



1
00:00:01,100 --> 00:00:02,234
>> I: Hi everybody.

2
00:00:02,234 --> 00:00:03,536
Josh Farley here inside
Mission Control Houston.

3
00:00:03,536 --> 00:00:05,604
Most of you probably know
the guy sitting beside me.

4
00:00:05,604 --> 00:00:06,705
This is Bill Foster.

5
00:00:06,705 --> 00:00:08,707
He's sort of a legend
around these parts.

6
00:00:08,707 --> 00:00:11,277
He is a mission control
ground controller or GC

7
00:00:11,277 --> 00:00:13,245
as they call it here;
that's the call sign,

8
00:00:13,245 --> 00:00:15,081
but what those guys do
there's an entire team

9
00:00:15,081 --> 00:00:18,451
that does it they basically run
everything inside this building,

10
00:00:18,451 --> 00:00:20,653
all of our communication
networks they help us interface

11
00:00:20,653 --> 00:00:22,655

with the tracking and data
relay satellite system.

12

00:00:22,655 --> 00:00:25,091

They've got the console back
there at the back that looks

13

00:00:25,091 --> 00:00:26,892

like something out
of the future.

14

00:00:26,892 --> 00:00:28,627

It's got lots of buttons on
it; it's quite impressive.

15

00:00:28,627 --> 00:00:30,896

It's a little less than what we
do over here, but Bill is here

16

00:00:30,896 --> 00:00:32,298

to talk about mission
control and sort

17

00:00:32,298 --> 00:00:33,966

of some activity that's
been taking place.

18

00:00:33,966 --> 00:00:37,403

You guys are probably not seeing
the space shuttle flight control

19

00:00:37,403 --> 00:00:38,871

room, which is down
the hall from us here

20

00:00:38,871 --> 00:00:41,974

in the space station room
in quite a long time.

21

00:00:41,974 --> 00:00:44,243

So, Bill, let's talk about
this is what it looks like now.

22

00:00:44,243 --> 00:00:45,644

We're taking a live shot of it.

23

00:00:45,644 --> 00:00:46,979

It looks quite a bit different

24

00:00:46,979 --> 00:00:48,380

than it did last time

we saw it, doesn't it?

25

00:00:48,380 --> 00:00:49,448

>> Bill: It is quite

a bit different.

26

00:00:49,448 --> 00:00:50,883

It takes some getting used to.

27

00:00:50,883 --> 00:00:54,086

We started running some

of our first testing

28

00:00:54,086 --> 00:00:55,621

out of there a couple

of days ago.

29

00:00:55,621 --> 00:00:58,290

In fact, I think you've got a

shot from that a little later.

30

00:00:58,290 --> 00:00:59,291

>> I: Yeah.

31

00:00:59,291 --> 00:01:01,026

>> Bill: But the

control center itself is

32

00:01:01,026 --> 00:01:04,196
in a big evolutionary
process where we are moving

33

00:01:04,196 --> 00:01:08,100
from the current architecture
which everybody is familiar

34

00:01:08,100 --> 00:01:09,235
with with the blue consoles.

35

00:01:09,235 --> 00:01:10,269
>> I: Big blue consoles, yes.

36

00:01:10,269 --> 00:01:12,304
>> Bill: Into what
we're calling MCC 21

37

00:01:12,304 --> 00:01:15,608
or 21st Century Control Center.

38

00:01:15,608 --> 00:01:18,010
Part of that is changing
out the hardware,

39

00:01:18,010 --> 00:01:22,414
which is like you can see the
brown more clean type consoles

40

00:01:22,414 --> 00:01:23,916
and that's something we're
going to have to get used

41

00:01:23,916 --> 00:01:27,219
to because we don't have
a lot of storage in there.

42

00:01:27,219 --> 00:01:29,555
We've been trying for years
to get away from a lot

43

00:01:29,555 --> 00:01:31,390
of paper media in front of us.

44

00:01:31,390 --> 00:01:32,458
>> I: Big binders.

45

00:01:32,458 --> 00:01:33,459
As a matter of fact
you can't see them,

46

00:01:33,459 --> 00:01:34,793
but we've got tons
of them over here.

47

00:01:34,793 --> 00:01:36,095
>> Bill: Right.

48

00:01:36,095 --> 00:01:39,031
When we brought in the last
version, the blue console,

49

00:01:39,031 --> 00:01:42,201
back in the mid-90s, that
was one of the big goals

50

00:01:42,201 --> 00:01:46,205
of that is pure electronic
documentation.

51

00:01:46,205 --> 00:01:47,306
>> I: Yeah.

52

00:01:47,306 --> 00:01:48,641
>> Bill: Well, we're
just not built that way.

53

00:01:48,641 --> 00:01:52,344
We don't think that way and

the monitors in front of us

54

00:01:52,344 --> 00:01:54,380
that we were planning on using

55

00:01:54,380 --> 00:01:57,516
for the documentation is what
we used to look at data coming

56

00:01:57,516 --> 00:01:59,018
down from the space craft

57

00:01:59,018 --> 00:02:01,987
and monitor real estate
is pretty valuable.

58

00:02:01,987 --> 00:02:05,925
So we didn't want to take
away what we needed to look

59

00:02:05,925 --> 00:02:08,527
at onboard or in my case
what's happening in the network

60

00:02:08,527 --> 00:02:11,530
or the equipment in the control
center to look at procedures.

61

00:02:11,530 --> 00:02:14,567
So we never really
got away from that.

62

00:02:14,567 --> 00:02:16,268
With the new control
center we're going

63

00:02:16,268 --> 00:02:19,004
to have even less space
to store documents.

64

00:02:19,004 --> 00:02:19,905

>> I: Many more monitors though.

65

00:02:19,905 --> 00:02:21,240

>> Bill: But many more monitors.

66

00:02:21,240 --> 00:02:23,142

In fact, that's one of the things we're still struggling

67

00:02:23,142 --> 00:02:25,144

with is how to configure the monitors

68

00:02:25,144 --> 00:02:27,213

so that we can see the front screens

69

00:02:27,213 --> 00:02:29,048

and the positions behind the scenes.

70

00:02:29,048 --> 00:02:30,182

>> I: [inaudible], yeah, yeah.

71

00:02:30,182 --> 00:02:33,419

>> Bill: Even now at our console we have a layout

72

00:02:33,419 --> 00:02:36,455

of monitors going horizontally but there's one side

73

00:02:36,455 --> 00:02:38,824

of the console where it's stacked up to

74

00:02:38,824 --> 00:02:41,560

where if you're sitting on that

side you don't see the front

75

00:02:41,560 --> 00:02:42,895
of the room.

76

00:02:42,895 --> 00:02:44,363
So it's always a challenge,
always working towards that.

77

00:02:44,363 --> 00:02:45,764
>> I: Let's take a
look at these pictures.

78

00:02:45,764 --> 00:02:47,866
I think we've got some photos of
what the room used like and kind

79

00:02:47,866 --> 00:02:49,635
of the build out of it.

80

00:02:49,635 --> 00:02:53,205
So that's 135, that's July, it's
hard to believe that's been more

81

00:02:53,205 --> 00:02:55,040
than 2 years ago, but
that's kind of the shock

82

00:02:55,040 --> 00:02:56,976
that everybody is familiar with;
that's sort of the role thing

83

00:02:56,976 --> 00:02:59,211
that mission control
shot that we've seen

84

00:02:59,211 --> 00:03:01,280
and like you've talked about
you see the blue consoles.

85

00:03:01,280 --> 00:03:02,381

>> Bill: Right.

86

00:03:02,381 --> 00:03:03,449

>> I: And there's the
[inaudible] console

87

00:03:03,449 --> 00:03:04,383

and you guys are up
there at the front.

88

00:03:04,383 --> 00:03:06,051

>> Bill: Yes, it
was a great room.

89

00:03:06,051 --> 00:03:08,153

It served its purpose
for many years.

90

00:03:08,153 --> 00:03:11,924

We started flying shuttle
out of there in 1995.

91

00:03:11,924 --> 00:03:14,260

>> I: And we flew about half
the shuttle missions didn't we?

92

00:03:14,260 --> 00:03:15,427

>> Bill: It was very close.

93

00:03:15,427 --> 00:03:17,129

I'm not sure of the
exact division,

94

00:03:17,129 --> 00:03:20,733

but STS-70 was the first
mission that was supported

95

00:03:20,733 --> 00:03:21,867

out of the white [inaudible].

96

00:03:21,867 --> 00:03:24,703

>> I: Yeah, just keep checking these photos.

97

00:03:24,703 --> 00:03:27,339

We can put them up there and see what all happened

98

00:03:27,339 --> 00:03:29,341

as you guys started to tear out the equipment and things

99

00:03:29,341 --> 00:03:31,210

like that because you basically had to come in there

100

00:03:31,210 --> 00:03:32,611

and basically strip the room bare, right?

101

00:03:32,611 --> 00:03:33,612

>> Bill: Correct.

102

00:03:33,612 --> 00:03:35,147

So here we're looking at it probably

103

00:03:35,147 --> 00:03:37,983

from last late wintertime frame

104

00:03:37,983 --> 00:03:41,353

when the blue consoles were just about all out.

105

00:03:41,353 --> 00:03:43,155

>> I: What people don't realize you see this is what's

106

00:03:43,155 --> 00:03:44,423

so funny the first time you walk

107

00:03:44,423 --> 00:03:46,325

in the room you see those
big squares in the floor.

108

00:03:46,325 --> 00:03:48,360

We actually have floating
floors here in mission control.

109

00:03:48,360 --> 00:03:50,562

They kind of give a little bit
when you step in there, right?

110

00:03:50,562 --> 00:03:53,666

>> Bill: Yeah, hopefully
they'll give,

111

00:03:53,666 --> 00:03:55,401

sorry about that,
I cut myself off.

112

00:03:55,401 --> 00:03:57,303

Hopefully don't give too much.

113

00:03:57,303 --> 00:04:02,308

It's got a good base foundation,
but we are walking about 28,

114

00:04:02,308 --> 00:04:04,576

30 inches off of
the actual floor.

115

00:04:04,576 --> 00:04:05,678

>> I: Yeah, there's lots
of wires up under there

116

00:04:05,678 --> 00:04:06,812

so let's keep going
through the pictures

117
00:04:06,812 --> 00:04:09,481
and take a look at
what was next.

118
00:04:09,481 --> 00:04:10,582
>> Bill: Okay.

119
00:04:10,582 --> 00:04:11,884
Now here we're bringing
in the new equipment

120
00:04:11,884 --> 00:04:13,018
into the control room.

121
00:04:13,018 --> 00:04:15,187
So you're seeing the
wooden consoles and --

122
00:04:15,187 --> 00:04:16,188
>> I: -- new paint
job on the walls.

123
00:04:16,188 --> 00:04:17,589
>> Bill: New paint job.

124
00:04:17,589 --> 00:04:20,459
They took all the plaques down
and put them back up afterwards

125
00:04:20,459 --> 00:04:22,528
and so we do like
to keep a history

126
00:04:22,528 --> 00:04:24,096
of what was supported
out of the room.

127

00:04:24,096 --> 00:04:25,864

The screens got wider.

128

00:04:25,864 --> 00:04:28,100

Yeah, that's one thing

I'm going to miss is

129

00:04:28,100 --> 00:04:30,536

in the white [inaudible]

we had room on either side

130

00:04:30,536 --> 00:04:32,438

of the screens for

the flags to go up.

131

00:04:32,438 --> 00:04:34,807

So now they're going to go

back on poles again just

132

00:04:34,807 --> 00:04:35,874

like they are in this room.

133

00:04:35,874 --> 00:04:37,276

>> I: Yeah.

134

00:04:37,276 --> 00:04:39,078

>> Bill: But it was kind of nice

for a while having the US Flag

135

00:04:39,078 --> 00:04:41,547

up on the wall with

light flooding it

136

00:04:41,547 --> 00:04:44,350

so it was visible to all.

137

00:04:44,350 --> 00:04:45,417

>> I: So there's a look

138

00:04:45,417 --> 00:04:46,719

at it during the
testing this week, right?

139

00:04:46,719 --> 00:04:47,820

>> Bill: Right.

140

00:04:47,820 --> 00:04:49,188

So, here we have all
the displays up and most

141

00:04:49,188 --> 00:04:53,492

of the displays you see right
now are not functional yet.

142

00:04:53,492 --> 00:04:56,662

We're still starting to populate
that with the new capabilities.

143

00:04:56,662 --> 00:04:59,932

On Tuesday, we ran
for the first time

144

00:04:59,932 --> 00:05:02,701

with the upgraded
training system simulator,

145

00:05:02,701 --> 00:05:05,604

which we're calling
Training Systems 21.

146

00:05:05,604 --> 00:05:09,141

That was very successful, able
to command, able to get data

147

00:05:09,141 --> 00:05:12,978

in so the developers that were
in working that were very happy

148

00:05:12,978 --> 00:05:15,147
with the results and the
progress that we're making.

149
00:05:15,147 --> 00:05:20,552
If things go as planned,
then sometime in June or July

150
00:05:20,552 --> 00:05:24,890
of next year, 2014, the
ISS support will move

151
00:05:24,890 --> 00:05:26,425
out of this room down the hall

152
00:05:26,425 --> 00:05:29,228
to the white [inaudible]
shuttle control room

153
00:05:29,228 --> 00:05:30,596
and for the next few months

154
00:05:30,596 --> 00:05:32,731
after that this room
will be upgraded.

155
00:05:32,731 --> 00:05:34,233
>> I: And this will end
up looking just like it.

156
00:05:34,233 --> 00:05:36,034
>> Bill: It will end up
looking very much like it.

157
00:05:36,034 --> 00:05:37,436
>> I: We'll keep looking at
these live shots of the room

158
00:05:37,436 --> 00:05:39,705
because I mean it's a different

look, it's a different look.

159

00:05:39,705 --> 00:05:43,041

It has a different sort of feel
to it, but it's more modern

160

00:05:43,041 --> 00:05:46,078

and everybody knows
that Orion will be run

161

00:05:46,078 --> 00:05:47,279

out of this room eventually.

162

00:05:47,279 --> 00:05:49,214

Let's talk about
EFT 1 very quickly.

163

00:05:49,214 --> 00:05:51,884

EFT 1 is going to be run not
actually out of that room,

164

00:05:51,884 --> 00:05:53,318

it's going to be run out of what
we call the blue [inaudible],

165

00:05:53,318 --> 00:05:54,620

right?

166

00:05:54,620 --> 00:05:55,854

>> Bill: It's going to be
out of the blue [inaudible].

167

00:05:55,854 --> 00:05:58,357

It's the original room that
we flew station out of.

168

00:05:58,357 --> 00:06:00,492

It's a smaller control room.

169

00:06:00,492 --> 00:06:03,595

It's also been upgraded to
the NCC21 configuration.

170

00:06:03,595 --> 00:06:06,665

In fact, I'm down there
today I stepped down the hall

171

00:06:06,665 --> 00:06:10,769

from that running tests
with the test rigs for Orion

172

00:06:10,769 --> 00:06:12,638

for the EFT 1 mission.

173

00:06:12,638 --> 00:06:13,705

>> I: Yeah.

174

00:06:13,705 --> 00:06:14,807

>> Bill: Currently
that's planned to launch

175

00:06:14,807 --> 00:06:19,211

in about a year from
now, September of 2014.

176

00:06:19,211 --> 00:06:21,447

It'll eventually run,
it'll eventually fly off

177

00:06:21,447 --> 00:06:23,315

of the space launch system.

178

00:06:23,315 --> 00:06:26,218

NASA's new rocket Heavy Lifter,

179

00:06:26,218 --> 00:06:29,421

but for this first mission it's
going to go off of a Delta IV

180
00:06:29,421 --> 00:06:31,023
out of Cape Canaveral.

181
00:06:31,023 --> 00:06:33,892
It will not have humans onboard,

182
00:06:33,892 --> 00:06:36,228
but we'll do two
orbits of the earth.

183
00:06:36,228 --> 00:06:39,331
The second orbit going
up to a high altitude

184
00:06:39,331 --> 00:06:41,166
of close to 4,000 miles.

185
00:06:41,166 --> 00:06:42,501
>> I: It's way out there, yeah.

186
00:06:42,501 --> 00:06:44,937
>> Bill: So that when it
re-enters it can re-enter close

187
00:06:44,937 --> 00:06:46,972
to the speed you would
re-enter if you're coming back

188
00:06:46,972 --> 00:06:49,041
from the moon or any - -

189
00:06:49,041 --> 00:06:50,776
>> I: -- way out there.

190
00:06:50,776 --> 00:06:51,977
>> Bill: Way out there.

191
00:06:51,977 --> 00:06:53,178

>> I: Mars or [inaudible]
or something like that.

192
00:06:53,178 --> 00:06:54,480
>> Bill: Exactly.

193
00:06:54,480 --> 00:06:55,714
>> I: We were talking before
we came on the air about,

194
00:06:55,714 --> 00:06:57,015
and let's talk about the history

195
00:06:57,015 --> 00:06:59,117
of this place real
quick before we wrap up,

196
00:06:59,117 --> 00:07:01,987
but people know mission control,
they know that name and it's

197
00:07:01,987 --> 00:07:03,355
in movies and things like that.

198
00:07:03,355 --> 00:07:04,957
The Mission Control Center is
actually the whole building.

199
00:07:04,957 --> 00:07:07,426
This is what we call
a flight control room.

200
00:07:07,426 --> 00:07:08,660
You'll hear us call
it a [inaudible].

201
00:07:08,660 --> 00:07:09,995
Of course, we love our
acronyms around here, right?

202

00:07:09,995 --> 00:07:11,263

>> Bill: Yes, we do.

203

00:07:11,263 --> 00:07:12,965

>> I: So let's tell everybody
this is [inaudible] 1

204

00:07:12,965 --> 00:07:14,233

that we're in right now.

205

00:07:14,233 --> 00:07:15,834

This is the space station
room and it used to be --

206

00:07:15,834 --> 00:07:16,869

>> Bill: -- this
used to be MOCR 1.

207

00:07:16,869 --> 00:07:17,903

>> I: It used to be MOCR 1.

208

00:07:17,903 --> 00:07:20,105

Mission Operations
Control Room, right.

209

00:07:20,105 --> 00:07:22,241

Actually Apollo 7 was
flown out of this room;

210

00:07:22,241 --> 00:07:23,208

the one that we're
sitting in now.

211

00:07:23,208 --> 00:07:24,610

>> Bill: That's correct.

212

00:07:24,610 --> 00:07:25,844

>> I: Of course it looked quite
a bit different than it did back

213

00:07:25,844 --> 00:07:27,579
in the day and then shuttle
started in this room.

214

00:07:27,579 --> 00:07:28,614
As a matter of fact,
the patch is right

215

00:07:28,614 --> 00:07:30,148
above our head up here STS1.

216

00:07:30,148 --> 00:07:32,084
>> Bill: First four shuttle
missions out of this room.

217

00:07:32,084 --> 00:07:34,720
>> I: Yeah, and then we ran
some shuttle missions upstairs

218

00:07:34,720 --> 00:07:37,489
in what used to MOCR 2
and the [inaudible] --

219

00:07:37,489 --> 00:07:41,360
>> Bill: -- for the last part
of the, I say the last part,

220

00:07:41,360 --> 00:07:43,095
the last part of the first half

221

00:07:43,095 --> 00:07:45,464
of the shuttle program
it became FICR 2.

222

00:07:45,464 --> 00:07:49,368
It's kind of funny because we,
when the building opened up,

223

00:07:49,368 --> 00:07:52,304
these were MOCRs, Mission
Operation Control Rooms,

224

00:07:52,304 --> 00:07:56,441
and after the first four shuttle
flights the decision was made

225

00:07:56,441 --> 00:07:59,845
that we're no longer running
missions these are more flights,

226

00:07:59,845 --> 00:08:04,082
which is why we changed the
names to FICR instead of MOCR.

227

00:08:04,082 --> 00:08:08,487
So, from that time these
were FICR 1 and FICR 2

228

00:08:08,487 --> 00:08:12,157
and we ran the first four
shuttle flights out of this one

229

00:08:12,157 --> 00:08:15,827
and then we moved upstairs to
FICR 2 while we tore this room

230

00:08:15,827 --> 00:08:17,062
out and upgraded it

231

00:08:17,062 --> 00:08:21,934
to the shuttle era consoles
back in the early 80s.

232

00:08:21,934 --> 00:08:26,138
Once this room was upgraded
we then started moving back

233

00:08:26,138 --> 00:08:28,907

and forth between the rooms
because it was a big job

234

00:08:28,907 --> 00:08:31,710
to reconfigure since everything
was running off mainframes,

235

00:08:31,710 --> 00:08:33,845
all the buttons were
individually wired

236

00:08:33,845 --> 00:08:36,248
to outputs of the mainframe.

237

00:08:36,248 --> 00:08:38,984
So it took literally
months to reconfigure

238

00:08:38,984 --> 00:08:41,420
from one shuttle
mission to the next,

239

00:08:41,420 --> 00:08:43,388
but later in the shuttle program

240

00:08:43,388 --> 00:08:47,693
after the Challenger accident
the third floor was dedicated

241

00:08:47,693 --> 00:08:50,362
to Department of
Defense missions

242

00:08:50,362 --> 00:08:52,898
and so we ran the last few
Department of Defense missions

243

00:08:52,898 --> 00:08:54,933
out of the third floor and
when those were finished,

244

00:08:54,933 --> 00:08:57,536

it was shut down and it had
already been designated a

245

00:08:57,536 --> 00:08:58,937

national historic landmark.

246

00:08:58,937 --> 00:09:00,339

>> I: That's the one
you see in the movies,

247

00:09:00,339 --> 00:09:03,408

the famous Apollo room and the
big green consoles and things

248

00:09:03,408 --> 00:09:04,876

like that, but in the mid 90s,

249

00:09:04,876 --> 00:09:06,645

we built the new section
of mission control.

250

00:09:06,645 --> 00:09:07,846

>> Bill: Yes.

251

00:09:07,846 --> 00:09:09,081

>> I: And for some reason
didn't call it FICR 3

252

00:09:09,081 --> 00:09:11,850

or FICR 4 it became the
white FICR and the blue FICR

253

00:09:11,850 --> 00:09:14,286

and there's a red FICR too
but it's just a training room.

254

00:09:14,286 --> 00:09:15,420

>> Bill: Right.

255

00:09:15,420 --> 00:09:17,222

Red FICR is not going to
be with us much longer.

256

00:09:17,222 --> 00:09:20,993

Once MCC21 is complete
the training room

257

00:09:20,993 --> 00:09:24,696

on the third floor will be
re-utilized for other purposes

258

00:09:24,696 --> 00:09:28,100

and we'll use the blue
FICR for training.

259

00:09:28,100 --> 00:09:29,468

>> I: Yeah, so you've got
blue and white down there.

260

00:09:29,468 --> 00:09:30,669

The white one is the famous one

261

00:09:30,669 --> 00:09:32,204

that we just showed you a
minute ago the live shot

262

00:09:32,204 --> 00:09:33,305

that was the shuttle.

263

00:09:33,305 --> 00:09:35,240

I think it was just a
coincidence probably

264

00:09:35,240 --> 00:09:36,775

that we call it white and
the shuttles are white,

265

00:09:36,775 --> 00:09:39,044

but that is you want to be
the Orion flight control room

266

00:09:39,044 --> 00:09:42,714

and these guys have been just
working like crazy trying to get

267

00:09:42,714 --> 00:09:45,183

that room back up and
running and modernize it.

268

00:09:45,183 --> 00:09:47,386

There's a change like we
talked about but, of course,

269

00:09:47,386 --> 00:09:49,921

this building has been migrating
and morphing and changing.

270

00:09:49,921 --> 00:09:51,657

>> Bill: The story of
this building is change

271

00:09:51,657 --> 00:09:54,393

from the original days
to the mid-90s until now

272

00:09:54,393 --> 00:09:55,761

and this won't be the last one.

273

00:09:55,761 --> 00:09:57,129

>> I: No.

274

00:09:57,129 --> 00:09:58,497

>> Bill: The evolution will
continue as technology improves.

275

00:09:58,497 --> 00:10:00,232

>> I: So, our chairs may
be a little bit different

276

00:10:00,232 --> 00:10:03,702
but it's still an extremely
cool feeling whenever you walk

277

00:10:03,702 --> 00:10:05,070
in there.

278

00:10:05,070 --> 00:10:06,605
I think all of us probably still
get chills whenever we walk

279

00:10:06,605 --> 00:10:08,006
in these rooms.

280

00:10:08,006 --> 00:10:09,107
>> Bill: It's great walking in
particularly if you're coming

281

00:10:09,107 --> 00:10:10,509
in for mission support.

282

00:10:10,509 --> 00:10:13,578
I know in the shuttle days when
I was coming in for a launch,

283

00:10:13,578 --> 00:10:16,014
you know, you just have a
feeling the whole hallways,

284

00:10:16,014 --> 00:10:18,383
everything feels
different in the building

285

00:10:18,383 --> 00:10:19,484
when it's ready for mission.

286

00:10:19,484 --> 00:10:20,585

>> I: Yeah.

287

00:10:20,585 --> 00:10:21,787

Well, Bill, thanks a lot for coming along.

288

00:10:21,787 --> 00:10:22,821

It's been cool to see this room and see it change.

289

00:10:22,821 --> 00:10:24,589

I'm glad it's almost ready to go.

290

00:10:24,589 --> 00:10:25,323

>> Bill: It's exciting.

291

00:10:25,323 --> 00:10:26,191

A lot of things coming.

292

00:10:26,191 --> 00:10:27,159

Thanks, Josh, appreciate it.