NASA Psyche Simulator Project

Introspection Elicitation Technique

<u>Perspectives</u>

Users include instructors and students of all academic levels, professionals dealing with the science of extraterrestrial bodies, researchers, and members of the general public who are curious about physics, space flight, asteroids or have other science-related interests.

Stakeholders are NASA managers and scientists, BYU-Idaho, researchers, and others who are vested in the Psyche Simulator Project.

<u>Software features</u>

Application must have:

Home page

Ability to configure data shown on home page (visuals, data frames, etc.)

Visual simulation of approach to Psyche

Data readout window:

Relative gravity in relation to Psyche

Distance

Rate of descent

Angle of descent

Speed

Rate of ascent

Angle of ascent

Time elapsed since beginning descent

Orbit data

Current

Interim

All visuals should have a frame speed range of 15 - 30 frames per second

A menu offering the selections of

Descend to lower orbit

Landing on Psyche

Ascend to a higher orbit

Visual to allow colored portions of Psyche indicating:

Areas of particular minerals/substances

Areas not possible to land

Prime landing target areas

Must have the ability to:

Pause and resume simulation

Record simulation

To internal video file

To internal data file

To external video file (USB, Portable drive, etc.)

To external data file (USB, Portable drive, etc.)

Run batch simulations

Sample different minerals/substances

Program a survey mission

Must possess an indicator for:

Landing failure

Landing success

Sampling error

Sampling success

Must permit mass viewing of single approach instance

Allow for associate invitation to a live simulator instance

Link to internal recording files of simulator for downloading

Ability to replay a recorded simulator run