

Mars 500 Project



Continued exploration of our solar system is central to the advancement of mankind, but manned flights beyond Earth's orbit continue to prove difficult. The Mars500 project is a \$15 million joint experiment run by the European Space Agency (ESA), Russia, and China, to study and bring feasible solutions to the complex psychological and technical challenges for long spaceflights, beginning with the journey to Mars. Running for more than eight months at the Institute of Biomedical Problems in Moscow, the Mars500 Project is a study that facilitates the basis for possible countermeasures to resolve the unfavorable effects that may occur during a mission of this depth. Daily aspects of crew life, operational capabilities, and research can be accomplished with prior study and familiarity of all the facets of this mission.

The operation of the manned Martian rover was one essential aspect of this study in which researchers can observe the reactions of crew members to each task in an unfamiliar environment and predict the potential hindrances in the mission.

Increasing the level of photo realism in the simulated visual graphics displays enhanced research findings. GL Studio empowered the design and control for the manned transportation rover simulation, creating the rover's sophisticated graphical cockpits accurately depicting the complex behaviors that drive the Martian terrain vehicle.

GL Studio enabled the teams at JC Group Ltd and Information Meta Systems Company (IMS) to create high fidelity replications of the actual rover cockpit and controls, offering the pioneer space crew a realistic experience for their journey across the uncertain Martian terrain. With these virtual representations, the space crew easily prepares for potential unfavorable scenarios, gain situational awareness of the rover cockpit, and complete vital exploration procedures of the mysterious "red" planet.

GL Studio allowed engineers to rapidly generate these essential graphical user interfaces without losing the critical instrumentation cues necessary to produce the best possible training throughput results.