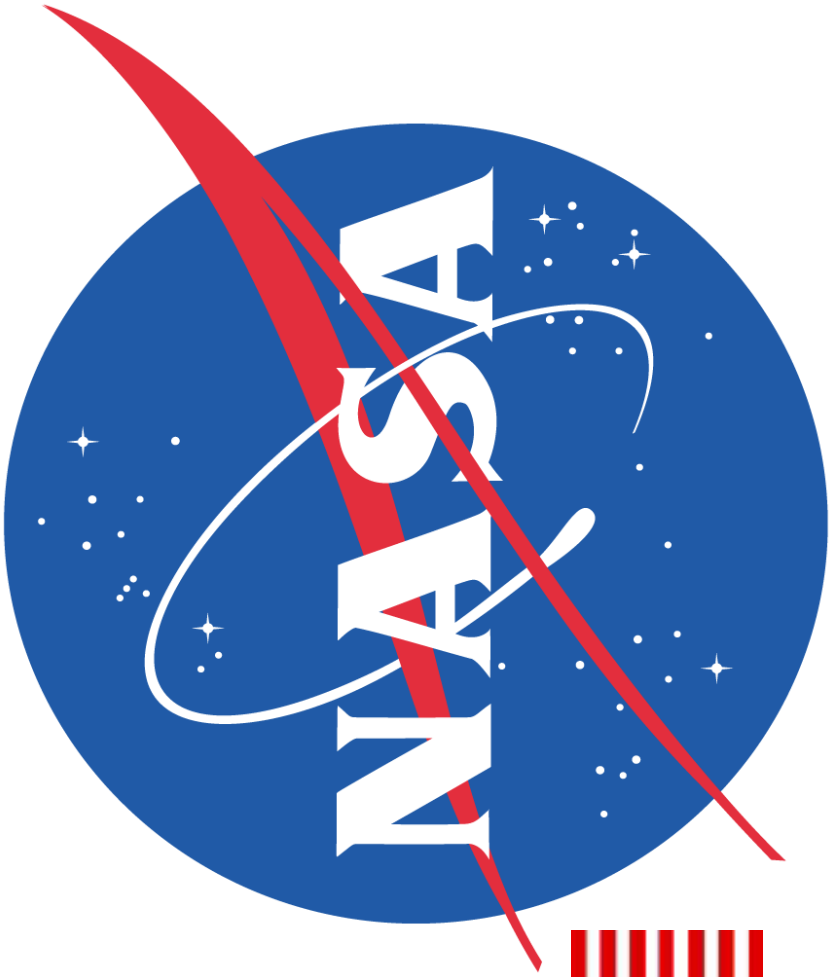


Mission to Mars!

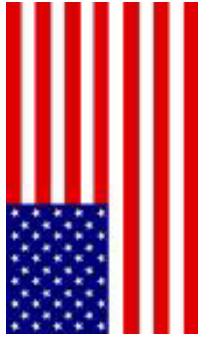


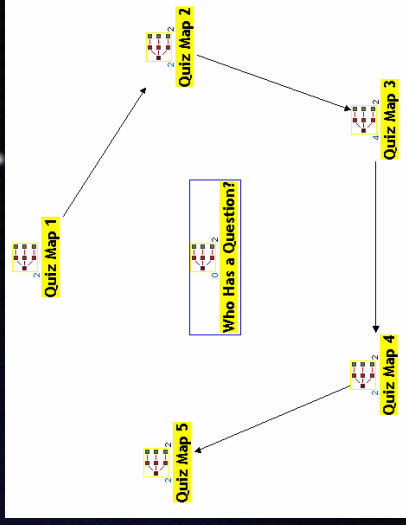
Bushfield Middle School
Wolverton, Milton Keynes
25th Feb. 2005

Dr Simon Buckingham Shum
Knowledge Media Institute
The Open University
Milton Keynes



The Open University

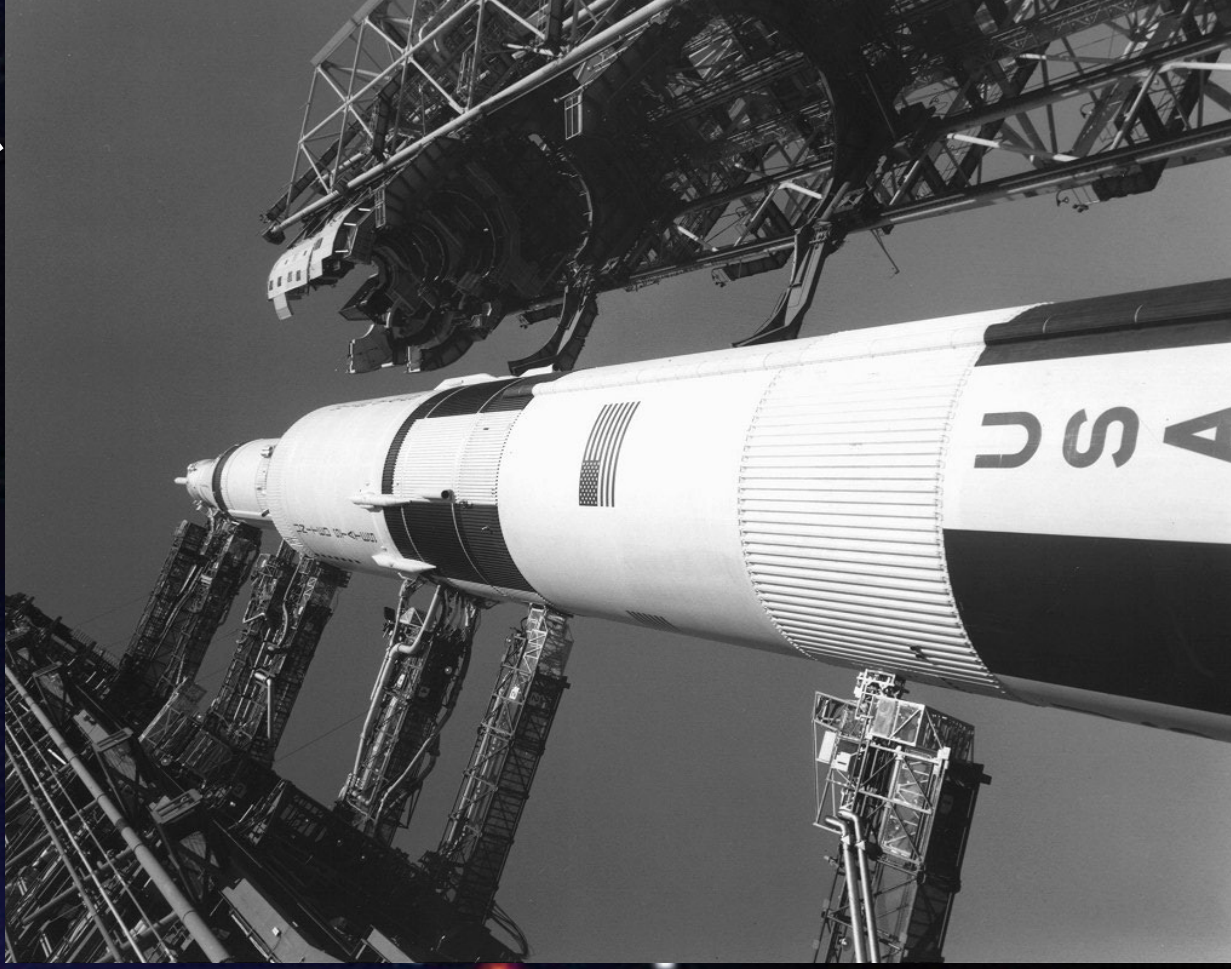




Quiz Map 1:

Who thinks that there could
be alien life in space?

Rocket to the Moon, 1969



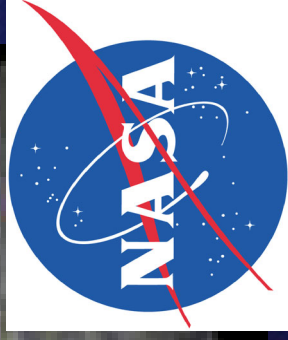
Acknowledgements:
NASA and Apollo
Archive



Walking on the Moon: July 1969



Acknowledgements:
NASA and Apollo
Archive



Imagine going to Mars...

How far is Mars from the Earth?



It takes **7 months** to get **there!**

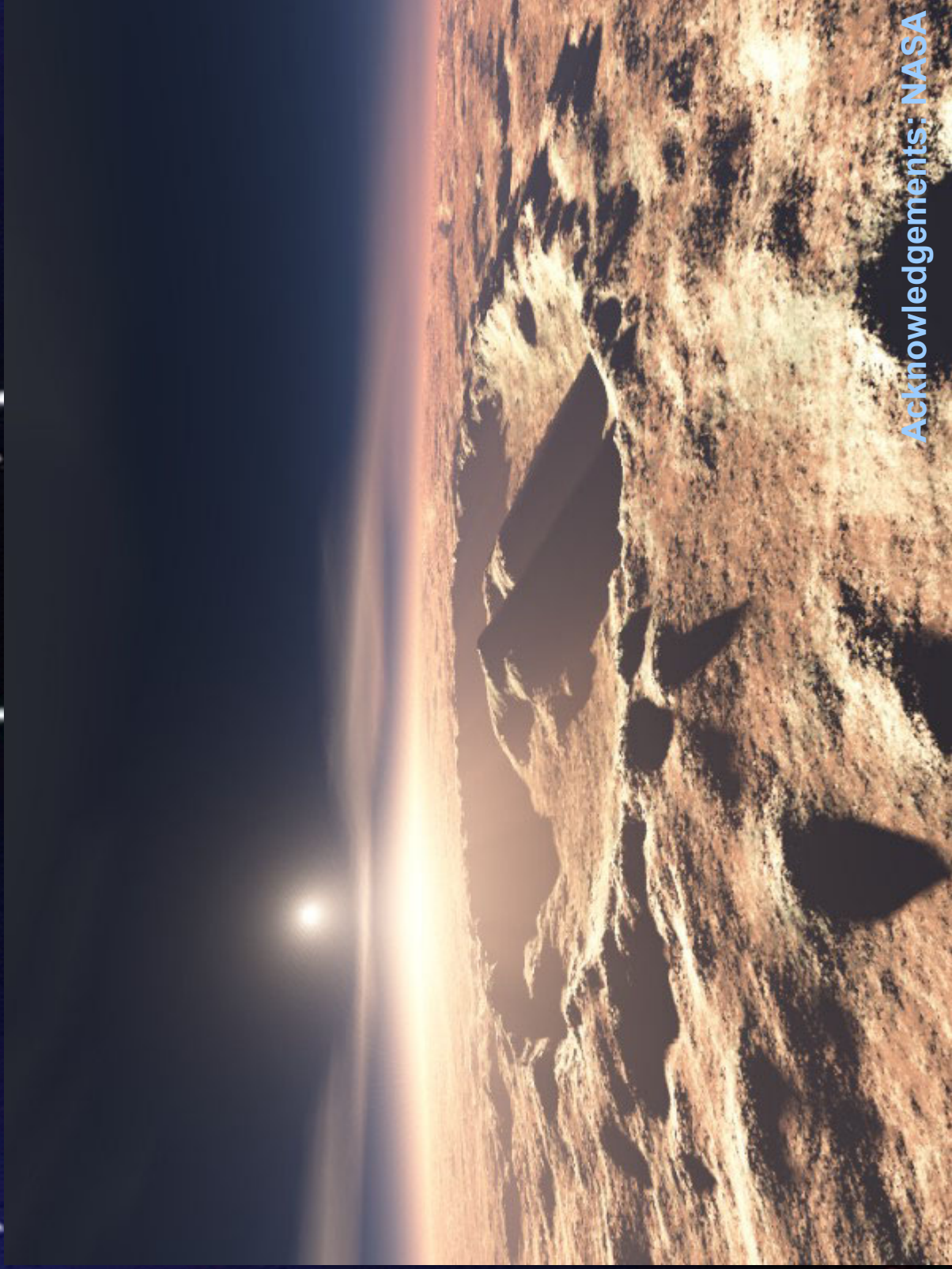
At their closest they are about **100 million km** apart, while at their furthest they are about **380 million km** apart.

Imagine going to Mars...



Acknowledgements: NASA

Imagine going to Mars...



Acknowledgements: NASA

Imagine going to Mars...



Acknowledgements: NASA

**But now we don't have to
imagine what Mars looks like,
because we've got robots
there**

Robots on Mars: January 2003

They're still on Mars,
right now!



**SPIRIT
& OPPORTUNITY**

One Year on Mars

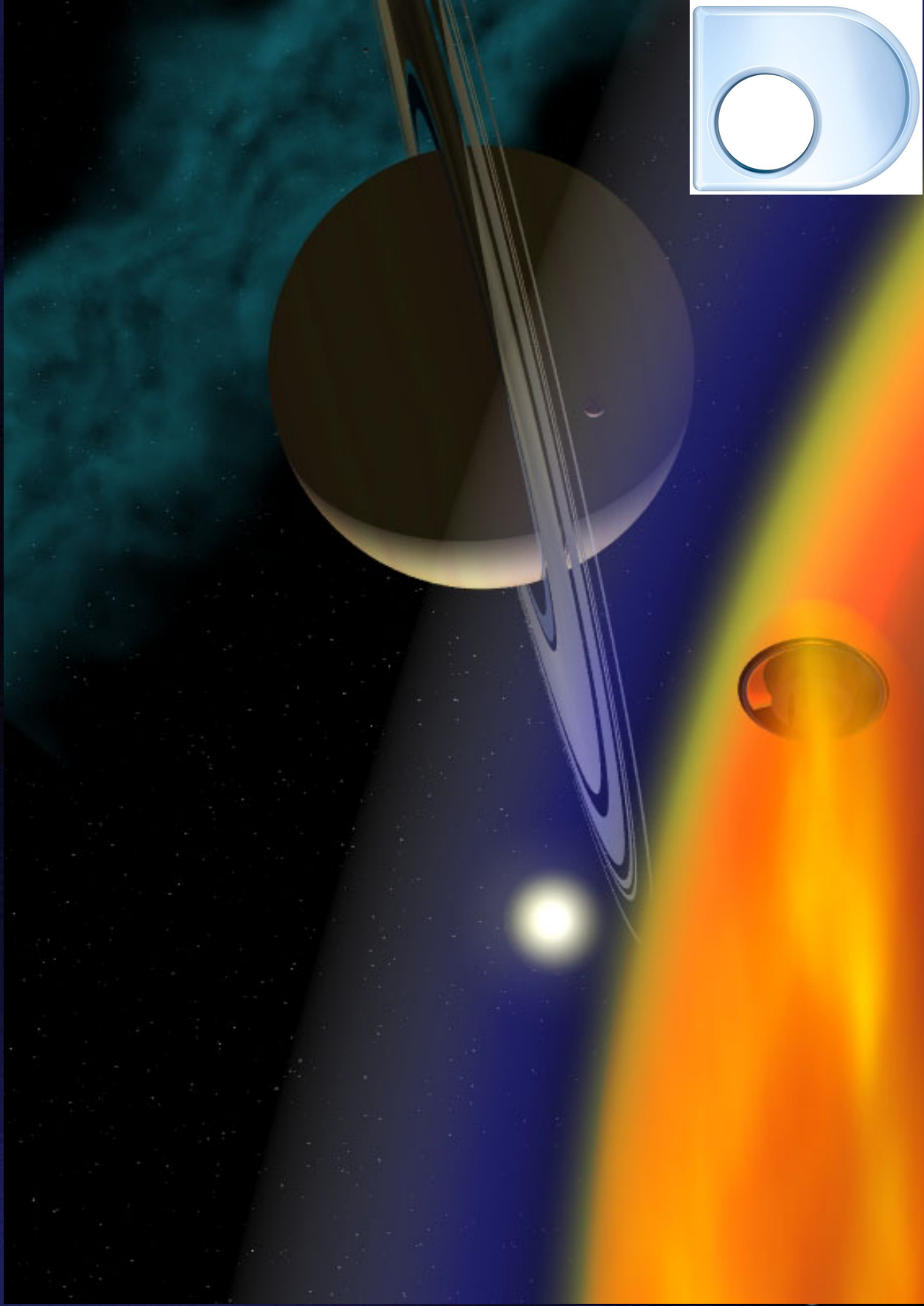


Acknowledgements: NASA

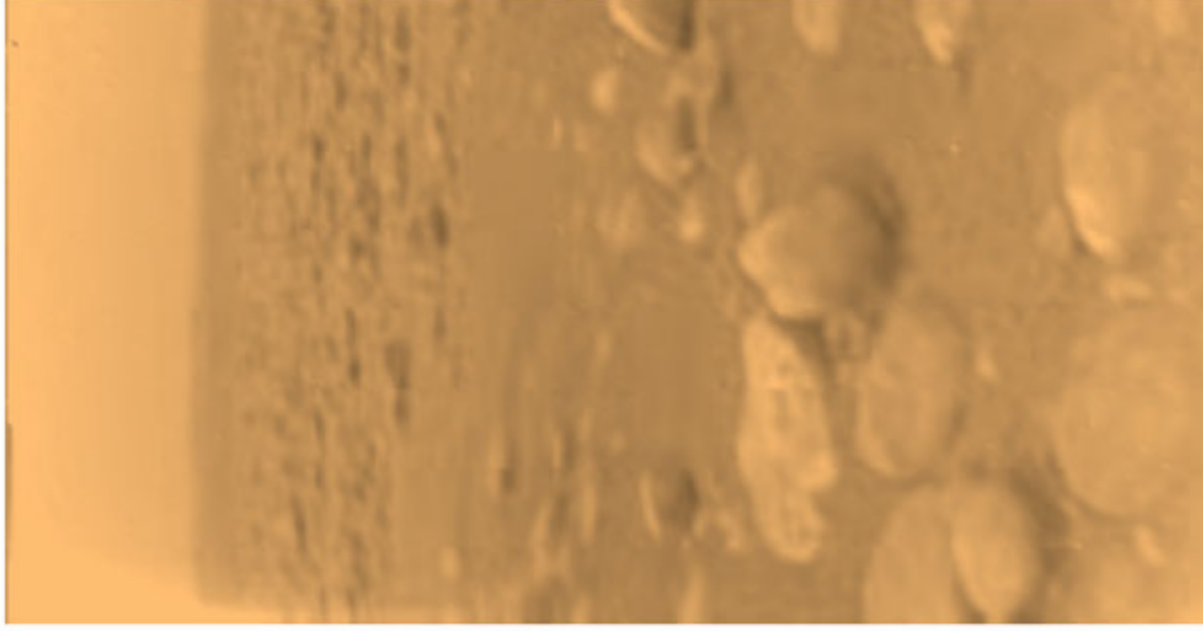
Where did we land in January?



Probe lands on Titan: January 2005



Probe lands on Titan: January 2005



Acknowledgements: **ESA**



The Open University

**Imagine being a Mars
astronaut...**

Imagine being a Mars astronaut...



Acknowledgements: NASA

Imagine being a Mars astronaut...



Acknowledgements: NASA

Imagine being a Mars astronaut...



Acknowledgements: NASA

**Let's do better than just
imagining being an astronaut.**

**Let's do lots of
dress rehearsals!
("simulations")**

Mars 'dress rehearsal': living in the desert Habitat



Acknowledgements: Mars Society

Astronaut geologists + robot



Acknowledgements: Mars Society

Mars 'dress rehearsal': practising geology in a space suit

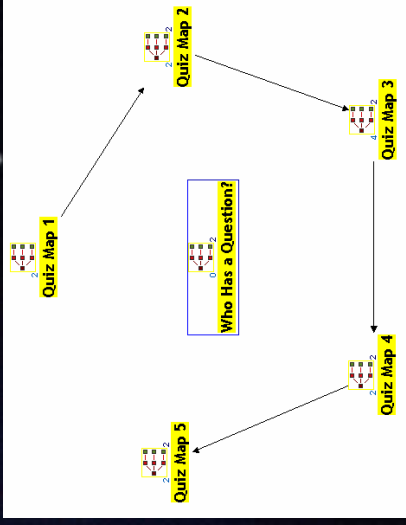


Acknowledgements: NASA

Mars 'dress rehearsal': walking with a robot assistant

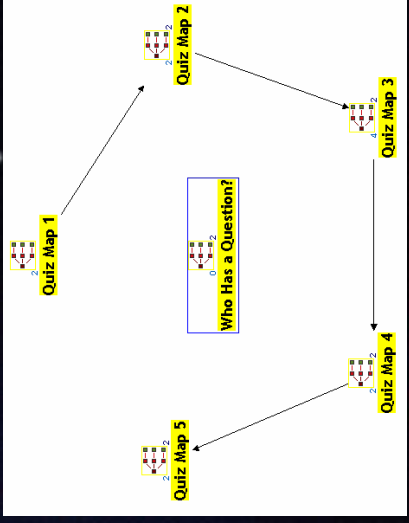


Acknowledgements: NASA



Quiz Map 2:

How many people are going to be in a Mars Crew?



Quiz Map 3:

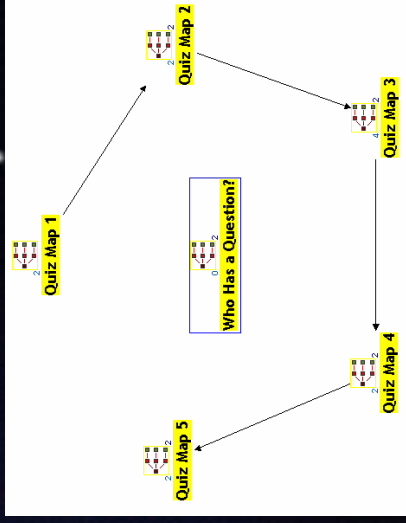
How many ways are there to communicate a message?

How long does it take to get to Mars?



7 months
to get
there

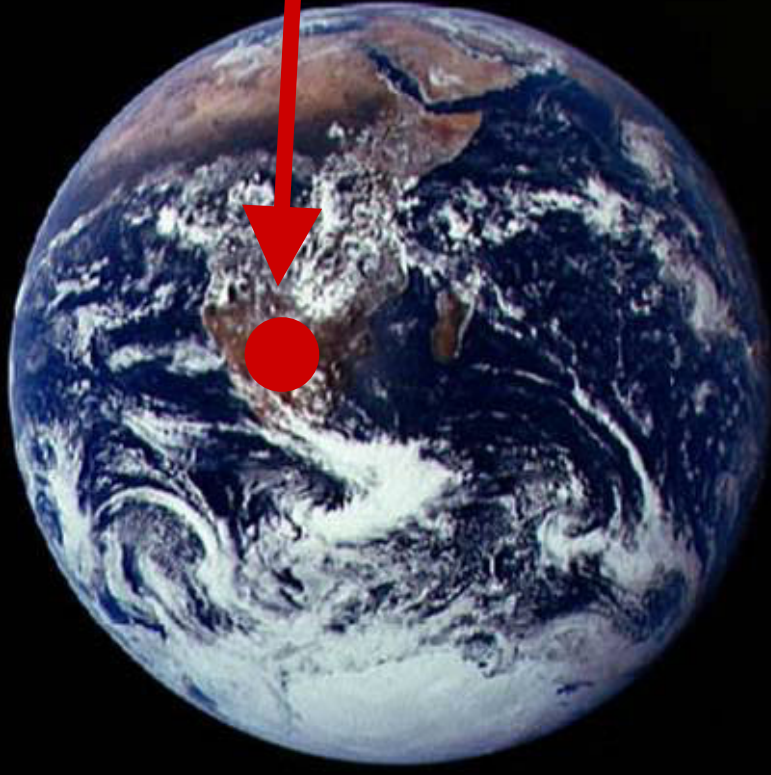




Quiz Map 4:

How will the scientists on Earth communicate with the Crew on Mars?

How will scientists on Earth communicate with the Crew on Mars?

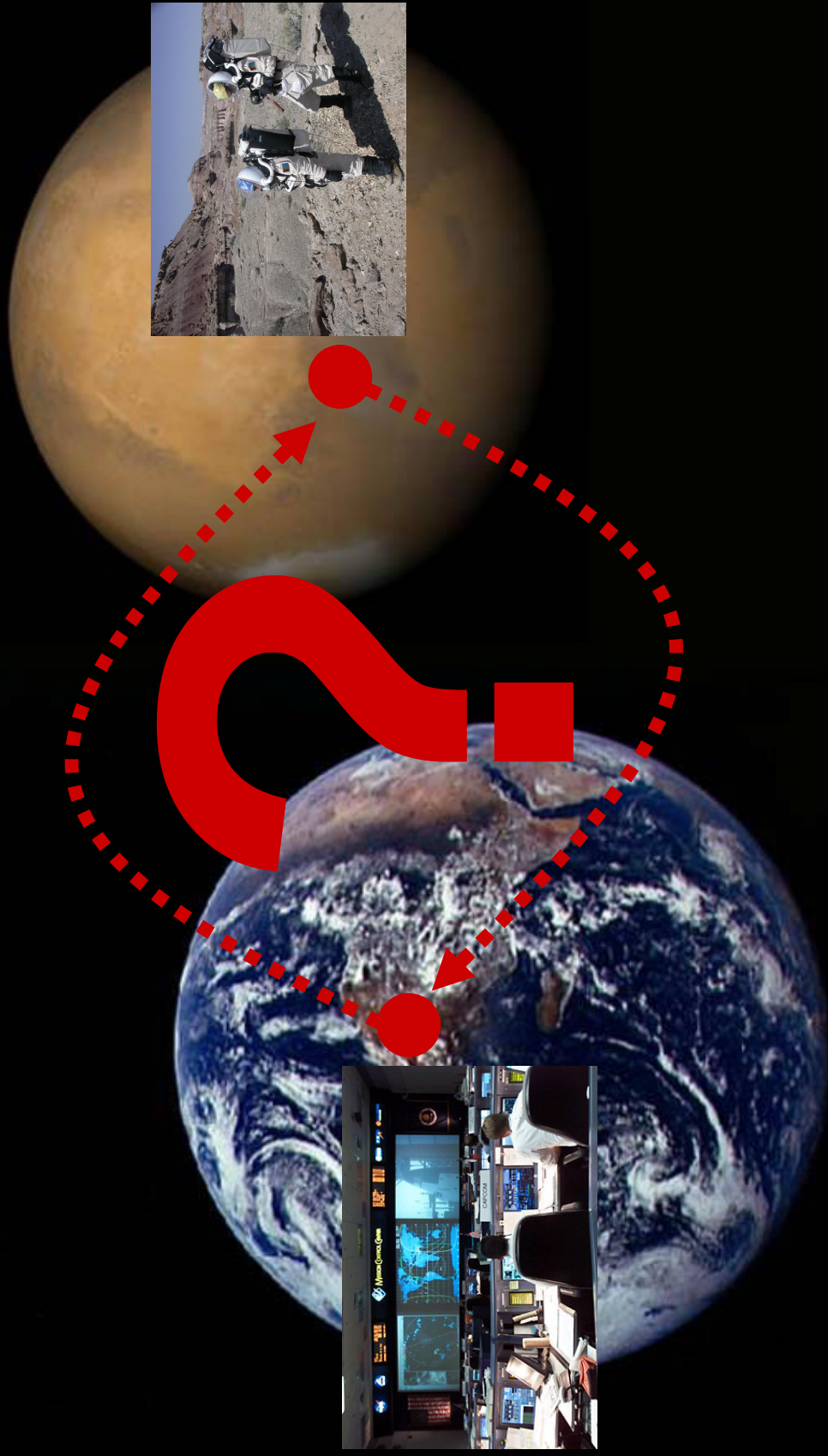


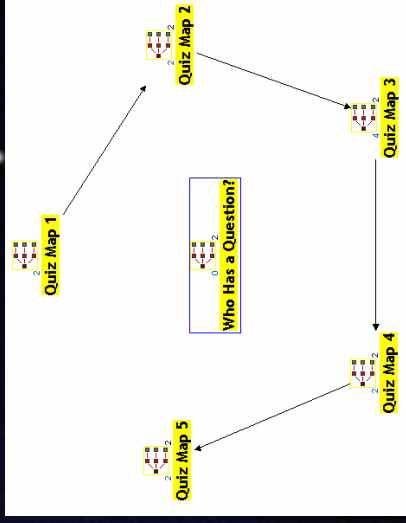
Earth Mission Control

How will the scientists on Earth communicate with the Crew on Mars?



How will the scientists on Earth communicate with the Crew on Mars?





Quiz Map 5:

How can computers help us communicate?

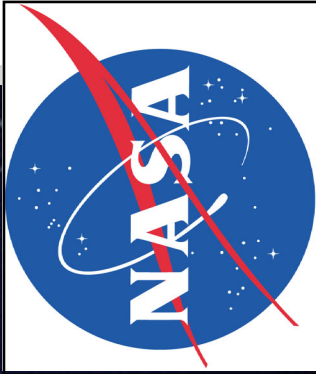
A dark blue night sky filled with numerous stars of varying colors, including white, yellow, orange, and red. The stars are scattered across the frame, creating a sense of depth and vastness.

Let's explore Mars!

**How did NASA and the Open
University communicate in
the Mars rehearsal?**

Scientists in different countries use the internet and phone

The screenshot shows a web browser window titled "Compendium - NASA_MDRS_Crew_29". The main content area displays a map of Mars with several colored dots (green, red, blue) representing different locations. A text box on the left explains that the map is an enhanced version of raw data rendered by WorkSite. Below the map, there is a chat window titled "BuddySpace2" with a message from "albert.m.sehiv@verizon.com" discussing alternative templates for future RSTs. To the right of the chat is a "Roster" window listing several team members with their names and email addresses. At the bottom of the browser window, there is a header for "THE MARS SOCIETY MARS DESERT RESEARCH STATION" and "MDRS Crew 29 April 25 - May 8, 2004".



The Open University



backing up
files that
be doing this

Close

Video record a Crew meeting on Mars



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RIACS/NASA Ames, Open
University, Southampton
University
Not to be used without
permission

RIACS/NASA Ames
Research Center
Mobile Agents Project
Maarten Sierhuis

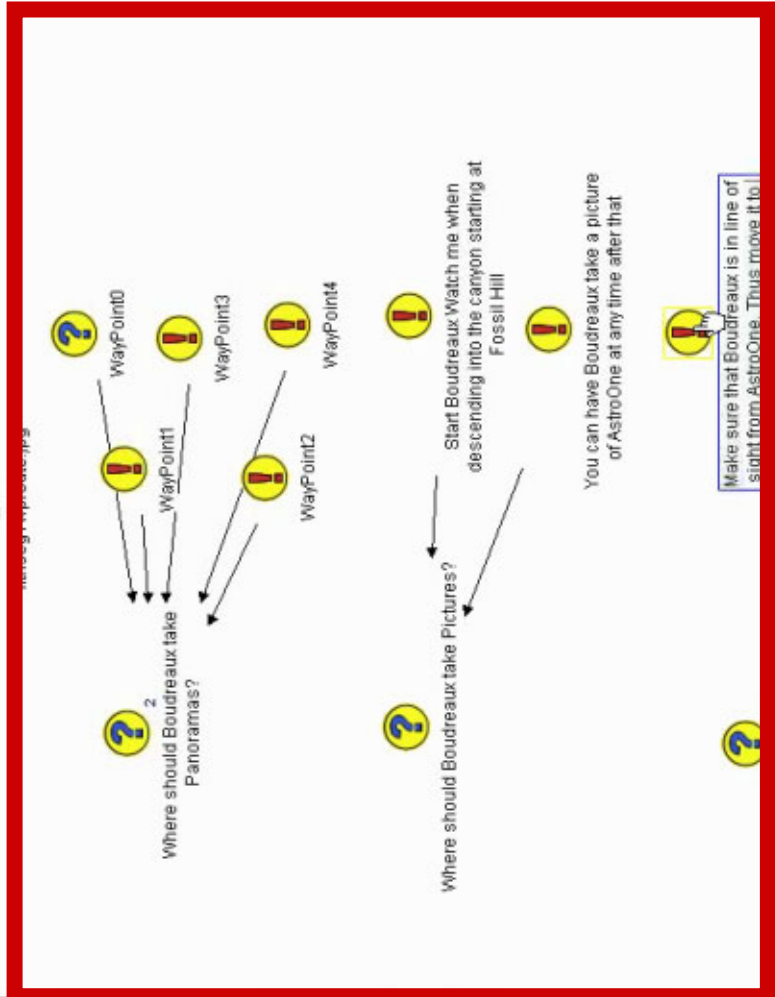
KMi Open University
CoAKTiNG Project
Simon Buckingham-
Shum & Al Selvin

Southampton University
CoAKTiNG Project
Kevin Page
Danius Michaelides
Dave De Roure
Nigel Shadbolt

Videos of the Mars Crew and Earth Scientists Meeting...

Make a Dialogue Map in the Crew meeting on Mars and record it

[Map] Lith Canyon EVA Segment 1 Crew Planning Meeting 05/03/04



(like we've been doing today)

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RIACS/NASA Ames Research Center
 Mobile Agents Project
 Maarten Stierhuis

KMi Open University
 CoAKTiNG Project
 Simon Buckingham-Shum & Al Selvin

Southampton University
 CoAKTiNG Project
 Kevin Page
 Dantius Michaelides
 Dave De Roure
 Nigel Shadbolt

Title: Lith Canyon EVA Segment 1 Planning Meeting - 3rd May 2004
Date: Tue May 4 00:37:00 2004
Participants: [Maarten](#), [Brent](#), [Abigail](#), [John](#).

Agenda

Compendium

Abigail

Planet

Video Playing 00h 20m 06s

GroupSync Offline Online

Mode Master Slave

Receiving Yes No

Current Speaker: Maarten

Nodes: Make sure that Boudreaux is in line of sight from AstroOne. Thus move it to WP 2 and 3 at appropriate times

This 'Meeting Replay' system was programmed by Southampton University

Rock project by geologists rehearsing to be on Mars

Compendium - NASA MDRS Crew29 FINAL

File Edit Map Format Tools Favorites Workspaces Window Help

[Map]: Brent's Analysis

75% 1:1

voice_note_2004-3-29_22-40-25.wav

Mosaic of Rock Hill w/ Abby and Boudreaux for scale

LOCATION: Rock Hill

LOCATION: Gap between Rock Hill and Back Hill

LOCATION: Back Hill

Summary of Field Work at Rock Hill

OBSERVATION: Rock Hill looks to have two layers not three as observed in Panoramas

Did not get to sample the reddish hills off to the north (left side in photos)

(In Brent's map) Please verify that the Rock and Back Hill location names are correct, as Sci.Org says they are Red and Rock

Context photo of Sample RK/1101 (SEE TAG for more detail)

Context photo # 2, similar to above

Close up photo of sample RK/1101

NOTE ON SAMPLE BAG Naming:

Not a good photo - sampling area is out of

This photo is v good - links Outcrop to the Rock perspective, and we are excited to incorporate it into the methodology :)

Summary of Field Work at Rock Hill

(In Abby's map) Which of these 4 samples came from the rock perspective photo in Brent's map?

OBSERVATION: Rock Hill looks to have two layers not three as observed in Panoramas

Did not get to sample the reddish hills off to the north (left side in photos)

voice_note_2004-3-29_22-22-35.wav

This is my bad for not being clear that the sample that I took here is the

Questions and answers about the geology rock photos

Questions and Ideas from the scientists on Earth

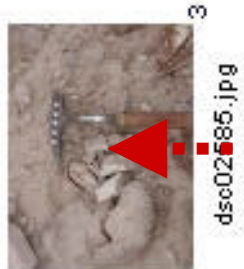
T + 2
This photo is v good - links Outcrop to the Rock perspective, and we are excited to incorporate it into the methodology :-)



Do we have these photos available?

Each sample should have an in situ Rock Perspective

T ? 3
(In Abby's map) Which of these 4 samples came from the rock perspective photo in Brent's map?



T ! 2
No, Abby's sample's are from the same unit as Brent's rock hammer, but not from this exact area in the photograph

Photos by scientists on Mars

T ! 2
Not a good photo - sampling area is cut off



This is my bad for not being clear that the sample that I took here is the broken fragments of the sandstone to the left side of the hammer, the arrow is not pointing to anything particular nor is this a photo of the location that Abby took

Answers from scientists on Mars

To be clear these 4 images are all from the same sample

T ! 2
For these 4 images



Who has a Question?

Goodbye!

Remember:

YOU may be going to Mars one
day!

Watch out for the Open
University website about today

With lots of thanks to:

■ **Bill Clancey & Maarten Sierhuis,
NASA Ames Mobile Agents**

Project: js.arc.nasa.gov/HCC/tasks/MbIAgt.html

■ **The EPSRC/e-Science CoAKTiNG**

Project: www.aktors.org/coaktng

■ **Follow up today at OU/Bushfield
Mission to Mars! website:**

www.kmi.open.ac.uk/projects/coaktng/nasa/bushfield