



1
00:00:11,030 --> 00:00:08,950
scenes like this seem to nominate

2
00:00:13,110 --> 00:00:11,040
television newsrooms and newspaper

3
00:00:15,749 --> 00:00:13,120
headlines

4
00:00:17,830 --> 00:00:15,759
statistics show that 60 to 80 of all

5
00:00:20,790 --> 00:00:17,840
aircraft accidents are caused by human

6
00:00:23,750 --> 00:00:20,800
error unfortunately air space like our

7
00:00:26,470 --> 00:00:23,760
freeways is becoming crowded

8
00:00:28,310 --> 00:00:26,480
a new nasa flight simulation laboratory

9
00:00:30,710 --> 00:00:28,320
called the manned vehicle systems

10
00:00:32,870 --> 00:00:30,720
research facility at the ames research

11
00:00:35,190 --> 00:00:32,880
center is addressing human factors

12
00:00:36,790 --> 00:00:35,200
issues which relate to pilot and true

13
00:00:39,350 --> 00:00:36,800

performance errors

14

00:00:41,350 --> 00:00:39,360

the facility in mountain view california

15

00:00:44,630 --> 00:00:41,360

houses the most realistic commercial

16

00:00:47,190 --> 00:00:44,640

transport boeing 727 aircraft simulation

17

00:00:49,750 --> 00:00:47,200

system in the world as well as an

18

00:00:51,590 --> 00:00:49,760

advanced simulator being used to test

19

00:00:53,990 --> 00:00:51,600

and develop the cockpits of the next

20

00:00:56,150 --> 00:00:54,000

generation commercial aircraft

21

00:00:59,270 --> 00:00:56,160

facility manager bob scheiner talks

22

00:01:00,950 --> 00:00:59,280

about the boeing 727 cab

23

00:01:02,470 --> 00:01:00,960

to do human factors we found that we

24

00:01:04,070 --> 00:01:02,480

have to create a

25

00:01:05,270 --> 00:01:04,080

full mission environment we have to give

26

00:01:07,109 --> 00:01:05,280

the pilot

27

00:01:08,789 --> 00:01:07,119

exactly the same

28

00:01:10,390 --> 00:01:08,799

the same scenario he's exposed to in the

29

00:01:12,950 --> 00:01:10,400

real world otherwise he believes he's in

30

00:01:14,550 --> 00:01:12,960

the simulator in a box but if we provide

31

00:01:15,910 --> 00:01:14,560

all the cues that he finds in the real

32

00:01:17,590 --> 00:01:15,920

world

33

00:01:19,429 --> 00:01:17,600

then we found that he'll behave the same

34

00:01:22,310 --> 00:01:19,439

way psychologically and that's what

35

00:01:34,149 --> 00:01:23,670

fire

36

00:01:34,159 --> 00:01:49,350

we'll be back

37

00:01:53,109 --> 00:01:51,270

video cameras and voice recorders

38

00:01:55,030 --> 00:01:53,119

document the physical behavior of the

39

00:01:56,389 --> 00:01:55,040

pilot and other participants in the

40

00:01:58,389 --> 00:01:56,399

simulation

41

00:02:00,630 --> 00:01:58,399

the principal investigator can monitor

42

00:02:02,389 --> 00:02:00,640

every aspect of the simulation from

43

00:02:04,709 --> 00:02:02,399

instrument settings to tracking the

44

00:02:07,510 --> 00:02:04,719

pilot's eye movements

45

00:02:09,990 --> 00:02:07,520

topics such as wind shear pilot workload

46

00:02:11,110 --> 00:02:10,000

jet lag and fatigue are currently slated

47

00:02:14,550 --> 00:02:11,120

for study

48

00:02:16,550 --> 00:02:14,560

senior scientist dr charles billings

49

00:02:19,990 --> 00:02:16,560

the fire

50

00:02:23,190 --> 00:02:20,000

or indeed any other malfunction

51
00:02:24,630 --> 00:02:23,200
is simply a way of causing the pilot to

52
00:02:27,190 --> 00:02:24,640
have to

53
00:02:28,710 --> 00:02:27,200
do some sort of decision making and some

54
00:02:31,270 --> 00:02:28,720
sort of behavior

55
00:02:33,589 --> 00:02:31,280
that he does not normally have to do

56
00:02:36,229 --> 00:02:33,599
in the course of routine flying and it's

57
00:02:37,990 --> 00:02:36,239
the mechanisms of that behavior that we

58
00:02:39,670 --> 00:02:38,000
are really studying

59
00:02:42,390 --> 00:02:39,680
to try to help you

60
00:02:44,390 --> 00:02:42,400
and uh all flight crew members do a

61
00:02:46,949 --> 00:02:44,400
better job of decision making under

62
00:02:49,270 --> 00:02:46,959
difficult circumstances

63
00:02:50,949 --> 00:02:49,280

v1

64

00:02:53,589 --> 00:02:50,959

rotate

65

00:02:56,070 --> 00:02:53,599

the advanced concept simulator is a tool

66

00:02:57,990 --> 00:02:56,080

for designing the cockpits of the future

67

00:03:00,070 --> 00:02:58,000

the hope is to replace many of the

68

00:03:02,309 --> 00:03:00,080

switches and dials found in today's

69

00:03:04,710 --> 00:03:02,319

aircraft with less cluttered instrument

70

00:03:07,750 --> 00:03:04,720

panels that are easier to use and can

71

00:03:09,830 --> 00:03:07,760

monitor aircraft functions better

72

00:03:12,869 --> 00:03:09,840

that's a manned vehicle systems research

73

00:03:14,470 --> 00:03:12,879

facility solving in-flight human factors