



1
00:00:00,786 --> 00:00:01,146
>> That's good.

2
00:00:01,356 --> 00:00:01,556
>> Yeah.

3
00:00:02,556 --> 00:00:06,416
>> Fused reality is a new
technology for simulation,

4
00:00:07,006 --> 00:00:09,906
but what it does
is we can determine

5
00:00:10,266 --> 00:00:14,346
where the real world ends
and the virtual world begins.

6
00:00:14,676 --> 00:00:16,786
What this allows you to do is

7
00:00:16,826 --> 00:00:20,736
that any aircraft can
become its own simulator.

8
00:00:21,006 --> 00:00:25,226
Whether it's on the hanger deck
or the flight deck or out there

9
00:00:25,316 --> 00:00:28,396
on the tarmac, or
if it's airborne.

10
00:00:29,016 --> 00:00:30,636
>> Things that simulators
aren't good

11
00:00:30,636 --> 00:00:32,906
at modeling always is real air.

12

00:00:33,646 --> 00:00:37,456

So I think what you gain here is taking a simulator into the air

13

00:00:38,306 --> 00:00:42,046

and you're actually exposed to the real environment,

14

00:00:42,046 --> 00:00:44,136

the flying environment up and away.

15

00:00:44,356 --> 00:00:47,156

And now taking that simulator, you know, and visually kind

16

00:00:47,156 --> 00:00:48,876

of superimposing that on top of it.

17

00:00:48,876 --> 00:00:50,326

So that's a new thing.

18

00:00:50,696 --> 00:00:51,046

That's good.

19

00:00:51,696 --> 00:00:52,806

>> What's most impressive to me

20

00:00:52,806 --> 00:00:55,166

about fused reality is the feeling that you get

21

00:00:55,166 --> 00:00:57,136

as you're actually flying the aircraft

22

00:00:57,186 --> 00:00:59,646

and seeing a new visual environment outside the window.

23

00:01:00,246 --> 00:01:02,766

And being able to put other aircraft

24

00:01:02,836 --> 00:01:05,436

that aren't actually there in your field of you

25

00:01:05,436 --> 00:01:07,836

and make you feel like you're actually flying in formation

26

00:01:07,836 --> 00:01:11,606

with another aircraft that isn't there.

27

00:01:11,656 --> 00:01:14,996

>> As a pilot, it-- evaluating the system we're looking

28

00:01:14,996 --> 00:01:18,356

at landing tasks, and see if I could do

29

00:01:18,356 --> 00:01:22,986

that using the synthetic vision, but the real aircraft flying up

30

00:01:22,986 --> 00:01:25,236

and way at a safe altitude today.

31

00:01:25,326 --> 00:01:29,866

So what I was seeing was me starting at like 500 feet

32

00:01:29,866 --> 00:01:34,136

and coming down right to the synthetic ground while we're up

33

00:01:34,136 --> 00:01:35,666

and away at, you know, 5000 feet.

34

00:01:36,516 --> 00:01:42,916

[Inaudible]

35

00:01:43,416 --> 00:01:46,366

In addition to the landing tasks we also did formation

36

00:01:46,366 --> 00:01:47,826

and aerial refueling tasks.

37

00:01:47,896 --> 00:01:51,346

So we basically had a tanker set up out there

38

00:01:51,646 --> 00:01:54,546

and we're just trying to see how we could orient ourselves

39

00:01:54,766 --> 00:01:58,586

and keep a smooth, stable station with that tanker

40

00:01:59,026 --> 00:02:03,406

and conceivably do some actual aerial refueling training

41

00:02:03,816 --> 00:02:04,656

with the system.

42

00:02:05,626 --> 00:02:09,096

One more feature that we looked at was the stenciling mode

43

00:02:09,236 --> 00:02:13,536

where basically this synthetic
tanker that I'm flying

44

00:02:13,536 --> 00:02:15,406

in formation with
that's not really there,

45

00:02:15,696 --> 00:02:17,026

it's essentially cut out.

46

00:02:17,026 --> 00:02:20,606

Everything around it is the
real world that's also coming

47

00:02:20,606 --> 00:02:24,876

in through my, you know,
camera, so I'm seeing mountains

48

00:02:24,996 --> 00:02:28,346

and cloud background and
the dash of the aircraft,

49

00:02:28,656 --> 00:02:32,036

but with this digital tanker
out there that I'm trying

50

00:02:32,156 --> 00:02:33,076

to fly formation with.

51

00:02:34,146 --> 00:02:36,316

>> Were talking about the
emotional gain of the pilot.

52

00:02:36,316 --> 00:02:38,356

Like really seeing
that they feel

53

00:02:38,356 --> 00:02:39,996

like they're actually
in the situation.

54

00:02:40,346 --> 00:02:43,006

You know they are in a real
aircraft, and you really feel

55

00:02:43,006 --> 00:02:45,226

like you're potentially going
to collide with the aircraft

56

00:02:45,226 --> 00:02:47,706

in a formation task
if you get too close.

57

00:02:48,396 --> 00:02:51,356

So, those types of things
really make the system feel

58

00:02:51,536 --> 00:02:53,706

like it's actually
really happening.

59

00:02:54,056 --> 00:02:56,266

>> A couple of them
forgot that they were

60

00:02:56,986 --> 00:02:59,096

in a simulated environment
talking

61

00:02:59,096 --> 00:03:02,136

that they were really
getting their blood pumping,

62

00:03:02,136 --> 00:03:06,296

and they felt like they were
at risk when they came close

63

00:03:06,376 --> 00:03:09,806

to aerial refuelers
or formation aircraft.

64

00:03:10,516 --> 00:03:30,016
[Inaudible]

65

00:03:30,516 --> 00:03:33,296
>> When you put [inaudible],
I mean, yeah, I can see it,

66

00:03:33,296 --> 00:03:36,466
and if I were to look
at the video later on,

67

00:03:36,466 --> 00:03:38,086
I would say oh there's
a mountain.

68

00:03:38,586 --> 00:03:40,516
But my-- I was text saturated.

69

00:03:41,376 --> 00:03:42,726
I mean if you guys
would've talked

70

00:03:42,726 --> 00:03:45,746
to me I probably wouldn't have
even had heard you except the

71

00:03:45,806 --> 00:03:48,156
in-- your forward, your
aft, your forward, your aft.

72

00:03:48,436 --> 00:03:50,326
[inaudible] and I were talking,
don't you see the mountains

73

00:03:50,326 --> 00:03:53,036
and I was like I'm
looking at an airplane.

74

00:03:53,036 --> 00:03:54,016

[laugh]

75

00:03:54,516 --> 00:04:08,826

[Inaudible]

76

00:04:09,326 --> 00:04:09,696

Yeah, really.

77

00:04:09,696 --> 00:04:11,786

I was all wired at the end.

78

00:04:11,846 --> 00:04:14,456

Because that plane was
like right there, you know.

79

00:04:14,556 --> 00:04:19,006

I got super close and maybe
too close and I learned a lot.

80

00:04:19,006 --> 00:04:21,836

There was a learning curve
today, but I came out of it

81

00:04:21,836 --> 00:04:23,186

as I didn't hurt anything.

82

00:04:24,186 --> 00:04:27,666

I mean, that's what you want out
of this is the ability to break

83

00:04:27,666 --> 00:04:32,566

out control systems whether they
have good qualities are not be a

84

00:04:32,566 --> 00:04:35,636

good training aid if that's
what you want to do with it,

85

00:04:35,636 --> 00:04:40,346
and to not hurt anyone but get
that pilot emotion up there.

86

00:04:40,766 --> 00:04:42,146
That's what this stuff is.

87

00:04:42,146 --> 00:04:43,046
I mean, it got me.

88

00:04:43,286 --> 00:04:45,746
I mean, I'm not just--
I go out there and try

89

00:04:45,746 --> 00:04:49,386
to give you the best I can as
a test pilot, but at the end,

90

00:04:49,386 --> 00:04:50,876
you know, my legs were shaking.

91

00:04:50,936 --> 00:04:54,256
So, my hats off to you
for doing this stuff.

92

00:04:54,456 --> 00:04:55,976
I mean what a great
training aid.