
E
17

1
00:01:32,259 --> 00:05:24,580
transitioning

2
00:05:29,240 --> 00:05:27,170
I'm a taken chief of the rotorcraft

3
00:05:31,909 --> 00:05:29,250
empowered lift branch at NASA Ames

4
00:05:34,550 --> 00:05:31,919
Research Center my branch is responsible

5
00:05:37,070 --> 00:05:34,560
for the development of a new research

6
00:05:40,700 --> 00:05:37,080
aircraft that aims known as a v/stol

7
00:05:44,830 --> 00:05:40,710
systems research aircraft or v sra it's

8
00:05:49,279 --> 00:05:44,840
whole purpose in being is to is to

9
00:05:50,869 --> 00:05:49,289
demonstrate aims develop technology in

10
00:05:54,589 --> 00:05:50,879
both the flight control and cockpit

11
00:05:56,120 --> 00:05:54,599
systems for a new breed of advanced

12
00:05:59,450 --> 00:05:56,130
short takeoff and vertical landing

13
00:06:02,050 --> 00:05:59,460

aircraft we're currently beginning a

14
00:06:04,370 --> 00:06:02,060
series of demonstration flights for both

15
00:06:07,820 --> 00:06:04,380
visiting military and industry test

16
00:06:11,420 --> 00:06:07,830
pilots to expose them to the technology

17
00:06:14,779 --> 00:06:11,430
being developed at Ames specifically the

18
00:06:16,670 --> 00:06:14,789
flight control system control modes and

19
00:06:19,999 --> 00:06:16,680
the head-up display formats that are

20
00:06:21,830 --> 00:06:20,009
being developed to help extend the

21
00:06:23,839 --> 00:06:21,840
operational capability of this type of

22
00:06:28,670 --> 00:06:23,849
aircraft as well as to improve the

23
00:06:31,159 --> 00:06:28,680
safety of flight what we have done is to

24
00:06:33,439 --> 00:06:31,169
implement a programmable fly-by-wire

25
00:06:36,140 --> 00:06:33,449
flight control system on the aircraft on

26
00:06:37,969 --> 00:06:36,150
the VSR a together with a head-up

27
00:06:42,200 --> 00:06:37,979
display with a programmable set of

28
00:06:44,740 --> 00:06:42,210
symbology which will allow us to expose

29
00:06:47,600 --> 00:06:44,750
these visiting pilots to this to a wide

30
00:06:49,730 --> 00:06:47,610
spectrum of possibilities and control

31
00:06:52,120 --> 00:06:49,740
modes that have been developed at Ames

32
00:06:56,870 --> 00:06:52,130
using the ground simulation facilities

33
00:06:59,029 --> 00:06:56,880
the intention then is to perform

34
00:07:01,300 --> 00:06:59,039
evaluation flights formal evaluation

35
00:07:05,659 --> 00:07:01,310
flights using these visiting test pilots

36
00:07:08,480 --> 00:07:05,669
and simulating a situation where they

37
00:07:13,519 --> 00:07:08,490
are making a an approach and landing to

38
00:07:17,120 --> 00:07:13,529

a small ship at sea or to a confined

39
00:07:18,260 --> 00:07:17,130
area on land in the great weather

40
00:07:21,980 --> 00:07:18,270
conditions in poor weather conditions

41
00:07:23,600 --> 00:07:21,990
poor visibility conditions and for the

42
00:07:29,769 --> 00:07:23,610
shipboard situation a very high sea

43
00:07:32,239 --> 00:07:29,779
State this is a is a particularly

44
00:07:34,489 --> 00:07:32,249
difficult area for this type of error

45
00:07:36,379 --> 00:07:34,499
craft because as the aircraft as this

46
00:07:39,049 --> 00:07:36,389
short takeoff and vertical landing

47
00:07:42,409 --> 00:07:39,059
aircraft slows down it depends more and

48
00:07:44,509 --> 00:07:42,419
more on the propulsion system for its

49
00:07:46,789 --> 00:07:44,519
own stability and control and less and

50
00:07:51,499 --> 00:07:46,799
less on the aerodynamics of the of the

51
00:07:53,359 --> 00:07:51,509
vehicle the the detail design of the

52
00:07:55,189 --> 00:07:53,369
propulsion system is extremely important

53
00:07:58,489 --> 00:07:55,199
and the way it affects the pilots

54
00:07:59,689 --> 00:07:58,499
ability to control the aircraft so we've

55
00:08:02,389 --> 00:07:59,699
developed systems that are appropriate

56
00:08:04,629 --> 00:08:02,399
for this type of aircraft and display

57
00:08:07,249 --> 00:08:04,639
formats which allow the pilot to have

58
00:08:08,809 --> 00:08:07,259
basically a status at a glance when

59
00:08:11,899 --> 00:08:08,819
looking out the looking out the window

60
00:08:13,759 --> 00:08:11,909
at a at a dark and stormy night he has

61
00:08:15,919 --> 00:08:13,769
some symbology sitting in front of his

62
00:08:21,049 --> 00:08:15,929
eyes that will help him perform the task

63
00:08:23,839 --> 00:08:21,059

that we've defined we are our primary

64
00:08:26,269 --> 00:08:23,849
role here at Ames is to generate the

65
00:08:27,979 --> 00:08:26,279
design criteria for these integrated

66
00:08:29,869 --> 00:08:27,989
flight and propulsion control systems

67
00:08:33,019 --> 00:08:29,879
for the short takeoff and vertical

68
00:08:35,869 --> 00:08:33,029
landing aircraft and the technique that

69
00:08:38,540 --> 00:08:35,879
we use to generate credible criteria is

70
00:08:41,480 --> 00:08:38,550
to use to employ flight validation of

71
00:08:43,999 --> 00:08:41,490
those of those criteria specifically the

72
00:08:48,040 --> 00:08:44,009
formal evaluations in the v/stol systems

73
00:08:52,879 --> 00:08:48,050
research aircraft we intend to have

74
00:08:56,329 --> 00:08:52,889
pilots from the marine corps major

75
00:08:58,160 --> 00:08:56,339
aerospace companies and and also

76
00:09:00,460 --> 00:08:58,170
visiting pilots from the united kingdom

77
00:09:03,530 --> 00:09:00,470
who fly that who fly the harrier and

78
00:09:05,619 --> 00:09:03,540
that will be done through the end of

79
00:09:09,980 --> 00:09:05,629
this calendar year through december and

80
00:09:11,259 --> 00:09:09,990
upon completion of that flight program a

81
00:09:14,679 --> 00:09:11,269
final report will be put together