

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD
3
4

5 MOTOROLA SOLUTIONS, INC.,)
6)
7 Petitioner,)
8)
9 vs.) Case No.
10) IPR2024-00207
11 STA GROUP, LLC,) U.S. Patent No.
12) 8,145,249 B2
13 Patent Owner.)
14)

15 VIDEOCONFERENCE DEPOSITION OF
16 DR. SAYFE KIAEI
17 Taken in behalf of Patent Owner

18 * * *

19 October 3, 2024

20 Bend, Oregon
21
22
23

24 Teresa L. Dunn, CSR, CCR, RPR
25 Court Reporter STA Group Exhibit 2003
Motorola Solutions Inc. v. STA Group LLC
IPR2024-00207
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EXHIBITS

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Exhibit 1007	United States Patent 8,121,057 B1 (Botha)	24
Exhibit 1004	United States Patent Application Publication (McDonald)	34

1 BEND, OREGON; THURSDAY, OCTOBER 3, 2024

2 9:00 a.m.

3 * * *

4 DR. SAYFE KIAEI

5 called as a witness in behalf of the Patent
6 Owner, having first been sworn by the Reporter,
7 testifies as follows:

8 EXAMINATION

9 BY MR. LUND:

10 Q. Good morning. Could you please state
11 and spell your full name for the record?

12 A. Good morning. I am Sayfe Kiaei, first
13 name S-A-Y-F-E, last name, K-I-A-E-I.

14 Q. And, Dr. Kiaei, where do you reside?

15 A. At this point I am in Bend, Oregon.

16 Q. And have you been deposed before?

17 A. Yes, sir.

18 Q. About how many times have you been
19 deposed?

20 A. Over 40 times by now.

21 Q. So you understand I'm going to be asking
22 a series of questions today?

23 A. Yes, sir.

24 Q. And you also understand that you took an
25 oath to tell the truth?

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1 A. Yes, sir.

2 Q. Are you under the influence of any
3 medications today?

4 A. No, sir.

5 Q. Is there any reason you would not be
6 able to fully, accurately, and honestly answer
7 the questions today?

8 A. No, sir.

9 Q. And if you don't understand any of my
10 questions please let me know, otherwise, I will
11 assume that you understood the questions.

12 Is that fair?

13 A. Will do. Thank you. Yes, correct.

14 Q. And I will do my best to avoid talking
15 over you. I will try to let you finish your
16 answer. I know it's sometimes difficult in the
17 remote environment, but if you would do your
18 best to let me finish my question that would be
19 great.

20 Is that fair?

21 A. I will do my best, yes, sir.

22 Q. I will try to take a break every 45
23 minutes to an hour, but if you need one before
24 then just let me know. The only thing I ask is
25 if there's a pending question please answer that

1 question before we take a break.

2 Okay? Is that okay?

3 A. Yes, sir, that's good, yes.

4 Q. Where are you located today?

5 A. Today I am in Bend, Oregon, 2917 North
6 Purcell Boulevard.

7 Q. Are you in the room alone?

8 A. Yes, I am.

9 Q. And what equipment are you using for
10 today's deposition?

11 A. My equipment, my computer is a MacPro
12 laptop with a display and a camera, a Logitech
13 camera and a Yeti microphone and an Anker
14 speaker.

15 Q. Do you have a phone in the room with you
16 today?

17 A. I do have a phone. It's in airplane
18 mode.

19 Q. Do you agree not to use the phone during
20 today's deposition?

21 A. Yes, sir, I do.

22 Q. Do you have any chat windows open on
23 your computer?

24 A. No, I don't.

25 Q. Do you have any hard copies of any

1 documents in front of you today?

2 A. No, I don't besides my one piece of
3 clean paper.

4 Q. Do you have any electronic copies of
5 documents accessible to you today?

6 A. Yes, I do. I have the exhibits and my
7 declaration available here in a hard -- in my
8 computer.

9 Q. And are those clean copies of the
10 electronic versions?

11 A. Yes, all are clean, yes.

12 Q. Are you currently employed?

13 A. Yes, I am.

14 Q. Where are you employed?

15 A. At Arizona State University School of
16 Electrical Computer and Energy Engineering.

17 Q. What do you do at Arizona State
18 University?

19 A. I am a professor of electrical
20 engineering in the areas of communications and
21 related areas.

22 Q. As a professor do you teach classes at
23 Arizona State University?

24 A. Yes, I do.

25 Q. How many classes do you teach per

1 semester?

2 A. Normally one class a semester, but not
3 this year or last year.

4 Q. And what class is that normally taught?

5 A. I typically teach a course on wireless
6 transceiver design and also I teach a course on
7 electronic circuits, analog and electronic
8 circuits, and sometimes I teach a course on
9 communication systems.

10 Q. Are those undergraduate-level courses?

11 A. Communications and electronics are
12 undergraduate. The wireless transceiver is a
13 graduate-level course.

14 Q. Besides teaching courses at Arizona
15 State University do you do anything else there?

16 A. Yes, I am. I am involved in research.
17 I'm also director of Center for Energy.

18 Q. What topics do you research?

19 A. My research are in various topics
20 related to communications -- mostly related to
21 electronics and algorithms related to
22 communications, but I have also been working on
23 energy areas in the last I would say 14, 15
24 years as well.

25 Q. Do you employ students to help with your

1 research?

2 A. Yes, I do. I typically recruit Ph.D.
3 students that work with me.

4 Q. Approximately how many students would
5 you say work for you in your research?

6 A. Currently I have brought it down quite a
7 lot to about two, but typically I have five to
8 eight students, but the last few years because
9 of my involvement in the centers I have brought
10 it down to two.

11 Q. How is your research funded at Arizona
12 State University?

13 A. Mostly by either National Science
14 Foundation or Department of Defense or right now
15 by USAID which is the State Department funding
16 for international development on energy.

17 And also sometimes, not recently in the
18 past few years, I have been funded by industry
19 as well.

20 Q. Do you recall any of the specific
21 industry funding that you received?

22 A. Yes. I have received fundings from
23 Intel, not directly, but they contributed to the
24 center called Connection One which is IUCRC,
25 Industry University Collaborative Research

1 Center, funded by the National Science
2 Foundation.

3 So the center has a pool that companies
4 put in annual membership in the center and that
5 annual membership -- then the board decides
6 which projects to fund.

7 So the members are the typical
8 electronic companies in the -- mostly in the
9 U.S.

10 Q. And when you say the board decides which
11 projects to fund what are you referring to?

12 A. Well, the center from the pool of
13 funding has certain amount of funds available
14 every year and in the summertimes the members of
15 the center, the faculty, presents different
16 projects and then they decide -- they vote and
17 decide which projects to fund.

18 That center has been more or less
19 semi-dormant in the past. The National Science
20 Foundation funding for that ended in 2018 so the
21 center has been dormant since 2018.

22 Q. Earlier you mentioned you received
23 funding from the National Science Foundation or
24 the Department of Defense; is that correct?

25 A. Yes, I do, yes.

1 Q. What would be a rough breakdown of what
2 percentage of funding you receive from those two
3 entities?

4 MS. MISHAGA: Objection, form.

5 THE WITNESS: It has really changed
6 quite a lot annually. It depends on what the
7 projects were. So the amount, I couldn't
8 remember that, but it depends on the nature of
9 the project and what it was.

10 Q. (By Mr. Lund) What did you do before
11 acting as a professor at Arizona State
12 University?

13 A. I was a -- I worked at Motorola for
14 roughly seven, eight years and before that I was
15 a professor at Oregon State University and
16 before that at Boeing high-tech center, and
17 somewhere in between those I did some consulting
18 as well.

19 Q. What did you work on during your time at
20 Motorola?

21 A. I was with Land Mobile Products Sector
22 and then joined a cellular or wireless
23 integrated technology center which was
24 responsible for the transceivers and
25 communication devices of all different various

1 Motorola products.

2 Q. Do you recall any of the Motorola
3 products?

4 A. Yes. To some extent, yes.

5 Q. And of those products that you recall
6 what were they?

7 A. I worked on the two-way radios. I
8 worked on, you know, there was a series of
9 two-way radios that were available at Motorola.

10 I worked on Motorola products. I worked
11 on different various Motorola two-way radio
12 products. And then I also worked on the -- for
13 a while I worked on DSL, digital subscriber
14 lines, and I also represented Motorola in the
15 standards, primarily in DSL and Bluetooth and
16 GPS, and I also worked on the cellular division
17 in the 2G wireless development.

18 Q. What did you do prior to working at
19 Motorola?

20 A. I was -- I was a professor at Oregon
21 State University.

22 Q. Do you hold any degrees?

23 A. Yes, my Ph.D. is from Washington State
24 University in 1987. My master's in 1984 is also
25 from Washington State University.

1 Q. Starting with your Ph.D. what degree was
2 that in?

3 A. It was in electrical and computer
4 engineering.

5 Q. Is that the same for your master's?

6 A. Master's as well was electrical and
7 computer engineering. All my degrees were in
8 electrical and computer engineering.

9 Q. Shifting gears a bit you provided
10 testimony in connection with IPR2024-0027 --
11 207; is that correct?

12 A. The number I have to look up, but it was
13 a declaration for the '249 patent, yes. If the
14 numbers match up, yes.

15 Q. Just to make it clear if I refer to the
16 '249 patent you will understand that's patent
17 number 8,145,249; is that correct?

18 A. Yes, that is correct, yes.

19 Q. Do you have Exhibit Share open by
20 chance?

21 A. I am opening it right now as we speak.

22 Q. Take your time and let me know when it
23 is open.

24 A. Sure. I forgot my password so I have to
25 do a new one. Okay. I have it open now.

1 Q. I'm going to go ahead and share in the
2 chat what has been previously marked as 1002
3 from the '249 patent IPR.

4 Just let me know when you see that and
5 have it up on your end.

6 MS. MISHAGA: Counsel, is it through the
7 chat or Exhibit Share?

8 MR. LUND: Exhibit Share.

9 THE WITNESS: I have both 1001 and 1002
10 exhibits opened and downloaded from the chat.

11 (Deposition Exhibits Numbers 1001 and
12 1002 marked for identification.)

13 Q. (By Mr. Lund) Do you recognize Exhibit
14 1002?

15 A. Yes, I do.

16 Q. And what is this document?

17 A. That is the declaration, my declaration
18 for the '249 patent IPR.

19 Q. So if I refer to this document as your
20 declaration you will understand that I'm
21 referring to Exhibit 1002; is that correct?

22 A. Yes, sir, that is fine.

23 Q. Are you being compensated for your work
24 done on the '249 patent IPR?

25 A. Yes, I am.

1 Q. Are you charging an hourly rate for your
2 work done on this IPR?

3 A. Yes, sir, I am.

4 Q. And what is that rate?

5 A. I believe it is 475 or it could be 495.
6 I increased my rate over the last year and a
7 half so I don't really exactly recall which one
8 I'm charging, but somewhere in between those,
9 either 475 or 495 per --

10 Q. Other than -- sorry, go ahead.

11 A. I said per hour.

12 Q. And other than that hourly rate are you
13 being compensated in any other way?

14 A. No, sir.

15 Q. Going back to Exhibit 1002 approximately
16 how many hours did you work in preparing your
17 declaration?

18 A. That was a while ago, but I am -- so I
19 don't recall exactly what it was, but it was
20 roughly I'm saying, you know, about 20, 30 hours
21 at least because I worked on that with a -- that
22 was a while ago.

23 Q. Do you think it was above 100 hours?

24 A. No, it was not above 100 hours.

25 Q. Did you work with anyone else in

1 preparing this declaration?

2 A. Yes, I did. I worked with a previous
3 firm that was working on this IPR that
4 was -- that I worked with them. It was, yeah,
5 dated in January 2024 so it was roughly about 10
6 months ago.

7 Q. Do you happen to recall any of the names
8 of the attorneys you worked on this declaration
9 with?

10 A. I apologize, I really don't, no. It was
11 a different firm. I can look it up if you want,
12 but I don't remember it.

13 Q. No, that's completely fair. Do you have
14 any assistants you work with?

15 A. Sure. I've been working with Day Jones
16 attorneys, Ms. Mighaga as well as with Josh who
17 is also -- Mr. Nightingale who is also on this
18 call.

19 Let me correct that statement. I worked
20 with them on preparing for this deposition. The
21 declaration was written with a prior firm,
22 working with a prior firm.

23 Q. So you stated that you worked with them
24 in preparing for this deposition. How did you
25 prepare for this deposition?

1 MS. MISHAGA: I'm going to object based
2 on privilege and caution the witness not to
3 disclose any communications you had with counsel
4 in preparation for today.

5 THE WITNESS: Thank you. In preparing
6 for this I reviewed the patent '249 as well as
7 my declaration as well as the prior arts that I
8 have listed in my declaration.

9 Q. (By Mr. Lund) Approximately how many
10 hours did you spend preparing for this
11 deposition today?

12 A. I'm guessing roughly about 20 to 40
13 hours approximately.

14 Q. Did you meet with counsel in preparation
15 for this deposition?

16 A. Virtually, yes.

17 Q. About how many times did you meet with
18 counsel to prepare for this deposition?

19 A. For this deposition virtually primarily
20 once.

21 Q. Do you recall who was on the meeting in
22 preparation for this deposition?

23 A. Yes, it was Ms. Mighaga as well as
24 Mr. Nightingale.

25 Q. Was there anyone else?

1 A. No.

2 Q. Earlier you stated that you also
3 reviewed the prior art when preparing for the
4 deposition.

5 What are you referring to when you
6 stated the prior arts?

7 A. The prior arts are the exhibits that I
8 have discussed in the various -- the three
9 different grounds in my declaration. So those
10 are the references that I have for what is prior
11 art in my declaration.

12 Q. And outside of the prior art is there
13 anything else you reviewed in preparation for
14 your deposition?

15 A. I briefly looked at a couple other
16 documents besides that.

17 Q. Do you recall what those documents were?

18 A. Yes, one of them was an institutional
19 decision I presume, yes, and then the other one
20 was patent owner response, preliminary patent
21 owner response.

22 Q. If I could have you turn to paragraph 23
23 of your declaration please and let me know when
24 you are there.

25 A. Okay. Yes, I'm there.

1 Q. Besides the materials listed in
2 paragraph 23 and the two documents you just
3 referenced, the institutional decision and the
4 preliminary patent owner response, are there any
5 other materials you considered in preparing for
6 this deposition?

7 A. Considered or reviewed?

8 Q. Reviewed.

9 A. Okay. No, I don't recall looking at any
10 other documents preparing for this deposition.

11 Q. Are there any other documents that you
12 considered? Strike that. Sorry.

13 Earlier you mentioned you participated
14 in over 40 depositions; is that correct?

15 A. Yes, sir.

16 Q. Are those depositions related to your
17 work as an expert?

18 A. Yes, all of them were related to my
19 position as an expert consultant.

20 Q. And have most of those cases been patent
21 cases?

22 A. Yes, with exception of one or two may
23 have been related to wireless issues in civil
24 lawsuits.

25 Q. Outside of this proceeding have

1 you -- sorry, strike that.

2 Have you worked as an expert with
3 Motorola Solutions outside of this proceeding?

4 A. I would say yes. Off top of my head,
5 yes, sir, I have.

6 Q. Do you recall what cases you have worked
7 on with Motorola Solutions?

8 A. Yes, I have. It's been a relatively low
9 activity, dormant, but I worked with them on a
10 case against Tata. It's a district court case.

11 Q. Do you recall any other cases that you
12 have worked on with Motorola Solutions?

13 A. There may have been one other one, but I
14 don't recall exactly which one it was. I think
15 there may have been one other one.

16 I think Tata was the only other one I
17 can think about. I don't think so. I think
18 this one and Tata are the two main ones I have
19 worked with Motorola.

20 Q. Outside of this proceeding have you
21 rendered any other proceedings related to the
22 '249 patent?

23 MS. MISHAGA: Objection, form.

24 THE WITNESS: Well, there are
25 a -- besides IPR there's, of course, the

1 district court litigation case going on so I
2 have rendered opinion on the invalidity in that
3 case.

4 And also I have -- related to the same
5 litigation case I have a declaration regarding
6 the claim construction.

7 Q. (By Mr. Lund) The opinions you rendered
8 in your declaration in this proceeding, are
9 those consistent with the opinions you have
10 rendered in other cases related to the '249
11 patent?

12 MS. MISHAGA: Objection, form.

13 THE WITNESS: I guess I would like to
14 know what you mean by consistent.

15 Q. (By Mr. Lund) Have you taken any
16 positions in this proceeding that are
17 inconsistent with your opinions taken in other
18 proceedings with the '249 patent?

19 MS. MISHAGA: Objection, form.

20 THE WITNESS: It really depends on what
21 it is. I have tried my best to be consistent in
22 forming the same opinion.

23 Q. (By Mr. Lund) And at this time are there
24 any corrections that you would like to make to
25 your declaration?

1 A. There was a few places in the
2 declaration -- I think I also discussed
3 it -- may have discussed it in a previous
4 deposition -- there were a few places where I
5 was referring to a -- one of the prior arts and
6 by mistake I called them '249 patent.

7 So those were -- there were like two or
8 three of them and I think I may have brought it
9 up as well last time, but I don't recall
10 exactly.

11 Q. Do you recall where those corrections
12 are in your declaration?

13 A. I would have to look. I don't have it
14 marked so I don't know. It was when I was
15 talking about Botha Exhibit 1004.

16 So this at this point I don't have it
17 marked anywhere so I don't recall where I talked
18 about it, but I can search if you want. I don't
19 remember exactly.

20 An example, for example, is -- one
21 example I found I believe is in paragraph 79.
22 At the last line before the quotation from
23 Exhibit 1004 I say, As disclosed in the '249
24 patent. I meant that as disclosed in the Botha
25 patent.

1 And there may have been two or three
2 other ones as well.

3 Q. And those two or three other instances
4 are the same substitution of the '249 for Botha?

5 A. Yes, sir.

6 Q. Outside of those instances that we
7 discussed are there any other corrections that
8 you would like to make to your declaration?

9 A. Not necessarily, no, I don't recall, but
10 if something comes up I will bring it up. At
11 this point, no.

12 Q. I should have said this before, but with
13 these questions please take your time reviewing
14 your materials.

15 If there's additional exhibits that
16 would be helpful to answer the questions please
17 request those. I'm happy to give you whatever
18 you need to answer the questions to the best of
19 your abilities.

20 A. Thank you.

21 Q. I'm going to share previously marked
22 Exhibit 1007 from the '249 IPR in the Exhibit
23 Share now.

24 Please let me know when you have that up
25 in front of you.

1 (Deposition Exhibit Number 1007 marked
2 for identification.)

3 THE WITNESS: Yes, I have the exhibit
4 2007 in front of me, I'm sorry, 1007.

5 Q. (By Mr. Lund) Do you recognize Exhibit
6 1007?

7 A. Yes, I do. It's a patent prior art
8 labeled McDonald or I call it McDonald prior
9 art.

10 Q. So it's okay if I refer to this one as
11 McDonald?

12 A. Yes, sir, yes.

13 Q. And this is one of the prior arts you
14 mentioned you reviewed in preparation for your
15 deposition today; is that correct?

16 A. Yes, sir, that's correct.

17 Q. What is McDonald's directed towards?

18 MS. MISHAGA: Objection, form.

19 THE WITNESS: As I say in my declaration
20 as well as in paragraph 86 it is directed
21 towards a system in which dispatch console
22 monitors talkgroups including mobile radios.

23 And the example of such a system is
24 shown in Figure 1 which has a number of console
25 sites and talkgroups in that depiction.

1 Q. (By Mr. Lund) And in Figure 1 repeater
2 site 102 communicates with console site 104; is
3 that correct?

4 MS. MISHAGA: Objection, form.

5 THE WITNESS: The repeater site 102
6 is -- via router 108 is in direct communications
7 with the core router 114.

8 Q. (By Mr. Lund) What's the function of the
9 core router in Figure 1?

10 MS. MISHAGA: Objection, form.

11 THE WITNESS: So the consoles 130 to
12 140, they receive audio from the mobile radios
13 which are on the upper right-hand side, 148 and
14 150 for example, in the talkgroup over a packet
15 base connection via the router 108 to the core
16 router 112 which goes to another router in the
17 console via the connections 162 and 160.

18 Q. (By Mr. Lund) Is the core router
19 controlled by the zone controller 116?

20 MS. MISHAGA: Objection, form.

21 THE WITNESS: As I also say in my
22 declaration and also in the McDonald exhibit
23 paragraph 14 it discusses that the -- it
24 discusses that the core router 114 is controlled
25 by the controller 116, yes. It is also in my

1 declaration.

2 Q. (By Mr. Lund) What is the function of
3 the zone controller 116 in Figure 1?

4 MS. MISHAGA: Objection, form.

5 THE WITNESS: In paragraph 2 of
6 Exhibit 1007 McDonald as well as in my
7 declaration I discuss that the McDonald radio
8 system may be a trunked or non-trunked radio
9 system, like a trunk of a car, trunked or
10 non-trunked.

11 In trunked or mixed trunked and
12 conventional system there is usually provided a
13 central controller called a zone controller for
14 allocating communication resources among
15 multiple sites.

16 Q. (By Mr. Lund) Would bandwidth be an
17 example of a communication resource?

18 MS. MISHAGA: Objection, form.

19 THE WITNESS: I would say that bandwidth
20 is -- they are within the links that are
21 provided and among many other components in the
22 system that could be one of the criterias
23 that -- based on that central zone -- the zone
24 controller, it is not necessarily bandwidth, the
25 resource, but really physically it is the links

1 and the connectivity to the link is the
2 resource.

3 Bandwidth is the -- is the data rate
4 within that link.

5 Q. (By Mr. Lund) And when you are referring
6 to links are you referring to link 160, 162, and
7 164?

8 A. I am referring to the links 160, 162,
9 and 164, yes.

10 Q. And if we could shift back for a moment
11 to exhibit -- well, to your declaration
12 paragraph 173. Sorry, let me know when you have
13 that up.

14 A. Yes, I'm at 173.

15 Q. I apologize, I misspoke, can we turn to
16 paragraph 137?

17 A. Yes, I'm at paragraph 137.

18 Q. The last sentence of paragraph 137
19 reads, McDonald teaches methods for identifying,
20 and so on.

21 Do you see that sentence?

22 A. Yes, sir, I do.

23 Q. How does McDonald identify whether a
24 talkgroup is critical?

25 MS. MISHAGA: Objection, form.

1 Q. (By Mr. Lund) Feel free to take your
2 time and look through McDonald as well.

3 A. As I have also described in paragraph
4 136 and 137 when I'm discussing McDonald I
5 discuss that the communication links 160 and 162
6 between the sites have a limited bandwidth and
7 it will not be able to accommodate all of the
8 data streams within that.

9 And the zone controller manages to
10 manage the bandwidth of the data stream call
11 units between different sites such that the zone
12 controller will not oversubscribe to a given
13 link and this is done by having a priority on
14 the calls.

15 Based on the priority of the calls
16 McDonald teaches the method for identifying
17 console from talkgroups as critical so that
18 calls for critical talkgroups and consoles may
19 be established as a priority basis for less
20 critical calls.

21 Q. So an example if we are looking at
22 Figure 1 console 130 would designate certain
23 talkgroups as either critical or non-critical;
24 is that correct?

25 MS. MISHAGA: Objection, form.

1 THE WITNESS: I have this also as an
2 example I show in paragraph 86 of my declaration
3 where on page 38 of my declaration I also
4 discuss that.

5 And where the core router is controlled
6 by zone controller 116 and the console 130 to
7 140 allow a console operator to select one or
8 multiple groups for monitoring and to select
9 priority for each talkgroups.

10 And in this case the console 142 can
11 select talkgroups and identification numbers for
12 monitoring and designating certain talkgroups as
13 critical and certain talkgroups as non-critical.

14 So it is the consoles 130 to 140 where
15 as shown also in the Figure 1 of the McDonald
16 with the table given in my declaration page 38 I
17 show that there is a talkgroup and priorities
18 where the console is given those.

19 Q. (By Mr. Lund) Can console 130 designate
20 a talkgroup as non-critical while console 132
21 designates a talkgroup as critical?

22 MS. MISHAGA: Objection, form.

23 THE WITNESS: I would actually refer
24 back to the Figure 1 and in there the two tables
25 labeled 188 and 190 show that the different

1 talkgroups are given the different priorities
2 for a given router, sorry, for given talkgroups.
3 So it is possible as shown here as well that the
4 talkgroups can have critical calls in 188 and
5 190, for example.

6 Q. (By Mr. Lund) So in that example of 188
7 and 190 talkgroup 6 is designated as
8 non-critical for console 140; is that correct?

9 A. Yes.

10 Q. And, sorry, let me start over. In
11 talkgroup 6 it is designated as critical for
12 console 138; is that correct?

13 A. That is correct, yes.

14 MR. LUND: I see that we have been going
15 for a little under an hour. Is it all right if
16 we take about a 10-minute break?

17 MS. MISHAGA: Works for me.

18 THE WITNESS: Sure, that would be great.
19 Thank you.

20 MR. LUND: Thank you. Let's go off the
21 record and come back in five to 10 minutes.

22 THE WITNESS: All right. Sounds good.

23 (Recess from 9:56 a.m. to 10:09 a.m.)

24 Q. (By Mr. Lund) Welcome back. Earlier
25 just before the break we were discussing Figure

1 1 and if we could stay there for a few more
2 minutes that would be great.

3 A. You mean Figure 1 of McDonald, correct?

4 Q. Correct. And you recall our discussion
5 about critical and non-critical designations; is
6 that correct?

7 A. Yes, I do.

8 Q. In Figure 1 console 138 designates
9 talkgroup 6 as critical; is that correct?

10 MS. MISHAGA: Objection, form.

11 THE WITNESS: On the table below 138 it
12 shows talkgroup 1 (phonetic) priority critical.

13 Q. (By Mr. Lund) And that designation of
14 critical for talkgroup 6 is different than --

15 A. Please go ahead and finish. Sorry about
16 that.

17 Q. Sorry, I'll start over. Console 138
18 designates talkgroup 6 as critical. Sorry, let
19 me start over.

20 Does console 138 have to designate a
21 talkgroup the same as console 140?

22 MS. MISHAGA: Objection, form.

23 THE WITNESS: I don't follow your
24 question so I would like you to elaborate,
25 please.

1 Q. (By Mr. Lund) Yes. So I'm trying to get
2 at -- I can re-ask it -- that talkgroup
3 designations for talkgroup 6 for 138 is critical
4 while the talkgroup designation for talkgroup 6
5 140 is non-critical so I guess I'm trying to
6 re-ask the question.

7 Consoles at console site 106 can
8 designate talkgroups with different
9 designations; is that correct?

10 MS. MISHAGA: Objection, form.

11 THE WITNESS: Based on the -- based on
12 the calls that are coming from the talkgroups
13 the consoles 130 to 140 allow a console operator
14 to select one or multiple talkgroups for
15 monitoring and to select priority for each
16 talkgroup.

17 That would be a better way -- I would
18 say that's my answer.

19 Q. (By Mr. Lund) And a console operator can
20 designate a talkgroup differently than
21 a -- sorry, that's a bad question. Strike that.

22 Console operators for consoles 130 to
23 140 aren't required to designate a talkgroup
24 with the same designation; is that correct?

25 MS. MISHAGA: Objection, form.

1 THE WITNESS: Again, I don't follow your
2 question so if you can elaborate are you talking
3 about the console site or -- I'm not clear what
4 you mean by your question.

5 Q. (By Mr. Lund) How does core router 114
6 communicate with router 112?

7 MS. MISHAGA: Objection, form.

8 THE WITNESS: Did you say the core
9 router 116?

10 Q. (By Mr. Lund) Core router 114, how does
11 it communicate with router 112?

12 A. Okay.

13 MS. MISHAGA: Same objection.

14 THE WITNESS: Sorry, Stephanie, go
15 ahead, please.

16 MS. MISHAGA: I have the same objection.

17 Q. (By Mr. Lund) Sorry, should I re-ask the
18 question?

19 A. I believe the question is clear. You
20 are saying how does core router 114 communicate
21 with the core router 112?

22 Q. Correct.

23 A. Via the link 160.

24 Q. And the core router 114 communicates
25 with the router at console site 104 via link

1 162?

2 MS. MISHAGA: Objection, form.

3 THE WITNESS: Core router 114 is
4 connected to the router in the console site 104
5 via the link 162.

6 Q. (By Mr. Lund) I'm now going to share
7 Exhibit 1004 in the chat.

8 (Deposition Exhibit Number 1004 marked
9 for identification.)

10 Q. (By Mr. Lund) If you can let me know
11 when you have that up in front of you that would
12 be great.

13 Sorry, just to be clear I shared it in
14 the Exhibit Share.

15 A. Thank you. I'm uploading it now. That
16 is the Botha patent. Yes, I have it here.

17 Q. So if I refer to Botha you will
18 understand that I'm referring to Exhibit 1004.
19 Is that fair?

20 A. Yes, sir.

21 Q. If you could turn to page 16 of Exhibit
22 1004 and let me know when you are there.

23 A. Just to make sure is that a page number
24 after the Exhibit 1004 Bates numbers?

25 Q. Yes, and you should be seeing Figure 14.

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1 A. Okay. That's the flow chart; is that
2 correct, Figure 14?

3 Q. Correct.

4 A. Yes, sir, I have that.

5 Q. And Figure 14 illustrates a flow chart
6 of one embodiment of the invention --

7 MS. MISHAGA: Objection.

8 Q. (By Mr. Lund) -- is that correct?

9 MS. MISHAGA: Apologies, Counsel. Go
10 ahead.

11 Q. (By Mr. Lund) Sorry, Figure 14
12 illustrates a flow chart of one embodiment of
13 the invention; is that correct?

14 MS. MISHAGA: Objection, scope.

15 THE WITNESS: I would say that the
16 Figure 14 to be clear based on what the Botha
17 patent also calls it is a logical block diagram
18 showing a nonlimiting example in which data is
19 received from one or more instances of the
20 embodiments of the invention 240-A, et cetera.

21 Q. (By Mr. Lund) Does Figure 15 illustrate
22 the logic of Figure 14?

23 MS. MISHAGA: Objection, scope.

24 THE WITNESS: Figure 15 is a flow chart
25 which represents an example of the logic used to

1 process the data and it's related to Figure 14
2 instead of -- in terms of, not instead of, in
3 terms of distribution, et cetera, and it talks
4 about that in details as well in the patent.

5 And this flow chart in Figure 15 can be
6 written in conjunction with Figure 14. That's
7 it.

8 Q. (By Mr. Lund) Does the flow chart of
9 Figure 15 include a mixing step?

10 MS. MISHAGA: Objection, scope, form.

11 THE WITNESS: In the flow chart in
12 Figure 15 where it discusses the logic there is
13 a decision block or a block that's called mix in
14 a diamond which says yes or no and it performs
15 the mixing or not performs the mixing.

16 Q. (By Mr. Lund) How does Botha determine
17 whether it is going to perform or not perform
18 the mixing?

19 MS. MISHAGA: Objection, form.

20 THE WITNESS: As -- sorry, I take that
21 back. Give me one second, please.

22 So as I have also discussed in paragraph
23 122 of my declaration the streams coming in --
24 the streams selected are mixed in the -- as
25 discussed also in Botha in column 10 starting

1 with line number 29 through column 11 line
2 number 10 which discusses the mixing operation.

3 So the answer to your question as
4 discussed in those columns in Botha starts the
5 more detailed discussions of that from line 161
6 onwards which is discussing the mixing logic
7 which determines whether a mixing should be
8 carried out in the data based on a number of
9 factors including the data can actually be mixed
10 or if the mixing is required.

11 Q. (By Mr. Lund) And that is shown
12 in -- sorry, let me start over.

13 That description is relevant to figure
14 21; is that correct?

15 MS. MISHAGA: Objection, form, scope.

16 THE WITNESS: In general in those
17 columns 10 and 11 as I have also discussed in my
18 declaration and a person skilled in the art
19 would understand that the mixing is done as
20 discussed in those two columns and that
21 discussion is laid out there in Figure 15 and
22 other figures related to that.

23 Q. (By Mr. Lund) And you are familiar with
24 the term mixing?

25 MS. MISHAGA: Objection, form.

1 THE WITNESS: Related to the '249 patent
2 I am familiar with the mixing.

3 Q. (By Mr. Lund) Are you familiar with the
4 term mixing as related to your work with
5 Motorola?

6 MS. MISHAGA: Objection, form.

7 THE WITNESS: In the context of the '249
8 patent I am familiar with mixing.

9 Q. (By Mr. Lund) If we could shift to
10 Figure 9 which appears on page 11 of Botha,
11 please let me know when you have that up.

12 A. Yes, sir, I'm here.

13 Q. Could you describe what Figure 9 is
14 showing?

15 MS. MISHAGA: Objection, form.

16 THE WITNESS: So in Figure 9 of Botha it
17 shows the handset 180 which is connected to the
18 base station 190 and connected to the gateway
19 where the gateway is connected to the channel
20 110 via the connections from the gateway to
21 channel 110.

22 And also on the other side it shows the
23 proxy and the other endpoints 999.

24 Q. (By Mr. Lund) What is the function of
25 the proxy 997 in Figure 9?

1 MS. MISHAGA: Objection, form.

2 THE WITNESS: In Figure 9 the proxy is
3 performing the -- excuse me, one second, give me
4 a minute here.

5 Q. (By Mr. Lund) Take your time.

6 A. One of the things that the proxy is
7 doing is the mixing operation as shown in Figure
8 9.

9 Q. Are you familiar with the acronym UHF
10 radio system?

11 A. Yes, I am.

12 Q. What does UHF stand for?

13 A. It is the selected band in the radio
14 wireless video system. It stands for ultrahigh
15 frequency.

16 Q. Do you know what frequency band a UHF
17 radio system would operate at?

18 MS. MISHAGA: Objection, form.

19 THE WITNESS: Not on top of my head I
20 don't recall exactly.

21 Q. (By Mr. Lund) Are you familiar with the
22 acronym VHF radio system?

23 A. Yes, I am.

24 Q. What does VHF stand for in a VHF radio
25 system?

1 A. It is very high frequency.

2 Q. Does the VHF radio system function at a
3 different frequency band than a UHF radio
4 system?

5 MS. MISHAGA: Objection, form.

6 THE WITNESS: The correct answer would
7 be that the UHF and VHF are designated by FCC to
8 operate at different carrier frequencies,
9 modulated carrier frequencies, and I do not
10 believe there's an overlap in their frequency of
11 operation.

12 Q. (By Mr. Lund) Would a UHF radio system
13 be able to communicate with a VHF radio system?

14 MS. MISHAGA: Objection, form.

15 THE WITNESS: It depends. It is a
16 hypothetical question, but it depends on
17 the -- it depends on the scenario and
18 configuration of many different things in the
19 system.

20 Q. (By Mr. Lund) And the frequency band
21 would be one of those configurations?

22 MS. MISHAGA: Objection, form.

23 THE WITNESS: The carrier frequency
24 conversion from one to another is one of those,
25 but really it depends on the different blocks

1 used in the system and also the media and the
2 base station configurations and many other
3 factors.

4 So it's a -- I need a lot more details
5 to answer that question.

6 Q. (By Mr. Lund) Could we turn to Figure 13
7 in Botha which is on page 15? Please let me
8 know when you have that up.

9 A. Yes, I'm there.

10 Q. Could you describe what Figure 13 is
11 illustrating?

12 A. So what Figure 13 is is that it shows
13 two different communication channel sets which
14 are channels 110-D to 110-F on the right side
15 and channel -- another set of channels 110-A, B,
16 and C and they are connected via the session 997
17 together which is device 997. They are bridged
18 by device 997.

19 Q. What do you mean when you say they are
20 bridged by device 997?

21 A. What I mean by that is that the proxy
22 997 as shown in Figure 13 is configured to
23 bridge the communication streams between a set
24 of channels, 110-A, B, C, to a set of channels
25 110-D, E, and F or the communication streams

1 between them connecting them together.

2 Q. And without bridge device 997 would
3 channel 110-D be able to communicate with
4 channel 110-A?

5 MS. MISHAGA: Objection, form.

6 THE WITNESS: It really is hypothetical.
7 I need more details of what channels 110-A, B, C
8 have, what is their characteristics and
9 different operating parameters to channel 110-D,
10 E, and F and what are the radio systems
11 connected to.

12 MR. LUND: I see we've been going
13 another 45, 50 minutes. Is it okay to take
14 another break?

15 THE WITNESS: Absolutely, great. Thank
16 you.

17 MS. MISHAGA: Sounds good.

18 (Recess from 10:54 a.m. to 11:05 a.m.)

19 Q. (By Mr. Lund) Welcome back. If you can
20 pull up Exhibit 1002, your declaration, page 52
21 and let me know when you are there.

22 A. Yes, sir, I'm at page 52.

23 Q. Could you describe the diagram on page
24 52?

25 A. Yes. This is a -- this is the Botha

1 system as I have also -- the figure in there --
2 as I have also discussed previously when I was
3 talking about the Botha as a prior art and
4 described this figure.

5 So it is the -- as Botha describes it
6 this consists of the radio systems connected to
7 the channels A, B, C, and the second or first
8 radio system is connected to the channels A, B,
9 C, and the second radio system is connected to
10 the channels D, E, F, and they are connected
11 together via the bridge proxy shown in Figure 13
12 that we just discussed prior to the break.

13 And the data streams from these channels
14 are also connected from these PTT streams or
15 radio systems, push-to-talk systems, data
16 streams from the first one and second one are
17 connected to an endpoint via the proxy which is
18 the phone proxy 997 that connects via the
19 gateway 220 to the phone switching network PSTN
20 210 and to the phone 160.

21 Q. What is the function of the bridge proxy
22 in the diagram you just described?

23 MS. MISHAGA: Objection, form.

24 THE WITNESS: As I said also before the
25 break, the 997 call session proxy is to bridge

1 and connect the two channel sets, channels A, B,
2 C to the channel sets on the right D, E, F.

3 Q. (By Mr. Lund) And you mentioned earlier
4 that the second PTT stream goes from channel
5 110-D to the phone proxy; is that correct?

6 A. That is correct, from channel 110-D, E,
7 and F it goes to the proxy along with the first
8 PTT stream coming from the first radio systems.

9 Q. Does the second PTT stream also go from
10 channel 110-D to the bridge proxy 997?

11 MS. MISHAGA: Objection, form.

12 THE WITNESS: It really depends on the
13 configuration and how the system is configured
14 and it possibly could, but not necessarily
15 depending on the configuration.

16 Q. (By Mr. Lund) If you could turn to
17 paragraph 102 of your declaration starting with
18 the third sentence, In the Botha system, and let
19 me know when you are there.

20 A. Yes, sir, I'm there.

21 Q. Starting with that sentence it reads, In
22 the Botha system the data from the first PTT
23 two-way system 190 connected to channel 110-A
24 streams into the phone proxy 997 via the gateway
25 230 and the bridge proxy 997, and the data from

1 the second PTT two-way radio system 190
2 connected to channel 110-D streams into the
3 phone proxy 997 via the bridge proxy.

4 I really am trying to understand in view
5 of paragraph 102 -- sorry, let me start over.

6 Would you agree with paragraph 102 that
7 the data from the second PTT two-way radio
8 system streams into the phone proxy via the
9 bridge proxy?

10 MS. MISHAGA: Objection, form.

11 THE WITNESS: As I have said in my
12 declaration regarding this in paragraph 102,
13 which you just read, it is that the data from
14 the first PTT two-way system 190 is connected to
15 the channel 110-A and it streams into the phone
16 proxy 997 via the gateway 230 and the bridge
17 proxy 997.

18 So if I'm looking at the figure for the
19 first two-way radio system on the upper left of
20 the figure above paragraph 100 is what I just
21 described.

22 The handset radios PTT talking via the
23 base station move through the gateway 230 to the
24 channels 110-A, B, C and via the proxy 997 which
25 is the bridge proxy. That first PTT stream

1 connects to the phone proxy which then connects
2 to the phone.

3 On the data set from the second PTT
4 which is on the right-hand side that data
5 also -- the signal and audio from 180 handset
6 radios goes to the base station 190 and the
7 gateway 230 which then connects it to the
8 channels as shown there D, E, or F and via that
9 it goes to the phone proxy 997 via the bridge
10 proxy 997.

11 Q. (By Mr. Lund) Does your diagram on page
12 52 show the second PTT stream going from channel
13 110-D to the bridge proxy 997?

14 MS. MISHAGA: Objection, form.

15 THE WITNESS: I think a person skilled
16 in the art would understand that that's a
17 drawing annotated, but a person skilled in the
18 art would understand that the signals coming
19 from either one of the two channels are going
20 through the session proxy 997 which provides the
21 bridge between these two channel stream signals
22 to the proxy for the phone 997.

23 And I have described it also correctly
24 in my paragraph 102.

25 Q. (By Mr. Lund) Is the first PTT stream

1 transmitted from channel 110-D to gateway 230 in
2 the second two-way radio system?

3 MS. MISHAGA: Objection, form.

4 THE WITNESS: To answer that I would
5 like to go to Figure 1 and 2 of the Botha
6 Exhibit 1004 where he shows that -- let's stick
7 to, for example, Figure 2. Sorry, go ahead.

8 Q. (By Mr. Lund) Sorry, I'm there.

9 A. Okay. Great. Where the radio system
10 190 which is the base station are connected to
11 the gateway through the channels -- channel 110.

12 So this is one of the endpoints and it
13 is not the only endpoint. 190 radio system is
14 one of the endpoints. And a person skilled in
15 the art and also as the patent describes and I
16 have also said in my declaration it is the
17 plurality of these radio systems which are
18 communicating with each other possibly and that
19 possibility exists.

20 So we could have a number of these radio
21 systems communicating with each other via the
22 channel. So that possibility exists that the
23 radio systems PTT one, for example, is
24 communicating with the second type of radio
25 system if needed.

1 Q. So shifting back to your diagram on page
2 52 the first two-way radio system communicates
3 with the second two-way radio system; is that
4 correct?

5 MS. MISHAGA: Objection, form.

6 THE WITNESS: They -- in lieu of in this
7 patent '249, I have also discussed this in
8 paragraph 95 of my declaration where I talk
9 about that in light of the Botha teaching a
10 POSITA would understand that Botha is talking
11 about the different combined embodiments.

12 As an example, it would have been
13 obvious to configure the proxy 997 which is
14 shown in Figure 13, that is the session proxy,
15 configured to bridge communication streams
16 between a PTT two-way radio endpoints 180 on the
17 first radio system, 190 on the first
18 communication channel 110-A and, B, PTT two-way
19 radio endpoints 180 on a second two-way radio
20 system 190 on a second communication channel
21 110-D and, C, one or more telephones 160
22 connected to channel 110-A, 110-D, or another
23 channel 110 via the PSTN 210, a gateway 220, or
24 another proxy as shown in Figure 8 configured to
25 perform mixing of communication streams from the

1 two radio systems 190 to the telephone 160 as
2 described.

3 So those -- that possibility exists.

4 Q. (By Mr. Lund) At the start of your
5 answer you mentioned in lieu of the patent '249.
6 Were you referencing Botha there or were you
7 referencing --

8 A. I appreciate your correcting this. I
9 meant in light of Botha's teaching, yes.

10 Q. Great. I think we're on the same page
11 there.

12 MR. LUND: If we can take another maybe
13 short five-minute break to collect my thoughts
14 can we go off the record?

15 MS. MISHAGA: Sure.

16 MR. LUND: Thank you.

17 THE WITNESS: Yes, sir.

18 (Recess from 11:28 a.m. to 11:35 a.m.)

19 Q. (By Mr. Lund) Welcome back. I just have
20 a few more questions so we should be -- I should
21 be wrapped up here pretty soon.

22 Earlier we discussed Figure 9 of Botha.
23 Do you recall that discussion?

24 A. Yes, sir.

25 Q. And we discussed -- strike that.

1 Do you recall discussing the proxy 997
2 of Figure 9?

3 A. Yes, I recall that, yes, sir.

4 Q. Is that proxy 997 of Figure 9 presented
5 in your diagram on page 51?

6 A. Let me go to that page. That's page
7 51 -- I can't find that page 51. It is page 51
8 on my declaration, correct?

9 Q. I should have been more clear. Sorry, I
10 misspoke again. Page 52 of your declaration.

11 A. Okay. Great. So the page, not the
12 Bates number, but the actual page printed on
13 there?

14 Q. Correct.

15 A. I guess to answer that I need to clarify
16 the fact that what the proxy 997 is configured
17 in Figure 9 is performing the mixing operation
18 and then connected to any endpoints 999 which is
19 also in the figure above paragraph 100 of my
20 declaration. That proxy also is a phone proxy.

21 On this particular one I'm showing the
22 phone system as an endpoint. So that proxy is
23 connected to the gateway on PSTN and then the
24 phone. So those proxies are configured to be
25 performing the mixing operations.

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1 So at high level, yes. There may be
2 some details of them being configured
3 differently, but at high level, yes, it is
4 similar type of block.

5 Q. So just to be clear your answer is, yes,
6 the proxy 997 in Figure 9 is present in your
7 diagram on page 52 of your declaration?

8 MS. MISHAGA: Objection, form.

9 THE WITNESS: At the high level the
10 answer is those two proxies are performing -- at
11 the high level they're connecting the channel
12 and the signal streams coming into the endpoint
13 999.

14 And they -- and that 999 is the phone
15 system that I have shown in the diagram above
16 paragraph 100.

17 There may be some subtle differences
18 between them and so on, but in general their
19 functionalities at high level is the same.

20 MR. LUND: Thank you for your time
21 today. I have no further questions on my end so
22 I pass the witness.

23 MS. MISHAGA: Thank you. Can you just
24 give me one minute to collect my thoughts?

25 MR. LUND: Take plenty of time.

1 MS. MISHAGA: Let's go off the record.

2 (Recess from 11:41 a.m. to 11:42 a.m.)

3 MS. MISHAGA: I have no questions.

4 (Deposition concluded at 11:42 a.m.)

5 MR. LUND: I'll order the transcript and
6 a rough draft.

7 MS. MISHAGA: We'll order a copy and we
8 will also order a rough, but just normal
9 process.

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C E R T I F I C A T E

I, Teresa L. Dunn, a Certified Shorthand Reporter for Oregon, do hereby certify that, pursuant to stipulation of counsel for the respective parties hereinbefore set forth, DR. SAYFE KIAEI appeared virtually before me at the time and place set forth in the caption hereof; that at said time and place I reported in Stenotype all testimony adduced and other oral proceedings had in the foregoing matter; that thereafter my notes were reduced to typewriting under my direction; and that the foregoing transcript, pages 1 to 53, both inclusive, constitutes a full, true and accurate record of all such testimony adduced and oral proceedings had, and of the whole thereof. Witness my hand and CSR stamp at Vancouver, Washington, this 4th day of October, 2024.



TERESA L. DUNN,
Certified Shorthand Reporter
Certificate No. 00-0367
Expiration Date: 6/30/2026

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

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COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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