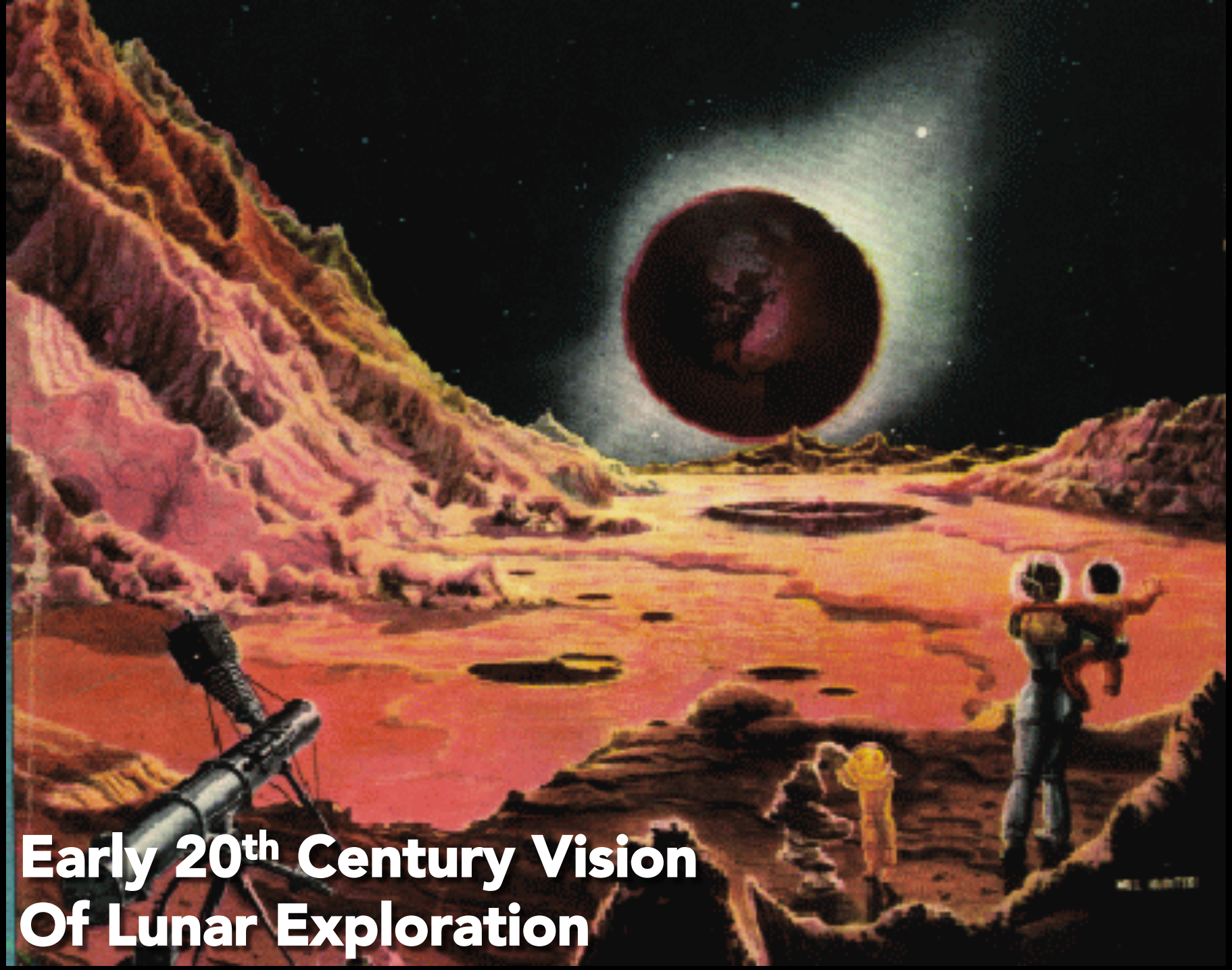
NASA's
Game Changing Technology
Industry Day
June 29-30, 2016

National Aeronautics and
Space Administration

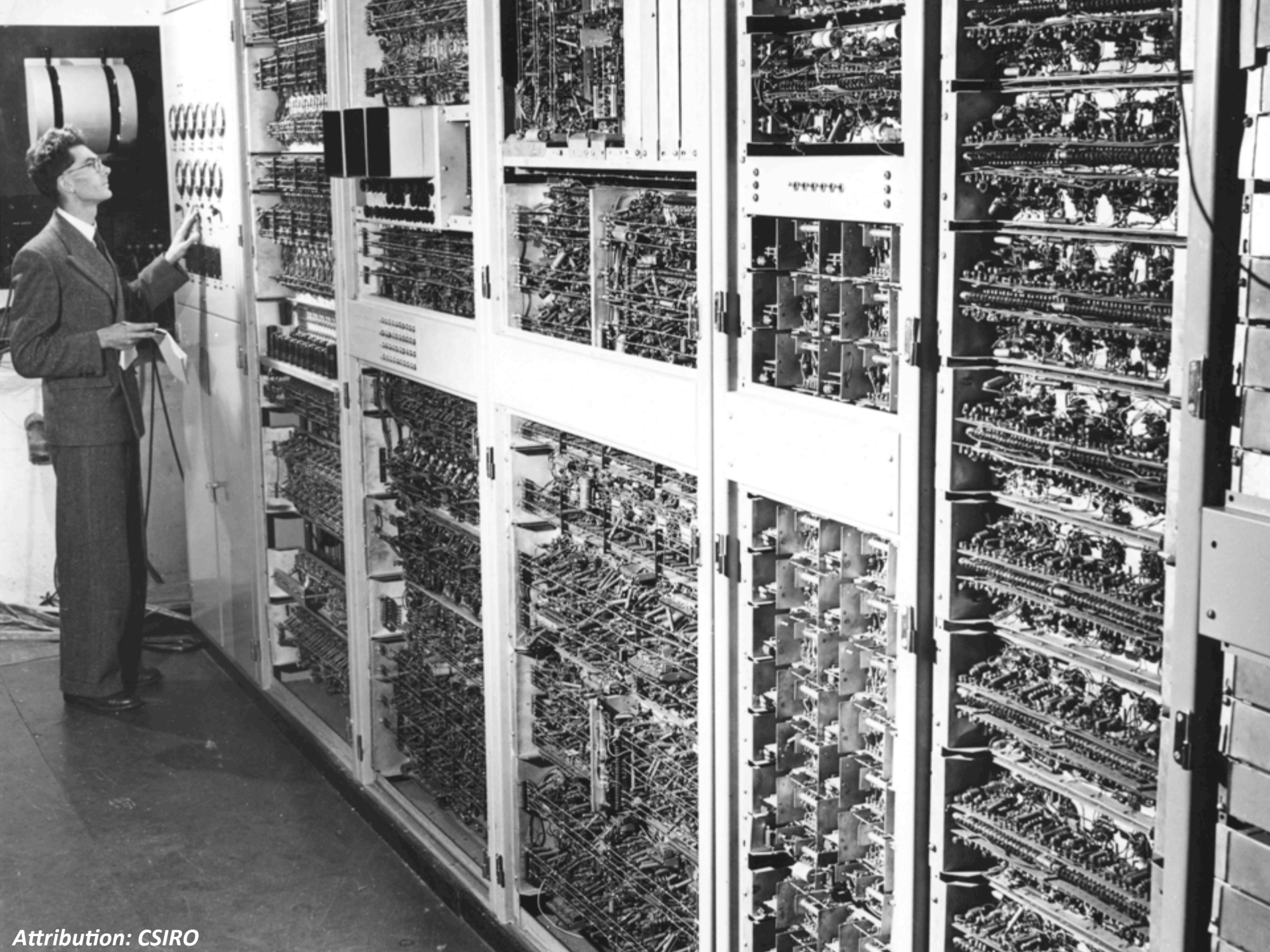
IDEAS: Integrated Display and Environmental Awareness System

Presented by
Allan Villorin (NASA)

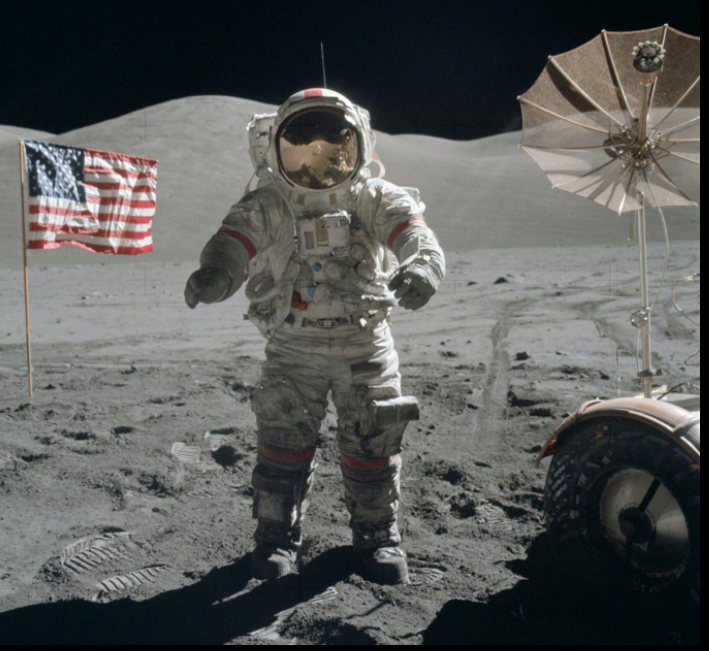
TECHNOLOGY DRIVES EXPLORATION


Early 20th Century Vision
Of Lunar Exploration

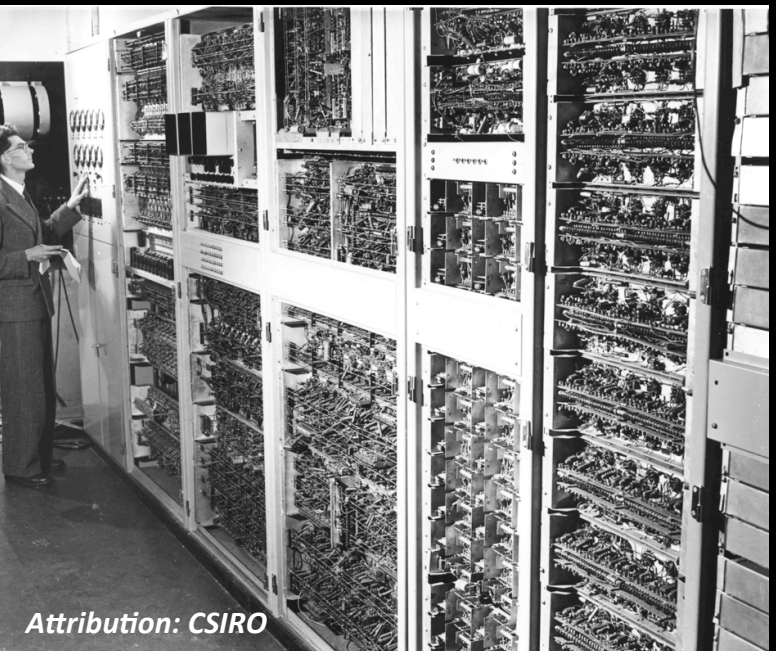
Major Industry Partners:
IBM
Boeing
Douglas Aircraft
Grumman Aircraft
North American Aviation



Attribution: CSIRO



1969



Attribution: CSIRO

1969

Attribution: CSIRO

1969

1981

Attribution: CSIRO

Major Partners:

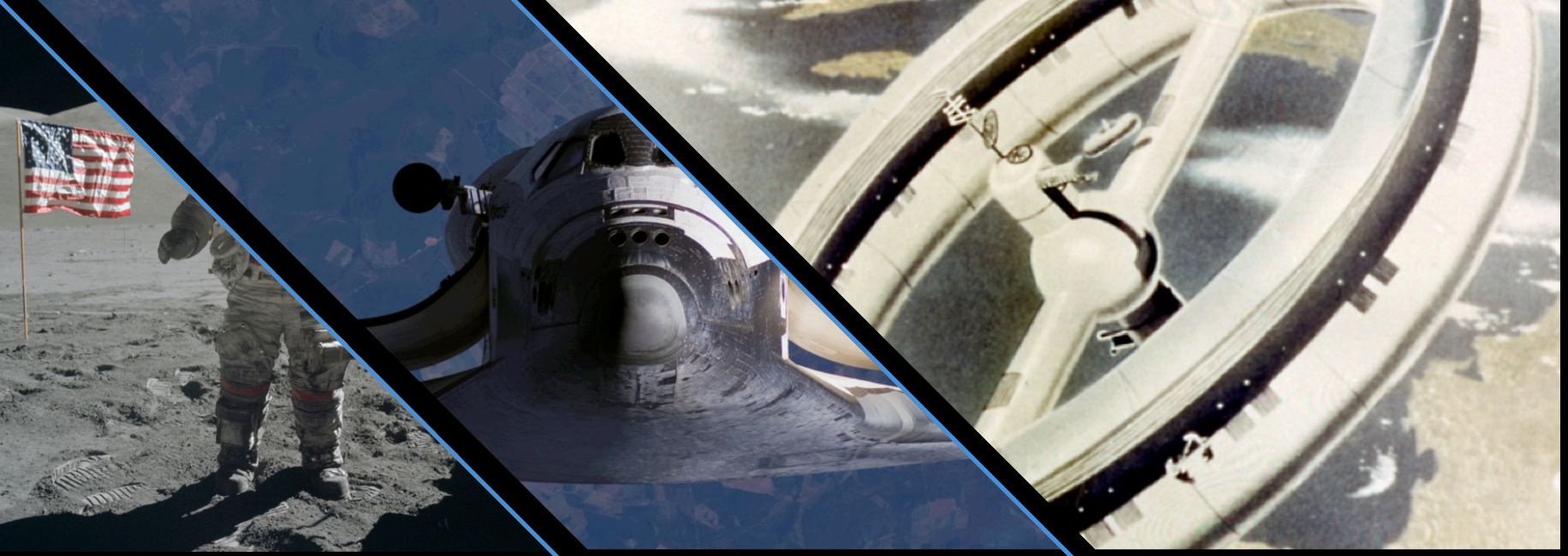
Lockeed Martin

Thiokol

Rockwell

1969

1981



1969

1981

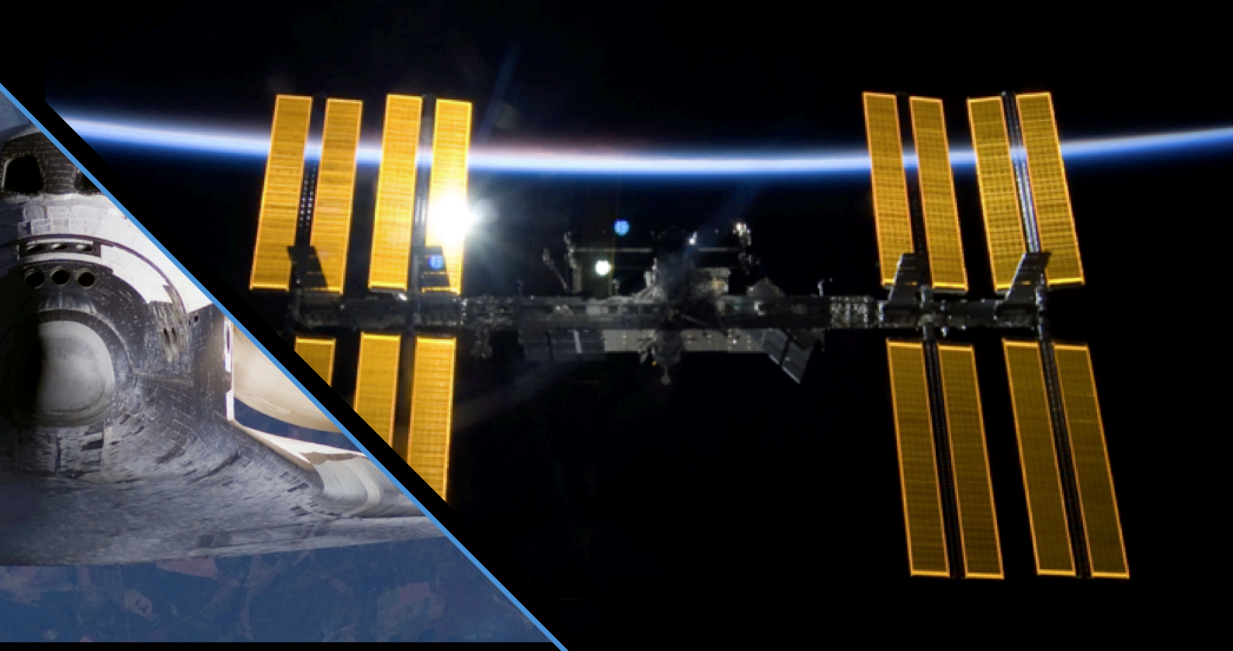
1969

1981

1998

Major Partners:

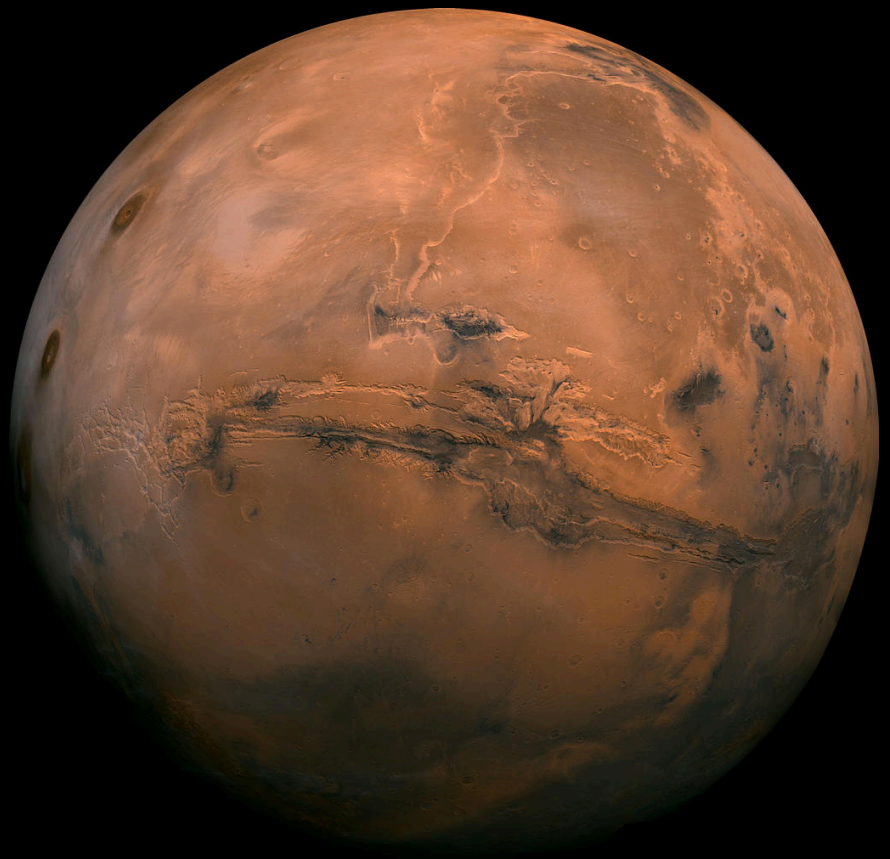
- Roscosmos
- ESA
- Boeing
- JAXA
- CSA
- Thales Alenia Space



1969

1981

1998



Mars:
21st Century Destination

Attribution: Tim.Reckmann

IDEAS: Integrated Display and Environmental Awareness System

What is it?

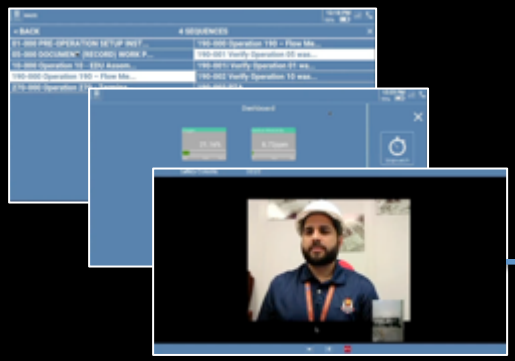
- Head-mounted display for users on Earth and in Space.
- Provides visual communication and augmented reality information to its user.

What is it for?

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

IDEAS Components

IDEAS Software



COTS Smart Glasses

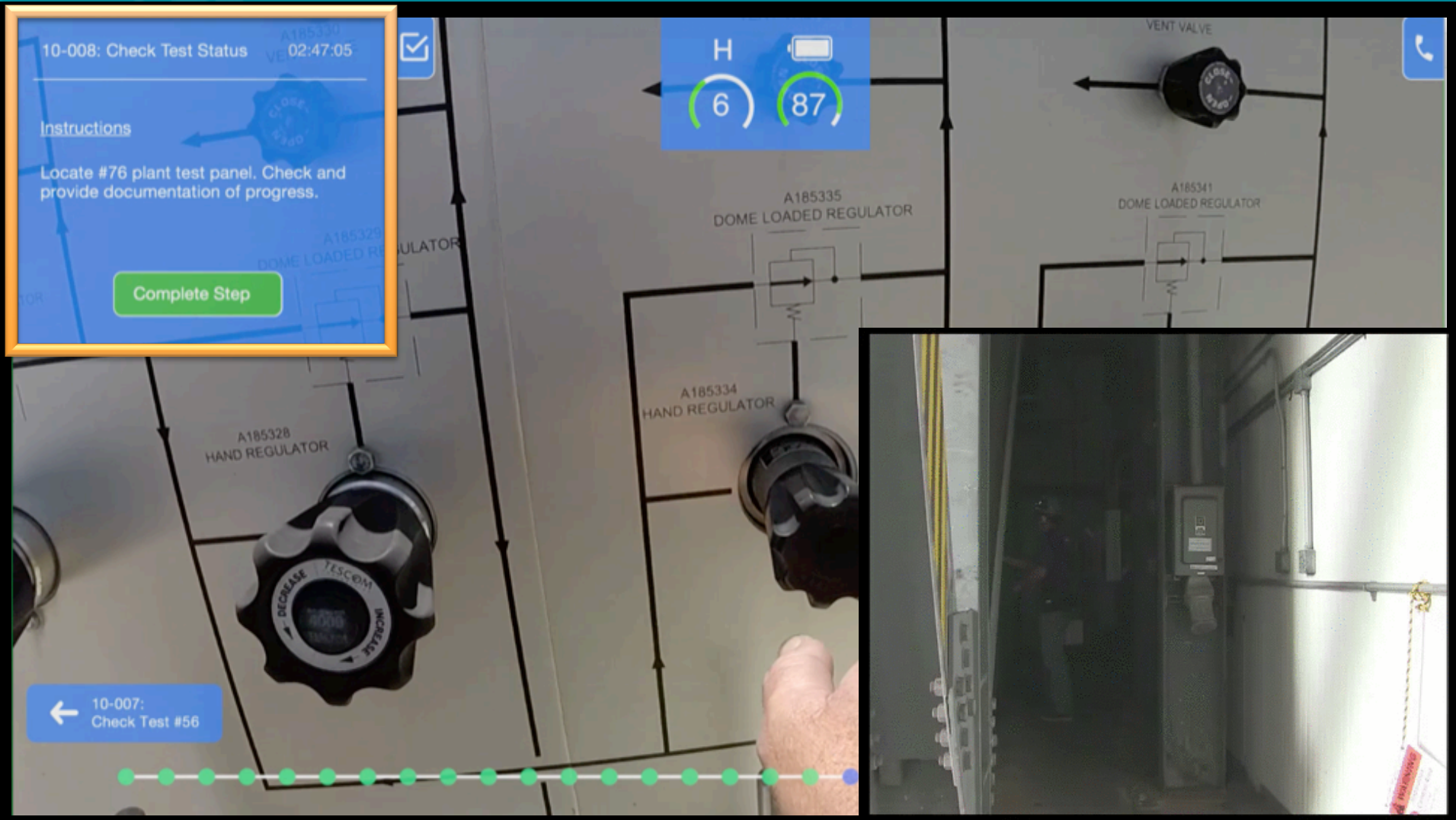
IDEAS Accessories

ANDROID

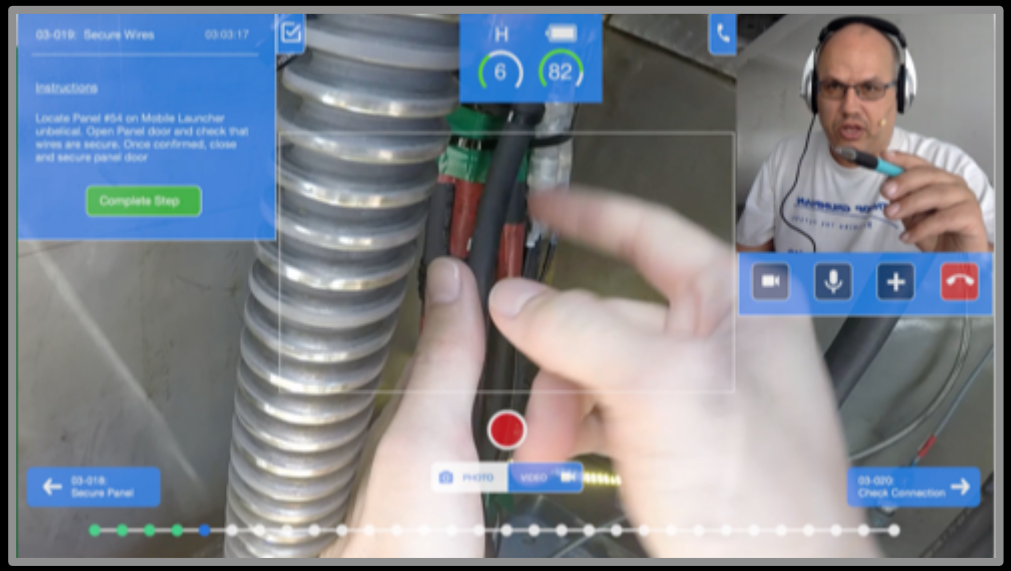
IDEAS Smart Glasses

Kepler-186f
KSC
IDEAS
NASA
KENNEDY SPACE CENTER

IDEAS Components – Procedures

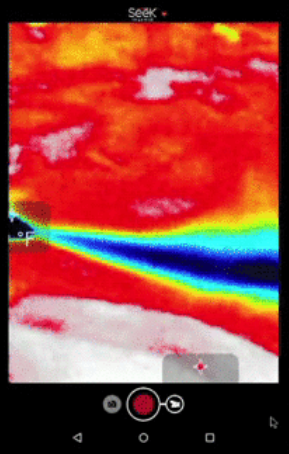


IDEAS Components – Camera Tools

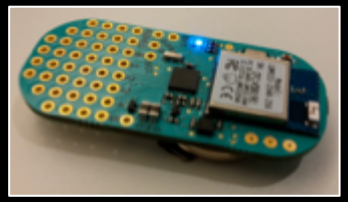


Remote RGB/IR Camera

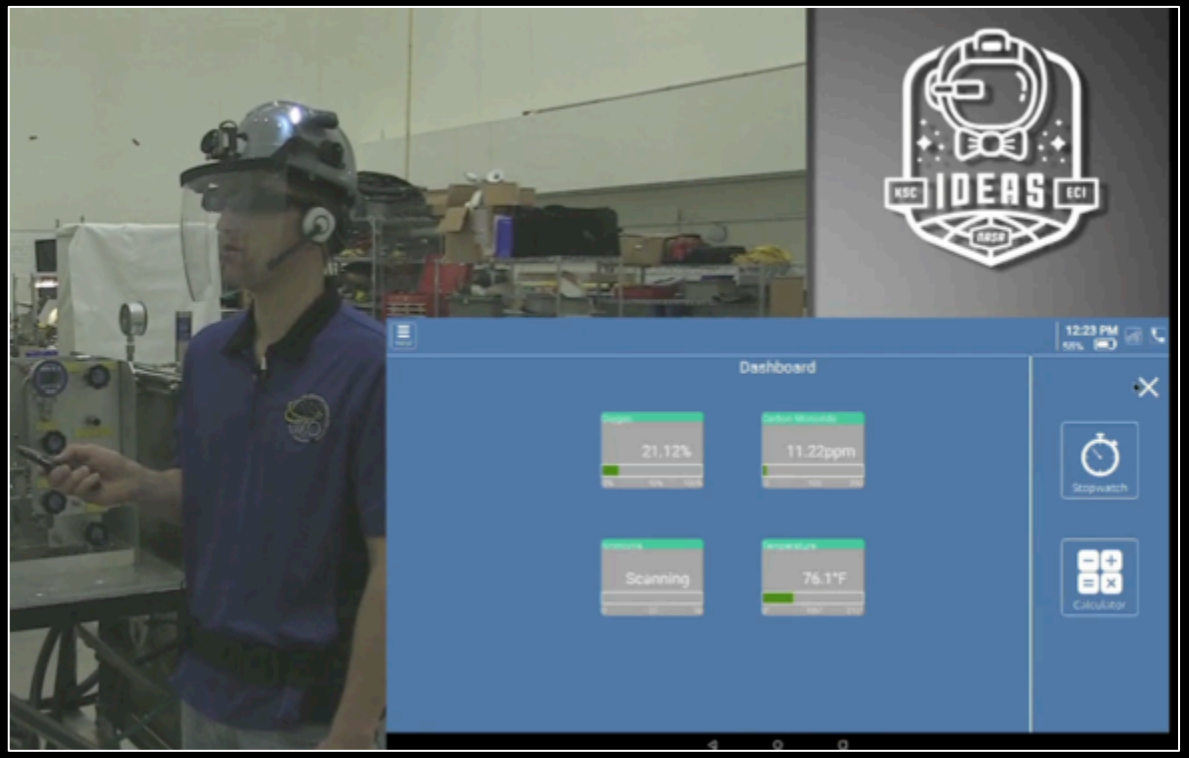
Head-mounted IR Camera Attachment



IDEAS Components – Sensors



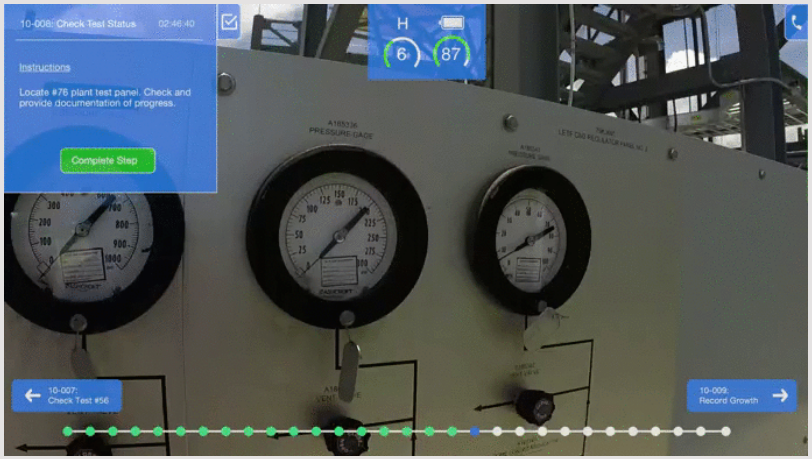
Sensor Accessories



IDEAS Components - Console

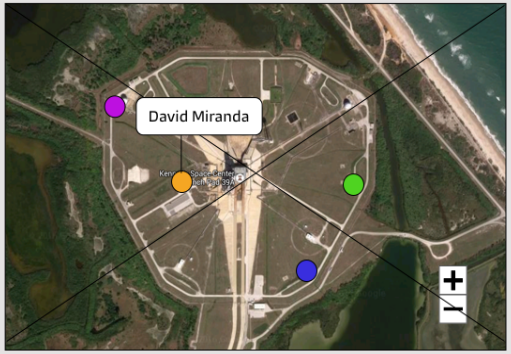
IDEAS Console

Channel Name - Live Video



Video Feed: **David Miranda**

Map

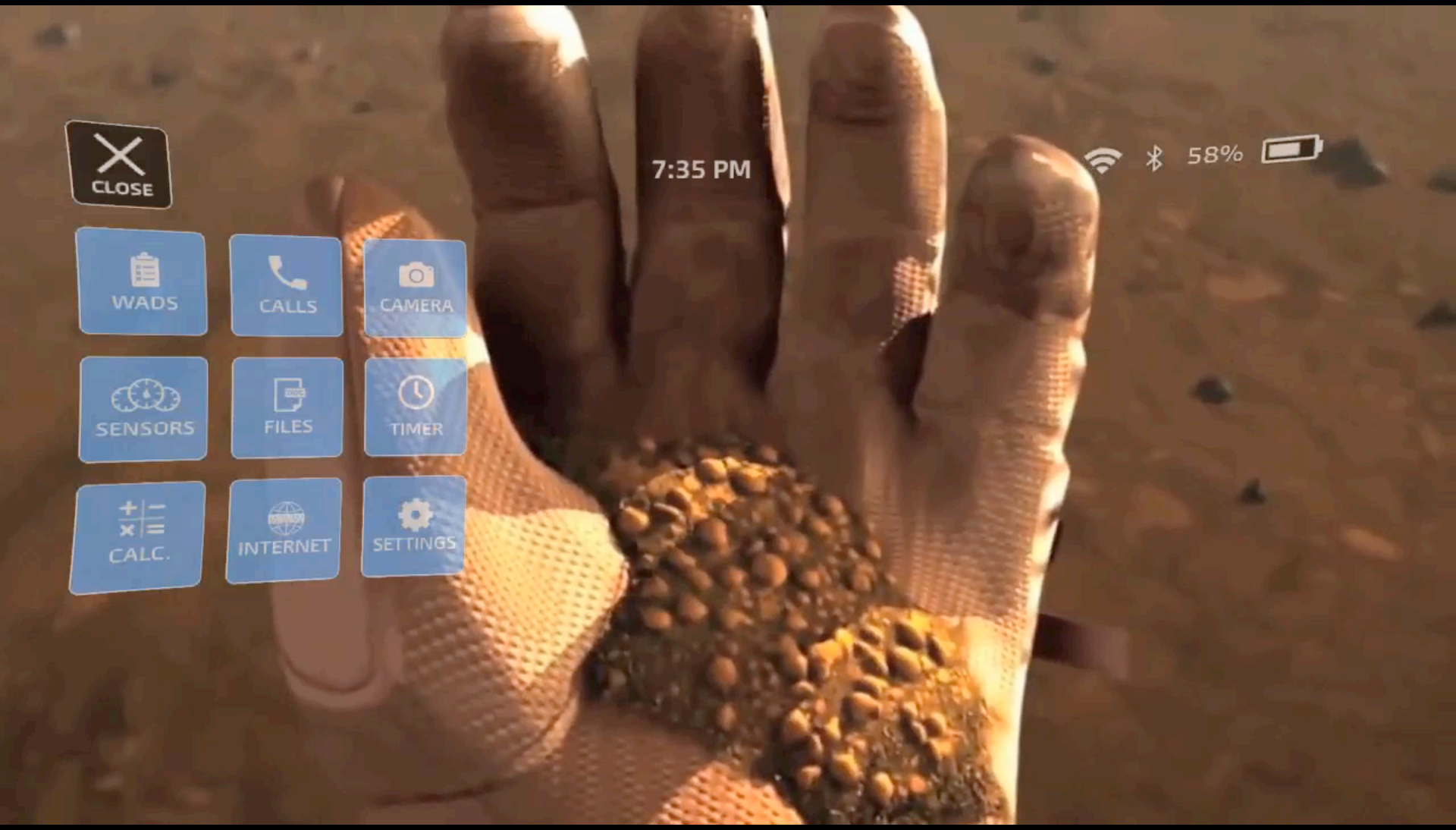


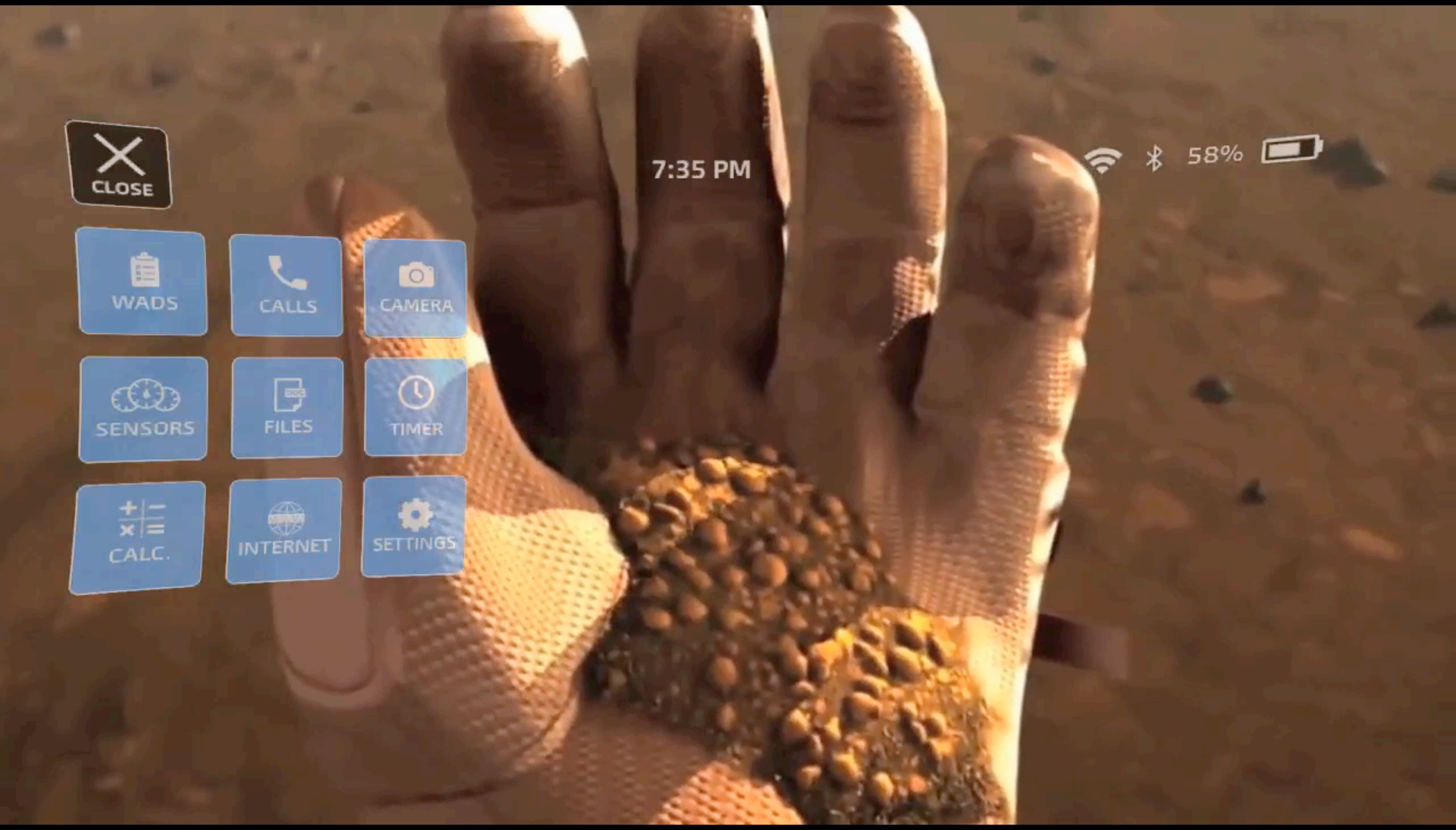
Users

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


CLOSE
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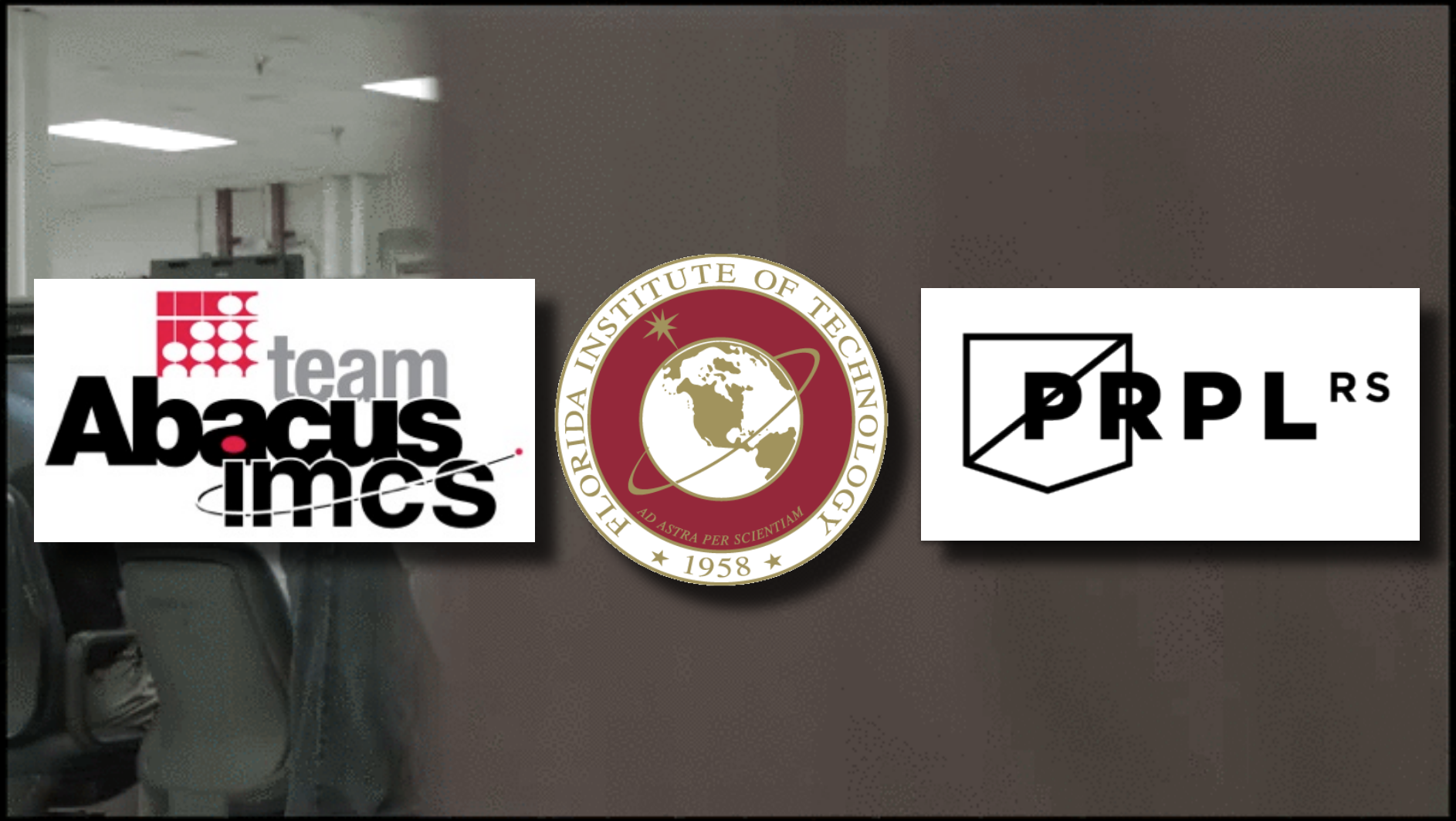
team
Abacus
imcs
FLORIDA INSTITUTE OF TECHNOLOGY
AD ASTRA PER SCIENTIAM
1958
PRPL RS

Major Partners:
You

IDEAS Contact Info

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

David J. Miranda
Email: david.j.miranda@nasa.gov
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