GeoGateway for The Airavata Django Portal

Abstract

The goal of this project is to translate the GeoGateway web-app into a custom Django app for the Airavata Django Portal and to develop a process and best practices for streamlined development of GIS based Airavata Gateways. A GeoGateway developed with the MVC (Model View Controller) architecture of the Django framework will be flexible and modular, enabling rapid deployment of future changes and updates to the app.

The main changes to be made are:

- JS GIS tools (mostly in tools.js)→ Modular JS tools for dynamic output to Django templates
- GeoGatewayServer.js → Airavata API Server
- GeoGateway HTML/CSS → Django Templates
- Databases for Map Tools, UAVSAR, Seismicity… etc → Airavata Resource & Django Data Models
- Airavata Authorization process

The completed project will feature a fully functional GeoGateway Django Application for use in the Airavata Django Portal.

May 11th – June 29th	Develop skeleton app for proof of concept: • Make decision on Map library (django-google-maps, leaflet… etc) • Create custom Django app in local Airavata Django Portal dev. Environment • Make Model View Controller representations of some of the simpler tools (Map Tools, Moment Magnitude Calculator…)
June 29th – July 27th	Develop extensive MVC architecture: • Django Data Models for GeoGateway data • Django view representations for tools.js • translate original HTML/CSS to dynamic Django templates
July 27th – August 24th	Document, Test, and Revise • Document changes made from original webapp for future GIS app translations • Integrate with Airavata Django Portal and test Custom App implementation • Revise UX/UI if needed