Lunar Exploration Web and Mobile Applications

Lunar Mapping and Modeling Portal Android Application (LMMPAA)

Team Members: Eddie Arevalo, Alvaro Ortiz, Daniel Soto
Faculty Advisor: Chengyu Sun
Jet Propulsion Laboratory Liaisons: Emily S. Law, George Chang, Shan Malhotra, Kyle Dodge, Syed Sadaqathullah
Department of Computer Science
College of Engineering, Computer Science, and Technology
California State University, Los Angeles

Background

The LMMP website allows users to browse the wealth of information gathered by JPL during its lunar exploration missions.

- REST data, in the form of Json and XML data, are extracted from the JPL servers.
- The REST data is downloaded into android devices to be displayed.

Objectives

- After extracting the xml layer data, images are downloaded to show various lunar map layers.

Results

- View information on famous lunar locations using the bookmark interface.
- Use the nomenclature browser to find interesting lunar surface features.
- Add, remove, set opacity or reorder layers using the layers interface.
- Switch between hundreds of layers and four different basemaps in order to see the lunar surface under the instruments of the LRO and Clementine.
- The combination of the different base architecture patterns allows for the ability to display a wide variety of information.

Architecture

- Model View Controller in conjunction with the Android programming paradigm, including APIs such as ESRI and Jackson work together to form the application.

App

- The LMMP Android App is currently in beta testing on Google Play. An official release is coming soon.

Devices: Phone Tablet

Android SDK

REST (Representational State Transfer)

Objectives

- Layers
- Marker Tool
- Nomenclature
- Bookmarks
- Search

Design

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Devs:

λ Phone
λ Tablet

REST

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