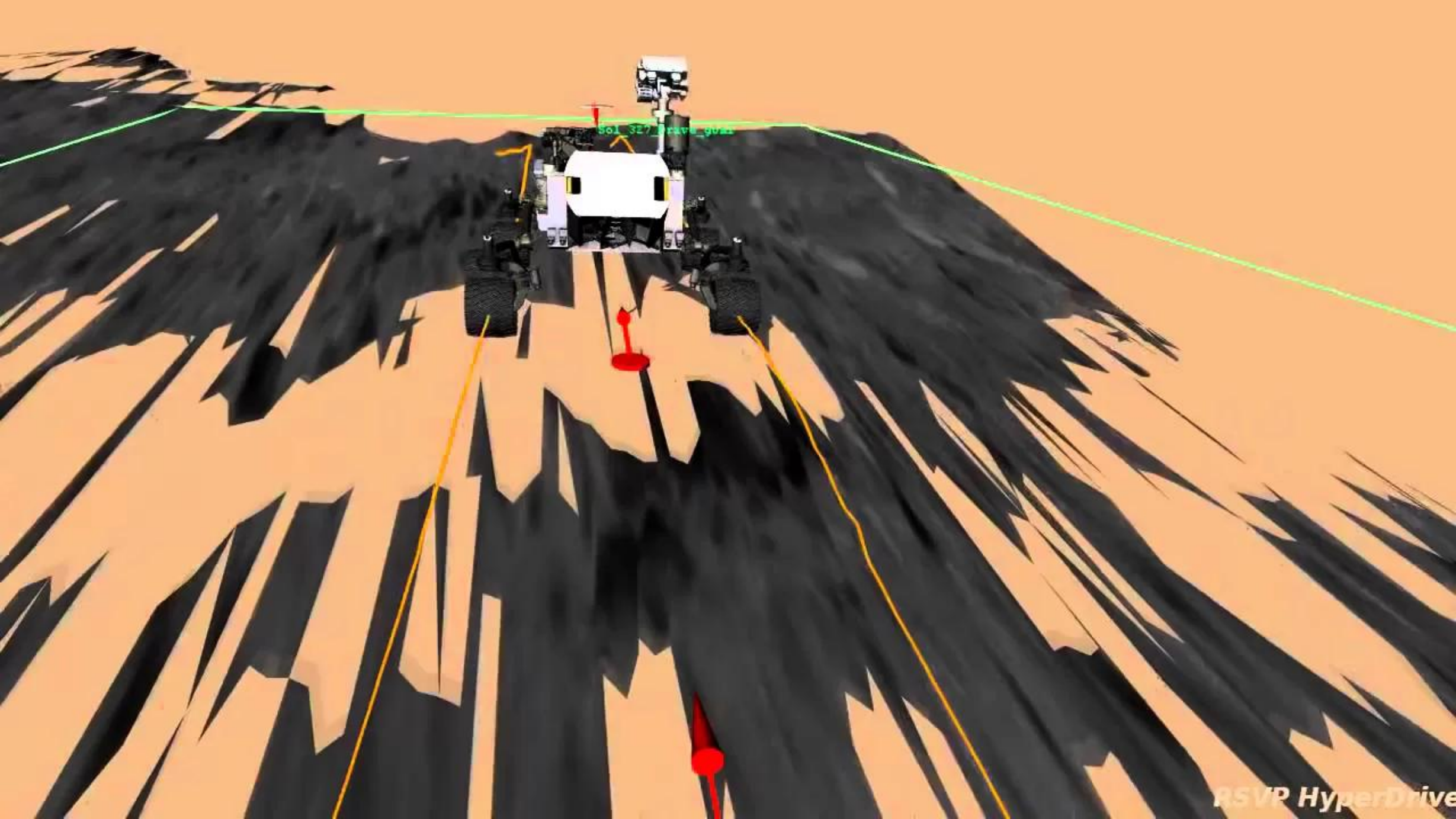
RSVP HyperDrive

1
00:00:00,000 --> 00:00:04,000
(Music)

2
00:00:04,000 --> 00:00:08,000
Hi, I am Jeff Biesiadecki, a rover planner and flight software developer,

3
00:00:08,000 --> 00:00:10,000
and this is your Curiosity rover report.

4
00:00:10,000 --> 00:00:15,000
After busily exploring the Glenelg region of Gale Crater,Curiosity is moving on.

5
00:00:15,000 --> 00:00:20,000
The rover is starting a 5 mile, or about an 8 kilometer trek southwest towards the foothills of Mt Sharp.

6
00:00:20,000 --> 00:00:23,000
Last fall, we found a great path into Glenelg.

7
00:00:23,000 --> 00:00:27,000
Now, we're going back the same way, so we can quickly be on our way.

8
00:00:27,000 --> 00:00:30,000
Here is a view of our recent sol 327 drive.

9
00:00:30,000 --> 00:00:35,000
We're looking westward from above Glenelg where you can see our inbound and outbound tracks.

10
00:00:35,000 --> 00:00:38,000
And here is a look of that drive displayed on terrain meshes created from Curiosity's

11
00:00:38,000 --> 00:00:44,000
stereo navigation cameras. A terrain mesh is a 3-D representation of the ground.

12
00:00:44,000 --> 00:00:47,000
This was a 40-meter long 'directed drive'. That's when we tell Curiosity

13
00:00:47,000 --> 00:00:51,000

to just drive towards the day's goal without stopping along the way to look for and avoid hazards.

14
00:00:51,000 --> 00:00:55,000
40 meters is about as far as the NAVCAM terrain meshes can reach.

15
00:00:55,000 --> 00:00:58,000
The orange lines show the path that the front wheels will take

16
00:00:58,000 --> 00:01:01,000
and the red marks show where individual arc and turn commands will be started.

17
00:01:01,000 --> 00:01:06,000
The green box shows the 'corral' given to Curiosity as part of her drive plan.

18
00:01:06,000 --> 00:01:10,000
She will not go outside it. The red and white marker shows the goal location.

19
00:01:10,000 --> 00:01:13,000
Images and animations like these are how rover planners document

20
00:01:13,000 --> 00:01:15,000
and present drives for the rest of the team.

21
00:01:15,000 --> 00:01:19,000
This directed-driving mode is how we'll start each of our drives to Mt. Sharp.

22
00:01:19,000 --> 00:01:23,000
To extend our drives further, we'll use the autonomous navigation mode

23
00:01:23,000 --> 00:01:26,000
that was part of Curiosity's recent software update.

24
00:01:26,000 --> 00:01:32,000
It enables Curiosity to decide on her own when to periodically stop and image the terrain in front of her.

25
00:01:32,000 --> 00:01:35,000
She can then look out for large rocks and ditches and drive around them.

26
00:01:35,000 --> 00:01:39,000
Using this mode, we hope to cover at least 100 meters per day.

27
00:01:39,000 --> 00:01:42,000
Here's a map view of our upcoming drive.

28
00:01:42,000 --> 00:01:46,000
We expect to get one final good look at the tracks laid down last year.

29
00:01:46,000 --> 00:01:51,000
Curiosity should end this drive as seen in the orange path, just south of the older tracks.

30
00:01:51,000 --> 00:01:55,000
And meanwhile, Curiosity's odometer is close to reaching the one kilometer mark.