

List of Existing Assets within the NASA XOSS MarsXR Engine

The assets below are available for participants to use in their submissions, assets can be modified and enhanced as part of a team's submission.

Interactable (includes physics):

- Tools
 - Camera
 - XRF - Handheld X-Ray Fluorescence Spectrometer (provides information about rock composition)
 - Rock pick
 - LRF – Laser Range Finder
 - PGT – Pistol Grip Tool
 - Dust brush
 - PGCG – Pistol Grip Caulking Gun
 - Trowel
 - *Tool Menu (allows player to select which tool to use, as well as additional gameplay settings)
- Surface Equipment
 - Apollo Lunar Surface Experiments Package (ALSEP)
 - Central Station + 5x payload models to deploy
 - Cable + cable cap models to connect payloads to central station
 - Storage crates with inventory system (used to hold/transport tools, payloads, cables, etc.)
 - Solar panels
 - Dusting/cleaning operations
 - Setup/installation of panels
 - In-Situ Resource Utilization (ISRU) station
 - Navigation/light beacons
- Environment
 - 400 sq km of Jezero Crater terrain. MRO Hi-RISE data with a resolution of 1x1 m
 - Mars gravity and physics
 - Day / night cycle
 - Dust storm, dust devils
 - Explorable lava tube
 - Interactive rocks for geology operations
 - Server hosting client for multiplayer capability
- Player character & mobility
 - Multiple motion capture modes using HTC Vive Trackers. Works with 0, 4, and 7 tracker puck modes.
 - xEMU (NASA's next-generation spacewalking suit) Astronaut Model (rigged) - Model scales to the user based on height
 - Spacesuit lights for night ops
 - Teleport system to traverse across Martian surface
 - Fast teleport system to regions of interest
 - Multi-Mission Space Exploration Vehicle (MMSEV) rover (limited at this point – requires some multiplayer updates)

Static models (no functionality):

- Habitat - LaRC (Evolvable Mars Campaign)
- Air Lock - LaRC (Evolvable Mars Campaign)
- Valkyrie Robotic Assistant – has a few animations & postures
- Centaurs Rover
- Rake
- Scoop
- Inflatable habitat field modules
- Misc. “Sci-fi” surface packages