

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,

Petitioner,

vs.

PORTSMOUTH NETWORK CORP.,

Patent Owner.

CASE IPR 2024-01450

Patent Number 7,596,088

REMOTE VIDEOCONFERENCE DEPOSITION OF

NADER MIR, PH.D.

June 25, 2025

Reported by:

Anne E. Vosburgh, CSR-6804, RPR, CRR, WA-25001522

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On June 25, 2025, commencing at approximately 9:00 a.m. Pacific, the remote videoconference deposition of NADER MIR, PH.D., was held before and stenographically reported by Anne E. Vosburgh, Certified Shorthand Reporter No. 6804, Registered Professional Reporter, Certified Realtime Reporter, Washington Certified Reporter #25001522, Notary Public, LiveNote Reporter.

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I N D E X

----- EXAMINATIONS -----

WITNESS: NADER MIR, PH.D.

Examination by Ms. Misbah

7

1	-----	MARKED EXHIBITS	-----
2	NUMBER	DESCRIPTION	PAGE
3	Exhibit 1	Declaration of Nader F. Mir,	11
4		Ph.D.	
5	Exhibit 2	US Patent 7,596,088, "Route	18
6		Selection with Bandwidth	
7		Sharing Optimization Over	
8		Rings"	
9	Exhibit 3	US Patent Application	28
10		Publication: US	
11		2005/0220026, "Calculation	
12		of Link-Detour Paths in Mesh	
13		Networks"	
14	Exhibit 4	US Patent Application	28
15		Publication: US	
16		2004/0190445, "Restoration	
17		Path Calculation in Mesh	
18		Networks"	
19		(EXHIBITS ATTACHED)	
20			
21			
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23			
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1 -----

2 PROCEEDINGS

3 -----

4 REMOTE VIDEOCONFERENCE DEPOSITION OF

5 NADER MIR, PH.D.

6 June 25, 2025, 9:00 a.m. Pacific

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8 MS. MISBAH: Good morning, everyone.

9 This is Sadaf Misbah from Steptoe LLP, and
10 I represent the patent owner in this case,
11 Portsmouth Network Corporation.

12 MR. CLEMENTS: My name is Calmann Clements
13 with Haynes and Boone, representing Petitioner,
14 Cisco.

15 NADER MIR, PH.D.,
16 (Having been called to testify, was
17 sworn to tell the truth, the whole
18 truth, and nothing but the truth.)

19 THE REPORTER: Thank you.
20 Counsel, you may proceed.

21 ---

22 EXAMINATION

23 BY MS. MISBAH:

24 Q. Good morning, Dr. Mir.

25 A. Good morning.



1 Q. Would you please state your full name for
2 the record.

3 A. My name is Nader, spelling N-a-d-e-r. Last
4 name is Mir, spelling M-i-r.

5 Q. And where are you sitting today for this
6 deposition?

7 A. I'm in my home office.

8 Q. Is there anyone else in the room with you?

9 A. No.

10 Q. And do you have anything in front of you?

11 A. I have a clean copy of the deposition
12 declaration. There's no notes on it. And along
13 with that, the prior art and the asserted patent.

14 Q. And when you say "the prior art," what
15 references are you talking about?

16 A. Two of us -- two of them is Dziong and
17 Sathyanath.

18 Q. And do you have a computer in front of you?
19 Presumably you do.

20 A. Yes, I do.

21 Q. And what windows do you have open on your
22 computer?

23 A. What kind of window?

24 Q. Do you have a browser open in front of you?

25 A. The browser is Microsoft.



1 Q. And do you have any links that are open on
2 the Microsoft browser?

3 A. There are two links. One of them is
4 Amazon. If you want me to close it, I'll close it.

5 Q. Yes, please.

6 A. And the other one is a personal, and that's
7 it. Magna and Agile left.

8 Q. And you don't have anyone else in the room
9 with you, correct?

10 A. No one is with me in this room.

11 Q. And you've been deposed before. Right,
12 Dr. Mir?

13 A. Yes.

14 Q. So I want to go over some quick ground
15 rules for the deposition. I'm sure you're familiar
16 with them, but I'm just going to go through them
17 anyway.

18 I will ask you questions and you will
19 provide answers. Your counsel may interrupt with
20 some objections for the record, but unless you are
21 instructed to not answer, I am entitled to your best
22 and most complete answers.

23 Do you understand that?

24 A. Yes.

25 Q. And do you understand that you are under



1 the same obligation to tell the truth today as you
2 would be in front of a judge or a jury?

3 A. Yes.

4 Q. And the court reporter today can only
5 record one person at a time. So it's important that
6 we don't talk over each other. So please wait until
7 I've finished asking my question, and I'll do the
8 same while you are giving an answer. Is that okay?

9 A. Very good.

10 Q. And if you don't understand any of my
11 questions, please ask.

12 If you answer, I'll assume that you
13 understood my question. Is that okay?

14 A. Yes.

15 Q. And we can take a break whenever you'd like
16 unless there's a question pending.

17 If there is a question pending, I'd ask
18 that you answer my question first and then we can
19 take a break. Is that okay?

20 A. Yes.

21 Q. Is there anything today that would prevent
22 you from answering my questions truthfully and
23 fully?

24 A. No.

25 Q. Okay. Dr. Mir, I'm going to add to the



1 AgileLaw platform your expert declaration.

2 Just let me know when you see it, okay?

3 A. Okay. I see Document 1 popping up. But --
4 should I open it?

5 Q. Yes, please. Open it.

6 A. It's open already. Control D the size of
7 the document or you're in control?

8 Q. I'm going to assume I'm in control maybe,
9 but let me see.

10 A. I don't see any way to enlarge or --

11 Q. Did it get larger?

12 A. Yes. That's fine.

13 Q. Okay. Fantastic.

14 (Declaration of Nader F. Mir, Ph.D.,
15 marked as Exhibit 1.)

16 BY MS. MISBAH:

17 Q. Do you see the document in front of you
18 that's going to be entered as Exhibit 1 for this
19 deposition?

20 A. Yes.

21 Q. And do you see that on the cover, it says
22 "Declaration of Nadir F. Mir, Ph.D."?

23 A. Yes.

24 Q. And is this your declaration that you
25 submitted for this case today?



1 A. Assuming the rest is the same as the one
2 that I have, the answer is yes.

3 Q. You can scroll through the document. If
4 you scroll to the very end, you'll see that it's
5 about 127 pages long.

6 Do you see that?

7 A. Give me a second to check.

8 Yeah. Apparently it is the same, the same
9 document that I have, yeah.

10 Q. And if you're looking at the last page, it
11 has your signature as well?

12 A. Yes.

13 Q. Do you have any reason to believe that this
14 is not a true and accurate copy of your declaration
15 that you submitted in this case?

16 A. No.

17 Q. And so during this deposition, I'm going to
18 refer to Exhibit 1 as your declaration.

19 Is that okay?

20 A. That's fine.

21 Q. And I know you mentioned that you have a
22 clean copy of your declaration in front of you.
23 You're welcome to use that if I refer you to any
24 specific pages in your declaration.

25 A. Okay. Thank you.



1 Q. So Dr. Mir, who wrote your declaration?

2 A. So for preparing this document, I spent
3 many hours of calls and Zoom sessions with counsel
4 for preparing my opinion and forming my opinion.

5 For some parts of the report, I asked
6 counsel to help me putting my opinion in writing in
7 a collaborative way, of course, back and forth.
8 I just checked on to make sure that's my opinion.

9 And once I made sure that the report
10 reflects my entire opinion, I agreed all the
11 report's content and signed it.

12 Q. So you mentioned that counsel helped put
13 your opinions in writing for this declaration.

14 Do you know if you personally wrote any
15 portion of this declaration?

16 A. Of course, yes.

17 Q. Do you remember which portions of this
18 declaration you personally wrote?

19 A. No. I mean, off-the-cuff, I cannot tell
20 you which paragraph specifically. Mostly in the
21 technical parts of the document, I did write the
22 declaration, some parts of it, of course.

23 Q. Can you tell me roughly what percentage of
24 this declaration you personally wrote?

25 A. No. It's impossible to guess what



1 percentages.

2 As I mentioned, this declaration reflects
3 my entire opinion on 100 percent. There is nothing
4 that is not part of my opinion.

5 Q. If you look at paragraph 2 of your
6 declaration -- let me know when you get there.

7 A. You said paragraph 2?

8 Q. Yes, that's right.

9 A. I'm there.

10 Q. You state that you are being compensated at
11 your standard hourly rate.

12 Do you see that?

13 A. Yes, I do.

14 Q. What's your standard hourly rate?

15 MR. CLEMENTS: Objection, scope.

16 BY MS. MISBAH:

17 Q. You can answer, Dr. Mir.

18 A. Yeah, what is the --

19 Q. The question was what is your standard
20 hourly rate?

21 A. I typically charge 450 an hour.

22 Q. And do you charge 450 an hour in all
23 matters in which you're an expert?

24 MR. CLEMENTS: Objection, scope.

25 A. I have to go back to my record and then



1 answer the question.

2 But typically this is my rate and it has
3 been for a while.

4 BY MS. MISBAH:

5 Q. Do you get paid by the petitioner, Cisco,
6 for work that is unrelated to this case?

7 MR. CLEMENTS: Objection, scope.

8 A. Never.

9 BY MS. MISBAH:

10 Q. Have you ever received grants from Cisco
11 for your research as a professor?

12 A. No.

13 Q. And how many times have you submitted
14 declarations in IPRs?

15 A. I don't remember exact number, but it has
16 been a number of depositions.

17 Did you ask depositions? I'm sorry.

18 Q. No. I asked how many declarations you have
19 submitted.

20 A. Declarations? Quite a number. I just --
21 it's impossible to remember how many.

22 Q. Do you remember how many times you've
23 submitted declarations for the petitioner?

24 A. Again, you are asking a question that needs
25 to be kind of searched in my database. It's



1 impossible to find an accurate number.

2 One thing that you could do to get an
3 answer is just to go to my CV and then count the
4 number of cases on the petitioner's side and on the
5 other side. And I clearly separated these cases.

6 Q. Does your CV include a full list of all
7 cases that you've served as an expert in?

8 A. I believe, yes.

9 Q. So Dr. Mir, if you look at your declaration
10 at paragraphs 4 and 5, you list out the documents
11 that you reviewed in forming your opinions in the
12 declaration.

13 Do you see that?

14 A. Yes.

15 Q. Did you look at any other materials besides
16 the materials that are listed in paragraphs 4 and 5?

17 A. No.

18 Q. And did you have any assistance in drafting
19 your report outside of counsel from Cisco helping
20 you out by putting your opinions in writing?

21 A. I'm sorry. What did you say?

22 Q. I said did you have any outside assistance
23 in putting together this report, aside from counsel
24 for Cisco helping you put your opinions in writing?

25 A. No.



1 Q. Did you prepare for today's deposition?

2 A. Yes.

3 Q. How much time did you spend preparing?

4 A. Several hours I spent reviewing my report
5 and the prior art and the patents-in-suit.

6 Q. Did you meet with anybody in preparing for
7 this deposition?

8 A. Yes.

9 Q. Who did you meet with?

10 A. Counsel.

11 Q. Would that be the counsel who has joined us
12 today, Calmann Clements?

13 A. Yes.

14 Q. Did you meet with anybody else?

15 A. Yes.

16 Q. Could you let me know who?

17 A. I just forgot his last name, but his first
18 name is Theo.

19 Q. Okay. And when did you meet with them,
20 Dr. Mir?

21 A. We have a number of sessions, Zoom
22 sessions, and none of them are in person.

23 Q. And were these Zoom sessions in the last
24 week? Were they the week before?

25 MR. CLEMENTS: Objection, scope.



1 A. I'd have to go back to my calendar to see
2 which days. But I can say that a couple of days
3 this week and last week, and a couple of sessions
4 last week.

5 BY MS. MISBAH:

6 Q. And how many hours roughly do you think you
7 spent in these meetings with counsel?

8 A. Roughly one to two hours, more or less.
9 Maybe two hours 15 minutes, maybe one hour
10 45 minutes. A couple hours, I would say.

11 Q. For each session or in total?

12 A. For each session, of course. Yeah.

13 Q. And roughly how many hours do you estimate
14 you spent working on this case as a whole?

15 A. That's very hard to estimate. I don't
16 remember.

17 Q. Do you think it's more or less than
18 50 hours?

19 A. I mean, my invoice should be a good way to
20 show the estimate. I'm pretty sure that it is less
21 than 50.

22 Q. Dr. Mir, I'm going to add another exhibit
23 to the AgileLaw platform.

24 Please let me know when you see it.

25 (US Patent 7,596,088, "Route Selection



1 with Bandwidth Sharing Optimization Over
2 Rings," marked as Exhibit 2.)

3 A. I see it. And then I opened it.

4 BY MS. MISBAH:

5 Q. Okay. This will be Exhibit 2.

6 A. Yeah.

7 Q. And this is the patent at issue in this
8 case, which is Patent Number 7,596,088.

9 Do you see that?

10 A. Yes.

11 Q. I know you mentioned earlier that you have
12 a physical copy of the patent in front of you.
13 You're welcome to use that physical copy if that's
14 easier than navigating through this platform.

15 A. Okay.

16 Q. So Dr. Mir, do you see that the patent in
17 front of you, Exhibit 2, is titled "Route Selection
18 with Bandwidth Sharing Optimization Over Rings."

19 A. Yes, I can see that.

20 Q. And I'm going to refer to Exhibit 2 as
21 the '088 patent. Is that okay?

22 A. That's fine.

23 Q. So Dr. Mir, would you agree that the '088
24 patent is directed to route selection for network
25 requests?



1 MR. CLEMENTS: Objection, form.

2 BY MS. MISBAH:

3 Q. Dr. Mir, you can still answer.

4 A. Yeah. I'm not sure why you are kind of
5 changing the title and getting to a conclusion of a
6 different phrase.

7 So if that's the case, I should have
8 pointed to in my report. I don't think the -- I
9 have done it in my report.

10 Could you please point me to if I am
11 missing anything?

12 Q. We can break this down a little bit.

13 So you agree that the patent is titled
14 "Route Selection," right?

15 A. That's clearly in the title, yes.

16 Q. And you would agree that the patent, the
17 invention, relates to route selection, correct?

18 A. So the title of the patent is "Route
19 Selection with Bandwidth Sharing Optimization Over
20 Rings."

21 So it is related to route selection, yes.

22 Q. And you also mentioned that the title
23 mentions "bandwidth sharing," correct?

24 A. Yes.

25 Q. So one of the teachings of the '088 patents



1 relates to bandwidth sharing, correct?

2 A. The route selection with bandwidth sharing,
3 yes.

4 Q. So bandwidth sharing is what is taught in
5 the '088 patent in relation to route selection?

6 A. Matter of fact, more accurately is
7 optimization of bandwidth sharing.

8 Q. So the '088 patent relates to the
9 optimization of bandwidth sharing in the context of
10 route selection?

11 A. That's correct.

12 Q. What's your understanding of bandwidth
13 sharing?

14 A. So I don't remember I have mentioned
15 anywhere what the bandwidth sharing is. That's
16 clearly, to me, ordinary and customary. It has an
17 ordinary and customary meaning.

18 Bandwidth sharing is bandwidth sharing. A
19 person of ordinary skill in the art would know about
20 that.

21 Q. And how have you defined bandwidth sharing
22 or understood bandwidth sharing as you worked on
23 this report?

24 A. I think I answered your question.

25 I have not given any additional meaning of



1 bandwidth sharing because it has, according to my
2 statement in paragraph 29 -- I would like to read it
3 for you.

4 I understand that in the proceeding to
5 which this declaration is being submitted, the words
6 of the claims, such as the one that you just
7 mentioned, "bandwidth sharing," are given their
8 ordinary and customary meaning as would have been
9 understood by a person of ordinary skill in the art
10 in light of the specification and prosecution
11 history unless the inventor has set forth a special
12 meaning for a term.

13 So I don't see any special meaning for the
14 term. And that, to me, is ordinary and customary.
15 I cannot give you any further meaning of that.

16 Q. What do you understand the ordinary and
17 customary meaning of bandwidth sharing to be?

18 A. So as I said, I applied ordinary and
19 customary meaning on bandwidth sharing. And I don't
20 recall offering any additional opinion on the
21 meaning of bandwidth sharing.

22 I only applied the rule of ordinary and
23 customary meaning in my analysis.

24 But if I'm missing something, or I have
25 given any extra opinion on that, I would love to



1 hear from you where I did it.

2 Q. Dr. Mir, I'm not saying that you've given
3 any extra meaning to bandwidth sharing. My question
4 is what you understand the ordinary and customary
5 meaning of bandwidth sharing to be.

6 A. As I said, if the rule of ordinary and
7 customary meaning is the one that would have been
8 understood by a person of ordinary skill in the art,
9 then there is no need to give any extra information
10 on it. It is ordinary and customary. And I'm
11 giving you the same answer.

12 Q. Dr. Mir, you qualify as a person of
13 ordinary skill in the art in the context of this
14 patent, right?

15 A. Yes. I have a Ph.D. in this field, yes.

16 Q. And as a person of ordinary skill and
17 extraordinary skill in the art, what understanding
18 do you have of the ordinary and customary meaning of
19 bandwidth sharing?

20 A. Well, I'm not here to give you a new
21 meaning of bandwidth sharing.

22 The rule of PTAB in IPR cases clearly
23 states that the words of the claims are given their
24 ordinary and customary meaning.

25 What does that mean to me? That means that



1 you don't need to try to clarify the meaning or give
2 a new meaning.

3 You're asking me exactly the opposite to
4 this rule.

5 Q. Dr. Mir, I'm just trying to understand what
6 meaning you used in your analysis for this
7 declaration for bandwidth sharing.

8 A. I have given an example. I may be able to
9 find an example of bandwidth sharing. I'm pretty
10 sure that there are several examples in the -- in my
11 declarations.

12 For example, Figure 6a of Dziong, it gives
13 bandwidth sharing.

14 And when it comes to a -- the claim
15 element 1.2 providing a sharing definition, I have
16 given several examples. I can go ahead and then
17 give you those examples for you to clarify it for
18 you.

19 Q. Would you agree that the examples that you
20 provide in your declaration comprise your
21 understanding of the term "bandwidth sharing"?

22 A. Absolutely.

23 Q. Let's go back and look at the '088 patent.
24 Let's look at the abstract.

25 Let me know when you're there.



1 A. Okay. The abstract is in front of me.

2 Q. If you look at the second-to-last sentence
3 of the Abstract, it says:

4 "A preferred route having a minimum
5 value of the cumulative additional
6 bandwidth reservation is selected out of
7 the two or more candidate routes."

8 Do you see that?

9 A. I just missed the starting point. Oh,
10 yeah, "two or more." Is that where you started?

11 Q. It's the second-to-last sentence in the
12 Abstract.

13 A. "A preferred route," you mean?

14 Q. Yeah. It starts with:

15 "A preferred route having a minimum
16 value of the cumulative additional
17 bandwidth reservation is selected out of
18 the two or more candidate routes."

19 Do you see that?

20 A. Yes, I do.

21 Q. So the '088 patent teaches a selection of a
22 route that has a minimum value of the cumulative
23 additional bandwidth reservation, right?

24 A. That's right.

25 MR. CLEMENTS: Objection, form.



1 BY MS. MISBAH:

2 Q. And the '088 patent refers to this as the
3 preferred route, correct?

4 A. Could you, please, I'm sorry, repeat your
5 previous question? I may have responded quickly. I
6 want to just make sure I did not -- that my answer
7 is accurate.

8 Q. The previous question was: So the '088
9 patent teaches a selection of a route that has a
10 minimum value of the cumulative additional bandwidth
11 reservation?

12 A. So you basically read the sentence again,
13 and then you're asking me if this is correct?

14 Q. Is that sentence correct?

15 A. That sentence is part of the Abstract.
16 Correct or incorrect -- I don't know what you mean
17 by "correct."

18 That's part of the Abstract, correct.

19 Q. And the Abstract notes that the '088 patent
20 teaches a selection of the route that has a minimum
21 value of the cumulative additional bandwidth
22 reservation, correct?

23 A. I'm not sure where -- I need to make sure
24 that this sentence is part of the Abstract or not.
25 Selection of the route -- I have to check



1 back to my report.

2 The Abstract says:

3 "The preferred route having a minimum
4 value of the cumulative additional
5 bandwidth reservation is selected out of
6 the two."

7 I can say that this is part of the
8 Abstract, yes. But I'm not sure about the sentence
9 that you just said, because you modified this
10 sentence in a different way. And I'm not sure if I
11 can answer that question.

12 Q. Well, the sentence that we just read notes
13 that a preferred route is selected, correct?

14 A. A preferred route having a minimum value of
15 the cumulative additional bandwidth reservation is
16 selected.

17 I'm not sure why you're escaping from this
18 middle part.

19 Q. I'm not escaping the middle part. We're
20 going to get to it.

21 But what I was saying was that a preferred
22 route is selected that has a minimum value of the
23 cumulative additional bandwidth reservation?

24 A. That sentence of the Abstract is fine. As
25 you read, that's the preferred route by having a



1 minimum value of the cumulative additional bandwidth
2 reservation is selected.

3 So a route is selected having that
4 condition, of course.

5 Q. I'm going to add a new exhibit to the
6 AgileLaw platform. Let me know when you see it.

7 This will be Exhibit 3.

8 (US Patent Application Publication: US
9 2005/0220026, "Calculation of Link-Detour
10 Paths in Mesh Networks," marked as
11 Exhibit 3.)

12 A. Yeah. I'm seeing it.

13 BY MS. MISBAH:

14 Q. Exhibit 3 is the Dziong reference that you
15 relied on in your declaration, correct?

16 A. Correct.

17 Q. And it is Publication Number US
18 2005/0220026, correct?

19 A. Correct.

20 Q. And I'm also going to enter another exhibit
21 in.

22 This will be marked as Exhibit 4 for this
23 deposition. Let me know when you see it.

24 (US Patent Application Publication: US
25 2004/0190445, "Restoration Path



1 Calculation in Mesh Networks," marked as
2 Exhibit 4.)

3 A. I can see it.

4 BY MS. MISBAH:

5 Q. And this is the other reference that you
6 relied on in coming to your conclusions, correct?

7 A. That's the Sathyanath I call it, yes.

8 Q. The Sathyanath reference, correct?

9 A. Correct.

10 Q. And this reference is numbered Publication
11 Number US 2004/0190445?

12 A. Correct.

13 Q. I'm going to ask you a few questions about
14 these references. I know, again, you mentioned that
15 you have paper copies in front of you. You're
16 welcome to use those.

17 Let's start with Exhibit 3, the Dziong
18 reference.

19 A. Okay.

20 Q. The Dziong reference is titled "Calculation
21 of Link-Detour Paths in Mesh Networks."

22 Do you see that?

23 A. Yes.

24 Q. What is a link-detour path?

25 A. Again, I did not construe any words or



1 terms, and I am not going to give any additional
2 meaning for that other than ordinary and customary
3 meaning that I applied. So link-detour is the
4 link-detour.

5 Q. And in the context of Dziong, what do you
6 understand link-detour to mean?

7 A. There are several examples of link-detour.
8 And I mentioned that in my report. For example, if
9 you go back to page 53 of my report, I give an
10 example in paragraph 93:

11 "In step 406, an LD path," referring
12 to link-detour, of course, "for each link
13 in a set of candidate primary paths for a
14 new demand is calculated in such a way
15 that sharing" -- and continues the
16 sentence.

17 I don't want to go to the end of the
18 sentence. I just wanted to bring to your attention
19 that link-detour is spread over my report, many
20 situations that, you know, give the example of
21 link-detour.

22 Q. Let's look at paragraph 34 of your
23 declaration.

24 Can you let me know when you're there?

25 A. I'm there.



1 Q. Second sentence:

2 "In one aspect, Dziong generally
3 relates to protecting communication paths
4 against potential failures by establishing
5 alternate pathways that allow traffic to
6 be rerouted around a failed node or link."

7 Do you see that?

8 A. Yes.

9 Q. The term "alternate pathways that allow a
10 route to be" -- sorry, the phrase "establishing
11 alternate pathways that allow traffic to be rerouted
12 around a failed node or link," is that similar to
13 the concept of a link-detour?

14 A. It could be, yes. Alternate paths could be
15 a detour going to a different path, of course.

16 Q. And in this sentence you note that these
17 alternate paths come into play when there is a
18 failed node or link, correct?

19 A. The failure that I stated in my report
20 relates to either failed node or failed link. There
21 are several examples of this.

22 Q. And if there is a failed node or a failed
23 link, then Dziong teaches how to navigate around
24 that failed link using alternate pathways, correct?

25 A. That's the ultimate reason we use Dziong



1 and Sathyanath, containing a number of examples for
2 choosing the alternate paths in the case of failure,
3 node failure or link failure.

4 Q. And in your declaration, you also discuss
5 how Dziong uses bandwidth sharing in establishing
6 alternate pathways.

7 A. What's your question?

8 Q. Is that right? In your declaration, you
9 discuss how Dziong uses bandwidth sharing
10 opportunities in establishing alternate pathways for
11 traffic flow in case of a link failure?

12 A. So one of the examples of bandwidth sharing
13 and sharing information that I have given in my
14 declaration can be found in -- on page 34, that
15 I explain why Dziong and Sathyanath render this
16 limitation of 1.2 obvious.

17 And the limitation, of course, is providing
18 a sharing definition. That's about that. And then
19 it is about sharing a bandwidth allocation.

20 So I have given a number of examples from
21 Dziong and Sathyanath.

22 Q. Well, looking at that page, if you look at
23 paragraph 65 on that page, you cite to a paragraph
24 from Dziong. It's paragraph 36.

25 Do you see it?



1 A. Yes.

2 Q. In this paragraph, it says:

3 "Another problem associated with some
4 current link-based recovery mechanisms is
5 a failure to take advantage of recovery
6 bandwidth-sharing opportunities."

7 Do you see that?

8 A. Yes.

9 Q. In the next paragraph, it says:

10 "In embodiments of the present
11 invention, link-detour path calculation
12 involves maximizing sharing of link-detour
13 bandwidth."

14 Do you see that?

15 A. I do.

16 Q. So this context, you agree that Dziong is
17 teaching bandwidth sharing in the context of
18 link-detour path calculation, right?

19 MR. CLEMENTS: Objection, form.

20 A. So, Counsel, could you tell me where I said
21 that sentence? You just modified the teaching of
22 Dziong or you just modified my words?

23 BY MS. MISBAH:

24 Q. I'm just trying to establish what Dziong
25 teaches.



1 So if you look at paragraph 65, your own
2 words that are at the top of that paragraph:

3 "Dziong repeatedly describes the
4 benefits of sharing bandwidth among
5 multiple recovery paths."

6 Right?

7 A. That's correct.

8 Q. So Dziong teaches sharing bandwidth with
9 the recovery paths, the link-detour paths, correct?

10 A. Dziong describes sharing bandwidth among
11 multiple recovery paths.

12 So if you have, for example -- I'll give
13 you an example. If you have two backup paths,
14 Dziong gives the benefits of sharing bandwidth
15 between the two. I give you another example.

16 That was my answer.

17 Q. Got it.

18 Let's turn to Sathyanath for a second.

19 Let me know when you have it in front of
20 you.

21 A. Yes. Sathyanath is in front of me.

22 Q. Now, Sathyanath is titled "Restoration Path
23 Calculation in Mesh Networks," correct?

24 A. Correct.

25 Q. And if you look at your declaration,



1 paragraph 37, it says:

2 "Like the '088 patent and Dziong,
3 Sathyanath describes improving network
4 performance and capacity through the
5 efficient sharing of protection capacity."

6 Do you see that sentence?

7 A. Yes.

8 Q. So Sathyanath relates to bandwidth sharing
9 or protection paths, correct?

10 A. Sathyanath relates to efficient sharing of
11 protection capacity, yes.

12 Q. And protection capacity relates to the
13 restoration paths that are taught in Sathyanath,
14 right?

15 A. So I'm not sure if the capacity and
16 restoration are equivalent terms.

17 I would not change this sentence, right? I
18 would not modify it the way that you did. I'm more
19 comfortable with what I just said in the
20 declaration, that it relates to efficient sharing of
21 protection capacity.

22 And, of course, later on in the
23 declaration, the capacity will be given several
24 examples. We can go over those examples.

25 Q. We don't need to look at those examples



1 right now.

2 A. Yeah.

3 Q. Okay.

4 Let's go to page 20 of your declaration.

5 Oh, sorry. You must already be there.

6 A. Yeah.

7 Q. Do you see the subheading titled "Combining
8 Dziong and Sathyanath"?

9 A. Yes.

10 Q. And under the subheading, you have two
11 paragraphs that discuss combining Dziong and
12 Sathyanath, correct?

13 A. Correct.

14 Q. And in that first paragraph, paragraph 38,
15 you talk about how Dziong's specification
16 incorporates Sathyanath by reference, right?

17 A. In that sentence, I say:

18 "Dziong's specification expressly
19 refers to and incorporates by reference
20 Sathyanath."

21 Q. And then you go on to say that:

22 "A person reading Dziong would have
23 been expressly instructed to refer to the
24 disclosure of Sathyanath, and as a result
25 would have found it obvious to consider



1 them together."

2 Right?

3 A. Yes.

4 Q. And this is one of your bases for combining
5 Dziong and Sathyanath, correct?

6 A. Yes.

7 Q. And then if you look at the next paragraph,
8 paragraph 39, you say that:

9 "The POSITA also would have found it
10 obvious to combine features from the
11 various examples provided in Dziong and
12 Sathyanath."

13 Correct?

14 A. Correct.

15 Q. And this is also one of the bases for
16 combining the two references, according to your
17 declaration, right?

18 A. Absolutely.

19 Q. Now, besides the reasons that are mentioned
20 in paragraphs 38 and 39, you don't provide any other
21 reasons for combining the two references, right?

22 A. All of my opinions related to the reasons
23 for combining Dziong and Sathyanath are included in
24 Section C.

25 Q. Now, let's look at page 27 of your



1 declaration.

2 This is in relation to Claim 1.1.

3 MS. MISBAH: Actually, sorry, I'm moving on
4 to another section, Dr. Mir. If you'd like to take
5 a break, we're almost coming onto an hour.

6 THE WITNESS: That's fine to take a break;
7 if you suggest, then that's a good time to take a
8 break.

9 (Recess taken from 9:52 a.m. to 9:58 a.m.)

10 BY MS. MISBAH:

11 Q. All right, Dr. Mir. Let's turn to page 27
12 of your declaration.

13 A. Yes. I'm on it.

14 Q. So on page 27 of your declaration, you're
15 discussing claim limitation 1.1, correct, correct?

16 A. Could you repeat your question? I'm sorry.

17 Q. It's okay. On page 27, you're discussing
18 claim limitation 1.1?

19 A. Yes.

20 Q. And this reads:

21 "Identifying two or more candidate
22 routes for a new connection having a
23 requested bandwidth to be established
24 through the network."

25 Right?



1 A. Yes.

2 Q. And you rely on Dziong and Sathyanath to
3 show that this limitation is obvious, correct?

4 A. Yes.

5 Q. And if you turn to paragraph 53 of your
6 declaration, you're relying on paragraph 70 of
7 Dziong, correct?

8 A. Correct.

9 Q. And paragraph 70 of Dziong is talking about
10 Figure 5 of the reference, right?

11 A. Correct.

12 Q. And it says:

13 "Figure 5 illustrates a simple network
14 with both path-based and link-based
15 recovery paths."

16 Correct?

17 A. Yes.

18 Q. Let's look at Figure 5 of Dziong.

19 A. Yes.

20 Q. In Figure 5, the links are labeled.

21 Do you see that?

22 A. Yes.

23 Q. So the links at the very top are labeled
24 "link protection paths," correct?

25 A. Yes.

1 Q. And the one in the middle is labeled
2 "primary path"?

3 A. That's right.

4 Q. And the last one is "path protection path,"
5 correct?

6 A. That's correct.

7 Q. So the primary path refers to the working
8 path of the links, right?

9 A. I'm pretty sure that's correct, but I would
10 like to ask for a second to double-check. I want to
11 see -- I'm pretty sure that I have given this
12 statement there.

13 Yeah. I found it in the previous page,
14 page 27. It says, from Dziong, paragraph 70: "One
15 is primary path A-B-C-D." I think this refers to
16 exactly what you just mentioned.

17 And the other one -- maybe that's your next
18 question.

19 Q. Yes. So you agree that the primary path is
20 the working path of -- that's disclosed in Dziong,
21 correct?

22 A. Primary path is -- interchangeably, I
23 guess, is working path in Dziong, primary and
24 working.

25 Q. And how do you understand the term "primary



1 or working path"? What do you understand that to
2 be?

3 A. That's the ordinary and customary meaning
4 it has.

5 And an example for that is A-B-C-D, which
6 is the primary path, as Dziong states.

7 Q. And so if a network has a request to send
8 out information across the bandwidth, the primary
9 path is the first path that is selected for
10 transmitting that request, correct?

11 A. The primary path is the path that is set
12 for communication in the beginning of network setup,
13 of course.

14 And then there might be a need for a backup
15 or detour path for it. And that's why -- that's
16 what Dziong, actually, explains next, what those
17 paths are.

18 Q. And those paths are the link protection
19 paths that are shown in Figure 5, right, the link
20 protection and the path protection paths, correct?

21 A. Yeah. Those are just examples. There
22 are -- other examples can be made on that. There
23 are two examples only.

24 Q. Understood.

25 And so if there's a failure on the primary



1 path, then the network request is rerouted using
 2 either the link protection paths or the path
 3 protection paths; is that right?

4 A. Did you say in the case of path protection
 5 or link protection -- path failure or link failure?

6 Q. Link failure.

7 And if it's helpful, Dr. Mir, if you look
 8 at paragraph 54 --

9 A. I just found it, yes.

10 Q. Link failure.

11 A. "In the event of a failure of link A" --
 12 just an example -- "Dziong contemplates a link-based
 13 recovery path that substitutes link-detour path
 14 J-K."

15 So it simply says that J-K can be
 16 substituted for A.

17 Q. And if you look at that same page, you have
 18 an annotated version of Figure 5?

19 A. I'm sorry. Where is it?

20 Q. On the same page, page 28, on the very top,
 21 you have an annotated version of Figure 5.

22 Do you see that?

23 A. Yes.

24 Q. It says "candidate route 1" and candidate
 25 route 2."

1 A. Yes. I see it.

2 Q. And you identified these as potential
3 candidate routes that can be taken if there's a
4 failure on link A, correct?

5 A. That is correct.

6 Q. And both these candidate routes have the
7 same amount of bandwidth as the primary path, right?

8 A. So I don't believe in this section of my
9 declaration I have discussed the bandwidth
10 assignments, the concept of bandwidth allocations.
11 I may be able to find it later for you, in
12 later discussions. This is just the candidacy of
13 links and paths, this page.

14 Q. Right. And the candidacy -- I mean, if
15 there is a failure, as we're showing on link A, to
16 take either candidate route, they should have the
17 same amount of bandwidth as needed to send the
18 communication request across the primary path,
19 right?

20 A. I'm sorry. Where did you find this
21 statement in my report? I can elaborate more on it
22 if you show me.

23 Q. It's not specifically written down in your
24 report, but you would agree conceptually, based on
25 what Dziong teaches, that if there's a failure, the



1 detour for that failure needs to have sufficient
2 bandwidth in order to continue sending requests down
3 that path that would have otherwise been sent
4 through the primary path, which now has a failure?

5 A. Just having a sufficient bandwidth is all
6 right. But how much bandwidth, equal bandwidth or
7 more than the amount of bandwidth, these are not the
8 ones that I discussed in my analysis. And I'm not
9 going to confirm anything.

10 But having enough bandwidth on the
11 candidate route is -- does make sense, of course.

12 Q. And so if there is a link failure on the
13 primary connection -- on the primary path, then
14 Dziong teaches that there is sufficient bandwidth on
15 the candidate routes that you identify to carry
16 through the requests that were going through primary
17 path, right?

18 A. As I just said, having sufficient bandwidth
19 on the backup section makes sense for the setup.

20 But I cannot say anything additional to
21 this statement and confirm anything else.

22 Q. And so in your analysis of Claim 1.1, you
23 are pointing to these two candidate routes as
24 meeting the limitation that notes "identifying two
25 or more candidate routes for a new connection,"



1 correct?

2 A. So if you go back to paragraph 53, I stated
3 that:

4 "Dziong further renders obvious
5 'identifying two or more candidate routes'
6 through its discussion of Figure 5."

7 That's a more complete statement. I hope
8 that, you know, this would be my answer to you.

9 Q. And in explaining the statement that you
10 just read from paragraph 53, you provide an
11 annotated Figure 5, correct?

12 A. That's correct.

13 Q. And in that annotated Figure 5, you
14 identify two candidate routes, correct?

15 A. That's correct.

16 Q. And you rely on these two candidate routes
17 to show that Dziong renders obvious identifying two
18 or more candidate routes, correct?

19 A. Correct.

20 Q. Let's look at paragraph 56 of your
21 declaration.

22 A. Yes.

23 Q. In paragraph 56, the first sentence says:

24 "Dziong's Figure 6a example also
25 renders obvious that the candidate routes



1 are 'for a new connection having a
2 requested bandwidth.'"

3 Right?

4 A. Yes.

5 Q. And if you look at the third sentence in
6 paragraph 56, you say:

7 "A POSITA would have recognized that
8 the recovery path for SRLG 4 ('a new
9 connection') needs to have the same amount
10 of available bandwidth to ensure that if
11 the recovery path is needed, the recovery
12 path can carry the same volume of traffic
13 as SRLG 4."

14 Right?

15 A. Correct.

16 Q. So in parentheses, you note that SRLG 4 is,
17 in quotes, a new connection, right?

18 A. The recovery path for SRLG 4 is a new
19 connection.

20 Q. Yes. And the term "a new connection," that
21 comes from the claim language, right?

22 A. That is correct.

23 Q. Dziong does not refer to SRLG 4 as a new
24 connection, right?

25 A. Well, I have to really spend maybe hours to

1 make sure that SRLG 4 is a new connection there or
2 not.

3 I called the recovery path for SRLG 4 a new
4 connection just to provide an example.

5 Q. And in your report -- or in paragraph 56,
6 you're not citing to anything from Dziong that
7 defines SRLG 4 as a new connection, right?

8 A. To the best of my memory, to the best of my
9 understanding and -- I'm trying to think if I have
10 done it or not. I don't remember if I've done it.

11 Q. And in paragraph 56 specifically, you don't
12 cite to anything from Dziong that notes that SRLG 4
13 is a new connection, right?

14 A. In this paragraph, everything is clear. It
15 says:

16 "The recovery path for SRLG 4 is a new
17 connection."

18 Q. But the language, "a new connection,"
19 that's your language, right?

20 A. That's part of the claim term language.

21 Q. That's part of the claim term, but that's
22 not a part of the Dziong reference as it's cited in
23 this paragraph, right?

24 A. I just mentioned to you that, you know, I
25 have to make sure that, you know, Dziong has not



1 used a new connection. I have to check, maybe
2 conduct a search on PDF.

3 If you say that it is not, I trust you and
4 I believe you.

5 Q. And you don't have to search, Dr. Mir.

6 I was just saying, in this specific
7 paragraph when you're saying that SRLG 4 is a new
8 connection --

9 A. Oh, in this paragraph?

10 Q. That's right. In this paragraph, it
11 relates to the claim language and not language from
12 Dziong, right?

13 A. Oh, yeah. I agree 100 percent. In this
14 paragraph only, yes.

15 Q. Okay. So let's look at -- let's turn to
16 Dziong. And I'd like you to turn to page 19 of
17 Dziong.

18 A. Paragraph 19?

19 Q. No, page 19.

20 A. Of Dziong?

21 Q. That's right.

22 A. Just give me a second, please.

23 Q. Take your time.

24 A. I'm sorry, I don't have -- the last page is
25 14.

1 Q. I'm sorry, I said -- oh, for Dziong?

2 Okay. How about for paragraph 95, 96?

3 Do you see that?

4 A. Did you say page 19?

5 Q. Yeah.

6 A. Where is page 19? It's only 14 pages. My
7 hard copy doesn't have that.

8 Q. Maybe you're looking at Sathyanath. I know
9 they're both titled Dziong at the top.

10 A. No, it's not. Hold on. Are we having --
11 are my hard copies different?

12 No, the soft copy also 14 pages. What are
13 you talking about?

14 Oh, maybe you are talking about PDF 19.

15 Q. Yeah, sorry. PDF page 19.

16 A. This is the hard copy. There is no PDF.

17 Q. Okay. I understand. Okay. So this would
18 be page 6 of Dziong.

19 A. Okay. Page 6.

20 Q. Okay. I want to look at paragraphs 95 and
21 96.

22 A. Okay.

23 Q. So you see, paragraph 95, it's titled
24 "Centralized Calculation."

25 A. Yeah.



1 Q. And then in paragraph 96, the first
2 sentence, it says:

3 "Recovery-path calculation can be
4 centralized or distributed."

5 Do you see that?

6 A. Yes.

7 Q. So if you look at the sentence -- the third
8 sentence that's in the middle, it says:

9 "When a new connection demand arrives
10 at a source node, a request is sent to the
11 server to calculate the primary path and
12 the associated protection paths."

13 Do you see that?

14 A. Yes.

15 Q. So Dziong teaches that when a new
16 connection comes in, the primary path and the
17 protection paths are calculated, right?

18 A. (Reading.)

19 "When a new connection demand
20 arrives, a request is sent to the server
21 to calculate the primary path and
22 associated path -- protection paths."

23 Yes. That's what it is.

24 Q. And so when a new connection demand
25 arrives, the server basically calculates the primary



1 and the recovery paths, correct?

2 A. That is correct.

3 Q. And then if you look at paragraph 97, it
4 talks about distributed calculation, right?

5 A. Okay.

6 Q. And if you look at the next paragraph, 98,
7 it says (as read):

8 "An alternative to centralized
9 solution is a distributed implementation
10 where paths are calculated at their
11 respective source nodes."

12 Do you see that?

13 A. Yes.

14 Q. And so when a new demand comes in, instead
15 of having the request sent to the server, the source
16 node will calculate the primary path and the
17 associated protection paths, right?

18 A. Well, it doesn't say specifically in this
19 sentence what happens to primary and backup. You
20 just assumed that these are the actions.

21 I'd rather not comment on it until I see
22 that, you know, what exactly this means in the next
23 few lines.

24 Q. Okay. If you look at paragraph 99 --

25 A. Okay.



1 Q. -- it describes Figure 7, which is a data
2 flowchart for link-based protection mechanisms.

3 A. Uh-huh.

4 Q. Is that a "yes"? The court reporter can't
5 record uh-huhs, and that's the only reason why I
6 ask.

7 A. It just starts with: "Figure 7 illustrates
8 a generic LSA."

9 I don't know what else I should confirm.

10 Q. That's what it says, okay.

11 And then if you look down towards like the
12 middle of that paragraph, it says:

13 "This is followed by primary path
14 calculation for the new demand in
15 step 706."

16 Do you see that?

17 A. (As read.)

18 "This is followed by a primary path
19 calculation for a new demand on step 706."

20 Okay. I'm seeing it.

21 Q. And it says that the calculation for the
22 new demand in step 706 is made using link and link
23 protection parameters 714 and 702 respectively.

24 Right?

25 A. That's what it says.



1 Q. And the next sentence says that in
2 step 708:

3 "Making use of link parameter 714 at
4 each node along the primary path, the
5 protection path for the downstream link
6 connected to the node is calculated."

7 Do you see that?

8 A. I see that.

9 Q. And so as we discussed with the centralized
10 calculation, when a new connection demand arrives at
11 a source node, the source node calculates the
12 primary path and the associated recovery paths,
13 right?

14 A. Where did I say this in my report?

15 Q. You don't say this in your report. I'm
16 talking about Dziong, which is a reference that you
17 analyzed in coming to your conclusions.

18 A. And where does Dziong say this? Could you
19 remind me again?

20 Q. Yeah. I mean, Dziong, as we discussed,
21 talks about centralized calculation and distributed
22 calculation for recovery paths, right?

23 A. I think we have already done the
24 centralized calculation. We have discussed it.

25 Are you trying to convey the teaching of



1 centralized over the distributed?

2 Q. Yes. So the distributed calculation is
3 similar to centralized calculation except that it's
4 done at the source node instead of by a server,
5 right?

6 A. If so, I just don't want to make a
7 conclusion -- get into a conclusion in our own
8 words. Just -- I would like to just use Dziong's
9 words.

10 Let's go to the conclusion of distributed.

11 Where is the conclusion of distributed?

12 Could you point me to?

13 Q. I mean, it doesn't provide a straight
14 conclusion. It's kind of incorporated into
15 Figure 7, which walks through how -- the sentence
16 that we discussed earlier, which was:

17 "The primary path calculation for the
18 new demand -- for the new demand in
19 step 706 is done using link and link
20 protection parameters 714 and 702."

21 And then in step 708:

22 "Making use of link parameters 714 at
23 each node along the primary path, the
24 protection path for the downstream link
25 connected to that node is calculated."



1 A. That's all it is. Let's not summarize it.
2 I'm not comfortable summarizing it and getting to a
3 one-sentence conclusion.

4 So that's exactly what the operation of
5 distributed calculation means.

6 Q. Let's turn to paragraph 68 of your
7 declaration.

8 A. Okay.

9 Q. So in this paragraph, you are talking about
10 bandwidth sharing in Dziong, right?

11 A. Let me go back and see which context
12 claim -- limitation context.

13 The claim limitation is 1.2, "providing a
14 sharing definition that is related to other
15 connections and new connections."

16 Okay. So would you repeat your question,
17 please.

18 Q. Dziong discloses, in your opinion,
19 bandwidth sharing; isn't that right?

20 A. Dziong repeatedly describes the benefits of
21 bandwidth sharing among multiple recovery paths.

22 That's what I say in paragraph 65 of this
23 section. So --

24 Q. And if you look at paragraph 68, the last
25 sentence, you say:



1 "The bandwidth sharing reservation
2 table shows that three protection paths on
3 link A-B (which protect against failures
4 of SRLG 3, 4, and 5) 'are permitted to
5 share a bandwidth allocation.'"

6 Right?

7 A. Yes.

8 Q. And so the protection paths that are set up
9 for various link failures are permitted to share
10 bandwidth allocation, correct?

11 A. Would you repeat the first part of your
12 question?

13 Q. Sure.

14 So it's your opinion that the bandwidth
15 reservation table that's shown -- that's discussed
16 in Dziong shows that the protection paths that are
17 on link A-B are permitted to share their bandwidth
18 allocation in case of failures in SRLG 3, 4, and 5,
19 right?

20 A. You slightly modified my sentence. I'm not
21 sure what -- what is the point there. Because this
22 sentence that I just -- you just read before your
23 question, it's so clear. Let me read it:

24 "The bandwidth reservation table shows
25 that the three protection paths on link



1 A-B (which protect against failures of
2 SRLG 3, 4, and 5) 'are permitted to share
3 a bandwidth allocation).'

4 This is so clear. I'm not sure why you
5 modified it.

6 Q. So these three protection paths that share
7 the bandwidth, you identified that it's three
8 protection paths on link A-B that are permitted to
9 share a bandwidth allocation based on the teachings
10 of Dziong, right?

11 A. Where did I say "three protection paths"?

12 Q. If you read the sentence that we were just
13 reading, it says:

14 "The bandwidth reservation table shows
15 that the three protection paths on link
16 A-B... are permitted to share a bandwidth
17 allocation."

18 Right?

19 A. That's what we agreed on, that this is
20 clear and -- but you are having a further question
21 related to three protection paths on link A-B.

22 In the parenthesis it says clearly "which
23 protect against failures of SRLG 3, 4, and 5."

24 Q. Sure.

25 And my question is that you note that these



1 are three protection paths, correct?

2 A. Correct.

3 Q. You're not identifying any primary paths
4 that are permitted to share the bandwidth allocation
5 in this sentence, right?

6 A. Counsel, if you look a few sentences down
7 that page -- so there is a sentence that starts --
8 I mean, in the middle of a sentence, of course,
9 "P-XC."

10 Do you see that? In Dziong's statement,
11 quotation, a quote from Dziong, the third line
12 "P-XC"?

13 Do you see that?

14 Q. Are you referring to:

15 "The P-XC represents the number of XC
16 units in link A-B that currently support
17 demands," right?

18 A. Yes. So 12 units of bandwidth is indeed
19 the bandwidth on link A-B that supports the current
20 demand.

21 So A-B by itself has its own working
22 connection besides the bandwidth sharing of
23 protection for other SRLGs.

24 So my point here is that the segment A-B,
25 the link A-B segment not only provides the



1 protection for SRLG 3, 4, and 5, it also has its own
2 support and communications -- or support for the
3 communications.

4 Do you see my point?

5 Q. When you say "it has its own support for
6 communications," you're referring to the working
7 demands that are on link A-B?

8 A. That is correct. So it's not solely for
9 bandwidth sharing, for protection. It has other
10 tasks too.

11 Q. And the link -- the bandwidth that's used
12 for these other tasks, which Dziong says is 12 units
13 in this example --

14 A. Correct.

15 Q. -- that bandwidth is not shared with the
16 other links that are on that connection, right?

17 A. It is so obvious, yes. It's so obvious
18 from Figure 6b.

19 In Figure 6b, it shows that it's not part
20 of the sharing. In Figure 6b, I was trying to make
21 a point before this discussion started.

22 P-XC, the Column P-XC, shows exactly the
23 support, the working bandwidth, 12, which is
24 separated from the other parts of the bandwidth
25 sharing.



1 Q. Let's turn back to Dziong.

2 A. Yeah.

3 Q. I'd like you to turn to paragraph 59.

4 A. 59, okay.

5 Q. And it says: "Link-protection path
6 calculation."

7 Right?

8 A. Okay.

9 Q. And if you look at the next paragraph,
10 which is paragraph 60, the first sentence reads:

11 "In embodiments of the present
12 invention, link-detour path calculation
13 involves maximizing sharing of link-detour
14 bandwidth."

15 Correct?

16 A. Yes.

17 Q. And so Dziong suggests using bandwidth
18 sharing for calculating link-detour paths, right?

19 MR. CLEMENTS: Objection, form.

20 A. It's so obvious, this sentence. We don't
21 need to interpret it further:

22 "Link-detour path calculation
23 involves maximizing sharing of link-detour
24 bandwidth."

25 Well, maximizing is an action which is



1 applied on link-detour path calculation process.

2 BY MS. MISBAH:

3 Q. And specifically, it's maximizing sharing,
4 right?

5 A. Maximizing sharing of link-detour paths --
6 link-detour bandwidths, yes.

7 Q. Okay. So let's just look at how -- the
8 next couple sentences in this paragraph and how
9 Dziong teaches this sharing process or this
10 calculation.

11 The next sentence reads:

12 "The recovery-path calculation
13 algorithm makes use of information
14 including how much bandwidth can be shared
15 at each link in the network."

16 Right?

17 A. Correct.

18 Q. And the next sentence reads:

19 "This information is obtained by
20 advertising, across the network, the
21 amount of bandwidth reserved for recovery
22 on each link and by bookkeeping, in each
23 node, information about all recovery paths
24 that would be activated when a protected
25 link fails."



1 Right?

2 A. That's correct.

3 Q. Dziong teaches that the recovery-path
4 calculation takes into account the amount of
5 bandwidth that can be shared across these protection
6 links, right?

7 A. I'm not going to, again, modify the
8 sentence of Dziong.

9 Paragraph 60, I agree to it. That's all
10 I can do.

11 Q. And I'm not asking for any modification,
12 Dr. Mir --

13 A. If not, then for it to be reinterpreted.

14 Q. -- understanding how the system that Dziong
15 teaches works, right?

16 A. Yeah. And I have a clear example of this
17 paragraph, if I'm not mistaken, in my report. We
18 can go over it and then learn more about it.

19 Q. Sure. Let's look at paragraph 67 of your
20 report.

21 A. Paragraph 67, you said?

22 Q. That's right.

23 A. Okay.

24 Q. So in paragraph 67 you're talking about how
25 Dziong renders obvious the "providing a sharing



1 definition" limitation of the claim.

2 Do you see that?

3 A. Yes.

4 Q. And so you understand Dziong to mean that
5 Dziong:

6 "Performs a bookkeeping so that its
7 local store of bandwidth sharing
8 information includes 'information about
9 all recovery paths' in the network."
10 Right?

11 A. Did you just read my --

12 Q. This is the second sentence of
13 paragraph 67.

14 A. Yeah, because I was lost for a second.
15 I just couldn't follow you.

16 Q. I'm sorry. I'm looking at the second
17 sentence of paragraph 67.

18 A. Starting with "Dziong explains"?

19 Q. That's right.

20 A. Okay. If you want to read again, but -- or
21 just let me read it.

22 Q. You can go ahead and read it.

23 A. Okay.

24 Q. So in the sentence, you say that the nodes
25 in Dziong:



1 "Performs bookkeeping so that its
2 local store of bandwidth sharing
3 information includes 'information about
4 all recovery paths' in the network."
5 Right?

6 A. Correct.

7 Q. So the bandwidth sharing that Dziong is
8 talking about in this sentence relates to the
9 recovery paths in Dziong, right?

10 A. I said "includes."

11 You said "relates."

12 I said "includes information about all
13 recovery paths in the network."

14 You want to use "relates to information
15 about all recovery paths." I don't know why.

16 Q. You can say "includes" as well.

17 So you agree that --

18 A. I agree.

19 Q. -- bookkeeping in Dziong includes
20 information about all recovery paths in the network,
21 right?

22 A. That's correct.

23 Q. And it says "information about all the
24 recovery paths." It doesn't mention the primary
25 paths of the network, correct?



1 A. I don't see any working path in this
2 statement.

3 Q. And working path can also mean primary
4 path, right?

5 A. Yes.

6 Q. And if you go back to paragraph 60 of
7 Dziong, which you cite in your declaration.

8 A. Okay.

9 Q. If you look at the very last phrase, it
10 says:

11 "Information about all recovery paths
12 that would be activated when a protection
13 link fails."

14 Right?

15 A. I can see that.

16 Q. And so, again, the information that is
17 obtained by the nodes that are calculating the
18 recovery paths, that relates only to the recovery
19 paths, correct?

20 A. This is a very long sentence, and it's not
21 a good idea to summarize it to a really short one.

22 In fact, this is a very long sentence in
23 paragraph 60, starting from the middle of it:

24 "This information is obtained by
25 advertising, across the network, the



1 amount of bandwidth reserved for recovery
2 on each link and by bookkeeping, in each
3 node, information about all recovery paths
4 that would be activated when a protected
5 link fails."

6 There is no discussion of primary path in
7 this sentence. That's all I can say.

8 Q. And looking at this paragraph,
9 paragraph 60, it doesn't explicitly use the term
10 "sharing definition," right?

11 A. No. I can see that the sharing of
12 link-detour bandwidths are there in the beginning of
13 the -- this paragraph.

14 Q. But it doesn't explicitly note the term
15 "sharing definition," right?

16 A. What do you mean by "sharing definition"?

17 Q. The term "sharing definition" as used in
18 the claim language.

19 A. This paragraph is about sharing of
20 link-detour bandwidth to be maximized.

21 So that's involvement of this kind of
22 mechanism.

23 That link-detour path calculation involves
24 maximizing sharing of link-detour bandwidths I think
25 is so clear. I cannot modify anything in this



1 sentence.

2 Q. I understand.

3 My question is the sentences in
4 paragraph 60 don't explicitly use the term "sharing
5 definition," right?

6 A. Could you give me an example of "sharing
7 definition"? What do you mean by that?

8 Q. Well, Dr. Mir, how do you understand
9 "sharing definition"? That's one of the claim terms
10 in this case.

11 So what is your understanding of the term
12 "sharing definition"?

13 A. That is ordinary and customary, according
14 to PTAB guidelines.

15 Q. And that's the meaning that you applied in
16 your declaration, right?

17 A. That is correct.

18 Q. And my question is, the term -- the
19 specific term "sharing definition" is not in
20 paragraph 60 of Dziong, right?

21 A. Sharing definition of the claim term, you
22 mean?

23 Q. Just the words "sharing definition,"
24 they're not in that paragraph, correct?

25 A. The definition of sharing in this paragraph



1 is not there. So it is plain -- I'm sorry. This is
2 ordinary and customary meaning it has.

3 I don't need to look for any other
4 definitions.

5 Q. Let's look at paragraph 68 of your report.

6 A. Yeah.

7 Q. In paragraph 68, you are discussing
8 Figure 6b from Dziong?

9 A. Yes.

10 Q. And if you go down to the next page, you
11 have an annotated version of Figure 6b?

12 A. I see that.

13 Q. And in this figure, you assume that SRLG 4
14 is a new connection, right?

15 MR. CLEMENTS: Objection, form.

16 A. Where did I say that?

17 BY MS. MISBAH:

18 Q. If you look at the footnote on page 38 --

19 A. Okay.

20 Q. -- you note that:

21 "Dziong does not expressly state the
22 order in which the three protection paths
23 across link A-B were established."

24 And the very last sentence, you say:

25 "I have simply chosen to treat the



1 SRLG 4 protection path as a
2 last-to-be-established path to further
3 explain how Dziong's bandwidth sharing
4 concept would work."

5 A. Yes, I see that.

6 Q. So you agree that Dziong does not expressly
7 note that SRLG 4 is a new connection or the last
8 connection to be established, right?

9 A. As I said there, SRLG 4 protection path:
10 "I have chosen to treat the SRLG 4 protection path
11 as the last-to-be-established path to further
12 explain how Dziong's bandwidth sharing concept would
13 work."

14 Q. Those are the selections by you. It's not
15 something that Dziong states, right?

16 A. Yes. Correct.

17 Q. Let's look at paragraph 71 of your report.

18 A. Paragraph 71?

19 Q. Uh-huh.

20 A. Okay.

21 Q. So the first sentence of paragraph 71 says:

22 "My analysis above treats the 'sharing
23 definition' as reflecting the information
24 that would be advertised across the
25 network before the claimed 'new



1 connection' is established."

2 Do you see that?

3 A. Yes.

4 Q. And this is how you're defining "sharing
5 definition" in the context of Dziong, right?

6 A. So I treated the sharing definition as
7 reflecting the information that would be advertised
8 across a network before the claimed new connection
9 is established.

10 So it's just a matter of time that it's
11 done before something else happens.

12 Q. And so the sharing definition is the
13 information that is advertised across the network
14 before the new connection is established, right?

15 A. I would say, again, the same sentence that
16 I said:

17 "Sharing definition as reflecting the
18 information that would be advertised
19 across a network before the claim term
20 'new connection' is established."

21 Q. And when you say "the information that
22 would be advertised across the network," are you
23 referring to the information in paragraph 60 of
24 Dziong in which the link recovery-path calculation
25 algorithm obtains information by advertising across



1 the network the amount of bandwidth reserved for
2 recovery on each link and by bookkeeping in each
3 node information about all recovery paths that would
4 be activated when a protected link fails?

5 A. Where did you read it from?

6 Q. I'm reading that from Dziong.

7 But my question to you is when you say --
8 what do you mean when you say "The new information
9 that would be advertised across the network"?

10 A. Yeah. If you go back to page 35 of my
11 report, I answered your question -- the answer to
12 your question is there.

13 Paragraph 66 of 34, which extends to
14 page 35, it shows two parts of Dziong's teaching.
15 One is paragraph 54, and the other one is
16 paragraph 60.

17 Well, paragraph 60 is already -- we have
18 reviewed several times together. And paragraph 54
19 is also part of it.

20 I would like to bring to your attention a
21 portion that is important in paragraph 54 that
22 starts with:

23 "For a distributed implementation,
24 each node keeps track of the sharing
25 information for each of its incident

1 links. Signaling is used to update this
2 sharing information with admittance of
3 every new demand into the network."

4 So this is a complementary kind of
5 statement from Dziong that supports the
6 advertising.

7 MS. MISBAH: Dr. Mir, we're coming up to
8 another hour. Would you like to take a break --

9 THE WITNESS: Yeah.

10 MS. MISBAH: -- or are you okay with moving
11 on to another section?

12 THE WITNESS: Sure. A break is always
13 welcome. Thank you.

14 MS. MISBAH: Okay. We can take
15 five minutes and then come back.

16 THE WITNESS: Okay.

17 (Recess taken from 10:55 a.m. to 11:02
18 a.m.)

19 BY MS. MISBAH:

20 Q. All right.

21 Dr. Mir, could you turn to page 45 of your
22 declaration.

23 A. Sure. Okay.

24 Q. So on page 45 you discuss limitation 1.3?

25 A. Yes.



1 Q. Limitation 1.3 reads:

2 "Such that a total bandwidth
3 allocated jointly to the new connection
4 and to the other connections in any given
5 segment is equal to a maximum of the
6 requested bandwidth and of the bandwidths
7 of the other connections in a given
8 segment."

9 Right?

10 A. Yes.

11 Q. Let's look at paragraph 84 -- I'm sorry, 81
12 of your declaration.

13 A. Uh-huh.

14 Q. So in the first sentence, you state that:

15 "Dziong states that the 'amount of
16 bandwidth actually reserved on each
17 incident link is the maximum of the
18 bandwidths required to recover from any of
19 the failures.'"

20 Right?

21 A. Yes.

22 Q. And then you say:

23 "Dziong's 'amount of bandwidth
24 actually reserved' corresponds to the
25 claimed 'total bandwidth allocated.'"



1 Right?

2 A. Yes.

3 Q. I'd like to look a little bit more closely
4 at what Dziong says in paragraph 63 that you cite,
5 so let's turn to paragraph 63 of Dziong.

6 A. Okay.

7 Q. So the last sentence of paragraph 63 is the
8 sentence that you quote in your declaration, right?

9 A. Where exactly?

10 Q. It's the last sentence of paragraph 63.

11 A. I know. Where did I quote it?

12 Q. You quote it in paragraph 81 of your
13 declaration that we just read.

14 A. Oh, 63, yeah. Okay. "The amount of
15 bandwidth" -- starting with "the amount of
16 bandwidth" -- yes, that's correct. Yeah.

17 Q. So when it says "incident link" in that
18 sentence, when it says, "The amount of bandwidth
19 actually reserved on each incident link," what is it
20 referring to as "incident link"? Can you clarify
21 that?

22 A. The incident links in that statement refers
23 to the earlier incident links in the same paragraph,
24 63. And I'll read it for you:

25 "In step 402, each node in the



1 network does bookkeeping for each of its
2 incident links of the amount of
3 protection bandwidth that is needed to
4 recover service in the event of each
5 potential link failure in the network."
6 In fact, it explains what incident link
7 means.

8 Q. And so the amount of bandwidth that's
9 reserved on these incident links refers to the
10 bandwidth that's reserved in case of a potential --
11 in case of a link failure; is that right?

12 A. Those are the amounts of protection
13 bandwidths that is needed to recover service, yeah.
14 So you try to shorten it or summarize it,
15 it's up to you.

16 Q. So when you say that "those are the amounts
17 of protection bandwidths," are you saying the
18 bandwidth that's actually reserved on those incident
19 links is the amount of bandwidth that is needed to
20 recover from the failures?

21 MR. CLEMENTS: Objection, form.

22 A. I don't think your statement is exactly
23 what Dziong says.

24 You know, Dziong is talking about, in 63 --
25 paragraph 63, is talking about how the bookkeeping



1 and the result is for each of its incident links of
2 the amount of protection bandwidth that is needed to
3 recover service in the event of each potential link
4 failure in the network.

5 It's so clear to me that it doesn't need
6 any further clarifications.

7 BY MS. MISBAH:

8 Q. So just looking, going back to that
9 sentence then, so:

10 "The amount of bandwidth actually
11 reserved on each incident link is the
12 maximum of the bandwidths required to
13 recover from any of the failures."

14 So going back to your paragraph 81 of your
15 declaration --

16 A. Okay.

17 Q. -- you say:

18 "Dziong's 'amount of bandwidth
19 actually reserved' corresponds to the
20 claimed 'total bandwidth allocated.'"

21 So that amount of bandwidth actually
22 reserved is the same as the maximum of the
23 bandwidth required to recover from any of the
24 failures, right?

25 A. I think you changed the second part of this



1 statement I made there.

2 Dziong's "amount of bandwidth actually
3 reserved" -- I'm talking about the reservation,
4 bandwidth reservation here -- "corresponds to the
5 claimed 'total bandwidth allocated.'"

6 Q. Yeah. So what I'm trying to clarify is
7 when you say, "Dziong's amount of bandwidth actually
8 reserved," are you referring to the sentence that's
9 coming right before that sentence where you say,
10 "Dziong states that the amount of bandwidth actually
11 reserved on each incident link is the maximum of the
12 bandwidths required to recover from any of the
13 failures"?

14 A. Remember that I use the statement from
15 Dziong that teaches the amount of bandwidth actually
16 reserved on each link to be the maximum of the
17 bandwidths required to recover from any of the
18 failures.

19 So you need to take the maximization
20 function, or use the maximization function over the
21 bandwidths required to recover, and then you assign
22 or allocate that bandwidth.

23 That's, to me, all I use from Dziong's to
24 address the claim elements, I would say -- what is
25 that, 1.2? I guess it's 1.2.



1 Q. So when you say that you use the
2 maximization function over the bandwidths required
3 to recover --

4 A. Can I give you an example?

5 Q. Yes, of course. Please do.

6 A. So turn your page on page 48. You see the
7 annotations in color?

8 Q. I do.

9 A. Okay. So take a look. The blue says the
10 "bandwidth allocated... to the other connections."

11 And the red says the "bandwidth
12 allocated... to the new connection."

13 And then you take the maximum of these
14 bandwidths required, specifically 48, 15, and 36,
15 you end up with the number 48.

16 That's what exactly Dziong says. Take the
17 maximizing for maximum of the bandwidths. That's
18 what it is about.

19 And then the result is shown on the
20 rightmost column annotated, "total bandwidth
21 allocated," 48.

22 I hope that this is a good example for you.

23 Q. Yeah. So the green on the rightmost that
24 says "total bandwidth allocated," that's referring
25 to reserved bandwidth, right?

1 MR. CLEMENTS: Objection, form.

2 BY MS. MISBAH:

3 Q. And if it's helpful, it says "reserved
4 bandwidth" on the top of that column.

5 A. So let me just give you the overview of
6 this scenario of annotations.

7 So the green actually shows the result of
8 the maximization. And then that is used for
9 reservation which is allocated on segment link A-B.

10 This maximization is the maximization of
11 the situations if SRLG 3 failure, if SRLG 4 failure,
12 if SRLG 5 failure.

13 And their bandwidth protection, I believe
14 that is shown by BP, is 48, 15, and 36, in order of
15 what I just mentioned.

16 So your question was that is it reserved
17 bandwidth? This is a reserved bandwidth on
18 segment A-B, yes.

19 Q. And this reserved bandwidth is allocated to
20 SRLG 3, SRLG 4, and SRLG 5, right?

21 A. Did you say "assigned to"?

22 Q. I said "allocated," but "assigned to" is
23 fine as well.

24 A. I wouldn't use "assigned to" because we are
25 reserving actually -- by this function, we are



1 reserving bandwidth on link A-B to protect these
2 three links in case of failure.

3 And we can actually go over this statement
4 that Dziong actually has given accurately -- more
5 accurately on the same page if you read the bold
6 lines:

7 "RSRV-XC," which is the rightmost
8 column, "represents the actual amount of
9 bandwidth that needs to be reserved on
10 link A-B to protect against any one SRLG
11 failure in network 602."

12 And then it explains further about how
13 maximization takes place.

14 MS. MISBAH: Understood.

15 Dr. Mir, I have nothing further for you.

16 I'll hand the witness over to counsel for
17 any redirect.

18 MR. CLEMENTS: I have no questions on
19 redirect.

20 MS. MISBAH: Thank you very much for your
21 time, Dr. Mir.

22 (Proceeding concluded.)

23 ---

24

25



1 C E R T I F I C A T E

2

3 I, ANNE E. VOSBURGH, Certified Shorthand
4 Reporter, Registered Professional Reporter,
5 Certified Realtime Reporter hereby certify:

6 That NADER MIR, PH.D., via remote
7 videoconference, agreed to testify truthfully, under
8 penalty of perjury; that all counsel stipulated to
9 the remote swearing and waive objection,
10 notwithstanding the location of reporter or witness
11 during testimony; and that this transcript is a true
12 and correct record of testimony given.

13 I further certify that I am not related to
14 any of the parties and am in no way financially
15 interested in the outcome of this matter.

16

17

----- ANNE E. VOSBURGH -----

18

ANNE E. VOSBURGH, CSR, RPR, CRR

19

Notary Public - Exp. July 20, 2029

20

21

22

23

24

25



1 E R R A T A

2 Deponent: NADER MIR, PH.D., June 25, 2025

3 Reason Codes:

- 4 1. To clarify testimony.
- 5 2. To change/correct testimony.
- 6 3. Transcription error

7

8	Page/Line	Now Reads	Should Read	Reason
9	____/____	_____	_____	_____
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24 Signature of Deponent Date

25





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