
POINTE
POINTE

1
00:00:06,070 --> 00:00:04,309
[Music]

2
00:00:08,070 --> 00:00:06,080
pointer is a 3d position tracking

3
00:00:09,270 --> 00:00:08,080
technology that enables us to determine

4
00:00:11,350 --> 00:00:09,280
the location of someone

5
00:00:13,350 --> 00:00:11,360
in environments where gps typically

6
00:00:15,589 --> 00:00:13,360
fails the main application being

7
00:00:17,670 --> 00:00:15,599
addressed in our demonstrations today

8
00:00:18,870 --> 00:00:17,680
are the fire safety fire search and

9
00:00:21,189 --> 00:00:18,880
rescue

10
00:00:22,950 --> 00:00:21,199
this week at caltech we've been hosting

11
00:00:25,509 --> 00:00:22,960
a set of live demonstrations

12
00:00:26,230 --> 00:00:25,519
in order to present and showcase the

13
00:00:28,470 --> 00:00:26,240

accuracy

14
00:00:30,390 --> 00:00:28,480
of our pointer technology and algorithms

15
00:00:32,630 --> 00:00:30,400
during the demos the individuals would

16
00:00:33,830 --> 00:00:32,640
enter the structure with devices

17
00:00:36,229 --> 00:00:33,840
and we'd be able to track those

18
00:00:37,750 --> 00:00:36,239
individuals location as well as position

19
00:00:39,750 --> 00:00:37,760
we've set up security cameras in every

20
00:00:40,709 --> 00:00:39,760
room of the house and so that way during

21
00:00:42,869 --> 00:00:40,719
the demonstration

22
00:00:44,790 --> 00:00:42,879
you can do a correlation and comparison

23
00:00:46,869 --> 00:00:44,800
of where the person is in real time

24
00:00:48,709 --> 00:00:46,879
with what the visualization calculated

25
00:00:51,189 --> 00:00:48,719
their position to be

26
00:00:52,790 --> 00:00:51,199
so in an actual emergency response the

27
00:00:53,590 --> 00:00:52,800
fire truck will show up right outside

28
00:00:55,029 --> 00:00:53,600
the building

29
00:00:58,150 --> 00:00:55,039
and the mass will be deployed and the

30
00:00:59,990 --> 00:00:58,160
system will be turned on

31
00:01:01,430 --> 00:01:00,000
at that instant you can also turn on the

32
00:01:02,950 --> 00:01:01,440
visualization software and immediately

33
00:01:03,750 --> 00:01:02,960
start tracking where everyone is inside

34
00:01:05,750 --> 00:01:03,760
the building

35
00:01:07,510 --> 00:01:05,760
so that when there is a certain rescue

36
00:01:09,590 --> 00:01:07,520
or a man-down type of event

37
00:01:11,030 --> 00:01:09,600
that the technology and visualization

38
00:01:12,630 --> 00:01:11,040

can be utilized by the incident

39
00:01:15,670 --> 00:01:12,640
commander sitting outside

40
00:01:17,590 --> 00:01:15,680
to help with the rescue event the

41
00:01:19,429 --> 00:01:17,600
technology is based off having

42
00:01:21,670 --> 00:01:19,439
devices outside the structures that

43
00:01:23,030 --> 00:01:21,680
would generate quasi-static fields

44
00:01:24,310 --> 00:01:23,040
and so what we do with those fields is

45
00:01:25,590 --> 00:01:24,320
we measure them much like a compass

46
00:01:27,990 --> 00:01:25,600
measures the fields

47
00:01:28,789 --> 00:01:28,000
analogous to how when you drive into a

48
00:01:30,950 --> 00:01:28,799
garage

49
00:01:32,469 --> 00:01:30,960
you still receive an am signal but your

50
00:01:34,230 --> 00:01:32,479
fm signal kind of cuts out

51
00:01:35,590 --> 00:01:34,240
the am signal is very close to the

52
00:01:37,270 --> 00:01:35,600
frequencies that we're using for this

53
00:01:39,670 --> 00:01:37,280
system and thus they penetrate

54
00:01:40,390 --> 00:01:39,680
very deeply into multiple types of

55
00:01:42,389 --> 00:01:40,400
environments

56
00:01:43,429 --> 00:01:42,399
this allows us to give 3d positioning to

57
00:01:44,950 --> 00:01:43,439
first responders

58
00:01:46,789 --> 00:01:44,960
the demos that we conducted this week

59
00:01:48,469 --> 00:01:46,799
were very successful the building

60
00:01:50,230 --> 00:01:48,479
and the structure permitted us to do

61
00:01:52,069 --> 00:01:50,240
testing and demonstrations over

62
00:01:53,510 --> 00:01:52,079
all floors the system performed

63
00:01:54,710 --> 00:01:53,520

flawlessly and very well in this

64
00:01:56,310 --> 00:01:54,720
environment

65
00:01:57,830 --> 00:01:56,320
i'm excited about this technology for

66
00:01:58,310 --> 00:01:57,840
firefighter applications because they

67
00:02:00,389 --> 00:01:58,320
can make an

68
00:02:02,069 --> 00:02:00,399
impact there today but also this

69
00:02:04,550 --> 00:02:02,079
technology is going to be very valuable

70
00:02:06,069 --> 00:02:04,560
for robotic navigation purposes inside

71
00:02:07,510 --> 00:02:06,079
buildings structures underground

72
00:02:08,469 --> 00:02:07,520
underwater and i think that that will be

73
00:02:10,229 --> 00:02:08,479
a entire