
(fast motion video)

1
00:00:11,720 --> 00:00:10,190
hi I'm Brian Wilcox and I'm the

2
00:00:14,140 --> 00:00:11,730
principal investigator for athlete

3
00:00:16,400 --> 00:00:14,150
athlete is the all-terrain heck slimmed

4
00:00:18,859 --> 00:00:16,410
extraterrestrial Explorer that we hope

5
00:00:21,230 --> 00:00:18,869
to fly to the moon in a decade or so i'm

6
00:00:22,250 --> 00:00:21,240
here at the JPL outdoor test facility

7
00:00:25,189 --> 00:00:22,260
and we're going to see a little bit

8
00:00:27,230 --> 00:00:25,199
about what athlete can do athlete is a

9
00:00:29,330 --> 00:00:27,240
six-legged vehicle with six wheels on

10
00:00:31,580 --> 00:00:29,340
the end of each of the legs the legs are

11
00:00:34,729 --> 00:00:31,590
connected to a hexagonal frame so that

12
00:00:37,250 --> 00:00:34,739
we can have a flat deck for cargo that

13
00:00:38,810 --> 00:00:37,260

we might carry on the moon could be

14
00:00:49,430 --> 00:00:38,820
either equipment or it could be a

15
00:00:52,430 --> 00:00:49,440
habitat every face of the hexagonal

16
00:00:56,180 --> 00:00:52,440
frame has a pair of stereo cameras that

17
00:00:59,330 --> 00:00:56,190
allow us to get a stereoscopic panoramic

18
00:01:02,090 --> 00:00:59,340
view of the surroundings of the vehicle

19
00:01:04,700 --> 00:01:02,100
and to display that to the operator back

20
00:01:05,929 --> 00:01:04,710
on earth so the operator it's as if

21
00:01:09,350 --> 00:01:05,939
they're standing in the middle of the

22
00:01:18,880 --> 00:01:09,360
vehicle looking out everywhere in every

23
00:01:24,460 --> 00:01:21,880
every leg has a real on the end and the

24
00:01:26,500 --> 00:01:24,470
wheel is relatively small because we

25
00:01:28,990 --> 00:01:26,510
know we can use it to roll efficiently

26
00:01:30,820 --> 00:01:29,000
on moderate and fairly hard to rain but

27
00:01:33,210 --> 00:01:30,830
we also know that we can lock it and use

28
00:01:40,900 --> 00:01:33,220
it as a foot if we get into soft or

29
00:01:44,620 --> 00:01:40,910
extreme terrain the wheel being as small

30
00:01:47,109 --> 00:01:44,630
as it is has a has a much smaller motor

31
00:01:49,030 --> 00:01:47,119
inside than it would have to have if it

32
00:01:51,010 --> 00:01:49,040
needed to go on the worst possible

33
00:01:55,570 --> 00:01:51,020
terrain that weight savings will allows

34
00:01:59,650 --> 00:01:55,580
us to put a tool adapter on every leg

35
00:02:03,249 --> 00:01:59,660
that allows us to adapt any kind of a

36
00:02:06,760 --> 00:02:03,259
power tool into the leg and to use this

37
00:02:09,400 --> 00:02:06,770
power take-off to to power that tool so

38
00:02:11,800 --> 00:02:09,410

in this case is a simple gripper and the

39
00:02:13,979 --> 00:02:11,810
gripper is actuated by the wheel when

40
00:02:17,050 --> 00:02:13,989
you turn the wheel it closes the gripper

41
00:02:19,690 --> 00:02:17,060
closes or opens gripper we also have a

42
00:02:22,690 --> 00:02:19,700
pair of again a stereo pair of cameras

43
00:02:24,580 --> 00:02:22,700
that we can use to look at the at the

44
00:02:27,069 --> 00:02:24,590
end of the tool and look at what the

45
00:02:29,890 --> 00:02:27,079
tool is doing so that you can see

46
00:02:39,560 --> 00:02:29,900
exactly what you need to see to use that

47
00:02:43,980 --> 00:02:42,150
this vehicle is just a prototype and

48
00:02:46,050 --> 00:02:43,990
it's only about half as big as the one

49
00:02:48,900 --> 00:02:46,060
that we expect to fly in another decade

50
00:02:51,750 --> 00:02:48,910
or so at that time we hope to land palos

51
00:02:53,880 --> 00:02:51,760
as much as 20 tons and with legs like

52
00:02:55,800 --> 00:02:53,890
these we could not only land them on the