

1

00:00:00,360 --> 00:00:01,080

Hello everyone.

2

00:00:01,080 --> 00:00:05,280

My name is Dave Maass and I am a senior investigative researcher at the

3

00:00:05,280 --> 00:00:06,930

Electronic Frontier Foundation.

4

00:00:07,170 --> 00:00:11,310

And today I'm going to be talking to you about how to spot police surveillance

5

00:00:11,310 --> 00:00:14,010

technologies while attending protests.

6

00:00:15,510 --> 00:00:16,230

So there, we're

7

00:00:16,230 --> 00:00:19,410

Going to split this talk into four different areas

8

00:00:19,470 --> 00:00:21,900

and based on where you might find that surveillance.

9

00:00:21,960 --> 00:00:24,630

So we're going to talk about the surveillance that might be on the police

10

00:00:24,630 --> 00:00:25,680

officer's person.

11

00:00:26,010 --> 00:00:29,100

We're going to talk about surveillance that might be on roadways.

12

00:00:29,340 --> 00:00:31,680

We're going to talk about the surveillance that's in the air.

13

00:00:31,860 --> 00:00:36,330

And then finally, the surveillance that might be permanently placed in the areas

14

00:00:36,330 --> 00:00:37,470

that protests are occurring.

15

00:00:39,060 --> 00:00:39,450

So let's

16

00:00:39,450 --> 00:00:43,500

start with on police officers bodies. And we mean by that:

17

00:00:43,560 --> 00:00:46,170

their uniforms, it might be attached to their belts.

18

00:00:46,290 --> 00:00:48,210

You might see them carrying it in their hands.

19

00:00:49,140 --> 00:00:52,830

Now the most common one that you're going to encounter are "Body-Worn Cameras".

20

00:00:53,160 --> 00:00:55,950

These are essentially just small video cameras,

21

00:00:55,950 --> 00:00:59,370

usually box shaped that are attached to police officers' uniforms.

22

00:00:59,520 --> 00:01:04,140

These really became popular in during
the Obama administration, originally

23

00:01:04,140 --> 00:01:06,990
as a measure to counter police brutality,

24

00:01:07,260 --> 00:01:11,220
but they've actually become the
means of surveilling protestors,

25

00:01:11,340 --> 00:01:12,210
as well as surveilling

26

00:01:12,240 --> 00:01:14,910
other people who have encounters
with police departments.

27

00:01:16,170 --> 00:01:18,090
So we do know that

28

00:01:18,110 --> 00:01:22,710
body camera footage is being
used to prosecute activists.

29

00:01:23,130 --> 00:01:25,740
For example, here's
a story from Flagstaff,

30

00:01:25,770 --> 00:01:30,510
Arizona in which protestors weren't
arrested at the protest itself,

31

00:01:30,690 --> 00:01:34,980
but based on body-worn camera footage,
police then arrested about 10,

32

00:01:34,980 --> 00:01:37,530
11 other people three weeks later.

33

00:01:39,270 --> 00:01:39,900

So.

34

00:01:39,900 --> 00:01:41,400

When you're looking at a police officer,

35

00:01:41,430 --> 00:01:44,070

there's a few places you're going to want to look for a body-worn camera.

36

00:01:44,280 --> 00:01:46,680

There's going to be a lot of kind of confusing things going on.

37

00:01:46,680 --> 00:01:49,350

There's going to be walkie-talkies, going to be a badge.

38

00:01:49,350 --> 00:01:52,380

There might be a name tag, but as far as the technology goes,

39

00:01:52,380 --> 00:01:56,040

you're going to really want to look on either the left or right side of the uniform,

40

00:01:56,190 --> 00:02:00,000

maybe even in the center or in the the police officer's pocket,

41

00:02:00,210 --> 00:02:04,200

but you also might look at the shoulder or around the head or helmet or hat that

42

00:02:04,200 --> 00:02:05,730

the police officer is using.

43

00:02:07,080 --> 00:02:08,130

So the most common

44

00:02:08,130 --> 00:02:10,740
type of body-worn camera is
going to be mounted on the chest.

45

00:02:10,770 --> 00:02:14,460
These are also called
"front facing cameras".

46

00:02:14,520 --> 00:02:17,370
But really, you're just going to look for
the center of the chest on the left or

47

00:02:17,370 --> 00:02:21,360
right. The one that's displayed here
on the bottom is the Axon camera.

48

00:02:21,570 --> 00:02:24,330
And that's going to be the
most common one out there.

49

00:02:26,550 --> 00:02:26,850

50

00:02:26,850 --> 00:02:30,330
There are other cameras that might be
mounted on a police officer's

51

00:02:30,330 --> 00:02:32,520
shoulder or on their shoulder epaulet.

52

00:02:32,790 --> 00:02:35,100
The Axon model that I
showed you a second ago,

53

00:02:35,100 --> 00:02:38,610
actually has a secondary attachment that
can go on the shoulder, and the one

54

00:02:38,610 --> 00:02:40,080

that's displayed here,

55

00:02:40,110 --> 00:02:44,550

the Blue Line Innovations camera, is actually a 360 degree camera that can

56

00:02:44,550 --> 00:02:45,383

see in all directions.

57

00:02:47,900 --> 00:02:48,380

Sometimes

58

00:02:48,380 --> 00:02:51,440

you might see something that looks like a cell phone in a police officer's

59

00:02:51,440 --> 00:02:55,160

pocket that actually could be a body-worn camera as well.

60

00:02:55,520 --> 00:02:59,180

There's a company called Visual Labs that

61

00:02:59,230 --> 00:03:03,040

that does retrofit or augment

62

00:03:03,820 --> 00:03:06,370

mobile phones to work as body-worn cameras.

63

00:03:06,670 --> 00:03:10,930

There might even be a clip holding that camera. And then finally,

64

00:03:10,930 --> 00:03:13,570

you're going to want to look around the police officer's face.

65

00:03:13,570 --> 00:03:18,190
Sometimes there might be a camera
attached to some specialized glasses.

66
00:03:18,310 --> 00:03:21,460
There might be something
attached to a riot helmet,

67
00:03:21,490 --> 00:03:25,450
or you might even have the lens
as part of the eyewear itself,

68
00:03:25,480 --> 00:03:28,930
which is what you see in the bottom,
right. There's a lens right between,

69
00:03:28,960 --> 00:03:32,830
the lenses of the eyewear.

70
00:03:34,720 --> 00:03:36,550
Moving onto the next technology.

71
00:03:36,580 --> 00:03:40,150
We want to talk about mobile
biometric devices and by biometric,

72
00:03:40,150 --> 00:03:45,070
we mean technologies that can
identify you based on a physical

73
00:03:45,070 --> 00:03:47,860
characteristic or
behavioral characteristic.

74
00:03:48,160 --> 00:03:52,170
So the most common one you might be
familiar with are fingerprints.

75
00:03:52,170 --> 00:03:52,690
You know,

76

00:03:52,690 --> 00:03:57,430

the technology matches various or maps out various parts of your fingertip,

77

00:03:57,730 --> 00:04:01,810

and then will match your fingerprint to other versions of your fingerprint.

78

00:04:01,840 --> 00:04:06,370

Perhaps if you'd been arrested earlier or you'd applied for a job.

79

00:04:06,730 --> 00:04:10,300

Face recognition works very similarly.

80

00:04:10,360 --> 00:04:13,480

In which it maybe measures the distance between your eyes and your eyes and the

81

00:04:13,480 --> 00:04:15,820

nose, and then creates a print of that,

82

00:04:15,820 --> 00:04:20,470

that can be matched against other images of your face. Now, specifically here,

83

00:04:20,470 --> 00:04:24,280

we're looking for mobile devices that can do face recognition,

84

00:04:24,550 --> 00:04:28,060

fingerprint scanning, or other types of biometric collection.

85

00:04:28,360 --> 00:04:31,930

And sometimes these devices are going to look just like a cell phone or other

86

00:04:31,930 --> 00:04:32,710
device,

87

00:04:32,710 --> 00:04:36,340
and you're gonna really gonna want to
look for how police are using them. So,

88

00:04:36,370 --> 00:04:36,620

89

00:04:36,620 --> 00:04:40,330
if they're holding them up at eye level
or they're requiring detainees to put

90

00:04:40,330 --> 00:04:41,770
their finger on the device.

91

00:04:42,640 --> 00:04:47,140
You're also more likely to see these being
used after people have been detained.

92

00:04:47,410 --> 00:04:50,110
So either they have been put in
handcuffs and arrested,

93

00:04:50,110 --> 00:04:51,490
or they've been pulled aside,

94

00:04:51,610 --> 00:04:55,720
that's where you might see
a law enforcement officer
use this technology. To show

95

00:04:55,720 --> 00:05:00,550
you what these look like, here's some
technology that was used in San Diego.

96

00:05:00,580 --> 00:05:04,270
These are just, you know,
souped up Android phones,

97

00:05:04,420 --> 00:05:08,080

but you can really tell that a police officer is doing something special with

98

00:05:08,080 --> 00:05:12,460

these phones in order to do face recognition.

99

00:05:12,490 --> 00:05:16,990

Some of the devices can do not only face recognition, but fingerprinting.

100

00:05:17,200 --> 00:05:19,930

So this device here is a very common fingerprinting device.

101

00:05:19,930 --> 00:05:23,020

It is the Dataworks Plus Evolution.

102

00:05:23,050 --> 00:05:24,970

You can see that at the little top square there,

103

00:05:24,970 --> 00:05:28,030

is where a person is required to put their fingerprint to get a

104

00:05:28,030 --> 00:05:31,630

fingerprint scan, but on the back of the phone or the back of the device,

105

00:05:31,630 --> 00:05:35,610

there's a little lens that will do face recognition. So

106

00:05:35,610 --> 00:05:39,430

you might see a police officer using a single device

107

00:05:39,430 --> 00:05:42,370
to collect multiple
forms of biometrics.

108
00:05:43,630 --> 00:05:47,890
So let's move on to vehicles and
roadways. When you think about a protest,

109
00:05:47,950 --> 00:05:51,340
you can't just limit your thought to
where people are marching or where people

110
00:05:51,340 --> 00:05:52,173
are rallying.

111
00:05:52,240 --> 00:05:56,440
You have to think about the protest to
include the parking lots and the streets

112
00:05:56,470 --> 00:05:59,120
around the protest, where
people are leaving their cars,

113
00:05:59,300 --> 00:06:02,060
because certainly that's what
police are viewing as the protest.

114
00:06:02,060 --> 00:06:05,180
And they're putting surveillance
on those

115
00:06:05,240 --> 00:06:07,790
entrance and exit points
of the protest area.

116
00:06:09,230 --> 00:06:13,760
So let's start with the area
adjacent to the protests.

117
00:06:14,240 --> 00:06:17,870

One of the technologies that we look for are things called "License Plate

118

00:06:17,870 --> 00:06:18,440
Readers."

119

00:06:18,440 --> 00:06:23,060
Now these are specialized cameras that are designed to look for license plates.

120

00:06:23,090 --> 00:06:26,000
And when it sees a license plate, it will take a photograph.

121

00:06:26,210 --> 00:06:30,530
It will digitize the letters and numbers and upload that information to a

122

00:06:30,530 --> 00:06:35,510
database along with the timestamp and the GPS

123

00:06:35,510 --> 00:06:37,280
coordinates. In other words, it will,

124

00:06:37,740 --> 00:06:41,360
will grab the license plate and tell police where, and when that license,

125

00:06:41,360 --> 00:06:43,760
plate was seen somewhere.

126

00:06:44,180 --> 00:06:48,290
And that gets added to a database that could police can search later on.

127

00:06:49,370 --> 00:06:53,510
And we do suspect that license plate readers are being used against protesters.

128

00:06:53,810 --> 00:06:57,560

Here's an article from
Forward that found that

129

00:06:57,620 --> 00:07:02,240

in Long Beach, police were
confiscating the vehicles of

130

00:07:02,330 --> 00:07:05,990

people suspected of
attending a protest. And

131

00:07:06,020 --> 00:07:09,770

and knowing what we know about how the
Long Beach Police Department uses license

132

00:07:09,770 --> 00:07:14,270

plate readers, we do believe
they are being used.

133

00:07:14,300 --> 00:07:17,930

One of the ways that police officers
will use a license plate readers is by

134

00:07:17,930 --> 00:07:22,400

dragging specialized trailers to the
entry and exit points of neighborhoods.

135

00:07:22,760 --> 00:07:24,650

These will look like speed trailers

136

00:07:24,650 --> 00:07:29,180

a lot of the time, where it tells you how
fast you're going. In some cases, the,

137

00:07:29,180 --> 00:07:32,750

speed trailers use
radar, but if they're using radar,

138

00:07:32,780 --> 00:07:35,570
they're not putting it near a protest.
So they're putting it near a protest.

139
00:07:35,570 --> 00:07:38,420
It probably is a license
plate reader based speed

140
00:07:38,420 --> 00:07:39,253
trailer.

141
00:07:40,700 --> 00:07:41,030

142
00:07:41,030 --> 00:07:45,800
Police will also attach the license plate
readers to the tops of their vehicles.

143
00:07:46,010 --> 00:07:50,330
And then police will drive around collecting
license plates of cars they pass.

144
00:07:50,660 --> 00:07:53,930
And there's a technique called
"gridding" where a police officer will

145
00:07:53,930 --> 00:07:56,720
systematically go up and
down a parking lot or,

146
00:07:56,790 --> 00:08:01,430
or block by block through a neighborhood
collecting everybody's license plates.

147
00:08:01,730 --> 00:08:05,330
So if you do see a police
vehicle with one of these cameras

148
00:08:05,600 --> 00:08:08,510
engaging in that kind of

behavior, that could be

149

00:08:08,510 --> 00:08:09,343
gridding.

150

00:08:11,210 --> 00:08:13,520
One other element is

151

00:08:13,550 --> 00:08:17,090
license plate readers that are
attached to stationary locations.

152

00:08:17,210 --> 00:08:19,460
We call these "fixed license plate readers",

153

00:08:19,880 --> 00:08:23,660
and generally they're attached to
streetlights or traffic lights,

154

00:08:23,810 --> 00:08:28,700
or they might even be attached to a
standalone, solar-powered pole.

155

00:08:28,730 --> 00:08:31,780
You're going to want to look for these
perhaps around intersections

156

00:08:31,780 --> 00:08:35,450
on the outskirts of protest zones.

157

00:08:37,310 --> 00:08:37,790
Now,

158

00:08:37,790 --> 00:08:42,590
there are also technologies that
might be moved into protests.

159

00:08:42,800 --> 00:08:47,480
So police may want to enhance

their surveillance capabilities

160

00:08:48,620 --> 00:08:53,410
by, you know, using a specialized
surveillance unit that, you know,

161

00:08:53,420 --> 00:08:54,860
usually set on wheels.

162

00:08:55,130 --> 00:08:59,700
There are either a vehicle itself or
as a trailer that can be towed into,

163

00:08:59,970 --> 00:09:02,490
a protest zone.

164

00:09:02,850 --> 00:09:06,990
So what you see here on the right is a
surveillance trailer that the Santa Fe

165

00:09:07,290 --> 00:09:12,210
Police Department in New
Mexico towed into a protest or

166

00:09:12,210 --> 00:09:16,920
towed near a protest against a
monument, and then captured footage of,

167

00:09:17,220 --> 00:09:20,850
people taking down that offensive monument.

168

00:09:22,650 --> 00:09:26,730
So, two particular flavors
of this I want to call out for you:

169

00:09:27,030 --> 00:09:31,170
The one on the left, we might
call a "surveillance watchtower".

170

00:09:31,200 --> 00:09:35,430
These are either trailers or vehicles
that have an actual compartment that a

171
00:09:35,430 --> 00:09:40,290
human being can sit in to surveil a
protest or some other public gathering.

172
00:09:40,710 --> 00:09:44,640
These often have cameras and other
kinds of technology attached to it.

173
00:09:44,910 --> 00:09:47,310
But one important thing to
note is that these function,

174
00:09:47,310 --> 00:09:51,900
regardless of whether somebody is
in the watchtower or not,

175
00:09:52,170 --> 00:09:56,700
these can broadcast remotely. So even
if they seem empty, they could be active.

176
00:09:57,330 --> 00:10:01,380
Now the one on the right looks like this,
the one from the previous slide,

177
00:10:01,440 --> 00:10:05,730
it is a "surveillance trailer", or it might
be called a "surveillance unit".

178
00:10:05,760 --> 00:10:09,450
These usually have a tower that
extends up in the air with a few

179
00:10:09,450 --> 00:10:13,650
surveillance cameras, and
these broadcast remotely as well.

180

00:10:14,340 --> 00:10:19,170
And we generally don't see a police officer
lingering around these technologies

181
00:10:19,170 --> 00:10:21,330
cause that's kind of
not the point of them,

182
00:10:21,360 --> 00:10:26,160
the point is for them to broadcast
remotely. So lately,

183
00:10:26,190 --> 00:10:30,240
protestors have been contacting us saying
they've seen trucks mounted with some

184
00:10:30,240 --> 00:10:34,680
very strange looking cameras,
like the ones pictured here.

185
00:10:34,710 --> 00:10:38,370
These are actually manufactured by a
company called FLIR, and FLIR stands for

186
00:10:38,370 --> 00:10:42,270
Forward-Looking Infrared. And that
means they do thermal imaging.

187
00:10:42,300 --> 00:10:46,050
This is a technology that police
might use at night to

188
00:10:46,080 --> 00:10:50,910
identify where protestors or protest
groups are moving in a in a city

189
00:10:50,910 --> 00:10:51,743
scenario.

190
00:10:53,700 --> 00:10:56,040

One last piece,

191

00:10:56,070 --> 00:11:00,900

last vehicle, I want to highlight for
you are these "command vehicles" or

192

00:11:00,900 --> 00:11:04,320

sometimes called "cyber response vehicles,"
depending on their capabilities.

193

00:11:04,590 --> 00:11:09,500

Now these are gonna be
massive RV sized,

194

00:11:09,570 --> 00:11:11,390

vehicles that, you know,

195

00:11:11,430 --> 00:11:14,250

several people can be
inside at any given time.

196

00:11:14,550 --> 00:11:16,530

Now these are not going to be
in the middle of the protest.

197

00:11:16,530 --> 00:11:18,960

They might be a block over
or a couple blocks over,

198

00:11:18,960 --> 00:11:22,710

but they're not going to be far from
the protest if they're being used.

199

00:11:22,770 --> 00:11:24,990

Inside, there might be

200

00:11:25,020 --> 00:11:29,820

the television screens and monitors
that you'd use to watch remote

201

00:11:30,240 --> 00:11:31,290

video footage,

202

00:11:31,470 --> 00:11:36,240

or it might be transmitting video
footage onto another command center.

203

00:11:36,240 --> 00:11:40,890

Sometimes these vehicles have
all the technology you'd need

204

00:11:40,920 --> 00:11:43,290

to do mobile phone forensics.

205

00:11:43,410 --> 00:11:46,110

That is if they confiscate
people's phones or devices,

206

00:11:46,260 --> 00:11:48,720

there could be the technology inside

207

00:11:49,080 --> 00:11:52,920

these mobile command centers to
extract data from those phones

208

00:11:53,380 --> 00:11:58,290

and computers. I want to clear
up a couple misconceptions,

209

00:11:58,380 --> 00:12:03,270

just to make sure that you, you
know, what you're encountering,

210

00:12:03,450 --> 00:12:07,800

due to assaults on members of the press,
as well as the theft of equipment,

211

00:12:07,800 --> 00:12:11,550

a lot of news organizations have

started using unmarked vehicles.

212

00:12:11,820 --> 00:12:14,070

Now these are going to look like vans.

213

00:12:14,100 --> 00:12:17,160

They might have a satellite dish on top. They might have a giant

214

00:12:17,220 --> 00:12:18,840

antenna that

215

00:12:18,870 --> 00:12:23,430

extends into the air just because something's unmarked and has a satellite dish

216

00:12:23,430 --> 00:12:26,610

and antenna. You shouldn't assume that belongs to law enforcement.

217

00:12:26,790 --> 00:12:31,020

They could belong to a news organization. Now, similarly, people,

218

00:12:31,050 --> 00:12:32,850

some people have

219

00:12:32,880 --> 00:12:36,720

come to the conclusion that whenever they see a vehicle that has an antenna or a

220

00:12:36,720 --> 00:12:40,590

satellite dish, that it might be a technology called a "stingray".

221

00:12:40,920 --> 00:12:45,750

I'm going to talk about stingrays for a moment. So stingrays are also called

222

00:12:45,870 --> 00:12:49,110
"IMSI catchers" or "cell-site simulators".

223

00:12:49,350 --> 00:12:53,430
But essentially these are technologies
that police use to surveil people's

224

00:12:53,430 --> 00:12:56,730
phones. Stingrays
pretend to be cell towers,

225

00:12:56,880 --> 00:12:58,290
people's phones connect to them,

226

00:12:58,470 --> 00:13:02,010
and that's how police get
data for people's phones. Now,

227

00:13:02,620 --> 00:13:06,780
few things to know: first of all,

228

00:13:06,780 --> 00:13:10,680
these are generally not going to
be visible to an observer,

229

00:13:11,040 --> 00:13:15,880
mostly because either they're kept inside
of police vehicles or they might be in

230

00:13:15,880 --> 00:13:16,890
an aircraft,

231

00:13:17,130 --> 00:13:20,490
we've seen cell-site simulators
that are so small that they can fit in

232

00:13:20,490 --> 00:13:21,870
somebody's jacket pocket.

233

00:13:23,040 --> 00:13:27,690
Really to detect the use of one of these technologies while at a protest,

234
00:13:27,930 --> 00:13:32,310
you need some sort of specialized equipment. But you know, to be honest,

235
00:13:32,340 --> 00:13:36,510
a lot of the use of cell-site simulators tends to come out through litigation,

236
00:13:36,720 --> 00:13:41,160
through court filings or through our Freedom Of Information Act requests.

237
00:13:42,780 --> 00:13:46,890
So let's move to the air and the types of technologies that police will put

238
00:13:46,980 --> 00:13:48,450
above us to surveil,

239
00:13:48,450 --> 00:13:53,310
usually large-scale protests or surveil protests from a bird's eye view.

240
00:13:55,200 --> 00:13:57,270
These come in a couple different categories,

241
00:13:57,300 --> 00:14:01,230
there might be planes or helicopters or drones.

242
00:14:01,260 --> 00:14:05,430
They often have high definition cameras attached to them.

243
00:14:05,580 --> 00:14:09,720

They might even be equipped with thermal imaging or other technologies like

244

00:14:09,720 --> 00:14:13,170

license plate readers, or face recognition or cell-site simulators.

245

00:14:13,440 --> 00:14:14,910

A lot of those technologies though,

246

00:14:14,910 --> 00:14:17,130

aren't going to be visible to somebody on the ground,

247

00:14:17,730 --> 00:14:20,580

but some technologies would be.

248

00:14:20,640 --> 00:14:25,200

We do know that law enforcement is using footage from aerial

249

00:14:25,200 --> 00:14:28,830

surveillance to investigate protestors.

250

00:14:28,950 --> 00:14:32,790

So here's a news article out of The Texas Tribune about how the Texas department

251

00:14:32,790 --> 00:14:37,110

of Public Safety used a drone to capture footage of a

252

00:14:37,110 --> 00:14:42,090

teenager who had potentially thrown in an item towards a state police,

253

00:14:42,480 --> 00:14:45,780

the DPS then use screen grabs from that footage,

254

00:14:46,140 --> 00:14:49,140

posted it along with a
thousand dollar cash reward.

255

00:14:49,380 --> 00:14:53,870

And then an anonymous tipster
identified a particular teenager as the

256

00:14:53,870 --> 00:14:54,703

suspect.

257

00:14:56,120 --> 00:15:00,230

So fixed-wing aircraft: now
by fixed-wing,

258

00:15:00,260 --> 00:15:03,740

we mean the traditional kind of
aircraft like traditional airplanes.

259

00:15:03,770 --> 00:15:08,000

So they have a wings that don't move.

260

00:15:08,030 --> 00:15:12,260

There is one particular contractor
known as Persistent Surveillance

261

00:15:12,320 --> 00:15:13,153

Systems,

262

00:15:13,610 --> 00:15:18,140

which uses a small Cessna
aircraft to gather images of

263

00:15:18,140 --> 00:15:19,520

cities. Now,

264

00:15:19,550 --> 00:15:24,260

the image on the right here is

Cessna of the similar class that

265

00:15:24,260 --> 00:15:28,070

persistent surveillance systems uses.

It's not the exact one,

266

00:15:28,340 --> 00:15:31,190

but one of the things you're gonna want
to look out for are planes like this

267

00:15:31,190 --> 00:15:35,690

that are circling the
protests. Helicopters.

268

00:15:35,990 --> 00:15:39,650

Lot of mid to large sized police
departments have helicopters,

269

00:15:39,680 --> 00:15:44,570

and they frequently use these at
large-scale public events.

270

00:15:44,600 --> 00:15:47,540

Some things to look out for,
you know,

271

00:15:47,570 --> 00:15:50,000

if you're not sure who it belongs
to, you can look for the tail number,

272

00:15:50,120 --> 00:15:53,780

but actually the tail number could be
useful in a lot of research projects

273

00:15:53,780 --> 00:15:56,870

afterwards. You can
even look for cameras.

274

00:15:56,870 --> 00:15:59,780

Maybe there's a police officer

leaning out with a telephoto lens,

275

00:15:59,960 --> 00:16:02,690
or there might be a camera
attached to it, like the one here,

276

00:16:02,840 --> 00:16:06,950
which is a FLIR thermal
imaging camera.

277

00:16:06,950 --> 00:16:08,930
It's kind of an orb
shaped thing, but you know,

278

00:16:08,930 --> 00:16:12,170
you saw the thermal imaging truck
earlier and you noticed how it had some

279

00:16:12,170 --> 00:16:16,250
strange lenses, similar lenses
are going to be here.

280

00:16:16,280 --> 00:16:19,550
These helicopters will often
have spotlights as well as,

281

00:16:19,550 --> 00:16:22,820
loudspeakers for
communicating with crowds

282

00:16:24,890 --> 00:16:27,860
Drones. Okay. So it's become very,

283

00:16:27,860 --> 00:16:30,590
very common for police
departments to have drones,

284

00:16:30,650 --> 00:16:35,210
which are also known as Unmanned Aerial
Vehicles or Unmanned Aerial Systems.

285

00:16:35,360 --> 00:16:39,620

But essentially these are remote controlled aircraft equipped with cameras that

286

00:16:39,620 --> 00:16:43,790

are used to surveil gatherings or protests.

287

00:16:43,820 --> 00:16:48,530

"Quadrotors" are the most common type of drone right now.

288

00:16:48,530 --> 00:16:52,370

You can recognize them by having the four propellers on top. Now,

289

00:16:52,400 --> 00:16:55,790

usually they are controlled by remote operator,

290

00:16:55,790 --> 00:16:57,380

which you could see in the right-hand image,

291

00:16:57,530 --> 00:17:00,080

but I do want to call your attention to the image on the left,

292

00:17:00,260 --> 00:17:03,020

which is what we call a "tethered drone".

293

00:17:03,050 --> 00:17:07,610

This means that the drone has a cord attached to it that allows police

294

00:17:07,640 --> 00:17:12,170

to continually charge it, it's

usually attached to a battery,

295

00:17:12,260 --> 00:17:13,940

so it can stay in the air longer.

296

00:17:14,120 --> 00:17:18,380

The one on the right that doesn't have
that function does have to return to the

297

00:17:18,380 --> 00:17:21,920

pilot repeatedly to
have batteries swapped in

298

00:17:21,920 --> 00:17:22,753

and out.

299

00:17:24,440 --> 00:17:26,720

Sometimes you might not
see the drone, you know,

300

00:17:26,720 --> 00:17:29,810

you might hear the drone in the air,
or maybe you don't hear or see it,

301

00:17:30,140 --> 00:17:35,090

but you might be able to identify
the people controlling the drone,

302

00:17:35,120 --> 00:17:39,850

the drone pilots. Oftentimes
there need to be two pilots

303

00:17:39,860 --> 00:17:41,660

at any given time.

304

00:17:41,720 --> 00:17:45,140

And so you would look for police
standing on the periphery,

305

00:17:45,170 --> 00:17:48,140
because they do usually have to be
within the line of sight of the drone,

306

00:17:48,410 --> 00:17:52,260
but they'd be on their periphery holding some sort
of remote control device with a screen.

307

00:17:52,830 --> 00:17:56,940
And maybe you don't even see those. Maybe
you see their vehicle they came in.

308

00:17:57,150 --> 00:17:59,370
So we've given you two examples here.

309

00:17:59,400 --> 00:18:03,990
The two lower images, showing that you
can identify whether the drone is there

310

00:18:04,140 --> 00:18:08,820
based on a vehicle marked
with the terms "UAV" or "UAS" or

311

00:18:08,820 --> 00:18:11,400
"aviation", or even just
the logo of a drone.

312

00:18:13,350 --> 00:18:17,010
Now there are going to potentially be
other types of aerial surveillance that

313

00:18:17,010 --> 00:18:21,360
are watching protests that you are just
not going to be able to see because they

314

00:18:21,360 --> 00:18:23,100
are high altitude aircraft.

315

00:18:23,370 --> 00:18:27,060
So an example of that is the Texas

Department of Public Safety has a few spy

316

00:18:27,060 --> 00:18:29,580

planes, and Customs and
Border Protection as well.

317

00:18:29,600 --> 00:18:33,000

Some other agencies have these
very large predator drones,

318

00:18:33,210 --> 00:18:35,730

which also are very
difficult to see sometimes.

319

00:18:38,100 --> 00:18:41,580

Also, would like to clear
up some misconceptions here
about drones and aircraft:

320

00:18:41,850 --> 00:18:45,570

just because you see a helicopter or
a drone in the air, does not mean it

321

00:18:45,570 --> 00:18:46,650

belongs to the police.

322

00:18:46,920 --> 00:18:51,450

Journalists and activists are
often flying drones and news

323

00:18:51,450 --> 00:18:55,860

helicopters are going to be far more
common than police helicopters.

324

00:18:56,160 --> 00:18:57,780

You know, protests here in San Francisco,

325

00:18:57,780 --> 00:19:02,730

you might see three or four

326

00:19:02,730 --> 00:19:05,490
news helicopters and only
one police helicopter.

327

00:19:06,120 --> 00:19:09,870
So if you're trying to take notes
on what you see at a protest,

328

00:19:10,140 --> 00:19:13,680
you really shouldn't classify an aircraft
as law enforcement until you visually

329

00:19:13,680 --> 00:19:18,000
confirmed it, either by noting the pilots
on the ground or the markings on the

330

00:19:18,000 --> 00:19:19,050
aircraft itself.

331

00:19:20,640 --> 00:19:24,600
One other technology you should keep
an eye on for is the "dronekiller".

332

00:19:24,660 --> 00:19:27,750
A technology made by a company called IXI.

333

00:19:28,170 --> 00:19:31,140
Now there are a few police
departments who have this technology,

334

00:19:31,140 --> 00:19:35,550
which is used to identify,
control and take down

335

00:19:35,880 --> 00:19:40,650
other people's drones. So drones run by
activists, drones run by the press.

336

00:19:40,980 --> 00:19:45,240

Basically it's what cops use
to kill drones, hence the

337

00:19:45,300 --> 00:19:47,010
the name dronekiller.

338

00:19:47,040 --> 00:19:50,880
It uses radio signals in
order to accomplish that task.

339

00:19:52,980 --> 00:19:54,630
Let's move onto the final section:

340

00:19:54,660 --> 00:19:59,520
where to look for permanent surveillance
in the protest environment. With this,

341

00:19:59,520 --> 00:20:03,720
we're mostly talking about camera
networks, a lot of

342

00:20:03,780 --> 00:20:07,500
neighborhoods, a lot of
businesses, a lot of

343

00:20:07,500 --> 00:20:10,710
metropolitan areas have
started installing,

344

00:20:10,740 --> 00:20:13,650
not only CCTV cameras all over the place,

345

00:20:13,890 --> 00:20:18,840
but CCTV cameras that involve
high definition video that
are networked together

346

00:20:18,960 --> 00:20:22,890
that can have, thermal
imaging. Maybe they've got

347

00:20:23,220 --> 00:20:27,720

AI technology that can identify
and track objects or analyze

348

00:20:27,720 --> 00:20:31,800

patterns. Sometimes these technologies
might belong to law enforcement.

349

00:20:31,980 --> 00:20:35,460

Sometimes they might belong to citizens
who are sharing that data with the

350

00:20:35,460 --> 00:20:36,293

police.

351

00:20:37,740 --> 00:20:38,100

So.

352

00:20:38,100 --> 00:20:41,400

I want to give you some terms to help you
identify some of the different cameras

353

00:20:41,400 --> 00:20:42,233

out there.

354

00:20:42,300 --> 00:20:46,440

So the term "bullet camera" is going to
refer to cameras that are

355

00:20:46,470 --> 00:20:47,350

capturing footage

356

00:20:47,380 --> 00:20:51,370

directionally: they're called bullet
cameras because they're usually in that

357

00:20:51,370 --> 00:20:52,420

tubular shape.

358

00:20:53,080 --> 00:20:57,100

"Dome camera" is what it looks like: a dome shaped camera.

359

00:20:57,340 --> 00:21:01,900

And that dome is going to obscure the direction the camera is facing as well as

360

00:21:01,900 --> 00:21:03,040

the number of lenses.

361

00:21:03,670 --> 00:21:07,000

Now there's one particular brand of camera that we keep an eye out for.

362

00:21:07,030 --> 00:21:10,330

it's called "Avigilon", you're never going to see just one,

363

00:21:10,330 --> 00:21:13,270

Avigilon camera, and you can see it's kind of a dome camera.

364

00:21:13,480 --> 00:21:16,540

Other configurations might be more bullet camera-based,

365

00:21:16,570 --> 00:21:21,400

or maybe even more dome-y, for lack of a better adjective.

366

00:21:21,700 --> 00:21:22,990

But you're never just going to see one.

367

00:21:22,990 --> 00:21:24,670

There's going to be a whole range of them.

368

00:21:24,700 --> 00:21:28,480

And they're going to be connected to some sort of video analytic software that

369

00:21:28,480 --> 00:21:33,400
can be used to track individual protesters, or

370

00:21:33,400 --> 00:21:37,360
to track the, the movements of the protest as a whole.

371

00:21:38,080 --> 00:21:41,560
Just to call back here, quickly to ALPR cameras:

372

00:21:41,560 --> 00:21:45,220
Those are those license plate cameras. Those are also going to be

373

00:21:45,250 --> 00:21:47,500
somewhat permanently

374

00:21:47,500 --> 00:21:51,730
affixed. And then probably one that you may have noticed,

375

00:21:51,730 --> 00:21:56,230
but you didn't have the words to describe, is a "Pan-Tilt-Zoom camera",

376

00:21:56,320 --> 00:22:00,880
or "PTZ camera". These can be remotely controlled.

377

00:22:00,910 --> 00:22:03,820
The operator can pan all the way around.

378

00:22:03,850 --> 00:22:07,600
They can tilt up and down and they can also zoom in on particular things

379

00:22:07,600 --> 00:22:08,433

they're interested in.

380

00:22:10,500 --> 00:22:11,640

Some cities

381

00:22:11,880 --> 00:22:16,560

have what are called "Police Observation Devices"
or "PODs".

382

00:22:17,100 --> 00:22:22,050

These are usually clearly marked
as belonging to the police department.

383

00:22:22,200 --> 00:22:26,040

They may have multiple cameras
attached, but as well as other sensors,

384

00:22:26,070 --> 00:22:30,660

such as gunshot detection or, you
know, thermal imaging, you know,

385

00:22:31,140 --> 00:22:32,610

it's going to depend city to city.

386

00:22:32,610 --> 00:22:35,010

But this example here is
from the city of Sacramento.

387

00:22:36,810 --> 00:22:40,440

And then some cities have started what
are called "Smart City Initiatives,"

388

00:22:40,470 --> 00:22:45,420

where they are installing sensors
on street lights. And, you know,

389

00:22:45,420 --> 00:22:49,630

sometimes these sensors are designed to dim

390

00:22:49,630 --> 00:22:52,710
the street light when there's no one around or it's dark out,

391

00:22:52,830 --> 00:22:57,480
or they might look for seismic activity or air quality,

392

00:22:57,720 --> 00:23:00,570
but more and more, we're seeing these smart street lights

393

00:23:00,570 --> 00:23:04,110
including video cameras, microphones and gunshot detection.

394

00:23:04,650 --> 00:23:08,790
So for example, here is one from the San Diego Police Department,

395

00:23:09,000 --> 00:23:12,720
and they certainly have used these to investigate protestors.

396

00:23:12,870 --> 00:23:16,980
So here's an article from this summer, from the Voice of San Diego.

397

00:23:17,100 --> 00:23:21,750
And that found that in May and early June, there was a lot of

398

00:23:21,810 --> 00:23:25,230
investigation going on with these cameras and

399

00:23:25,260 --> 00:23:27,540

the Black Lives Matter protests that were happening.

400

00:23:29,730 --> 00:23:30,210
So.

401

00:23:30,210 --> 00:23:32,640
That is most of the technology

402

00:23:32,640 --> 00:23:35,490
that we'd expect you to see at a protest,

403

00:23:35,640 --> 00:23:38,680
but I do want to give you some resources so you can further

404

00:23:38,680 --> 00:23:43,620
your learning on this issue. So the Atlas is Surveillance is a project of EFF.

405

00:23:43,680 --> 00:23:48,590
That is a database of more than 6,000 individual surveillance purchases

406

00:23:48,590 --> 00:23:52,280
made by police and sheriff and other law enforcement agencies

407

00:23:52,310 --> 00:23:55,880
around the United States. You can go in and you can search by your city,

408

00:23:55,880 --> 00:23:57,080
your county, your state,

409

00:23:57,260 --> 00:24:01,400
or a particular law enforcement agency to see all the technologies they might be

410

00:24:01,400 --> 00:24:06,050

using. Spot The
Surveillance is a game,

411

00:24:06,080 --> 00:24:09,200

or an experience, that you
can use to train yourself

412

00:24:09,200 --> 00:24:11,270

to look for surveillance technology.

413

00:24:11,300 --> 00:24:16,280

If you have a VR headset say like
an Oculus Go or an HTC Vive,

414

00:24:16,340 --> 00:24:19,730

you can actually go into a street
scene and look around for pieces of

415

00:24:19,730 --> 00:24:23,330

surveillance technology. If you
don't have a virtual reality headset,

416

00:24:23,420 --> 00:24:27,890

no problem. We've actually got a version
that works in your desktop browser.

417

00:24:27,920 --> 00:24:31,220

If you wanted to read some more
in-depth reports or blogs posts on the

418

00:24:31,220 --> 00:24:32,510

surveillance technology,

419

00:24:32,780 --> 00:24:36,050

EFF Street Level Surveillance
hub has everything you need.

420

00:24:36,710 --> 00:24:40,040
And then if you're wondering how to
defend yourself from surveillance at a

421
00:24:40,040 --> 00:24:43,460
protest, we've got the EFF
Surveillance Self-Defense guide,

422
00:24:43,490 --> 00:24:47,420
and there's an entire section about how
to attend a protest and the things that

423
00:24:47,420 --> 00:24:51,440
you can do in advance to protect yourself,
as well as the things you can do to

424
00:24:51,440 --> 00:24:54,770
protect yourself while you're
at the protest. And with that,

425
00:24:54,770 --> 00:24:58,970
I would just like to thank you for taking
the time to learn about surveillance

426
00:24:59,330 --> 00:25:03,830
at protests. And if you have any
other questions, just reach out.

427
00:25:03,830 --> 00:25:08,660
You can find contact information
as well as other resources at <https://eff.org>.