Explorer of Grid Load (EGL)

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CERN openlab

Who am I? ~~Spiderman, Batman~~

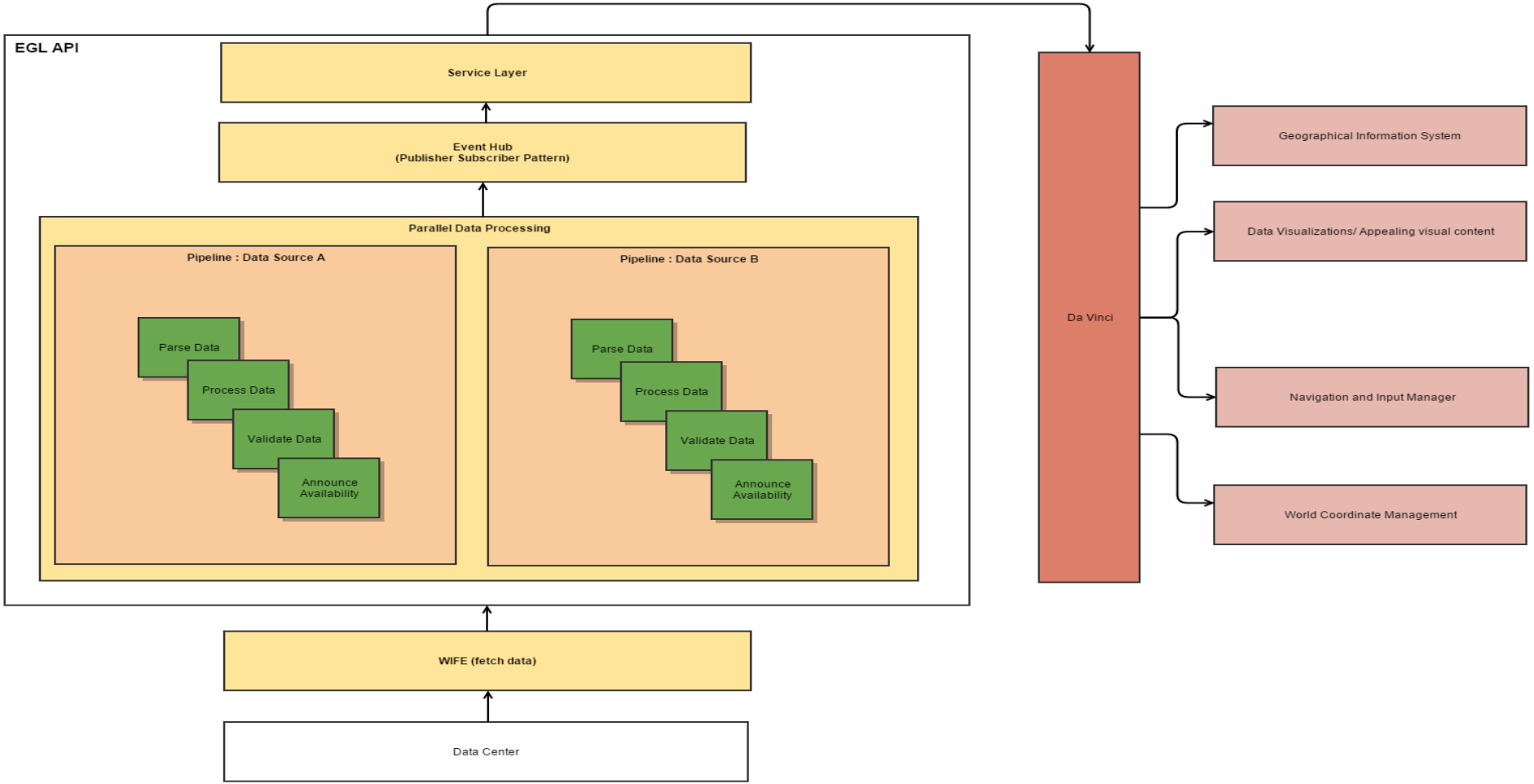
- Electronics and Communications Senior at NIT Delhi
- 2 time Google Summer of Code Alumnus
- Release Manager, Dev Tools Manager @ OpenMRS
- Music career going nowhere, sticking to coding (like most of us)

The Project Challenge

- **Big data challenge for scientists**
  - reality scientists face every day
  - CERN projects and collaborations have become global.
- **Worldwide LHC computing grid –**
  - Petabytes of data
  - >170 active sites , 42 countries
  - data analytics and high processing computing possible through these sites.
- **Reliable Grid = Reliable resource availability**
  - = reliable operations of collaborating projects, partner companies, institutes and universities

Solution : EGL (Explorer of Grid Load)

- **http://ml-server01.cern.ch/files/EGL/**
  (^ test-drive in Firefox)
- **Features and Architecture**
  - Event Driven (Observer Pattern/ Publisher Subscriber Pattern) to handle asynchronous events
  - Service Layer Pattern
  - Pipeline design pattern
  - Multithreaded for parallel processing and loading
  - I did the wife and API, Joao worked on the awesome elaborate visualization system you are about to witness



Project Impact

Advantages

- Not limited by visualization and data handling capabilities of Google Earth
- Multi-Platform : Android/ iOS/ WebGL/ Standalone
- More control over data handling and visualizations. Less load on current servers for adapting xml's for Google Earth
- Flexible and Generic core API : can be adapted for visualizing statistics on a Globe

Project Impact

Future Work

- Generic tool for data visualizations on Globe
- Transform into a monitoring tool
- Adapt for more visit points