



Solar System Explorer

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Project Objectives

- Create planetary data modules to be used with the Celestia solar system application.
- Develop educational interactive visual and VR comparison data for each of the planets and many of the moons within the solar system.
- Provide true inquiry-based educational content and standards-based tools for use with the data sets and within the modules and application.

Sample Use Cases

- Project and data sets will be available for the Explorer Schools initial release. Continued update and releases will be available via hard media and the Web.
- To be used within Chabot Space and Science Center as well as the Tech Museum of Innovation. Both will use this project with daily educational classroom programs.
- Within the Ames AeroSpace Encounter for daily classroom visits.

Customers

- Explorer Schools
 - K-12 students and educators
 - School media centers.
- Informal education providers:
 - Museum curators
 - Science Centers
- General public

Deliverables for Phase 1

- Develop GUI for content data sets.
 - Nested-frame based and multi-content viewing, using a very intuitive and scaleable interface design
- Develop and integrate data sets on each of the 9 planets comparing attributes such as diameter, distance to the sun, mass, fly throughs, surface virtual reality, etc.
- Generate data sets for specific moons
- Develop educational comparison activities pertaining to concepts such as searching for water within the solar system.
- Develop instruments for testing and evaluating application and or modules/components/
- Testing and evaluations

Milestones for Phase 1

When	What	Confidence
14 Feb 03	Develop GUI	High
15 April 03	Develop planetary and moon data sets	High
30 April 03	Integrate planetary and moon data sets	High
15 May 03	Develop educational comparison activities	High
1 June 03	Beta testing of project to date for Explorer Schools	High
1 Sept 03	Develop instruments for testing and evaluation	High
1 Oct 03	Test and evaluation	High

People

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Partnerships

- The Tech Museum of Innovation
- NASA Higher Educational Collaborative
- Chabot Space and Science Center
- Celestia

Technologies

- Virtual Reality
- Web-content streaming for linear planet surface fly throughs
- 3D rendered imagery data.
- Graphical visual comparison data.
- JavaScript and web based technologies which may include: DCR, SWF, QTVR, Java Applets
- 3D immersive environments (Potential)

Quality Assurance

- Local lab testing and early-deployment testing of all new project features.
- Multi platform development and testing

Dependencies

- Because content is accessed from Celestia it is highly dependent to the system requirements of that application. Modules can be accessed separately with a currently web browser.