

# Virtual Machine Language Controls Remote Devices

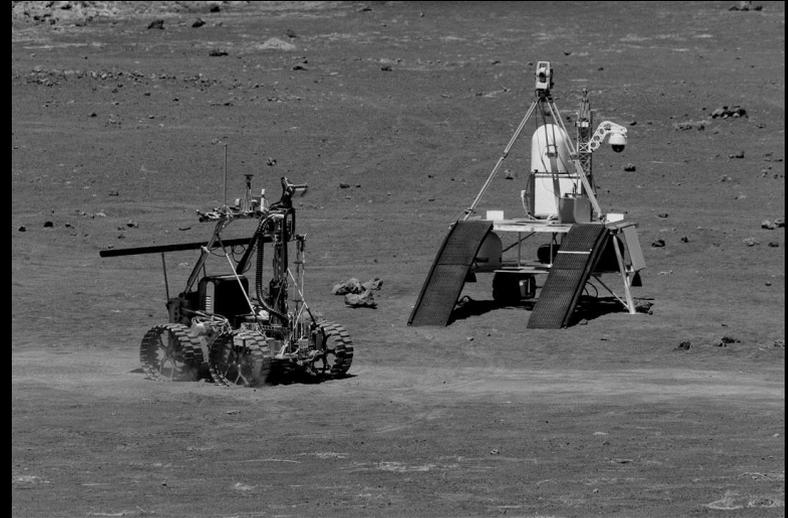


***Kennedy Space Center***

***Blue Sun Enterprises  
Boulder, Colorado***

## **NASA Technology**

- ◆ Chris Grasso created Virtual Machine Language (VML) as the sequencing language for the Spitzer Space Telescope
- ◆ VML let the spacecraft respond to its environment and dispatch commands to its instruments at the right time, under the right conditions



## **Partnership**

- ◆ Grasso cofounded Blue Sun Enterprises to provide spacecraft software-engineering services
- ◆ Kennedy Space Center worked with Blue Sun to enhance VML for use with the Regolith and Environment Science and Oxygen and Lunar Volatiles Extraction mission
- ◆ VML provided coordination and the capability for sequencing onboard the spacecraft

## **Benefits**

- ◆ Blue Sun's NASA-derived VML 3.0 is commercially available for spacecraft and provides operational cost reductions for customers
- ◆ On Earth, potential applications include unmanned aerial vehicles, remote sensing devices, and autonomous vehicles like submarines, weather balloons, and telescopes