
1996
1984
NASA

1
00:00:00,334 --> 00:00:03,303
[Music]

2
00:00:03,303 --> 00:00:07,574
>> We are primarily dedicated
towards looking at all the data

3
00:00:07,574 --> 00:00:11,979
that comes from the moment it
leaves the airplane all the way

4
00:00:11,979 --> 00:00:16,116
to the ground and into
the researchers' hands.

5
00:00:16,116 --> 00:00:18,085
Code MC is made up
of two groups,

6
00:00:18,085 --> 00:00:19,419
a software engineering team

7
00:00:19,419 --> 00:00:21,622
and then the hardware
engineering team.

8
00:00:21,622 --> 00:00:23,323
For the hardware team, we
work with the project to see

9
00:00:23,323 --> 00:00:26,360
if our current assets
can meet their needs.

10
00:00:26,360 --> 00:00:30,731
If it doesn't then we
have to go figure out

11
00:00:30,731 --> 00:00:35,068

and engineer the best way
to meet the project needs

12
00:00:35,068 --> 00:00:38,305
which could be figuring out
a new transmitter scheme,

13
00:00:38,305 --> 00:00:41,008
or new transmitter hardware.

14
00:00:42,309 --> 00:00:45,078
In a supersonic aircraft,
for example,

15
00:00:45,078 --> 00:00:47,180
they might need different
hardware

16
00:00:47,180 --> 00:00:49,816
that would be specialized
to be able

17
00:00:49,816 --> 00:00:52,019
to handle supersonic
environments.

18
00:00:54,655 --> 00:00:56,423
We utilize telemetry assets.

19
00:00:56,423 --> 00:00:57,858
Telemetry is the
data that's going

20
00:00:57,858 --> 00:00:59,259
from the airplane to the ground.

21
00:00:59,259 --> 00:01:02,062
We do a little bit of command
and control transmissions

22
00:01:02,062 --> 00:01:05,799
which is the controlling
of the airplane going

23
00:01:05,799 --> 00:01:07,501
from the ground up
to the airplane.

24
00:01:07,501 --> 00:01:10,370
Those are only used with
unmanned airplane assets.

25
00:01:10,370 --> 00:01:16,209
Then we also have radar which
is a way of tracking a vehicle.

26
00:01:16,209 --> 00:01:20,881
We have flight termination
systems which are only utilized

27
00:01:20,881 --> 00:01:23,216
with unmanned vehicles and
those are, in the event,

28
00:01:23,216 --> 00:01:28,055
that something bad is happening
with the aircraft we can bring

29
00:01:28,055 --> 00:01:29,623
it in a controlled decent

30
00:01:29,623 --> 00:01:31,325
to the ground before
it does something bad.

31
00:01:31,325 --> 00:01:34,528
We also provide the
communications

32

00:01:34,528 --> 00:01:37,364
from the ground here in the
control room all the way

33
00:01:37,364 --> 00:01:39,833
to both the aircraft,
the flight crew,

34
00:01:39,833 --> 00:01:42,736
and the ground crew
on the ground.

35
00:01:42,736 --> 00:01:44,938
>> ...heard you loud
and clear...

36
00:01:44,938 --> 00:01:45,973
>> On the software engineering
side, what we do is ensure

37
00:01:45,973 --> 00:01:47,274
that the data that
they're sending

38
00:01:47,274 --> 00:01:50,143
down from the aircraft
can be displayed

39
00:01:50,143 --> 00:01:52,779
in the control room correctly.

40
00:01:52,779 --> 00:01:54,815
There are sensors on the
aircraft and when each

41
00:01:54,815 --> 00:01:57,551
of those sensors move
that data is telemetered

42
00:01:57,551 --> 00:01:58,585

down to the control room.

43
00:01:58,585 --> 00:02:01,722
Everything's coming
down in like 1s and 0s.

44
00:02:01,722 --> 00:02:03,056
And we work as translators.

45
00:02:03,056 --> 00:02:05,859
So we take that data, we
translate it and we put

46
00:02:05,859 --> 00:02:08,061
that into a readable format

47
00:02:08,061 --> 00:02:09,196
that can be displayed
in the control room.

48
00:02:09,196 --> 00:02:12,532
They want to see maybe
specific items on their display.

49
00:02:12,532 --> 00:02:16,870
They also want to see where the
aircraft is, where it's located.

50
00:02:16,870 --> 00:02:18,438
We have a couple of
different little applications

51
00:02:18,438 --> 00:02:20,340
that were designed
and developed here.

52
00:02:20,340 --> 00:02:21,908
There's one called CISBoomDA.

53

00:02:21,908 --> 00:02:26,146
That is Cockpit Interactive
Sonic Boom Display Avionics.

54
00:02:26,146 --> 00:02:29,149
That's one used specifically
for supersonic flights.

55
00:02:29,149 --> 00:02:31,651
It shows us where all the booms
are going to hit on the ground.

56
00:02:31,651 --> 00:02:34,421
I just like to see new
technologies being tested