

NASA's
Game Changing Technology
Industry Day
June 29-30, 2016

National Aeronautics and
Space Administration



IDEAS: Integrated Display and Environmental Awareness System

Presented by
Allan Villorin (NASA)

TECHNOLOGY DRIVES EXPLORATION

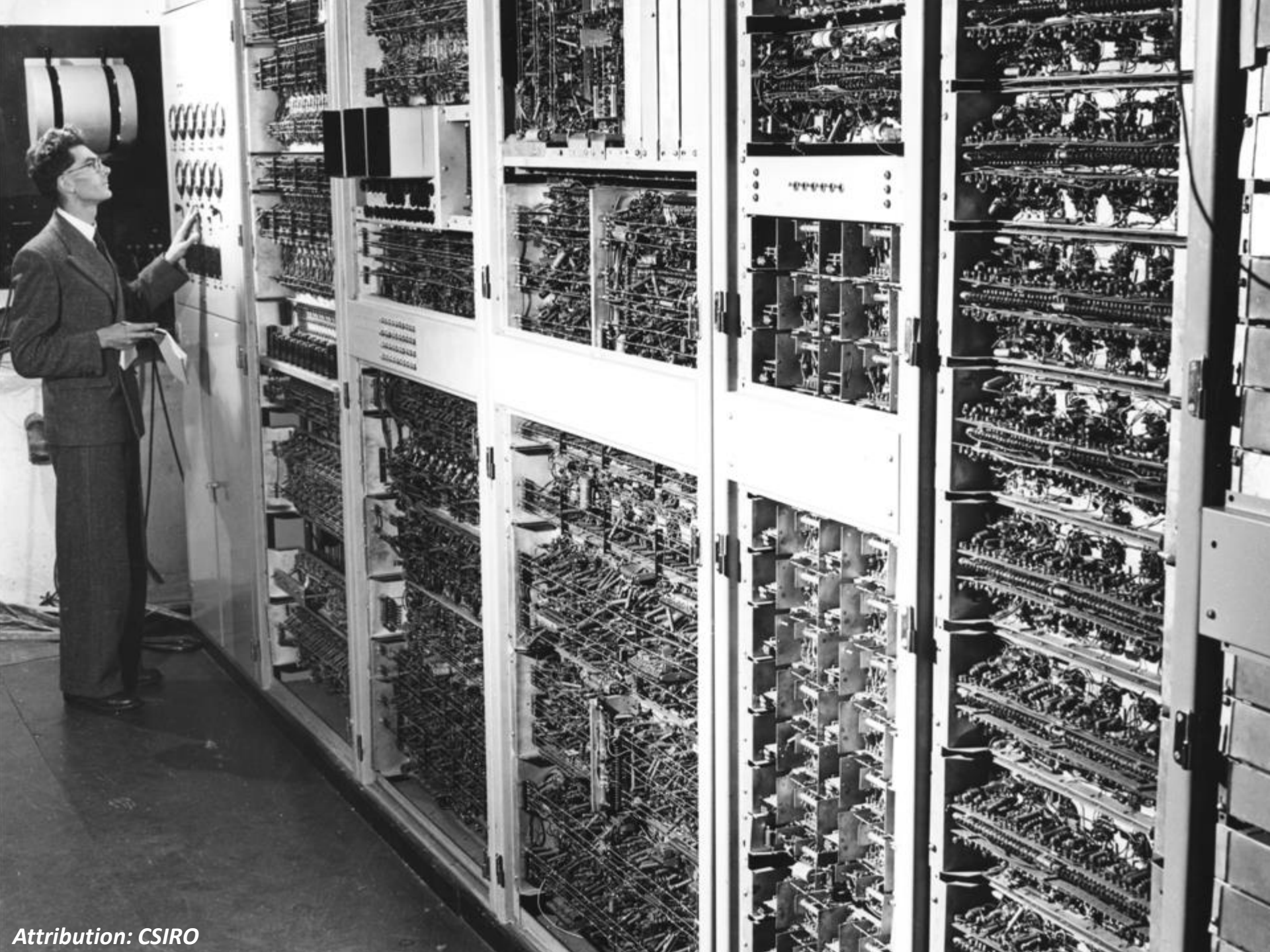


An early 20th-century illustration depicting a lunar landscape. In the foreground, a large, dark, cylindrical telescope or probe is mounted on a tripod. The ground is a reddish-brown, cratered surface. In the middle ground, two astronauts in spacesuits are standing on a rocky outcrop, looking towards the horizon. One astronaut is holding a small object. In the background, a large, dark, spherical object, likely the Earth, hangs in the black sky, surrounded by a bright, glowing halo. The overall scene is a classic representation of early lunar exploration.

Early 20th Century Vision Of Lunar Exploration



Major Industry Partners:
IBM
Boeing
Douglas Aircraft
Grumman Aircraft
North American Aviation





1969



Attribution: CSIRO



1969



Attribution: CSIRO



1969

1981



Major Partners:
Lockeed Martin
Thiokol
Rockwell



1969

1981





1969

1981





1969

1981

1998



Major Partners:
Roscosmos
ESA
Boeing
JAXA
CSA
Thales Alenia Space

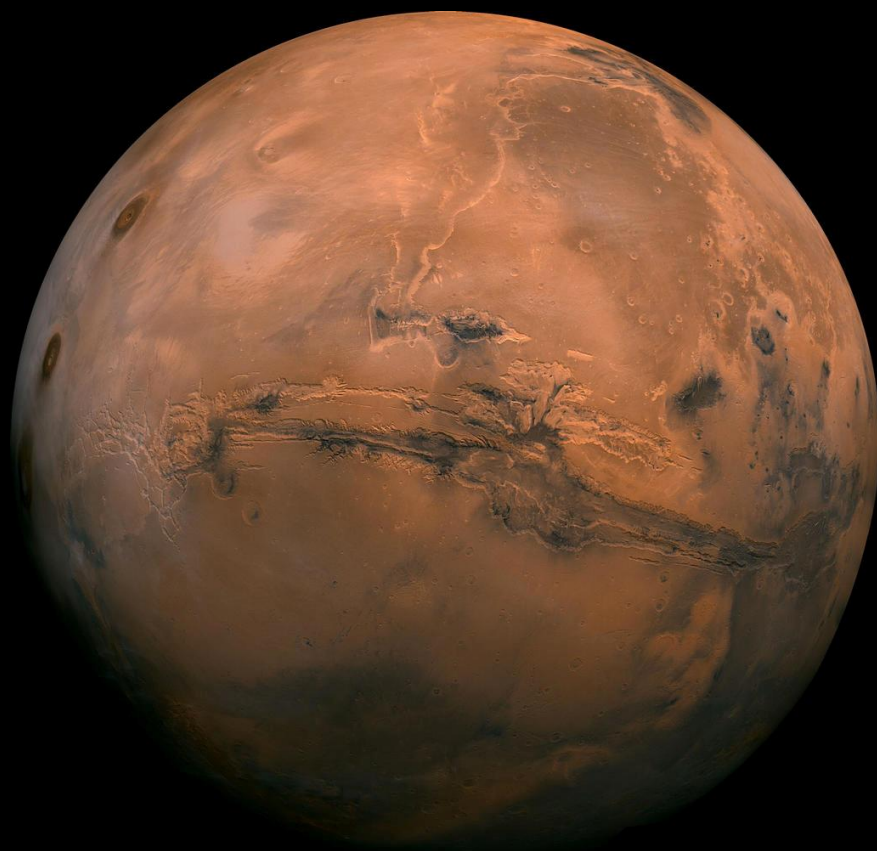


1969

1981

1998





Mars:
21st Century Destination



Attribution: Tim.Reckmann





IDEAS: Integrated Display and Environmental Awareness System

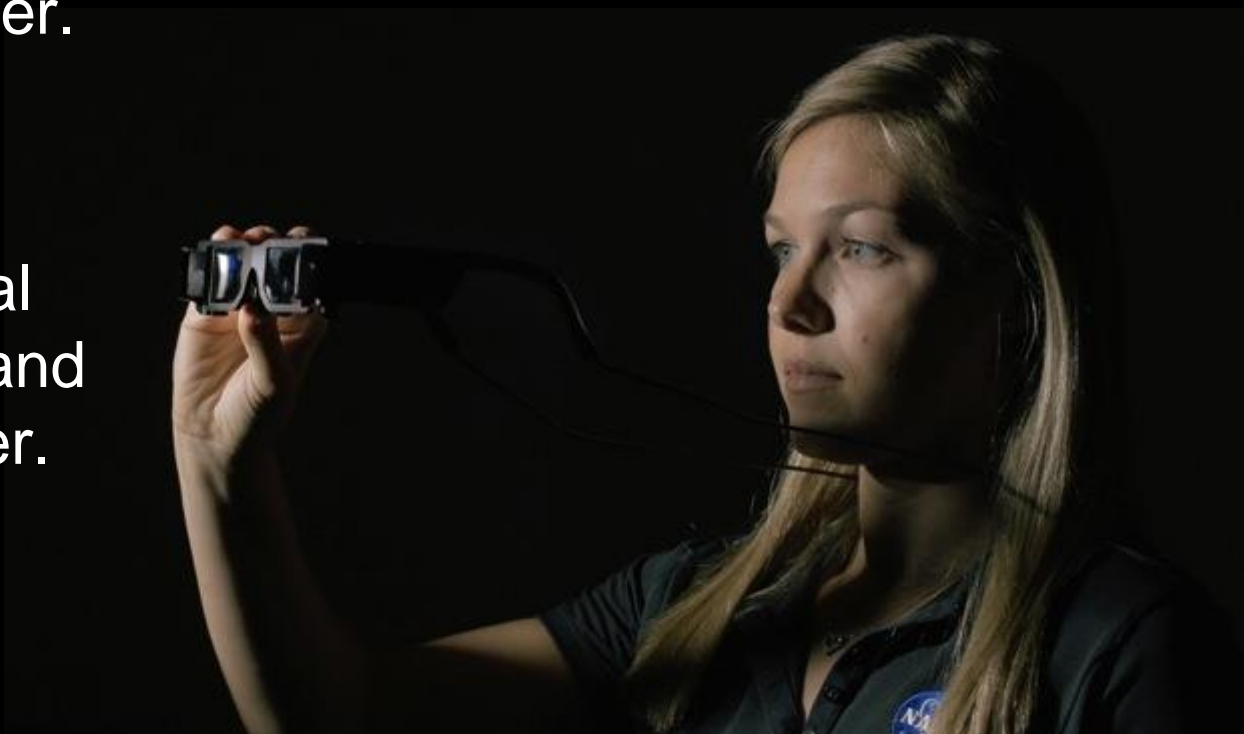


What is it?

- Head-mounted display for users on Earth and in Space.
- Provides visual communication and augmented reality information to its user.

What is it for?

- Improving situational awareness, safety and efficiency of the user.

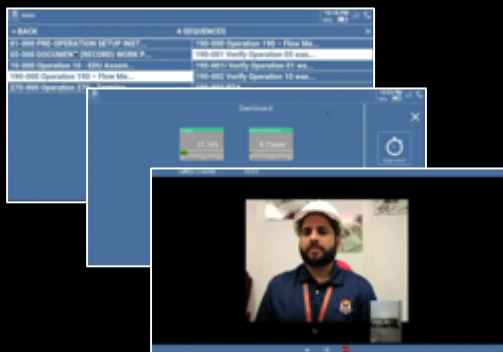




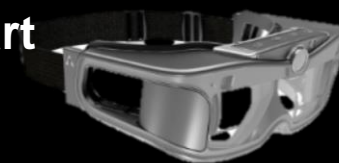
IDEAS Components



IDEAS Software



COTS Smart Glasses



IDEAS Accessories



IDEAS Smart Glasses







IDEAS Components – Procedures



10-008: Check Test Status 02:47:05

Instructions

Locate #76 plant test panel. Check and provide documentation of progress.

Complete Step

← 10-007:
Check Test #56

H
6 87

A185335
DOME LOADED REGULATOR

VENT VALVE

A185341
DOME LOADED REGULATOR

A185328
HAND REGULATOR

A185334
HAND REGULATOR





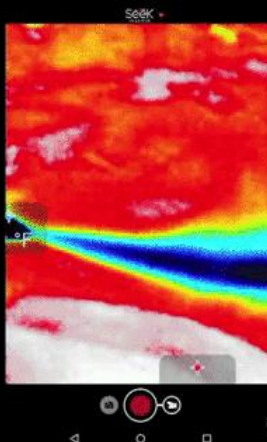
IDEAS Components – Camera Tools



Remote
RGB/IR
Camera

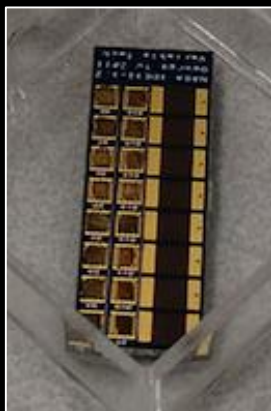


Head-mounted
IR Camera
Attachment

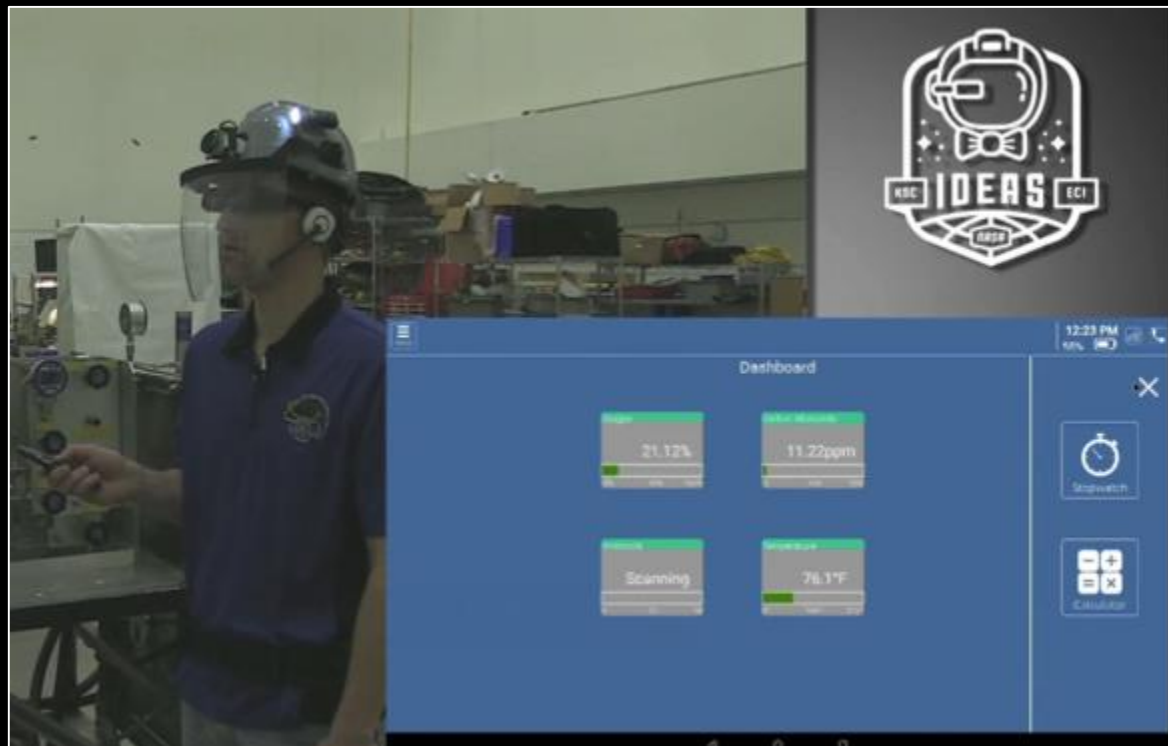




IDEAS Components – Sensors



Sensor Accessories





IDEAS Components - Console



IDEAS Console

Channel Name - Live Video

10-006 Check Test Status 02:45:40

Instructions
Locate #76 plant test panel. Check and provide documentation of progress.
Complete Step

10-007 Check Test #56
10-009 Record Growth

Video Feed: ● David Miranda

Map

Users							
Channel	Users	Safety Clear	Oxygen	Ammonia	Carbon Monoxide	Temp.	Active Step
Request	● David Miranda		18% ▲	18% ▲	18% ▲	70	005-005 Step Description Here
Request	● Paul Hilt	⚠	21% ▼	21% ▼	21% ▼	71	005-002 Step Description Here
	● Jake Hochstadt		23% ▼	23% ▼	23% ▼	70	005-008 Step Description Here
	● Allan Villorin		25% ▲	25% ▲	25% ▲	71	005-004 Step Description Here





Attribution: Meutia Chaerani / Indradi Soemardjan



Attribution: Andyminicooper




CLOSE

7:35 PM

  58% 


WADS



CALLS


CAMERA


SENSORS


FILES


TIMER

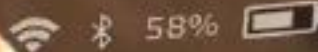

CALC.


INTERNET


SETTINGS



7:35 PM







**Major Partners:
You**



IDEAS Contact Info



For more information about this technology or to discuss potential collaboration efforts:



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Phone: 321-867-5219



We are open to partnerships:

- to help us develop our tech further
- bring your technology into our system

We have the tools to:

- build agreements
- protect your intellectual property