S4: Distributed Computing, TranSMART, & Big Data

Session Summary

The use of i2b2 in developing distributed computing and specialized i2b2 Hives. This is the direction that that the i2b2 team is working towards with tranSMART in order to increase its support for special i2b2 instances that support Genomics, Imaging science, and Big Data Analytics that can be linked together in a distributed network.

Presenters (6)

Paul Avillach, MD, PhD

Assistant Professor of Pediatrics

Children's Hospital Boston

Assistant Professor of Biomedical Informatics

Harvard Medical School

Assistant Professor in the Department of Epidemiology

Harvard School of Public Health

Christopher Herrick, MBA

Corporate Manager II

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Mike Mendis

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Shawn Murphy, MD, PhD

Corporate Director, Research IS and Computing

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Associate Professor of Neurology

Harvard Medical School

Lori Phillips, MS

Sr. Project Specialist

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Griffin Weber, MD, PhD

Research Associate in Biomedical Informatics

Harvard Medical School

Associate Professor of Medicine

Beth Israel Deaconess Medical Center

Presentations (4)

Presentation 1: i2b2 / tranSMART BD2K PIC-SURE RESTful API

Presenter: Paul Avillach

Presentation 2: Healthcare System Dynamics

Presenter: Griffin Weber, MD, PhD

- HSD Cycles in Clinical Data
- Using HSD to Predict Outcomes
- Using HSD to Derive Normal Ranges
- Adding HSD to i2b2

Presentation 3: Using Big Data to Create an Information Commons with the i2b2 Infrastructure

Presenter(s): Christopher Herrick and Lori Phillips

- Information Commons
- i2b2 Cell: The Canonical Software Module
- Distributed Queries: Central and Remote Hives

Presentation 4: Developing Specialized Hives to Contribute to the i2b2 Ecosystem

Presenters: Shawn Murphy and Mike Mendis

- Distributed Query System links together Specialized i2b2 Hives
- Using BRISSKIT to assemble a new Hive very quickly
- Patient Information Commons