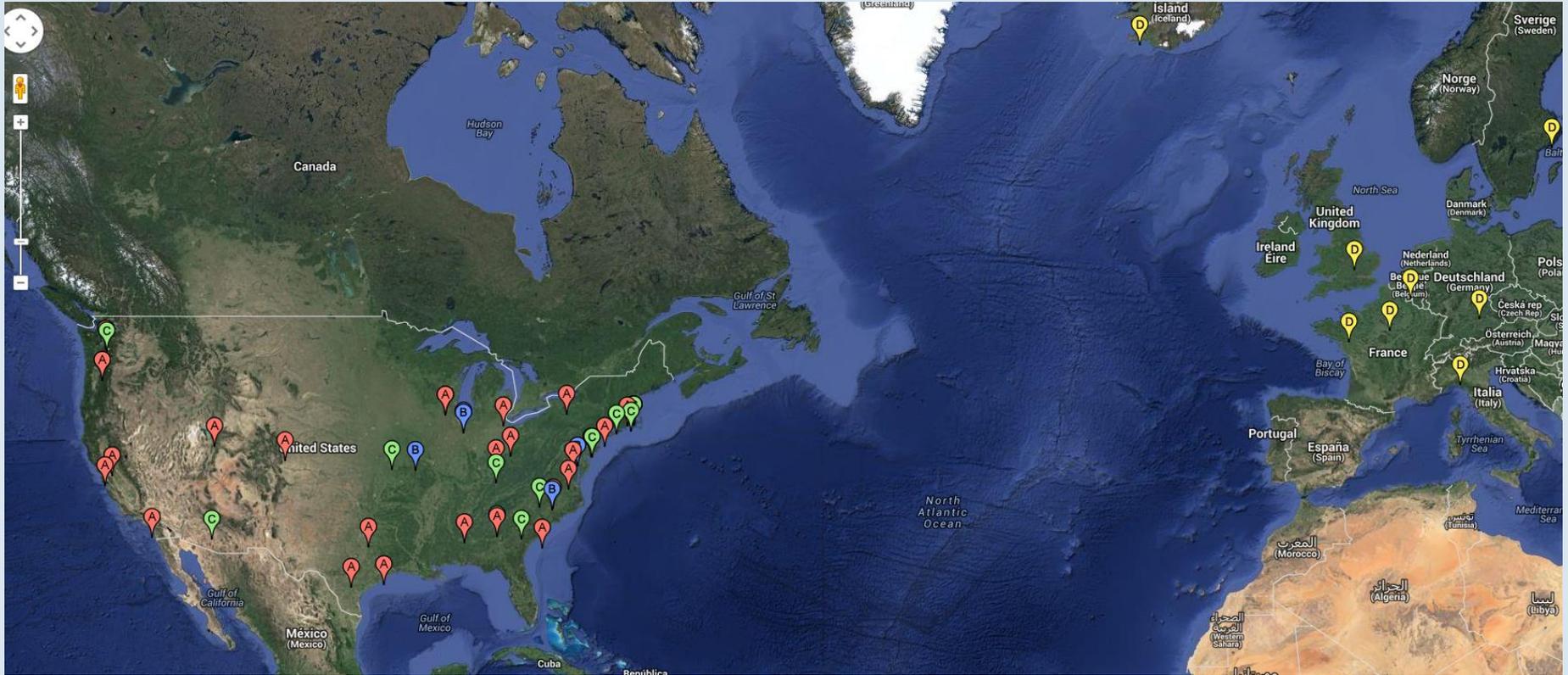
Detailed List View Category: ALL

Timeline
This plugin creates a visual representation of when selected observations occur within a given patient set.

Project Request
This plugin is used to generate a request for a new project based on concepts, patients and sets..



i2b2 Installationen weltweit



- i2b2 Plattform fehlt ...
 - ↳ einfache Installation
 - ↳ einfaches Laden von Daten typischer Formate
 - ↳ Erstellung von (komplexen) i2b2-Hierarchien
 - ↳ Semantische Integration

- Lösung:
 - ↳ Werkzeug-Set, dass i2b2 in eine einfach einzusetzende Lösung für Datenzusammenführung, Filterung und Abfrage und Weitergabe an statistische Analyse macht.
 - ↳ Integrated Data Repository Toolkit (IDRT)
 - ↳ TMF gefördertes Projekt der Universitäten Erlangen, Leipzig und Göttingen

Extraktion

ODM
CSV/SQL
§21
Biomaterial

Aufbereitung

Standard-
Terminologien
MDR-Anbindung
Ontologie-Editor
PIDgen-Anbindung
Eigenst. Objekte

Support

Deliverables
Best Practice-
Guides
Dissemination

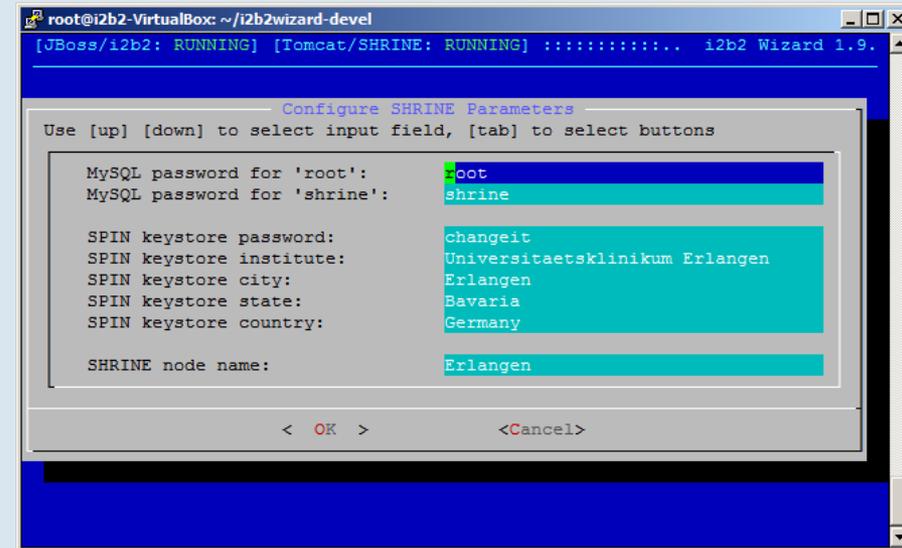
Setup & Konfiguration

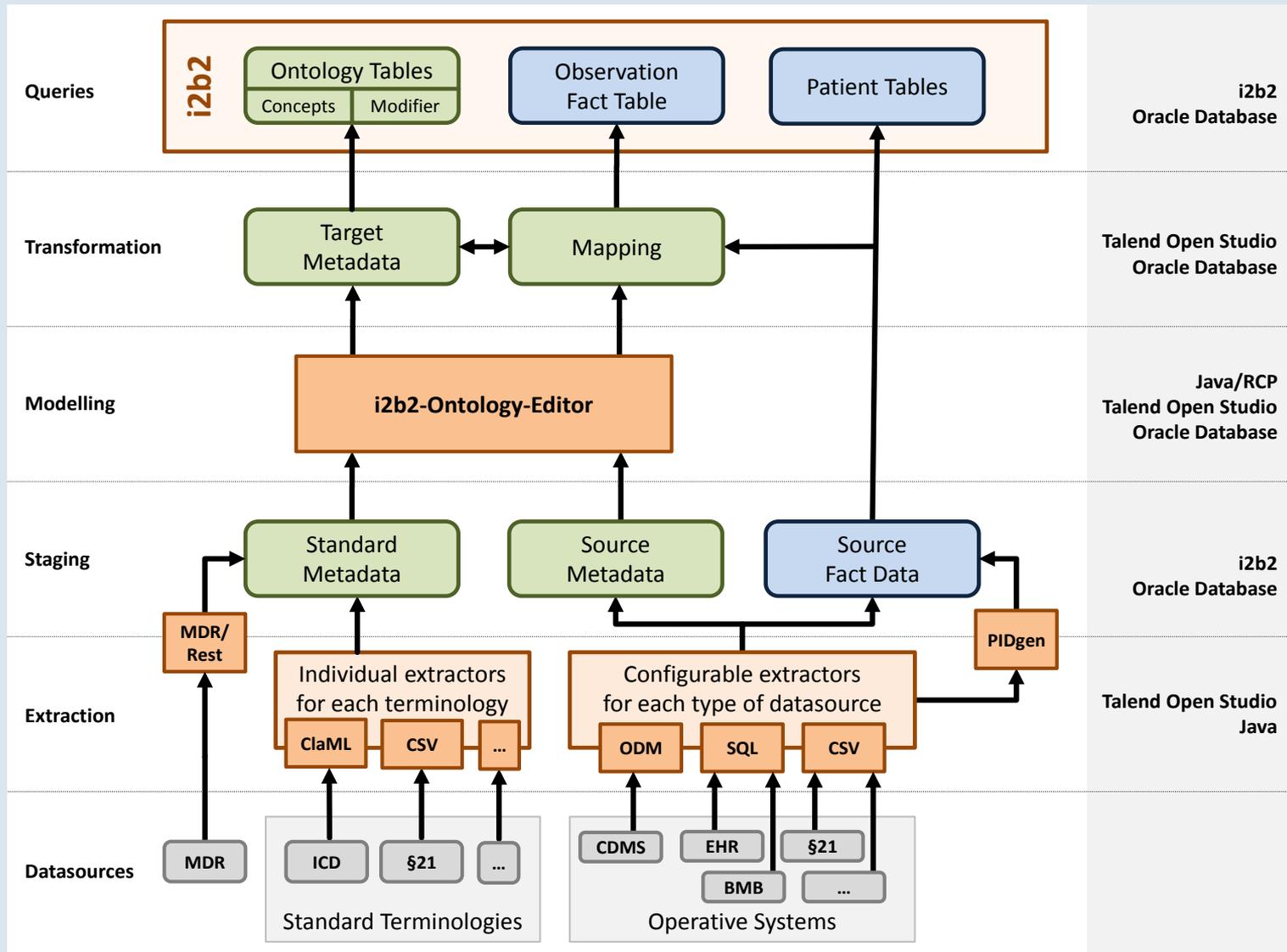
Ziele

- Setup automatisieren
- Konfiguration von Projekten und Nutzern erleichtern

Umsetzung

- Shellscript für Linux & Windows
 - ↳ modulares Konzept
 - ↳ unterstützt verschiedene Betriebssystem- und Datenbanktypen
- automatische Installation der Plattform in ~30m
- einfache Verwaltung von Projekten, Nutzern & Rechten
- Unterstützung von SHRINE (föderierte Datamarts)
- stark nachgefragtes Werkzeug (auch international)



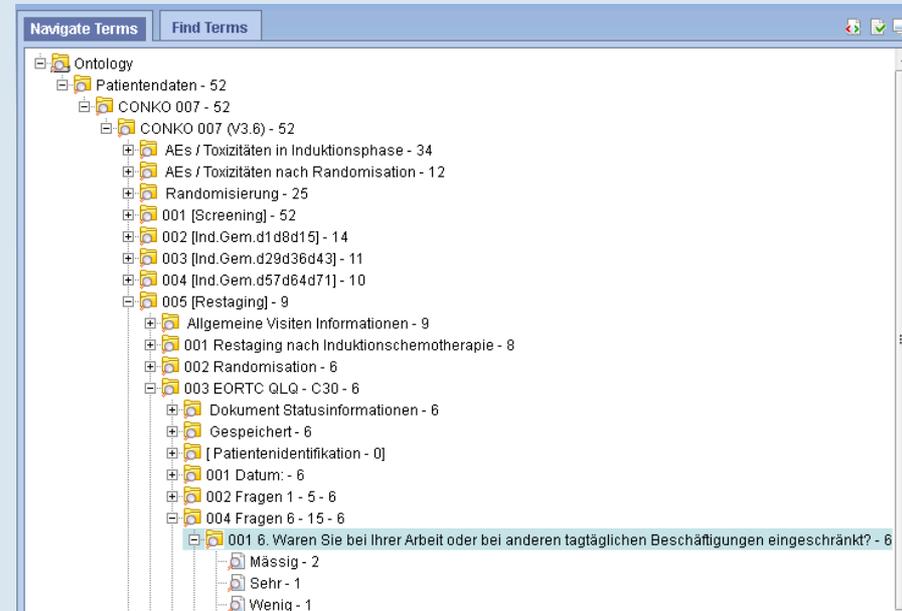


Ziele

- Import von Studiendaten im CDISC ODM-Format
 - ↪ weit verbreitet
 - ↪ strukturiert

Umsetzung

- Talend Open Studio-Job
 - ↪ konfigurierbar
 - ↪ wiederverwendbar in eigenen Jobstreams
 - ↪ Integration in "Standalone" IDRT-Frontend
- generiert hierarchische i2b2-Ontologie
- Unterstützung für ODM v1.3
 - ↪ getestet mit Exporten aus secuTrial, OpenClinica



Ziele

- Import von Routinedaten aus CSV-Dateien und SQL-Datenbanken

↪ unstrukturiert

↪ flexibel

Umsetzung

- Talend Open Studio-Job

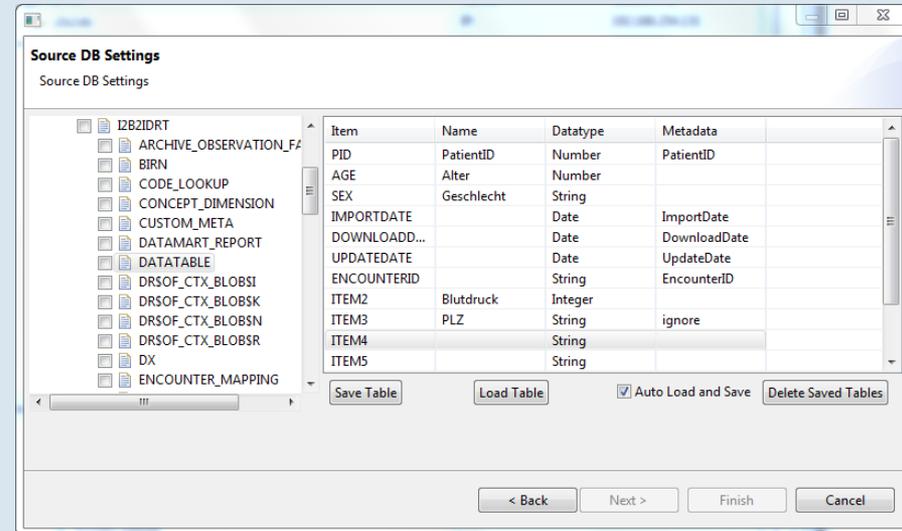
↪ wie ODM-Extraktor

- generiert flache i2b2-Ontologie

↪ ein Ast pro Quelltable + Knoten für Felder & Ausprägungen

↪ Ableitung aus Konfigurationsdatei, Feldnamen und -inhalten

- Unterstützung für beliebige Quelldatenbanken (JDBC-Connector)

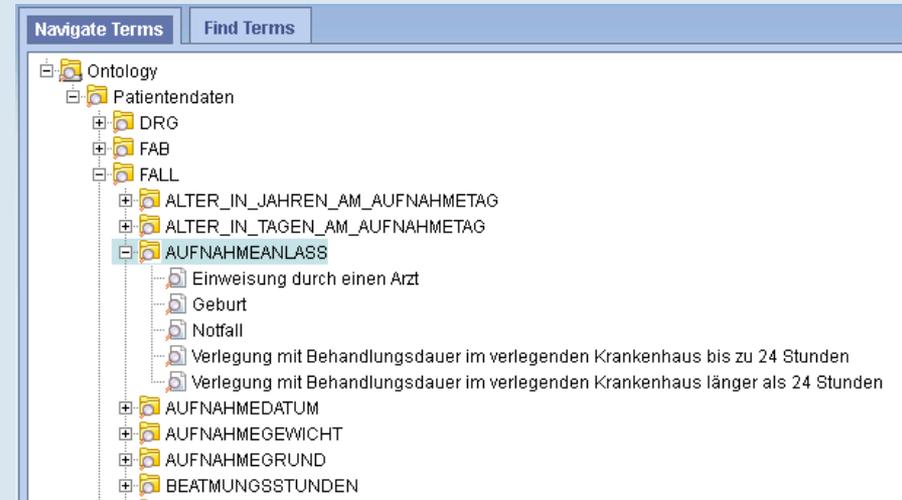


Ziele

- Import des Benchmarking-Datensatz nach KHEntgG §21
 - ↪ weit verbreitet
 - ↪ limitierter Datenumfang
 - ↪ ideal für "quick win" bei Projektstart

Umsetzung

- Talend Open Studio-Job
 - ↪ wie ODM-Extraktor
- verknüpft mehrere IDRT-Teilpakete
 - ↪ Vorparametrierung für CSV-Extraktor
 - ↪ Einbindung relevanter Standardterminologien (ICD, OPS, DRG)
- Unterstützung für verschiedene Jahresversionen des §21

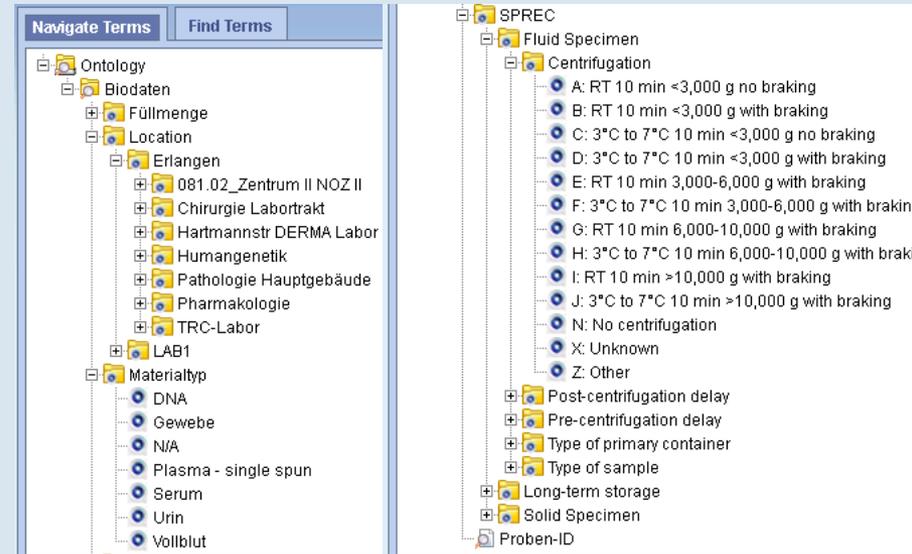


Ziele

- Import von Biomaterialdaten
 - ↳ generischer Ansatz
 - ↳ Umsetzung am Beispiel Starlims

Umsetzung

- Talend Open Studio-Job
 - ↳ wie ODM-Extraktor
- importiert relevante Quelltabellen aus Starlims Biorepository
- generiert hierarchische i2b2-Ontologie
 - ↳ Abbildung flexibler Lagerhierarchien
 - ↳ strukturierte Darstellung des SPREC-Codes (präanalytisches Probenhandling)
 - ↳ Übernahme projektspezifischer Probenmetadaten
- Unterstützung von Modifiern und eigenständigen i2b2-Objekten

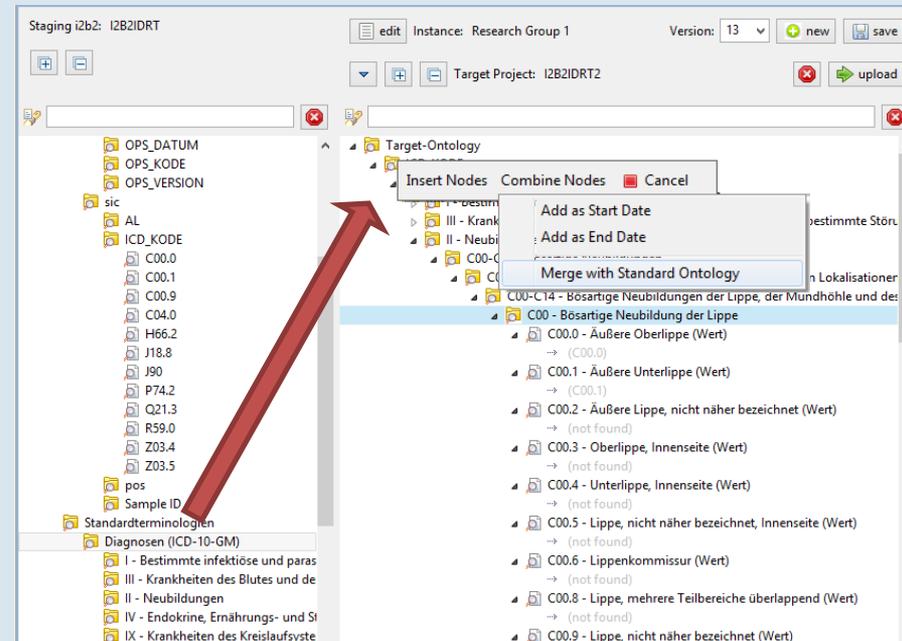


Ziele

- Nachbearbeitung importierter i2b2-Daten
 - ↳ Strukturierung der i2b2-Ontologie
 - ↳ Zusammenführung von Datenelementen
 - ↳ Zuordnung von Attributen (z.B. Datum)

Umsetzung

- Java Eclipse-Frontend
- grafische Benutzeroberfläche
 - ↳ Integration der IDRT-Extraktoren & Standardterminologie-Loader
 - ↳ Laden von Quell- und Zielontologien
 - ↳ Erstellung von Mappings per Drag & Drop
- Überführung von Quelldaten in die Zielontologie



Ziele

- "Nachrüsten" komplexer Datenelemente in i2b2
 - ↪ "Modifier-Codes" erlauben ab i2b2 v1.6 multiple Attribute für ein Objekt
 - ↪ begrenzte Unterstützung für Anzeige und Export in i2b2

Umsetzung

- Erweiterung der IDRT-Komponenten
 - ↪ Unterstützung von Modifiern
- Plugin für i2b2-Webclient
 - ↪ getrennte Darstellung von Konzepten und Modifiern
 - ↪ Bündelung in Karteireitern für die Anzeige
 - ↪ CSV-Export

Additional Data

2 - w-1 - V-002 2@14:24:01 [3-19-2014] [akrueger] [PATIENTSET_350]

Patientendaten Bioproben

Search CSV Export

Patient ID	001 Geschlecht	001 20. Sind Sie derzeit erwerbstätig?	002 22. Welche berufliche Stellung trifft derzeit auf Sie Ihrer früheren Erwerbs
18	2 - weiblich	1 - Vollzeit erwerbstätig	3 - Sonstige Selbständige (im Handel, Gewerbe, Handw PGH-Mitglied
29	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
47	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
50	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
58	2 - weiblich	1 - Vollzeit erwerbstätig	3 - Sonstige Selbständige (im Handel, Gewerbe, Handw PGH-Mitglied
120	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
123	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
140	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
143	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
175	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
228	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r
288	2 - weiblich	1 - Vollzeit erwerbstätig	5 - Angestellte/r

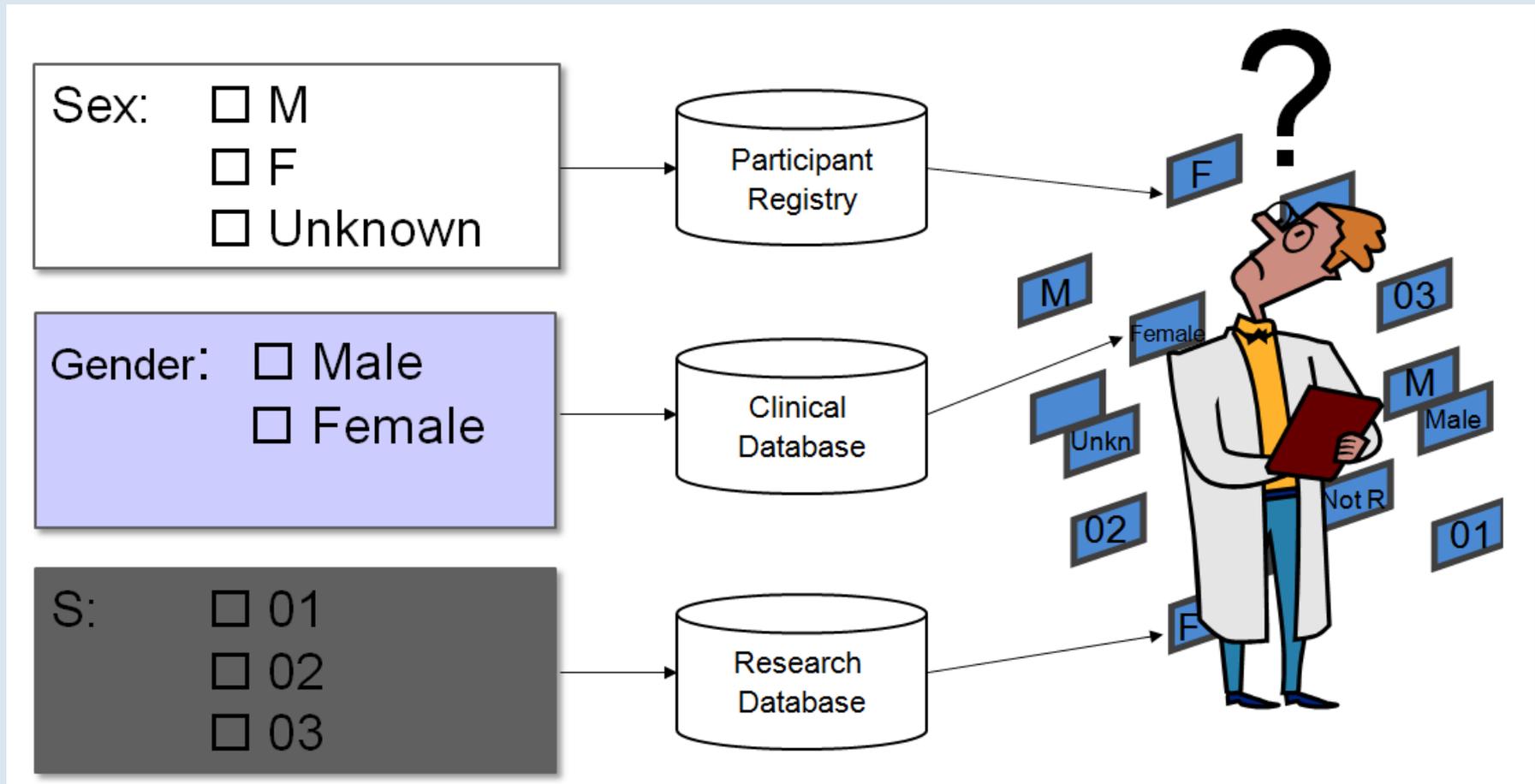


Standardterminologien

Was ist das?

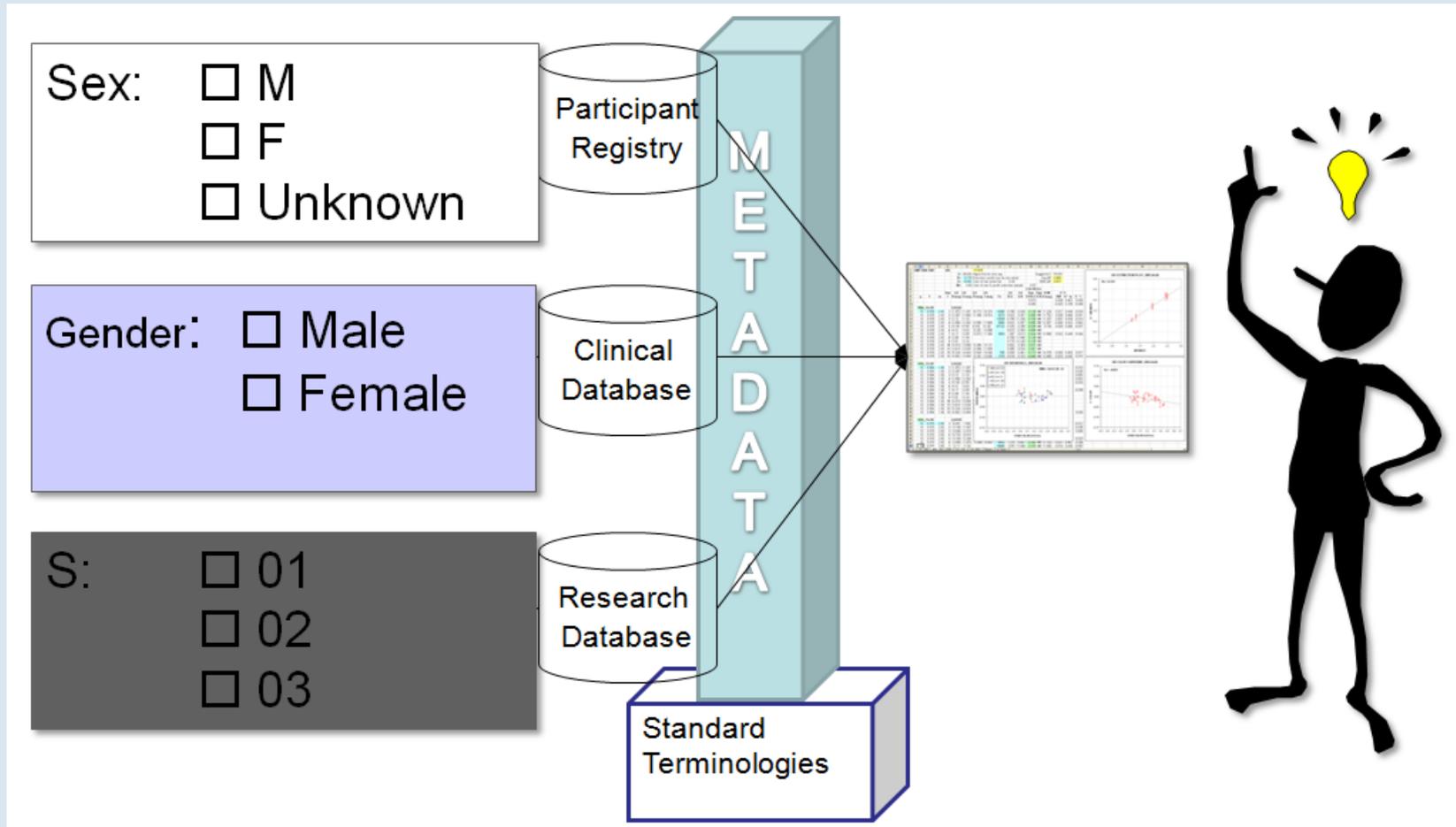
- Standardterminologien sind kontrollierte Ordnungssysteme für medizinische Konzepte
- Variablen bzw. Datenfelder in Studien-CRFs, Registerbögen oder KIS-Formularen werden (zum Teil) durch harmonisierte Konzepte oder Codes beschrieben
- Diagnosen
- Prozeduren
- Laborwerte
- Medikation
- Leistungsverrechnung
- Biomaterial
- Bilddaten
- Psycho-soziale Instrumente

- Interpretation der Datenfelder nur durch Erhebenden



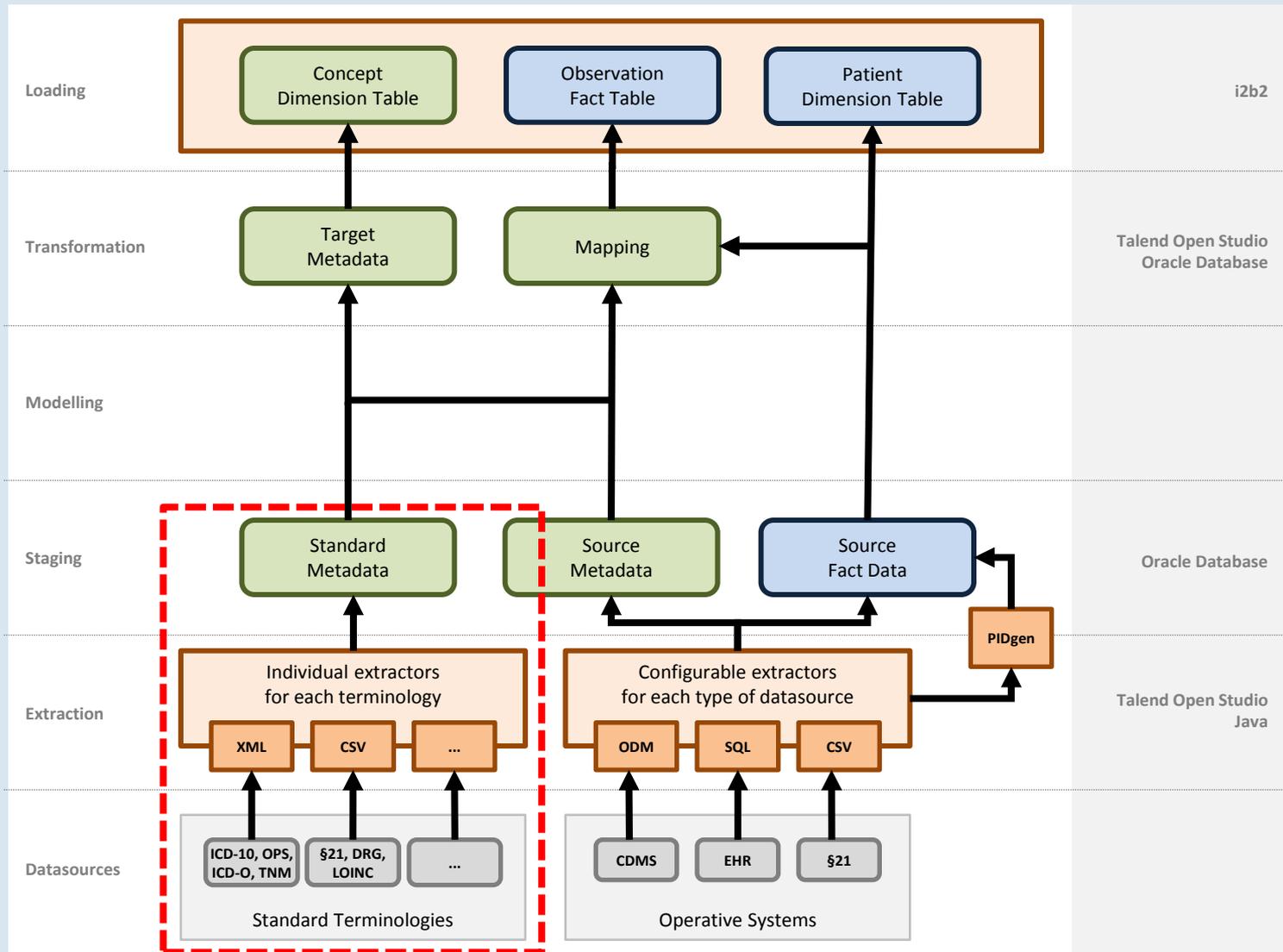
Quelle: NCI caBIG Training 1000: Introduction to caCORE

- Interpretation der Datenfelder ist jedermann möglich



Quelle: NCI caBIG Training 1000: Introduction to caCORE

- i2b2 enthält nur „amerikanische“ Terminologien (ICD-9, National Drug File, RadLex, Zip-Codes)
- Deutschland verwendet eigene Terminologien
 - ↳ Unterschiedliche T. in Versorgung und Forschung
- Ziel: Verfügbarmachung dieser Terminologien in i2b2
 - ↳ **ICD-10-GM** zur Kodierung von Krankheitsdiagnosen und **OPS** zur Kodierung von Operationen und Prozeduren als die in Deutschland am häufigsten verwendeten Systeme in der Krankenversorgung
 - ↳ **DRG-Schlüssel** und **§21-Codelisten** (Aufnahmegrund etc.) als Systeme zur Leistungsabrechnung, die in jedem Krankenhaus zur Verfügung stehen
 - ↳ **LOINC** für die Kodierung von Laborwerten und Dokumenten
 - ↳ **TNM** und **ICD-O** für onkologische Datensammlungen
 - ↳ **MedDRA** zur Kodierung von unerwünschten Ereignissen bzw. Nebenwirkungen besonders in klinischen Studien mit Menschen
- Weitere i.V.: SNOMED CT, ATC, SPREC, CDISC SDTM ...
 - ↳ Nur lohnend, wenn entsprechende Daten vorhanden sind



- OPS – Operationen- und Prozedurenschlüssel
 - ClaML – Classification Markup Language
- ↪ XML-basierter Standard für medizinische Terminologien



DIMDI
medizinwissen
Deutsches Institut für Medizinische
Dokumentation und Information

English Presse | Kontakt Suche:

Ihre Position: [Startseite](#) » [Klassifikationen, Terminologien, Standards](#) » [Downloadcenter](#)

Downloadcenter Klassifikationen, Terminologien und Standards

Im Downloadcenter Klassifikationen können Sie das Datenmaterial zu den Klassifikationen des DIMDI herunterladen. Kostenpflichtige Dateien sind gekennzeichnet; Sie werden dann direkt zum DIMDI Webshop weitergeleitet.

- [Formate und Kosten](#)
- [Hinweise zu Auswahl, Download und Kauf von Dateien und zu Ansprechpartnern/-innen](#)

Mithilfe der **Suche** können Sie sich Dateien anzeigen lassen, die **innerhalb der letzten 14 Tage neu** oder innerhalb eines beliebigen, von Ihnen gewählten Zeitraums in das Downloadcenter eingestellt wurden. Auch **Freitextsuche** ist möglich.

[Downloadcenter](#) » [OPS](#) » [Version 2013](#) » [Systematik](#)

Name	Typ	Größe	Geändert
OPS 2013 Systematik Buchfassung PDF - Referenzfassung Herausgegeben am 12.10.2012	PDF	2601 KB	23.10.12
OPS 2013 Systematik Buchfassung HTML	HTML	1702 KB	23.10.12
OPS 2013 Systematik Buchfassung ODT	ODT	631 KB	23.10.12
OPS 2013 Systematik EDV-Fassung ASCII	ASCII	978 KB	23.10.12
OPS 2013 Systematik EDV-Fassung ClaML/XML	ClaML/XML	1038 KB	23.10.12
Beispiel OPS: Vergleich Buchfassung vs. EDV-Fassung ASCII	HTML	4 KB	23.10.12

```
<xsl:template match="/">

  <!-- xsl:text instructions provide nice formatting for generated code -->
  <xsl:text>#xA;</xsl:text><ops><xsl:text>#xA;</xsl:text>

  <!-- Only <Class> elements of kind 'category' are parsed into concepts -->
  <xsl:for-each select="//Class[@kind='category']"><!-- //Class[not(./SubClass)]

  <!-- Add surrounding <class> element -->
  <xsl:text>#9;</xsl:text><class><xsl:text>#xA;</xsl:text>

  <!-- Add <code> element-->
  <xsl:text>#9;#9;</xsl:text><code><xsl:value-of select="@code"/></code><xsl:text>#9;#9;</xsl:text>

  <!-- Add <label> element-->
  <xsl:text>#9;#9;</xsl:text><label><xsl:value-of select="Rubric[@kind='preferred']"/></label>

  <!-- Add <path> element-->
  <xsl:text>#9;#9;</xsl:text><path>

  <!-- Write path prefix and call template "i2b2path"-->
  <xsl:text>\i2b2\ST\OPS</xsl:text>
  <xsl:call-template name="i2b2path">
    <xsl:with-param name="code" select="@code"/>
  </xsl:call-template>
</xsl:for-each>
</xsl:template>
```

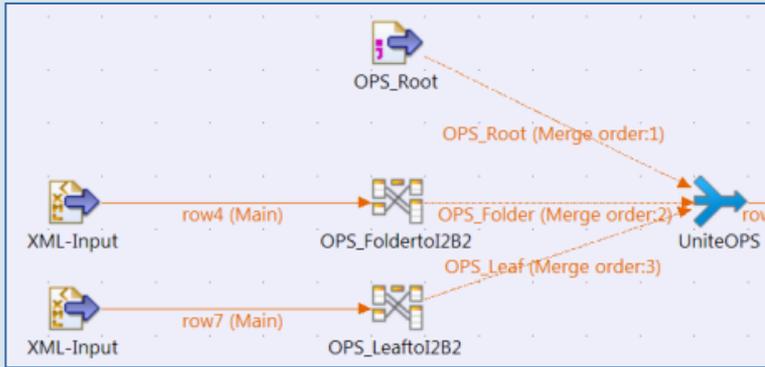
- XSL-Stylesheets für Ordner und Blätter der i2b2-Ontologie

```
54509 <Class code="5-351" kind="category">
54510   <Meta name="P17b-d" value="2"/>
54511   <Meta name="DRG" value="J"/>
54512   <SuperClass code="5-35"/>
54513   <SubClass code="5-351.0"/>
54514   <SubClass code="5-351.1"/>
54515   <SubClass code="5-351.2"/>
54516   <SubClass code="5-351.3"/>
54517   <SubClass code="5-351.4"/>
54518   <SubClass code="5-351.x"/>
54519   <SubClass code="5-351.y"/>
54520   <Rubric kind="preferred">
54521     <Label xml:lang="de" xml:space="default">Ersatz von Herzklappen durch Prothese</Label>
54522   </Rubric>
54523   <Rubric kind="note">
54524     <Label xml:lang="de" xml:space="default">Die Anwendung</Label>
54525   </Rubric>
```

- Normatives ClaML als Eingabedatei

```
28419 <class>
28420   <code>5-351</code>
28421   <label>Ersatz von Herzklappen durch Prothese</label>
28422   <path>\i2b2\ST\OPS\5\5-35...5-37\5-35\5-351\
28423   <level>7</level>
28424 </class>
28425 <class>
28426   <code>5-351.0</code>
28427   <label>Aortenklappe</label>
28428   <path>\i2b2\ST\OPS\5\5-35...5-37\5-35\5-351\
28429   <level>8</level>
28430 </class>
28431 <class>
28432   <code>5-351.1</code>
```

- XML-Zwischenformat



- Talend Open Studio

```

28419 <class>
28420 <code>5-351</code>
28421 <label>Ersatz von Herzklappen durch Prothese</label>
28422 <path>\i2b2\ST\OPS\5\5-35...5-37\5-35\5-351\
28423 <level>7</level>
28424 </class>
28425 <class>
28426 <code>5-351.0</code>
28427 <label>Aortenklappe</label>
28428 <path>\i2b2\ST\OPS\5\5-35...5-37\5-35\5-351\
28429 <level>8</level>
28430 </class>
28431 <class>
28432 <code>5-351.1</code>
  
```

- XML-Zwischenformat

The screenshot shows the 'Auto map!' window in Talend Open Studio. It displays a mapping between the columns of 'row23' and the columns of 'copyOfOPS_all_1'.

Column	Column
code	C_HLEVEL
label	C_FULLNAME
path	C_NAME
level	C_SYNONYM_CD
	C_VISUALATTRIBU...
	C_TOTALNUM
	C_BASECODE
	C_METADATAXML
"concept_cd"	C_FACTTABLECOL...
"concept_dimension"	C_TABLENAME
"concept_path"	C_COLUMNNAME
'T'	C_COLUMNDATAT...
"LIKE"	C_OPERATOR
row23.path	C_DIMCODE
	C_COMMENT
row23.label	C_TOOLTIP
'@'	M_APPLIED_PATH
TalendDate.getCurrentDate()	UPDATE_DATE
	DOWNLOAD_DATE
TalendDate.getCurrentDate()	IMPORT_DATE
"ICD-0"	SOURCESYSTEM_CD
	VALUETYPE_CD
	M_EXCLUSION_CD
	C_PATH
	C_SYMBOL

- Schemamapping nach i2b2

i2b2 Query & Analysis Tool Project: IDRT_STDTERM User: Matthias Löbe Find Patients | Analysis Tools | Help | Logout

Navigate Terms Find Terms

- Ontology
 - Standardterminologien
 - Diagnosebezogene Fallgruppen (G-DRG)
 - Diagnosen (ICD-10-GM)
 - Laborwerte (LOINC)
 - Onkologie (ICD-O-3)
 - Onkologie (TNM-Klassifikation)
 - Paragraph 21
 - Paragraph 21
 - Prozeduren (OPS)
 - 1 - DIAGNOSTISCHE MASSNAHMEN
 - 3 - BILDGEBENDE DIAGNOSTIK
 - 5 - OPERATIONEN
 - 5-01...5-05 - Operationen am Nervensystem
 - 5-06...5-07 - Operationen an endokrinen Drüsen
 - 5-08...5-16 - Operationen an den Augen
 - 5-18...5-20 - Operationen an den Ohren
 - 5-21...5-22 - Operationen an Nase und Nasennebenhöhlen
 - 5-23...5-28 - Operationen an Mundhöhle und Gesicht
 - 5-29...5-31 - Operationen an Pharynx, Larynx und Trachea
 - 5-32...5-34 - Operationen an Lunge und Bronchus
 - 5-35...5-37 - Operationen am Herzen
 - 5-35 - Operationen an Klappen und Septen des Herzens und herznaher C
 - 5-350 - Valvulotomie
 - 5-350 - Valvulotomie (Wert)
 - 5-351 - Ersatz von Herzklappen durch Prothese
 - 5-351.0 - Aortenklappe (Wert)
 - 5-351.1 - Mitralklappe, offen chirurgisch (Wert)
 - 5-351.2 - Mitralklappe, thorakoskopisch (Wert)
 - 5-351.3 - Pulmonalklappe (Wert)
 - 5-351.4 - Trikuspidalklappe (Wert)
 - 5-351.x - Sonstige (Wert)
 - 5-351.y - N.n.bez. (Wert)

Query Tool

Query Name:

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">R65.0 - Systemisches infla</div> <div style="border: 1px solid black; padding: 5px;">R65.1 - Systemisches infla</div>								

one or more of these

AND

drop a term on here

Run Query Clear Print Query 1 Group New Group

Query Status



Nationales Metadata Repository (MDR)

Standardisierung und semantische Fundierung

- Datenelemente, Wertelisten und Formulare zentral speichern
- Qualität, Effizienz, Vergleichbarkeit und Zugreifbarkeit steigern

The screenshot shows the MDR web interface with a navigation menu at the top (New, Edit, Save, Home, Copy, Paste, Remove, Simple, ISO11179, Browser, Preview, Source, Version) and a user profile (Sign out mloebe).

The main content area is divided into two panes:

- Left Pane (Study INSEP: Entlassungsgrund):** A hierarchical tree view showing the structure of code lists. The path is: INSEP -> IN_Basisdaten - V1.0 -> Aufnahme -> Entlassung -> Entlassungsgrund.
- Right Pane (CL_Entlassungsgrund):** A detailed view of the selected code list. It includes fields for Parent, Language (en-US), Designation (CL_Entlassungsgrund), Definition, Data Type (integer), Format, Length (0), and Unit of Measure (no value). Below these fields is a table of members:

Code	Text
2	Verlegung in andere Klinik
1	Entlassung nach Hause, Pflegeheim oder Reha-Klinik

At the bottom right, there is a sidebar with a search filter (FILTER BY Data Group) and a list of related studies, including Study NeuroPAIN, Study MEDUSA-Zentren, Study MEDUSA, Study ALERTS, Study INSEP, Study EIDECS-Behandler, Study ACTION, Study EIDECS, Study SMOOTH, Study REGISTRY, Study PREDSEP, Study OSARST, Study NeuroSOSNERVE, Study NeuroSOSCIP, Study NeuroPAIN - Probanden, Study NeuroPAIN - HE-Patienten, Study NeuroPAIN - ICU-Patienten, and Study NeuroPAIN - Sepsis-Patienten.

- MDR-Server als Metadatenquelle, Mapping auf klinische Fakten

The screenshot displays the I2B2 Ontology Editor V0.9.0.9 interface. The main window is split into several panes:

- Left Pane (IDRT Import Tool):** Shows a tree view of staging I2B2 servers. The 'system@ifbfb1' server is selected, showing details like Hostname (ifbfb1), Project (I2B2CSCCTRIALS), and Patients. An 'Import Log' shows the progress of importing data from the MDR server.
- Right Pane (Ontology Editor):** Shows a tree view of the target ontology (I2B2MDR). The 'Target-Ontology' is expanded to show various clinical facts like '002 Geschlecht' (Gender) and '003 SAPS II-Score'.
- Bottom Left (StatusView):** Shows a log of system messages, including 'The i2b2 staging project has been loaded' and 'Target I2B2 loaded (0 lines)'.
- Bottom Right (Target Info View):** Shows a table of attributes and their values for the selected target instance.

Attribute	Value
C_HLEVEL	7
C_FULLNAME	\i2b2\PD\S_INSEP\1.0.0\SE_INTAG1\F_IN_BASISDATE_V10\IG_IN_BA_PATIENTENDATEN\I_IN_BA_1...
C_NAME	002 Geschlecht
C_SYNONYM_CD	N
C_VISUALATTRIBUTES	FAE
C_TOTALNUM	0
C_BASECODE	
C_METADATAXML	
C_FACTTABLECOLUMN	concept_cd
C_TABLENAME	concept_dimension
C_COLUMNNAME	concept_path
C_COLUMNDATATYPE	T

Navigate Terms

Find Terms

- [-] Ontology
 - [-] Patientendaten - 27329
 - [-] ACTION - 251
 - [-] ALERTS - 7319
 - [-] EIDECS - 269
 - [-] EIDECS-Behandler - 191
 - [-] INSEP - 12110
 - [-] MetaDataVersion_v1.0.0 - 12110
 - [-] 001 Tag 1 - 12109
 - [-] IN_Basisdaten - V1.0 - 11032
 - [-] Aufnahme - 11032
 - [-] Entlassung - 10923
 - [-] 001 Entlassung ITS - 10922
 - [-] 002 Status bei ITS-Entlassung - 10923
 - Verstorben - 1019
 - Überlebt - 9904
 - [-] 003 Entlassung Krankenhaus - 10361
 - [-] 004 Status bei KH-Entlassung - 10350
 - Verstorben - 1281
 - Überlebt - 9069
 - [-] 005 Entlassungsgrund - 9082
 - [-] Patientendaten - 11032
 - [-] Sepsispatient - 10974
 - [-] 001 Patient mit schwerer Sepsis / septischem Schock? - 10974
 - Ja - 1387
 - Nein - 9587
 - [-] IN_Basisdaten - V1.0-HGW - 1076
 - [-] IN_SOFASubscore - V1.0 - 1953
 - [-] [IN_SOFASubscore - V1.0-Opt - 0]
 - [-] IN_Sepsisdaten - V1.0 - 1538
 - [-] 002 Tag 7 - 1003
 - [-] 003 Entlassung ITS - 1576
 - [-] 004 Verlegung - 284

Query Tool

Query Name: Überl-Verst-Ja@18:43:24

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Überlebt - 9904			Verstorben - 1281			Ja - 1387		
one or more of these			one or more of these			one or more of these		
AND			AND					

Run Query
Clear
Print Query
3 Groups
New Group

Query Status

Finished Query: "Überl-Verst-Ja@18:43:24" [20.6 secs]
 Compute Time: 19 secs
Number of patients for "Überl-Verst-Ja@18:43:24"
 patient_count: 70

- Kooperationsvertrag zwischen TMF und i2b2 Center for Biomedical Computing
- IDRT Präsentationen
- ↳ i2b2 AUG Konferenz Boston 10.07.2014
- ↳ IDRT2-Abschlussworkshop 10.09.2014
- ↳ 2. EU i2b2 AUG Konferenz 11.09.2014



- NIH-funded National Center for Biomedical Computing (NCBC)
- Erste Förderphase ausgelaufen
- Verstetigung in den Harvard Medical-Häusern
- Große Community weltweit
- Jetzt: Center for Biomedical Computing

- Derzeit Version 1.7.01, Version 2 in Vorbereitung

- Details:
 - ↳ I2b2-Website <https://www.i2b2.org/>
 - ↳ Jährliche AUG meetings Ostküste/Westküste USA, EU
 - ↳ Website IDRT <http://idrt.imise.uni-leipzig.de/>
 - ↳ MDR-Website <https://mdr.imise.uni-leipzig.de/>

ConvergeHEALTH by Deloitte

Population Demographics | Diagnosis Summary | Procedure Summary | Prescriptions Summary | Labs Summary | Event Summary

Total Patients: 60,000
In Selection: 60,000

miner. | outcomesminer

OUTCOMES

- Number of in-patient days per patient per quarter for COPD
- Number of office visits per patient per quarter
- Number of urgent care visits per patient per quarter
- Number of urgent care visits per patient per quarter for COPD

AGE AND GENDER DISTRIBUTION

Number of Patients vs. Age Band (0-10 to 81-100). Legend: Female (light green), Male (dark blue).

COMORBIDITIES

CHRONIC LUNG DISEASE	DIABETES M.	ELECTROLY...	HYPD.	OBESITY
				KIDNEY FAIL.
	CHRONIC HE.	DEPRESSION	PSYCHOSIS	NEUROL.
HYPERTENSION	ANEMIA	PULMONOICR.	HEART...	SOLID TU.
			PERNA.	WEIGHT L.
				CORADULA.

DRUGS OF INTEREST

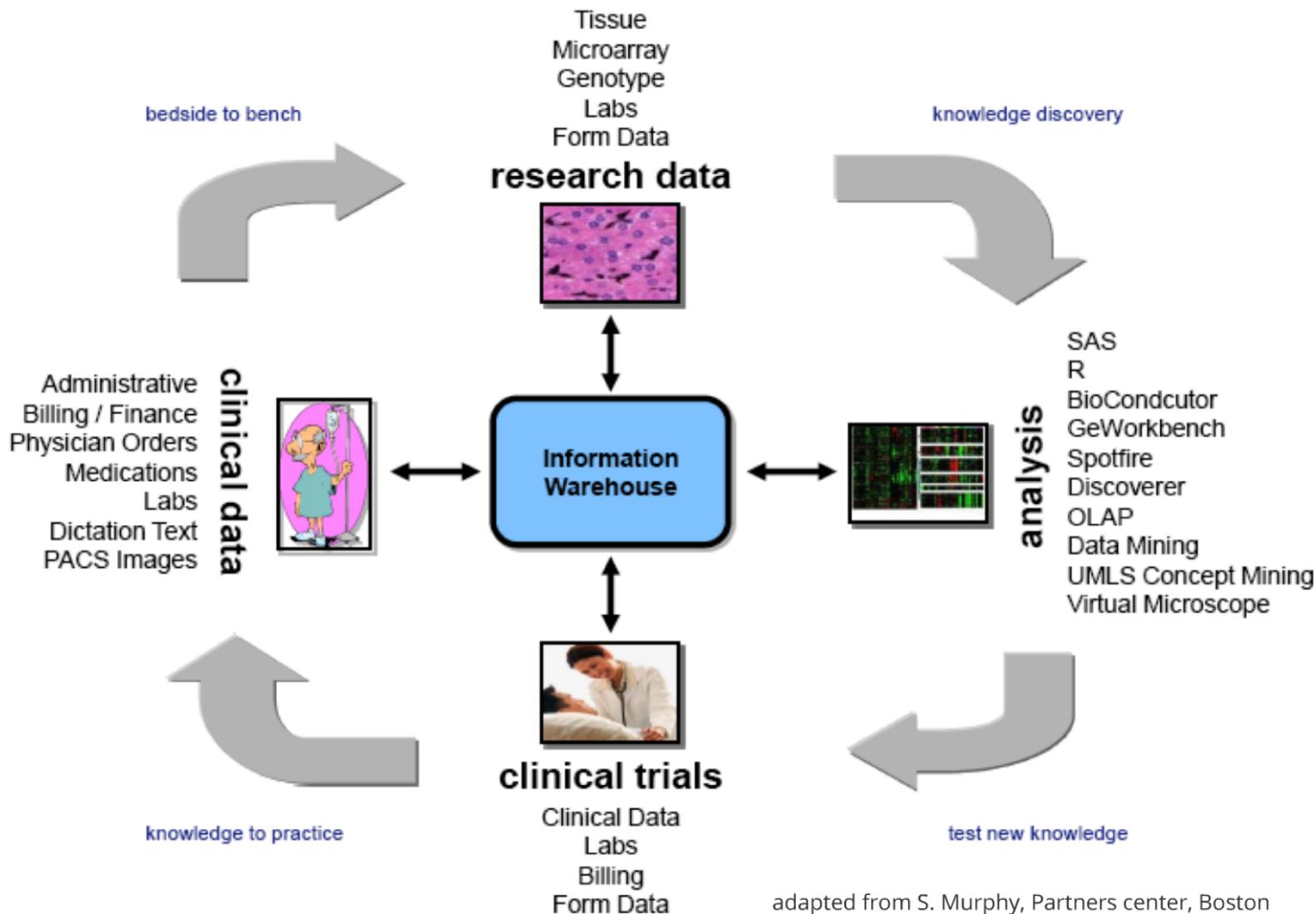
Outcome value range: 0.00 - 10.00

PRESCRIPTIONS

CHRON	STOMAT...	INTESTL.	PSY.	CARDIAC T...
				LIPID MODI.
DRUGS FOR OBSTRU...	BLOOD SU...	COU...	ANTITHROM...	AGE
			DIURETICS	OTO
NASAL PREP	OPH.	MINERAL S.	ANESTH.	VASOPR.
			OPHT	AN.
ANTI.	ANALGESICS	PSYCHOLE	OVINE AN.	DRUGS
			ANTI-PIRU.	ANTI-IN.
	CORTICOST...	CORTICOS.	DRUGS U.	ANTHIS.
				TH.
				BETA BL.
				MUSCL.
				CALCI.
				DL.

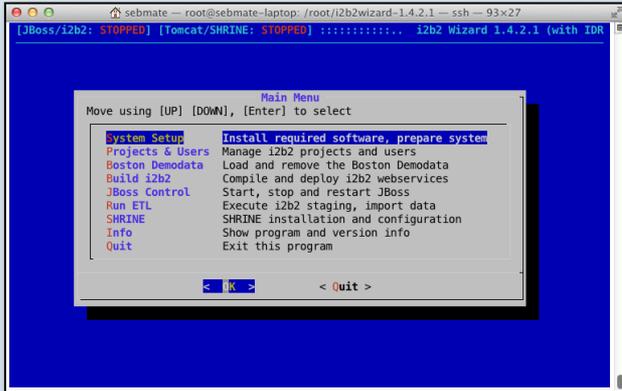
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<http://www.converge-health.com/solutions/miner/outcomes-miner/>

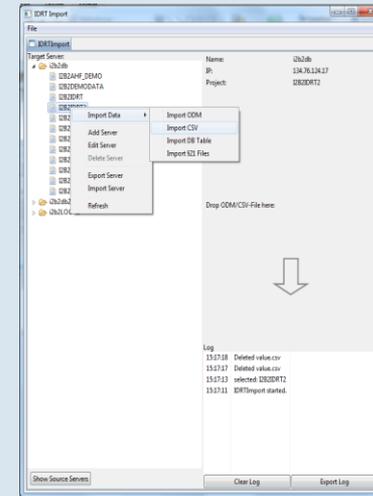


adapted from S. Murphy, Partners center, Boston
 R. Bellazzi, Pavia as shown at 1st Europ. I2b2 AUG 2013

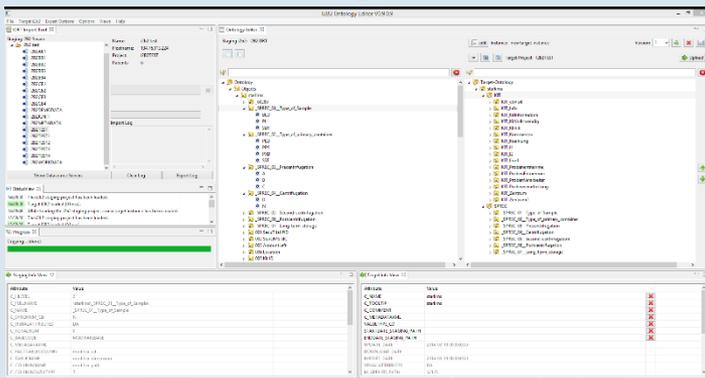
i2b2Wizard



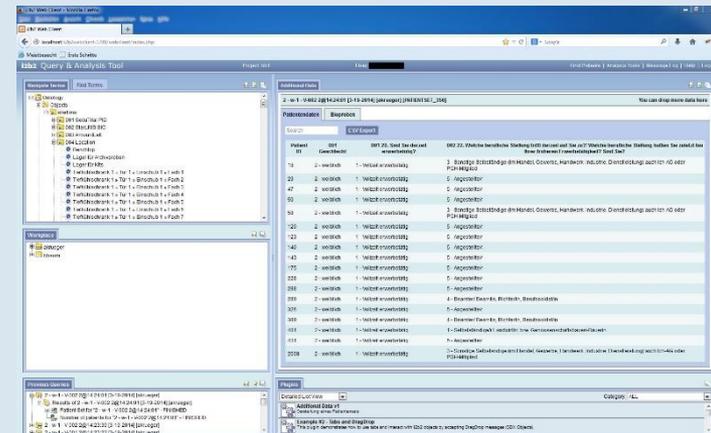
IDRT Import Tool



i2b2 Ontology Editor



i2b2 Web Client PlugIn





6. TMF-Jahreskongress 02.04.2014

Standardisierte Datenaufbereitung und Zusammenführung für die Forschung

TMF-Projekt V091-MI IDRT *Integrated Data Repository Toolkit Integrated*

Ulrich Sax, Thomas Ganslandt und Matthias Löbe,
Christian Bauer, Benjamin Baum, Matthias Quade,
Matthias Löbe, Igor Engel, Sebastian Stäubert,
Sebastian Mate, Jan Christoph, Alfred Winter, Hans-Ulrich Prokosch





Additional Slides

i2b2 Star Schema

visit_dimension		
PK	<u>encounter_num</u>	INTEGER
PK	<u>patient_num</u>	INTEGER
	inout_cd	VARCHAR(10)
	location_cd	VARCHAR(100)
	location_path	VARCHAR(700)
	start_date	DATETIME
	end_date	DATETIME
	visit_blob	TEXT(10)

patient_dimension		
PK	<u>patient_num</u>	INTEGER
	vital_status_cd	VARCHAR(10)
	birth_date	DATETIME
	death_date	DATETIME
	sex_cd	CHAR(10)
	age_in_years_num	INTEGER
	language_cd	VARCHAR(100)
	race_cd	VARCHAR(100)
	marital_status_cd	VARCHAR(100)
	religion_cd	VARCHAR(100)
	zip_cd	VARCHAR(20)
	statecityzip_path	VARCHAR(200)
	patient_blob	TEXT(10)

observation_fact		
PK	<u>encounter_num</u>	INTEGER
PK	<u>concept_cd</u>	VARCHAR(20)
PK	<u>provider_id</u>	VARCHAR(20)
PK	<u>start_date</u>	DATETIME
PK	<u>modifier_cd</u>	CHAR(1)
	patient_num	INTEGER
	valtype_cd	CHAR(1)
	tval_char	VARCHAR(50)
	nval_num	DECIMAL(10,2)
	valueflag_cd	CHAR(1)
	quantity_num	DECIMAL(10,2)
	units_cd	VARCHAR(100)
	end_date	DATETIME
	location_cd	TEXT(100)
	confidence_num	VARCHAR(100)
	observation_blob	TEXT(10)

concept_dimension		
PK	<u>concept_path</u>	VARCHAR(700)
	concept_cd	VARCHAR(20)
	name_char	VARCHAR(2000)
	concept_blob	TEXT(10)

provider_dimension		
PK	<u>provider_path</u>	VARCHAR(800)
	provider_id	VARCHAR(20)
	name_char	VARCHAR(2000)
	provider_blob	TEXT(10)

Navigate Terms Find Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
 - Circulatory system - 66
 - Admit Diagnosis
 - Principal Diagnosis
 - Secondary Diagnosis
 - [Acute Rheumatic fever - 0]
 - Arterial vascular disease - 6
 - [Cerebrovascular disease - 0]
 - Chronic Rheumatic heart disease - 5

Workplace

- SHARED
- demo

Previous Queries

- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]
- Female- 18-34@10:57:18 [6-14-2013] [demo]
- Laboratory_Test@10:52:05 [6-12-2013] [demo]

Query Tool

Query Name: Hypertensive di@10:17:44

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Hypertensive disease - 60								

one or more of these AND drop a term on here

Run Query Clear Print Query 1 Group New Group

Query Status

Finished Query: "Hypertensive di@10:17:44" [17.2 secs]
 Compute Time: 12 secs

Patient Set for "Hypertensive di@10:17:44"

Number of patients for "Hypertensive di@10:17:44"
 patient_count: 40

Navigate Terms | Find Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
 - Circulatory system - 66
 - Admit Diagnosis
 - Principal Diagnosis
 - Secondary Diagnosis
 - [Acute Rheumatic fever - 0]
 - Arterial vascular disease - 6
 - [Cerebrovascular disease - 0]
 - Chronic Rheumatic heart disease - 5
 - Disease of capillaries - 1
 - [Diseases of pulmonary circulation - 0]
 - Hypertensive disease - 40
 - Ischemic heart disease - 17
 - Other forms of heart disease - 35

Workplace

- SHARED
 - demo

Previous Queries

- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Results of Hypertensive di@10:17:44 [6-17-2013] [demo]
 - Patient Set for "Hypertensive di@10:17:44" - FINISHED
 - Number of patients for "Hypertensive di@10:17:44" - FINISHED
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:04:16 [6-17-2013] [demo]

Demographics

Specify Data | View Results | Plugin Help

Patient Count: 40

Age in Years

10-20	3	
20-30	4	
30-40	5	
40-50	8	
50-60	4	
60-70	10	
70-80	3	
80-90	3	

Sex

F	17	
M	23	

Race

asian	7	
black	16	
hispanic	10	
indian	3	
white	4	

Language

english	14	
german	17	
spanish	9	

Plugins

Detailed List View | Category: ALL

- ExportXLS**
This plugin populates a table of selectable concepts/observations and provides the possibility to download the result as a file.
- Demographics (1 Patient Set) - Simple Counts**
This plugin displays a demographic break-down of a Patient Set.

Navigate Terms | Find Terms

- Rx Sig
 - [Alternative medicines - 0]
 - Anti-infectives - 78
 - Antihyperlipidemic agents - 7
 - Antineoplastics - 3
 - [Biologicals - 0]
 - Cardiovascular agents - 19
 - Central nervous system agents - 78
 - Coagulation modifiers - 11
 - Gastrointestinal agents - 43
 - Hormones - 49
 - Immunologic agents - 3
 - Miscellaneous agents - 13

Workplace

- SHARED
 - demo

Previous Queries

- Hyperte-Antihyp@10:20:29 [6-17-2013] [demo]
- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]
- Female-18-34@10:57:18 [6-14-2013] [demo]

Query Tool

Query Name: Hyperte-Antihyp@10:20:29

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Hypertensive disease - 40			Antihyperlipidemic agents -					

one or more of these **AND** one or more of these **AND** drop a term on here

Run Query | Clear | Print Query | 2 Groups | New Group

Query Status

Finished Query: "Hyperte-Antihyp@10:20:29" [13.4 secs]
 Compute Time: 11 secs

Patient Set for "Hyperte-Antihyp@10:20:29"

Number of patients for "Hyperte-Antihyp@10:20:29"
 patient_count: 6

Navigate Terms

Find Terms

- ⊕ Blood Gases/Oximetry - 2
- ⊕ CSF Chemistries - 6
- ⊕ Cardiac Tests - 64
- ⊕ Endocrine Studies - 40
- ⊕ [Fetal Lung Maturity - 0]
- ⊕ Fluid Chemistries - 3
- ⊕ General Chemistries - 124
- ⊕ Hemoglobin - 15
- ⊕ Lipid Tests - 96
- ⊕ Liver Function Tests - 113
- ⊕ Lytes/Renal/Glucose - 123
- ⊕ Thyroid Studies - 81
- ⊕ Urine Chemistries Random - 8

Workplace

- ⊕ SHARED
- ⊕ demo

Previous Queries

- ⊕ Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
- ⊕ Hyperte-Antihyp@10:20:29 [6-17-2013] [demo]
- ⊕ Hypertensive di@10:17:44 [6-17-2013] [demo]
- ⊕ Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- ⊕ Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- ⊕ Hypertensive di@10:02:05 [6-17-2013] [demo]

Query Tool

Query Name: Hyper-Antih-Lipid@10:21:37

Temporal Constraint: Treat all groups independently

Group 1			Group 2			Group 3		
Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude	Dates	Occurs > 0x	Exclude
Treat Independently			Treat Independently			Treat Independently		
Hypertensive disease - 40			Antihyperlipidemic agents -			Lipid Tests - 96		
one or more of these			AND			one or more of these		
AND			one or more of these			AND		
one or more of these			AND			one or more of these		

Run Query | Clear | Print Query | 3 Groups | New Group

Query Status

Finished Query: "Hyper-Antih-Lipid@10:21:37" [5.4 secs]
 Compute Time: 3 secs

Patient Set for "Hyper-Antih-Lipid@10:21:37"

Number of patients for "Hyper-Antih-Lipid@10:21:37"
 patient_count: 6

Navigate Terms Find Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
- Expression Profiles Data
- Laboratory Tests
- Medications
- Procedures
- Providers
- Reports
- Visit Details

Workplace

- SHARED
 - demo

Previous Queries

- Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
- Hyperte-Antihyp@10:20:29 [6-17-2013] [demo]
- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]

Timeline

Specify Data View Results Plugin Help

Drop a Patient Set and one or more Concepts (Ontology Terms) into the input boxes below, and then click the "View Results" tab to view a timeline showing when those concepts were observed in the selected patient set.

Patient Set: Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo] [PATIENT]

Concept(s):

- Diagnoses
- Expression Profiles Data
- Laboratory Tests
- Medications
- Procedures
- Reports

Click a concept to remove it from the list.

Plugins

Detailed List View Category: ALL

- Timeline**
This plugin creates a visual representation of when selected observations occur within a given patient set.
- Project Request**
This plugin is used to generate a request for a new project based on concepts, patients and sets..

Navigate Terms Find Terms

- Clinical Trials
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Previous Queries

- Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
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- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]

Timeline

Specify Data View Results Plugin Help

<<< start: 1 size: 10 go >>> zoom: - + pan: < >

4/3/1997 11/11/2003 6/22/2010

Person_#1000000025__Female__76yroid__Hispanic

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Person_#1000000031__Male__50yroid__Hispanic

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Person_#1000000054__Female__66yroid__Asian

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Person_#1000000083__Female__65yroid__Black

Diagnoses
Expression Profiles Data
Laboratory Tests
Medications
Procedures
Reports

Plugins

Detailed List View Category: ALL

Timeline
This plugin creates a visual representation of when selected observations occur within a given patient set.

Project Request
This plugin is used to generate a request for a new project based on concepts, patients and sets..

Navigate Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
- Expression Profiles Data
- Laboratory Tests
- Medications
- Procedures
- Providers
- Reports
- Visit Details

Workplace

- SHARED
- demo

Previous Queries

- Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
- Hyperte-Antihyp@10:20:29 [6-17-2013] [demo]
- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]

Timeline

Specify Data | View Results | Plugin Help

<<< start: 1 size: 10 go >>> zoom: - + pan: < >

4/3/1997

Person ID	Demographics	Diagnoses	Expression Profiles Data	Laboratory Tests	Medications	Procedures	Reports
Person_#1000000025	Female_76yroid_Hispa						
Person_#1000000031	Male_50yroid_Hispani						
Person_#1000000054	Female_66yroid_Asian						
Person_#1000000083	Female_65yroid_Black						

Observation Details

2/2010

event_id: 473200
patient_id: 1000000031
concept_id: LCS-I2B2:XR_RPT_DID
observer_id: LCS-I2B2:D000109064
start_date: 2000-07-14T00:00:00.000+02:00

Radiology: X-Ray

Report Status: Final
Exam: Hand, > 2 views
Ordering Provider: Kildare, James M.D.

HISTORY:
Rheumatoid arthritis; Question of erosions.

REPORT:
TECHNIQUE: Two views of both hands.

COMPARISON: There are no prior studies available for comparison.

FINDINGS:
There are no significant degenerative changes. There are no bony erosions. There is no evidence of fracture or joint malalignment. There is normal mineralization.

IMPRESSION:
Unremarkable examinations.

[report_end]

Plugins

Detailed List View

- Timeline**
This plugin creates a visual representation of when
- Project Request**
This plugin is used to generate a request for a new project based on concepts, patients and sets..

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- Hypertensive di@10:17:44 [6-17-2013] [demo]
- Hyper-Antih-Chemi@10:05:04 [6-17-2013] [demo]
- Hyperte-Antihyp@10:04:16 [6-17-2013] [demo]
- Hypertensive di@10:02:05 [6-17-2013] [demo]

ExportXLS

Specify Data | View Results | Plugin Help | Settings

Drop a patient set and at least one concept (ontology term) onto the appropriate input boxes below, then click the "View Results" tab to retrieve the respective observations in the selected patient set.

For more info refer to the "Plugin Help" tab.

Patient Set:

Concept(s):

- Diagnoses
- Laboratory Tests
- Medications
- Procedures

Click a Concept to remove it from the list.

Output Options:

Formatting:

Replace Patient IDs with Ascending Numbers starting at 1

Include Patient Demographic Data:

- Sex
- Age
- Birth Date
- Birth Year
- Vital Status
- Language
- Race
- Religion
- Income
- State/City/ZIP

Plugins

Detailed List View | Category: ALL

- ExportXLS**
This plugin populates a table of selectable concepts/observations and provides the possibility to download the result as a file.
- Demographics (1 Patient Set) - Simple Counts**
This plugin displays a demographic break-down of a Patient Set.

Navigate Terms | Find Terms

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
- Expression Profiles Data
- Laboratory Tests
- Medications
- Procedures
- Providers
- Reports
- Visit Details

Workplace

- SHARED
- demo

Previous Queries

- Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
 - Results of Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
 - Patient Set for "Hyper-Antih-Lipid@10:21:37" - FINISH
 - Number of patients for "Hyper-Antih-Lipid@10:21:37" -
 - Results of Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]
 - Results of Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo]

ExportXLS

Specify Data | View Results | Plugin Help | Settings

Click the one of the buttons on the right to download the following table in the appropriate format. [CSV Export](#) [HTML/XLS Export](#)

Patient Information
for Patient Set 'Hyper-Antih-Lipid@10:21:37 [6-17-2013] [demo] [PATIENTSET_14]'

	Patient ID	Sex	Age in Years	Timestamp Start	Timestamp End	Observation Set	Observation Concept Code	Observation Value	Observation Unit
1	1000000025	F	76	2001-12-05	2001-12-05	Diagnoses	ICD9:786.50		
2	1000000025	F	76	2001-12-07	2001-12-07	Diagnoses	ICD9:493.90		
3	1000000025	F	76	2001-12-07	2001-12-07	Diagnoses	ICD9:780.8		
4	1000000025	F	76	2001-12-07	2001-12-07	Diagnoses	ICD9:782.0		
5	1000000025	F	76	2001-12-07	2001-12-07	Diagnoses	ICD9:786.59		
6	1000000025	F	76	2001-12-10	2001-12-10	Diagnoses	ICD9:354.0		
7	1000000025	F	76	2001-12-10	2001-12-10	Diagnoses	ICD9:493.90		
8	1000000025	F	76	2001-12-10	2001-12-10	Diagnoses	ICD9:723.4		
9	1000000025	F	76	2001-12-10	2001-12-10	Diagnoses	ICD9:786.50		
10	1000000025	F	76	2001-12-10	2001-12-10	Diagnoses	ICD9:786.59		
11	1000000025	F	76	2001-12-11	2001-12-11	Diagnoses	ICD9:786.59		
12	1000000025	F	76	2003-07-15	2003-07-15	Diagnoses	ICD9:494		
13	1000000025	F	76	2003-07-16	2003-07-16	Diagnoses	ICD9:273.2		
14	1000000025	F	76	2003-07-16	2003-07-16	Diagnoses	ICD9:493.90		
15	1000000025	F	76	2003-12-23	2003-12-23	Diagnoses	ICD9:V16.0		

Plugins

Detailed List View | Category: ALL

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