

1
2 UNITED STATES PATENT AND TRADEMARK OFFICE
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD
4 Case No. IPR2023-00606

5 - - - - -x

6 CISCO SYSTEMS, INC.,

7 Petitioner,

8 -against-

9 NETSOCKET, INC.,

10 Patent Owner.

11 - - - - -x

12 December 15, 2023
13 9:36 a.m.

14 Virtual Deposition of
15 R. MICHAEL BUEHRER, Ph.D., taken by Patent
16 Owner, pursuant to Notice, held remotely,
17 before Sharon Pearce, RDR, CRR, CRC,
18 NYRCR, a Registered Diplomate Reporter,
19 Certified Realtime Reporter, and Notary
20 Public of the State of New York.

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23
24
25

A P P E A R A N C E S:

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* * *

1 BUEHRER, Ph.D.

2 R. M I C H A E L B U E H R E R, Ph.D.,
3 having first been duly sworn by
4 Sharon Pearce, the Notary Public,
5 was examined and testified as
6 follows:

7 EXAMINATION

8 BY MR. PYMENTO:

9 Q. Good morning, Dr. Buehrer.
10 Could you please state your full
11 name for the record.

12 A. Sure. My name is Richard
13 Michael Buehrer.

14 Q. So I'll be taking your
15 deposition today.

16 Have you had your deposition
17 taken before?

18 A. Yes, I have.

19 Q. Approximately how many times?

20 A. I don't know the exact number.
21 It's somewhere between, say, 12 and 20, I
22 would suspect.

23 Q. In each of those 12 to 20 prior
24 depositions, were those in the context of
25 inter partes reviews?

1 BUEHRER, Ph.D.

2 A. No.

3 Q. So in what context were you
4 deposed previously?

5 A. Previously, I was deposed in the
6 context of inter partes reviews and
7 district litigation cases.

8 Q. About what percentage was the
9 split between IPRs and District Court
10 proceedings?

11 A. I don't know the percentage.

12 Q. Could you give me an
13 approximate?

14 A. Yes. As I said, I don't know
15 exactly. If I had to guess, I would say
16 somewhere around 40 percent of the
17 depositions were IPRs, maybe a little
18 less.

19 Q. And in each of those
20 proceedings, did you provide a written
21 opinion, as you did in this case with your
22 declaration?

23 A. I believe that in each of the --
24 each of the cases where I was deposed,
25 there was some form of written report

1 BUEHRER, Ph.D.

2 filed.

3 Q. Have you been deposed in the
4 last three years before today?

5 A. Yes, I have.

6 Q. Okay. I'll just briefly go over
7 some of the ground rules. I'll be asking
8 you questions, and you basically will give
9 me answers.

10 Do you understand that?

11 A. Yes.

12 Q. You're required to answer my
13 questions truthfully and fully. If you
14 don't understand my question, please ask
15 me to rephrase it.

16 Do you understand that?

17 A. Yes.

18 Q. If you do provide me with an
19 answer, I'll assume you understood my
20 question.

21 Do you understand that?

22 A. Yes.

23 Q. And I do need verbal answers. A
24 head nod or "uh-huh" doesn't show up very
25 good on the record for the court reporter.

1 BUEHRER, Ph.D.

2 Is that understood?

3 A. Yes, it is.

4 Q. I'm also going to try and take a
5 break about once an hour. But if you
6 would like a break at any time prior to me
7 calling a break, just let me know. I'm
8 happy to go off the record for a
9 five-minute bathroom break or, you know, a
10 cup of coffee. The only thing that I
11 request is that if there's a question
12 pending, let's get an answer to the
13 question before we take the break.

14 Do you understand that?

15 A. Yes, I do.

16 Q. Dr. Buehrer, is there any reason
17 that you can't testify truthfully today?

18 A. No.

19 Q. Have you taken any drugs or
20 alcohol that could impair your ability to
21 think today?

22 A. No.

23 Q. Where are you located right now
24 physically?

25 A. I am in Montgomery County,

1 BUEHRER, Ph.D.

2 Virginia.

3 Q. And that's your home; right?

4 A. I'm in my home. Correct.

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

7 A. No, there is not.

8 Q. And if that changes, could you
9 please let me know?

10 A. Yes.

11 Q. Dr. Buehrer, what programs do
12 you have currently running on your
13 computer aside from this Zoom meeting?

14 A. I have a Chrome browser running,
15 I have Adobe PF Annotator, and the file
16 window -- I guess it's called Windows
17 Explorer, essentially shows the folders
18 and files on your system.

19 Q. Do you have any communications
20 programs open, such as Outlook or any
21 email program or chat program?

22 A. No, I do not.

23 Q. So I think it's okay with the
24 exception of this videoconference to have
25 the internet browser open in order to view

1 BUEHRER, Ph.D.

2 exhibits. To the extent that's not the
3 case, if you can close any other tabs that
4 may be open on internet browser aside from
5 the exhibits, that would be great.

6 Is that okay?

7 A. Yes. All the tabs currently are
8 involved with Veritext.

9 Q. Okay. Perfect. That's fine.

10 A. Yeah. There's four tabs that
11 are open that came up during the logging
12 into Veritext.

13 Q. Yeah. That's fine.

14 So I've already marked all of
15 the exhibits on Veritext. I'm just going
16 to read them through the record.

17 The first document is going to
18 be Exhibit 1 to the IPR, which is U.S.
19 Patent No. 7,616,601. That's the subject
20 patent in this proceeding. I'll refer to
21 it as the '601 patent or Exhibit 1.

22 (Exhibit 1, United States Patent
23 No. 7,616,601, was hereby marked for
24 identification, as of this date.)

25 Q. Exhibit 2 is your declaration

1 BUEHRER, Ph.D.

2 that was submitted in IPR2023-00606.

3 (Exhibit 2, Declaration of R.
4 Michael Buehrer, was hereby marked for
5 identification, as of this date.)

6 Q. Exhibit 3 is your CV that you
7 submitted in IPR2023-00606.

8 (Exhibit 3, Curriculum vitae of
9 R. Michael Buehrer, was hereby marked
10 for identification, as of this date.)

11 Q. Exhibit 4 is U.S. Patent No.
12 7,043,225. It's the Patel, which is also
13 called Exhibit 1005 in this proceeding,
14 but I might also refer to it as Patel.
15 But I hope you'll understand either way.

16 (Exhibit 4, United States Patent
17 No. 7,043,225, was hereby marked for
18 identification, as of this date.)

19 Q. And last, we have the
20 institution decision in IPR2023-00606,
21 which will be Exhibit 5.

22 (Exhibit 5, Institution decision
23 in IPR2023-00606, was hereby marked
24 for identification, as of this date.)

25 Q. And just let me know if there's

1 BUEHRER, Ph.D.

2 any problem either from your attorney's
3 side or your side accessing those.

4 So Dr. Buehrer, I'd like you to
5 open your declaration in the
6 proceedings -- in this proceeding, which
7 is Exhibit 2. And let me know when you
8 have it open.

9 A. Exhibit 2 appears to be my -- is
10 Exhibit 2 you want me to open or my
11 declaration?

12 Q. Your declaration. So what I was
13 just saying is that I marked it for the
14 purposes of this deposition as Exhibit 2.
15 You know, maybe if it's helpful, I'll just
16 refer to it as the name in the proceeding,
17 you know, prior to the deposition. So
18 just your declaration. So I think it's
19 Exhibit 1002 in the proceeding.

20 MR. HUH: Hey, Julian, sorry to
21 interrupt. But I believe that
22 Dr. Buehrer also has these in physical
23 copy, and it might just be more
24 expedient if he can refer to that, I
25 think.

1 BUEHRER, Ph.D.

2 MR. PYMENTO: Yeah. That's

3 fine. I'm fine with that.

4 BY MR. PYMENTO:

5 Q. Are those annotated in any way?

6 A. No, they are not.

7 Q. Okay. Then I'm fine with you
8 using physical copies of those documents
9 if that's more helpful.

10 A. Okay. Let's see. Okay. I have
11 it on my screen and I have it -- the hard
12 copy in front of me.

13 Q. Great.

14 So sitting here today, have you
15 considered any other materials for this
16 declaration aside from the documents that
17 are cited in the declaration?

18 A. So as I was preparing my
19 declaration, I reviewed many, many
20 documents, and there certainly may have
21 been other documents that I reviewed and
22 considered besides those that I cited in
23 the declaration. But those that I felt
24 were most relevant to the case -- to the
25 opinion, I should say, at hand were cited.

1 BUEHRER, Ph.D.

2 Q. Do you have any examples of
3 documents that you're referring to that
4 you considered in creating the opinion in
5 this declaration other than those that
6 were cited in the declaration?

7 A. As I sit here today, I can't
8 think of any documents that I didn't cite.
9 But again, I reviewed a large number of
10 documents, and of course, I used my own
11 background, which includes reading many,
12 many documents over time. But again, the
13 ones that I believed were most relevant to
14 the opinion were cited in the declaration.

15 Q. So what I've marked as Exhibit 5
16 is the decision granting institution in
17 this proceeding. And it was created by
18 the Patent Office after you submitted your
19 declaration.

20 Have you reviewed that decision?

21 MR. HUH: Objection. Form.

22 A. So let me download the document.
23 Which exhibit are you asking about?

24 Q. I'm asking what I've marked as
25 Exhibit 5. But it's -- it is the decision

1 BUEHRER, Ph.D.

2 granting institution in this case.

3 A. Is it in the -- is it actually
4 in Exhibit Share?

5 Q. Yes.

6 A. You've marked it Exhibit 5?

7 Q. Yes.

8 A. I only see Exhibit 1, 2, 3, and
9 4. And it should be in the folder labeled
10 marked exhibits? Two exclamation points?

11 Q. That's correct.

12 A. Yeah. I still only see four
13 exhibits.

14 Q. If you have the record of the
15 proceeding in front of you, it's also
16 noted as Paper No. 11.

17 A. Paper No. 11. I'm not sure what
18 you mean by Paper No. 11.

19 Q. Okay. So let's try the Veritext
20 Exhibit Share again.

21 A. Yeah. So there's two numbers on
22 each of the exhibits. There's Exhibit 1,
23 Exhibit 2, Exhibit 3, Exhibit 4, dash, and
24 each one says dash with a different
25 exhibit number. I'm assuming the first

1 BUEHRER, Ph.D.

2 exhibit number is the one that you
3 provided.

4 Q. Yes.

5 A. And the second one corresponds
6 to the exhibits from -- I guess they would
7 be from the petition?

8 Q. That's correct. Yeah. My
9 preference would be to use the first
10 number because it's just the numbers 1
11 through 5.

12 A. Okay. Well, those -- again, I
13 only have four there. I have tried
14 refreshing a few times. I don't know why
15 it's not showing up. Oh, let me see. No.
16 That's still -- by the way, there are two
17 folders named "Deposition" and two folders
18 named "Marked Exhibits" under those two
19 different folders. But I don't see it in
20 either one.

21 Q. Maybe we can go off the record
22 to try to resolve this.

23 (A discussion was held off the
24 record.)

25 MR. HUH: Go on the record, and

1 BUEHRER, Ph.D.

2 you can ask the questions without this
3 exhibit.

4 MR. PYMENTO: Yeah. Sure.

5 THE WITNESS: Okay. So could
6 you please restate your question?

7 BY MR. PYMENTO:

8 Q. Sure. Exhibit 5 is the decision
9 granting institution in this case. And it
10 was created by the Patent Office after you
11 submitted your declaration.

12 Have you reviewed that decision
13 in preparation for this deposition today?

14 A. Okay. So I don't see the
15 exhibit, so I don't know exactly what --
16 the document you're talking about. But I
17 believe that I reviewed it recently. But
18 I clearly did not review it prior to
19 writing my declaration. At least my
20 understanding was that it came out after I
21 wrote my declaration, and I don't recall
22 ever seeing it before I wrote my
23 declaration. But again, I don't have that
24 document in front of me, so I'm just going
25 based on memory.

1 BUEHRER, Ph.D.

2 Q. So you have reviewed it in
3 preparation for today's deposition;
4 correct?

5 A. Again, without having it in
6 front of me to know for sure what we're
7 talking about, I believe -- I believe that
8 I did skim it prior to this deposition,
9 but certainly not prior to my declaration.

10 Q. About how much time did you
11 spend preparing for this deposition?

12 A. I don't know exactly. Maybe ten
13 to twenty hours total.

14 Q. When do you first recall being
15 involved in this case?

16 A. It would either have been -- I
17 don't recall the exact date when I first
18 started -- when I started my involvement.
19 I would guess it was either early this
20 year or late last year.

21 Q. About how much time did you
22 spend preparing the declaration?

23 A. I don't know.

24 Q. Would you consider it more than
25 ten hours?

1 BUEHRER, Ph.D.

2 A. Yes, I would.

3 Q. More than 20 hours?

4 A. Probably so, yes.

5 Q. How about more than 50 hours?

6 A. That I don't know. Possible,
7 but I don't recall -- I don't recall
8 exactly how many hours I worked on it.

9 Q. Dr. Buehrer, aside from your
10 counsel at Haynes Boone, did you
11 communicate with anyone else about your
12 deposition today?

13 A. No, I did not.

14 Q. And just to clarify, did you
15 communicate with anyone at Cisco directly
16 about your deposition today?

17 A. No, I did not.

18 Q. Have you corresponded with Cisco
19 prior to today related to your declaration
20 or the deposition?

21 A. I do not believe that I have
22 corresponded with Cisco concerning my
23 deposition or my declaration.

24 Q. Aside from your attorneys at
25 Haynes and Boone, was anyone else involved

1 BUEHRER, Ph.D.

2 in the preparation of your declaration in
3 this action?

4 A. Are you asking if I -- if I
5 talked to anybody -- asked anybody
6 questions about it or anybody -- when you
7 say -- I guess I'd like a little
8 clarification on your question --

9 Q. Sure.

10 A. -- to be clear.

11 Q. It means any other involvement
12 in the creation of the declaration,
13 whether that means you talked to anyone,
14 any -- any other person in order to help
15 you prepare the declaration.

16 A. I don't believe that I talked to
17 anybody else to prepare -- to prepare this
18 declaration. No. I don't think I talked
19 to anybody else.

20 Q. And just to clarify, that's
21 anyone else other than the attorneys at
22 Haynes and Boone; correct?

23 A. Yes, that is correct.

24 Q. And who were the attorneys at
25 Haynes and Boone that you talked to?

1 BUEHRER, Ph.D.

2 A. Gregory -- Gregory Huh. And I
3 apologize if I mispronounced your name,
4 Gregory.

5 MR. HUH: It's "Huh."

6 Q. That's the only attorney you
7 talked to?

8 A. I believe that is correct. But
9 it was, again, many months ago, so it's
10 possible I spoke with somebody else there,
11 but I only recall speaking with Gregory.

12 Q. Could you describe how the prior
13 art documents identified in this
14 proceeding were located?

15 A. I don't recall exactly how all
16 of the documents were located. Generally
17 speaking, when I work on either IPRs or
18 invalidity opinions, there is a mix of
19 documents that I find and a mix of
20 documents that counsel provides. I don't
21 recall in this case exactly what that mix
22 was or which documents were found by whom.
23 But generally speaking, there is a mix of
24 documents that I find and mix of documents
25 that are provided by counsel.

1 BUEHRER, Ph.D.

2 Q. Do you know which references
3 were provided by you?

4 A. As I sit here today, I don't
5 know -- I can't recall which documents I
6 found and which documents were provided to
7 me.

8 Q. But the references were a mix of
9 documents provided by you and documents
10 provided by your attorneys; correct?

11 A. Yes. The documents -- the
12 references for my declaration would have
13 been a mix of documents that I found and a
14 mix of documents -- and documents that the
15 attorneys provided.

16 Q. And just to clarify, when I
17 refer to -- when you refer to documents,
18 you're referring to the prior art
19 references in this proceeding; correct?

20 A. When I say documents, I mean all
21 the documents that I cited.

22 Q. Okay. With reference to the
23 provider art documents that were
24 referenced in this case, were those
25 provided by you or by the attorneys or a

1 BUEHRER, Ph.D.

2 mix of both?

3 A. I don't recall. It may have
4 been a mix of both. I don't -- but I
5 don't recall.

6 Q. Did you personally conduct a
7 search for any of the prior art documents?

8 A. Again, I don't recall the
9 specifics. But generally speaking, when I
10 get involved in any IPR or invalidity
11 case, I spend time doing my own prior art
12 search.

13 Q. Were there any prior art
14 documents that you located but were
15 ultimately not used for this proceeding?

16 A. I don't recall.

17 Q. So I'd like to talk about your
18 background a little bit.

19 Can you take a look at your CV.
20 I've marked that as Exhibit 3. And just
21 please let me know if you think this CV is
22 still accurate.

23 A. You said it's Exhibit 3?

24 Q. Yes.

25 A. It doesn't look to be Exhibit 3.

1 BUEHRER, Ph.D.

2 Q. Exhibit 3 as I've marked on the
3 Exhibit Share.

4 A. So there -- Exhibit 3 -- so it
5 says Exhibit 3-EX.1006. And it's
6 PPTS25.304.

7 Q. That's not how I have it on
8 mine. It's Exhibit 3, and it's marked
9 2023-02-17 --

10 A. Oh, this -- I think I see the
11 problem. For some reason, it's displaying
12 the wrong folders.

13 Q. That might do it.

14 A. This is a completely different
15 case. Okay. Well, I can go by the -- I
16 can go by the hard copy that I have here.

17 Q. Okay.

18 A. And maybe at some point can
19 figure out why it's showing me the
20 wrong -- wrong case here.

21 Q. That's totally fine. If it's
22 easier, I can go by the petition marked
23 exhibit number. So this would be
24 Exhibit 1004.

25 A. Okay. Okay. I see the exhibit

1 BUEHRER, Ph.D.

2 number at the bottom. Okay. Yes, this
3 appears to be my CV.

4 Q. And sitting here today, is it
5 still accurate?

6 A. It is accurate, but it's a
7 little dated.

8 Q. Could you describe that, how is
9 it dated?

10 A. Well, this appears to be an
11 older version of my CV. So it does not
12 have more recent -- more recent elements.
13 So as an example, the students listed
14 that -- current students that I'm
15 advising, some of those students now are
16 graduated, and there are new students that
17 aren't listed. I believe there are
18 probably a couple of research projects
19 that aren't on here yet, because those
20 would have come in in the last year.
21 There are certainly publications that
22 aren't included that would have happened
23 over the last year, and perhaps some other
24 elements.

25 Q. Is there anything else that

1 BUEHRER, Ph.D.

2 might be outdated on this CV other than
3 the list of students and research papers?

4 A. Honors and recognitions appear
5 to be dated. The list of funded research
6 I believe is outdated. I'd have to double
7 check that.

8 Q. What is your current position?

9 A. I am currently a professor at
10 Virginia Tech.

11 Q. What specialization are you a
12 professor in?

13 MR. HUH: Objection. Form.

14 A. My specialty is in communication
15 systems and communication networks in
16 general as well as other -- as well as in
17 wireless systems in general.

18 Q. I see under your employment,
19 which is on page 1 of the exhibit, that
20 you are a member of the technical staff at
21 Bell Laboratories, Lucent Technologies,
22 promoted to distinguished member of
23 technical staff in September 2000.

24 Could you describe that
25 position.

1 BUEHRER, Ph.D.

2 A. Sure. As a member of technical
3 staff and later as a distinguished member
4 of technical staff, I conducted research
5 at Bell Laboratories in the general area
6 of communication systems, and while -- in
7 the course of conducting that research, I
8 sometimes took the ideas that we -- that
9 were generated in research to product
10 teams and worked with the product teams to
11 implement those ideas into current
12 products as well as doing research that
13 was a bit more forward-looking and
14 attempted to develop technologies that
15 would be useful in future Lucent product
16 offerings.

17 Q. Did that job entail working with
18 wireless communication systems, including
19 cellular networks that utilize IP-based
20 core networks?

21 A. Yes, it did.

22 Q. How so?

23 A. Lucent -- the products that
24 Lucent had included wireless cellular
25 networks, which would match that

1 BUEHRER, Ph.D.

2 description.

3 Q. Could you describe what are
4 IP-based core networks?

5 A. So IP networks --

6 MR. HUH: Objection to form.

7 A. IP networks are networks that
8 use IP generally at the network layer and
9 are packet networks.

10 Q. Could you describe the work that
11 you did as a senior engineer at Stanford
12 Telecommunications, Advanced Programs?

13 A. I don't recall all the work that
14 I did there off the top of my head. It
15 was 30 years ago now. I do recall one
16 project that I worked on that involved
17 propagation measurements from satellite
18 systems and characterizing the impact of
19 environmental factors on the propagation
20 from satellite systems to ground stations.
21 But again, I don't recall -- it was a
22 while ago, so I don't recall all the stuff
23 I worked on there.

24 Q. Let's turn to paragraph 20 of
25 your declaration. I've marked it as

1 BUEHRER, Ph.D.

2 Exhibit 2. But it's petition marked as
3 Exhibit 1003.

4 A. Paragraph 24?

5 Q. Paragraph 20.

6 A. Oh, 20.

7 Q. Just let me know when you're
8 there.

9 A. Okay. I'm there.

10 Q. All right. Do you see where it
11 says, "Such a POSITA would include someone
12 who had a bachelor's degree in computer
13 science, computer engineering, electrical
14 engineer, or an equivalent, and two years
15 of experience working with wireless
16 computer communication systems, including
17 cellular networks that utilize IP-based
18 core networks"?

19 A. I see that sentence. Yes.

20 Q. Did you draft this section
21 yourself?

22 A. So this section was likely
23 drafted in collaboration with the
24 attorneys, since it was describing level
25 of ordinary skill in the art, which is a

1 BUEHRER, Ph.D.

2 legal -- legal concept, and so I would
3 have consulted with the attorneys and
4 worked with the attorneys to draft this.

5 Q. Who provided the first draft
6 between you and the attorneys for this
7 section?

8 A. I don't recall in this
9 particular section what the -- who wrote
10 the first draft. Generally speaking, we
11 discuss what's going to be in the report.
12 We discuss what's going to be in the
13 various sections, come to some agreement
14 on what is going to be included. Then
15 sometimes I will write the first draft.
16 Sometimes attorneys write the first draft.
17 But at the end of the day, I review it and
18 make sure that it's all my opinion and my
19 words.

20 Q. Are there any sections in your
21 declaration which were drafted solely by
22 the attorneys?

23 A. So I don't recall if there's
24 anything that was solely drafted -- I
25 doubt that there is, but possibly

1 BUEHRER, Ph.D.

2 Section 4, the relevant legal standards.

3 It's possible that I didn't edit that very
4 much, because it deals with legal
5 standards. But in general, I edit and
6 review everything in my declaration.

7 Q. How did you arrive at this
8 understanding of a POSITA?

9 A. Well, I started off by reviewing
10 the patent itself and the prior art for
11 this patent, and then as I said in my
12 declaration, paragraph 19, I considered
13 various factors, including levels of
14 education and experience of persons
15 working in the field at the time of the
16 invention, the sophistication of the
17 technology, the types of problems
18 encountered in the field, and the prior
19 art solutions to those problems.

20 Q. We have been going on for about
21 an hour. So maybe this would be a good
22 time to take a break. How does ten
23 minutes sound?

24 MR. HUH: Sounds good.

25 MR. PYMENTO: All right.

1 BUEHRER, Ph.D.

2 (A recess was taken from 10:22

3 a.m. until 10:36 a.m.)

4 BY MR. PYMENTO:

5 Q. Dr. Buehrer, could you please

6 turn to Exhibit 1, which is the '601

7 patent in this proceeding and, in

8 particular, turn to Claim 1.

9 A. Okay.

10 Q. So in Claim 1, the first line

11 states "A method for providing end-to-end

12 Quality of Service (QoS) within a mobile

13 telecommunication system comprising a Core

14 Network (CN) connected to at least one

15 Radio Access Network (RAN) using Internet

16 Protocol (IP) based transmission."

17 Do you see that?

18 A. Yes, I do.

19 Q. What is your understanding of

20 end-to-end Quality of Service?

21 A. So end-to-end Quality of Service

22 is -- is Quality of Service providing a

23 particular Quality of Service from one end

24 of a link to another end of a link.

25 Q. What is a link?

1 BUEHRER, Ph.D.

2 A. A link could be more
3 carefully -- it could be qualified -- it
4 could be defined as a flow, a flow of
5 particular packets.

6 Q. And the end-to-end Quality of
7 Service describes a flow from some end to
8 end; correct?

9 MR. HUH: Objection. Form.

10 A. The Quality of Service -- so
11 end-to-end Quality of Service describes
12 the Quality of Service from the -- one end
13 of the flow of packets to the other end of
14 the flow of packets, so from origin to the
15 destination.

16 Q. Could you provide an example of
17 what one of the origins or destinations
18 would be?

19 MR. HUH: Objection to form.

20 A. So origins and destinations
21 could be -- could include mobile terminals
22 and servers, application servers.

23 Q. Could you describe the term
24 "Quality of Service"? What is the Quality
25 of Service referring to?

1 BUEHRER, Ph.D.

2 MR. HUH: Objection. Form.

3 A. So Quality of Service generally
4 refers to how traffic is treated.
5 Typically, Quality of Service is referring
6 to something better than best effort
7 treatment. So as an example, DiffServ was
8 one example of Quality of -- providing
9 Quality of Service to traffic by
10 classifying the traffic into different
11 classes and treating them differently.

12 Q. Referring back to Claim 1, the
13 language there, do you see the term
14 "mobile telecommunication system"?

15 A. Yes, I do.

16 Q. Is another term for that
17 cellular networks or cellular network?

18 MR. HUH: Objection. Form.

19 A. So could you repeat your
20 question, please?

21 Q. Do you see the term "mobile
22 telecommunication system" in Claim 1?

23 A. Yes.

24 Q. Is another way of phrasing
25 mobile telecommunication systems cellular

1 BUEHRER, Ph.D.

2 network?

3 MR. HUH: Objection. Form.

4 A. I wouldn't necessarily say that
5 those terms are synonymous.

6 Q. Is there a relationship between
7 the two terms?

8 A. Well, there is a relationship.
9 Yes.

10 Q. In your opinion, what is the
11 relationship between the two terms?

12 A. That they have some
13 similarities, both deal with wireless,
14 both deal with communications.

15 Q. Could you describe the position
16 you just took a little earlier that they
17 are not synonymous? Why is that your
18 opinion?

19 MR. HUH: Objection. Form.

20 A. Well, they're at least not
21 synonymous because cellular could --
22 because cellular typically refers to a
23 particular type of wireless network or
24 mobile communication system.

25 Q. Could you describe how a

1 BUEHRER, Ph.D.

2 cellular network is a specific type of a
3 mobile telecommunication system?

4 A. A cellular network typically has
5 relatively long range, can cover large
6 areas, and has handoff mechanisms and
7 is -- uses the concept of cells in order
8 for terminals to move through the network.
9 That would not -- those characteristics
10 would not necessarily be true of all
11 mobile telecommunication systems.

12 Q. Is it fair to say that a
13 cellular network is a type of mobile
14 telecommunication system?

15 A. Certainly, a cellular -- it
16 would depend a little bit on the exact
17 context of how the two terms are being
18 used. But cellular -- a cellular
19 telecommunication system would be a type
20 of mobile telecommunication system.

21 Q. Is a network a telecommunication
22 system?

23 A. A network could be part of a
24 telecommunication system, again --

25 Q. Would you explain --

1 BUEHRER, Ph.D.

2 A. -- depending on the context of
3 how the term is used.

4 Q. Could you explain that context,
5 why it would be different or why it would
6 be or could be -- scratch that.

7 Could you explain why a network
8 could be a part of a telecommunication
9 system but could not be the
10 telecommunication system itself?

11 MR. HUH: Objection. Form.

12 A. Again, it would just depend on
13 the context. So if you gave me examples,
14 I could probably -- I could probably help
15 answer that question. But what I'm saying
16 is that terms sometimes get used in
17 slightly different ways. And the term
18 "network" can be used in different ways,
19 and so it would depend on the context
20 whether they were referring to an entire
21 system or not.

22 Q. In the context of Claim 1 of the
23 '601 patent, is a cellular network a
24 mobile telecommunication system?

25 MR. HUH: Objection. Form.

1 BUEHRER, Ph.D.

2 A. So in Claim 1, the mobile
3 telecommunication system has to have
4 certain features, as described within the
5 claim. So if a wireless network were
6 modified to have those claim terms, then
7 it would meet the definition of the mobile
8 telecommunication system as described.

9 Q. So in the context of Claim 1,
10 can a cellular network be the mobile
11 telecommunication system?

12 A. Again, if that cellular network
13 were modified or included, all the aspects
14 in -- met the limitations of Claim 1, then
15 it could be -- it could meet -- it could
16 be the mobile telecommunication system in
17 Claim 1.

18 Q. Can you turn to Column 5 in the
19 '601 patent, starting at around line 14.

20 A. Okay.

21 Q. Do you see where it says, "The
22 NRM" -- or Network Resource Managers --
23 "monitors and/or manages and/or reserves
24 resources within the network with IP based
25 transmission within the cellular

1 BUEHRER, Ph.D.

2 telecommunication system and a bearer
3 service manager, such as a RAB service
4 manager, manages radio resources in the
5 wireless part of the cellular
6 telecommunication network. How the radio
7 resource management function/entity
8 internally manages the resources within
9 the wireless part, is however beyond the
10 scope of this invention. It is hence
11 possible to obtain an end-to-end QoS
12 throughout the cellular telecommunication
13 system."

14 Do you see that section?

15 A. I do.

16 Q. Do you see that the patent
17 references the terms "cellular
18 telecommunication system" and "cellular
19 telecommunication network"?

20 A. I do.

21 Q. Is the patent referring to two
22 different things --

23 MR. HUH: Objection to form.

24 Q. -- with those terms?

25 A. So in the first sentence that

1 BUEHRER, Ph.D.

2 you read, it starts "The NRM monitors."
3 It says, "The NRM monitors and/or manages
4 and/or reserves resources within the
5 network with IP based transmission within
6 cellular telecommunication system." So
7 the cellular telecommunication system in
8 that sentence seems to be slightly more
9 broad than just the term "network" in that
10 particular sentence.

11 Q. In your opinion, does that
12 section refer to a singular network within
13 a cellular telecommunication system?

14 A. Are you referring to a
15 particular opinion I have in my
16 declaration, or are you asking me to form
17 a new opinion?

18 Q. I'm asking you your opinion on
19 this section of Column 5.

20 A. Okay. But is it not -- without
21 any reference to something in my
22 declaration, you're not asking me about an
23 opinion that's currently in my
24 declaration.

25 Q. I'm not sure if it's currently

1 BUEHRER, Ph.D.

2 in your declaration or not, but it has
3 implications to the claims in your
4 declaration. But it may be an opinion
5 related to it.

6 A. Okay. Can -- perhaps we should
7 go there.

8 Q. Well, I just want to ask your
9 opinion about Column 5. If you need to
10 consult your declaration, if you believe
11 that there's an opinion in that there
12 that's relevant, you may look at it. But
13 I'm just asking you about this section of
14 Column 5 of the '601 patent.

15 A. Okay. So ask your question
16 again. You're asking me to provide an
17 opinion --

18 Q. Sure.

19 A. -- on what?

20 Q. In your opinion, based on this
21 section of Column 5 of the '601 patent, is
22 there a singular cellular network within
23 the cellular telecommunication system?

24 MR. HUH: Objection. Form.

25 A. Okay. So you're asking me to

1 BUEHRER, Ph.D.

2 provide an opinion about one particular
3 paragraph which I -- again, I don't think
4 I provided an opinion only on one
5 particular paragraph. My opinions are
6 written within the scope of the entire
7 patent and particularly the claims. So
8 I'm a little uncertain how -- you know,
9 what you're asking me, how -- what it has
10 to do with the opinions that I've
11 provided.

12 Q. The opinions you provided are
13 related to the entire specification, as
14 you said, and this is a part of the
15 patent. So I'm just asking you about this
16 particular part of the patent.

17 A. Right.

18 Q. What's your understanding?

19 A. So again, I don't know that I
20 provided an opinion on the specific terms
21 within this paragraph in isolation.

22 Q. I understand that.

23 So now I'm asking you to -- I'm
24 asking you for your opinion on this
25 particular section of Column 5.

1 BUEHRER, Ph.D.

2 MR. HUH: Objection. Form.

3 A. And so you're asking me if this
4 particular paragraph is referring to a
5 single telecommunication network.

6 Q. No. I'm asking if this
7 paragraph refers to a single cellular
8 telecommunication network within a
9 cellular telecommunication system, since
10 you have just testified that the cellular
11 telecommunication system is something
12 broader than the cellular network. That's
13 what I'm asking.

14 A. Okay. To be clear --

15 MR. HUH: Objection. Form.

16 A. So to be clear, my testimony was
17 about a particular sentence, not about the
18 whole paragraph within -- I said it was
19 slightly broader. And I don't think that
20 I provided -- as I said, I didn't provide
21 an opinion that isolated one particular
22 paragraph. And again, unless you can show
23 me what broader -- what opinion from my
24 declaration I'm -- you're asking about,
25 I'm a little hesitant to form what seems

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2 to me to be a new opinion on the fly.

3 Q. Yeah. I would just prefer that
4 you just answer the question about what
5 Column 5 is describing, or at least that
6 question. If you want to limit it to
7 that.

8 I'm just asking does this
9 sentence describe a single cellular
10 network within a cellular
11 telecommunication system, in your expert
12 opinion?

13 MR. HUH: Objection. Form.

14 A. Yeah. I would say that you
15 really can't limit your understanding to a
16 single paragraph. You have to read a
17 paragraph within the context of the
18 entire -- of the entire patent. So to say
19 you want me to pull this one sentence or
20 one paragraph out of context and define
21 the terms, I think -- I'm not -- I'm not
22 ready to make that kind of -- to form that
23 kind of opinion on the record. I would
24 have to have some time to think about it.

25 Q. Yeah. Let me clarify the

1 BUEHRER, Ph.D.

2 question, then.

3 With respect to this singular
4 sentence, right, does it describe a
5 singular cellular telecommunication
6 network within a cellular
7 telecommunication system?

8 MR. HUH: Objection. Form.

9 A. So in this particular sentence,
10 the -- it could refer to either, right,
11 because again, in the context, they are
12 talking about at least one Network
13 Resource Managers in an overall system,
14 and in above, they were talking about
15 end-to-end Quality of Service in a
16 communication network more broadly. And
17 so in this particular sentence, they can
18 be referring to a specific NRM that's
19 monitoring a particular network but also
20 that you have multiple NRMs in -- that
21 are -- together are monitoring end-to-end
22 communications.

23 Q. And is the end-to-end
24 communications a particular network as
25 well?

1 BUEHRER, Ph.D.

2 A. They could be, but they might
3 not be.

4 Q. Could you describe from this
5 paragraph how it could not be or could be?

6 MR. HUH: Objection. Form.

7 A. So again, the patent isn't a
8 single paragraph; right? So right above
9 this, they're talking about end-to-end
10 QoS. Right? So a POSITA reading this
11 would know that in an end -- when we're
12 talking about two ends of a connection or
13 a flow, they could be in different
14 networks. But they could be in the same
15 network.

16 Q. Is it your testimony that
17 end-to-end QoS can be accomplished using
18 two different networks?

19 MR. HUH: Objection. Form.

20 A. So it is my testimony that if
21 end-to-end Quality of Service is to be
22 provided, and the lake or flow in question
23 crosses multiple networks, then you would
24 need to have management -- some kind of
25 bandwidth management or Quality of Service

1 BUEHRER, Ph.D.

2 management in both networks.

3 Q. Referring to specifically,
4 again, the sentence, I'm going to break it
5 up just to make it easier.

6 The paragraph says, "The NRM
7 monitors and/or manages and/or reserves
8 resources within the network with IP based
9 transmission."

10 In that segment of the sentence,
11 is it referring to a singular or plural
12 network?

13 MR. HUH: Objection. Form.

14 A. So reading that sentence, it
15 could be referring to a single network,
16 but it could also apply to a network -- a
17 connection that spans multiple domain --
18 network domains, multiple -- multiple
19 networks, as I believe you're using the
20 term.

21 Q. Okay. Could you describe how it
22 can span multiple networks.

23 MR. HUH: Objection. Form.

24 A. So the term "network" can refer
25 to simply the overall network that

1 BUEHRER, Ph.D.

2 connects two ends, a transmitter and a
3 receiver, two ends of the flow. But you
4 can also refer to network as a specific
5 network, by what we sometimes call a
6 network domain that is run by a particular
7 organization or managed by a particular
8 organization.

9 Q. And now the following part of
10 the sentence, do you see where it says
11 "such as a RAB service manager, manages
12 radio resources in the wireless part of
13 the cellular telecommunication network."

14 Is that a singular cellular
15 telecommunication network or a plural
16 cellular telecommunication network?

17 MR. HUH: Objection. Form.

18 A. Again, in this particular
19 sentence, it seems as though it could
20 refer to either.

21 Q. And just a clarifying question.

22 So before, we saw the word where
23 it just said "within the network." And at
24 the end of the sentence, it says "cellular
25 telecommunication network."

1 BUEHRER, Ph.D.

2 Are those two terms referring to
3 the same thing?

4 MR. HUH: Objection. Form.

5 A. I'm sorry. Which two terms?

6 Q. Within that sentence, it uses
7 the term "within the network," so the
8 network, and then at the end of the
9 sentence, it says "the cellular
10 telecommunication network."

11 Is the sentence referring to the
12 same thing?

13 MR. HUH: Objection. Form.

14 A. Well, it -- since they use
15 different terms, my initial thought would
16 be that perhaps it's different --
17 different things that are being referred
18 to there. But I would have to spend more
19 time thinking about it. Again, I don't
20 tend to interpret the sentence only within
21 the context of the sentence itself.

22 Q. Yeah. I mean, this is more for
23 a grammatical sort of situation where I'm
24 just asking you your interpretation of a
25 sentence and whether the network referred

1 BUEHRER, Ph.D.

2 to in the first part of the sentence is
3 the same as the cellular telecommunication
4 network at the end of the sentence.

5 MR. HUH: Objection. Form.

6 Asked and answered.

7 Q. Can you provide an opinion on
8 that?

9 A. So I didn't formulate an opinion
10 on that question as far as I can recall
11 from my declaration. As I sit here today,
12 as I mentioned, my first inclination in
13 reading the sentence is that it's using
14 two different words or two different
15 phrases, that they're referring to
16 slightly different things, similar, but
17 slightly different. But generally
18 speaking, you need to interpret the
19 sentence within the context of the entire
20 patent rather than just pulling it out and
21 trying to isolate what's meant in that
22 particular sentence. So --

23 Q. Is it your testimony that you
24 cannot provide an opinion on your
25 interpretation of a singular sentence

1 BUEHRER, Ph.D.

2 within the patent?

3 MR. HUH: Objection. Form.

4 A. It is my testimony that, A, I
5 prefer to not create new opinions on the
6 fly; and that as I read that, sitting here
7 today, it appears to me that because the
8 terms are different, they seem to be
9 referring to two different things.
10 However, there is definitely similar, and
11 so the exact nature of the two terms and
12 the exact similarities and differences
13 were to require some more thought,
14 especially because you're restricting it
15 to that particular section.

16 Q. For the first part of the
17 sentence, "The NRM monitors and/or manages
18 and/or reserves resources," do you have an
19 interpretation of what that means?

20 MR. HUH: Objection. Form.

21 A. I would say that it means just
22 what it says, the NRM monitors and/or
23 manages and/or reserves resources.

24 Q. And continuing that, it says,
25 "The NRM monitors and/or manages and/or

1 BUEHRER, Ph.D.

2 reserves resources within the network."

3 Do you have an interpretation on
4 that?

5 MR. HUH: Objection. Form.

6 A. So again, we've been through
7 this. The term "the network" could refer
8 to the end-to-end network, which may span
9 multiple networks. It may be just the
10 specific -- a single network, but it could
11 potentially mean either of those things
12 and still be consistent with the patent.

13 Q. So the following term "cellular
14 communication network" in the same
15 sentence, is that also consistent with
16 there being multiple networks in the
17 patent?

18 MR. HUH: Objection. Form.

19 A. Could you repeat your question,
20 please?

21 MR. PYMENTO: May the court
22 reporter please repeat the question.

23 (The requested portion of the
24 record was read.)

25 MR. HUH: Objection. Form.

1 BUEHRER, Ph.D.

2 A. Well, just as a first order, the
3 term I think you're talking about,
4 cellular telecommunication system?

5 Q. No. It's the end of the
6 sentence, cellular telecommunication
7 network.

8 A. Oh, cellular telecommunication
9 network. All right. And you're asking me
10 whether that term is consistent with there
11 being multiple networks in the patent.

12 Q. Correct, just as you had
13 previously testified as to the singular
14 word "network" in the same sentence.

15 MR. HUH: Objection. Form.

16 A. So this sentence's use of the
17 term "cellular telecommunication network"
18 does not necessarily have any bearing on
19 whether there could be multiple networks
20 described in the patent.

21 MR. HUH: Hey Counsel, at an
22 opportune time, I need to take a
23 break. I've got to take care of
24 something.

25 MR. PYMENTO: Yeah. That's

1 BUEHRER, Ph.D.

2 fine. A ten-minute break?

3 MR. HUH: Sure.

4 (A recess was taken from 11:40
5 a.m. until 11:55 a.m.)

6 BY MR. PYMENTO:

7 Q. Dr. Buehrer, are you familiar
8 with WCDMA?

9 A. Yes, I am.

10 Q. Could you describe that system,
11 please.

12 A. Sure. WCDMA is -- otherwise
13 known as UMTS, was a 3G cellular network
14 standard defined by 3GPP, a cellular
15 telecommunication standard specified by a
16 3GPP.

17 Q. Are you familiar with the
18 concept of core network?

19 A. The term -- the term "core
20 network"? Is that what you're asking?

21 Q. Sure. Yes.

22 A. So within 3GPP, WCDMA? Is that
23 the context that you're asking the
24 question or something more broad?

25 Q. More broad.

1 BUEHRER, Ph.D.

2 What is your understanding of
3 the term "core network"?

4 MR. HUH: Objection. Form.

5 A. So core network, of course, is
6 a term in Claim 1. And I did not construe
7 any of the claim terms in my analysis but
8 rather applied the plain and ordinary
9 meaning as a POSITA would understand in
10 the context of the patent. But a core
11 network is generally -- or -- is generally
12 a wireline network, and certainly an
13 example of a core network is the core
14 network in WCDMA.

15 Q. Could you describe that
16 relationship between WCDMA and core
17 network further?

18 A. It is simply an example of a
19 core network. Core network is a broader
20 term than that, but it's -- the core
21 network in WCDMA is in fact called a core
22 network and is an example of a core
23 network.

24 Q. What is your understanding of
25 the term in Claim 1 Radio Access Network?

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2 MR. HUH: Objection. Form.

3 A. Again, I didn't construe the
4 claims, but consistent with the --
5 consistent with the understanding of a
6 person of ordinary skill, the plain and
7 ordinary meaning would certainly include
8 the Radio Access Network in WCDMA. Again,
9 that term may be a little broader than
10 that, but certainly the WCDMA Radio Access
11 Network would be an example of a RAN.

12 Q. Sort of a little broader.

13 What is a Radio Access Network?

14 A. As I said, I didn't construe the
15 term, but the radio -- the term Radio
16 Access Network kind of explains itself.
17 It is a network of -- a network that
18 provides radio access to wireless
19 terminals. And an example of that is the
20 RAN that's in WCDMA.

21 Q. Could you further describe the
22 relationship between WCDMA and Radio
23 Access Network?

24 A. WCDMA as a wireless system
25 requires a method for wireless terminals

1 BUEHRER, Ph.D.

2 to access its network. The Radio Access
3 Network provides that access.

4 Q. Turning to another limitation
5 within Claim 1.

6 Do you see where it says
7 "controlling IP network resources by using
8 a network map"?

9 A. I'm sorry. Could you repeat
10 that?

11 Q. Sure. Do you see the limitation
12 in Claim 1 which says "controlling IP
13 network resources by using a resource
14 map"?

15 A. Yes. I'm sorry. I for some
16 reason kept missing that. Yes. I do see
17 it.

18 Q. What is your understanding of a
19 resource map?

20 A. So a resource map, again, as the
21 name would imply, is a map of the
22 resources in the overall network, and as
23 an example, having a map of current
24 allocated bandwidth and new requests for
25 bandwidth would be one example of a

1 BUEHRER, Ph.D.

2 resource map.

3 Q. In your opinion, does a resource
4 map relate to a core network?

5 MR. HUH: Objection. Form.

6 A. So a resource map could be
7 applied to a core network.

8 Q. How can it be applied?

9 A. It can be -- the resource map
10 could be used to control the IP network
11 resources within the core network.

12 Q. In your opinion, would a
13 resource map relate to a Radio Access
14 Network?

15 MR. HUH: Objection. Form.

16 A. I'm sorry. Could you repeat
17 your exact question, please?

18 Q. In your opinion, would a
19 resource map relate to a Radio Access
20 Network?

21 MR. HUH: Same objection.

22 A. Again, the -- a radio resource
23 map could be used to control IP resources
24 in the Radio Access Network.

25 Q. So hypothetical question: If an

1 BUEHRER, Ph.D.

2 NRM does not have control over radio
3 resources in a network, can it still
4 provide end-to-end QoS?

5 MR. HUH: Objection. Form.

6 A. So if -- I'm sorry. Could you
7 repeat the question again, please, so I
8 remember it?

9 Q. Sure. Sure. If an NRM does not
10 have control over radio resources in a
11 network, can it still provide end-to-end
12 QoS?

13 MR. HUH: Objection. Form.

14 A. So if some other entity controls
15 the radio resources, but the network --
16 the NRM can make requests or can negotiate
17 with that resource manager, then yes, it
18 can guarantee QoS, end-to-end QoS.

19 Q. In the answer you gave, are you
20 assuming that the NRM does have control or
21 does not have control over radio resources
22 in a network?

23 MR. HUH: Objection. Form.

24 A. I'm assuming that the NRM has
25 the ability to negotiate with the resource

1 BUEHRER, Ph.D.

2 manager or whoever is controlling the
3 radio resources so that it can obtain
4 those radio resources, contain access to
5 those radio resources, even if that
6 radio -- that resource manager or --
7 controls the resources, it still can
8 negotiate and provide those resources to
9 the NRM.

10 Q. So your testimony is that if an
11 NRM does not directly control radio
12 resources in a network but can negotiate
13 with a manager who does, it can still
14 provide end-to-end QoS?

15 MR. HUH: Objection. Form.

16 A. So again, in your hypothetical,
17 you seem to be assuming that the radio
18 resource manager would have no reason to
19 listen to the NRM. Right? But the radio
20 resource manager clearly is part of -- is
21 trying to achieve the same goals. And so
22 my testimony is that even if the NRM does
23 not have direct control over those radio
24 resources, if it can communicate with the
25 entity that does, it can provide

1 BUEHRER, Ph.D.

2 end-to-end Quality of Service by
3 determining through communication whether
4 adequate resources are available in the
5 radio -- from the radio resource manager
6 or resource manager who does control.

7 Q. Is it possible for radios that
8 are under the control of two
9 telecommunications providers to be
10 integrated by a third party who has no
11 access to the radios to perform end-to-end
12 QoS?

13 MR. HUH: Objection. Form.

14 A. I'm not exactly sure what you're
15 asking me. Could you repeat that or maybe
16 clarify?

17 Q. Sure. Sure. In a hypothetical
18 where there are radios under the control
19 of two telecommunications providers, is it
20 possible for them to be integrated by a
21 third party who has no access to the
22 radios to perform end-to-end QoS?

23 MR. HUH: Objection. Form.

24 A. Okay. So I'm a little -- I'm
25 not exactly sure what you mean by

1 BUEHRER, Ph.D.

2 "controlled" when you talk about the
3 radios being controlled by two different
4 network service providers. And then
5 what's -- the third party is integrating?
6 I'm not sure what you mean by integrating.
7 Could you maybe elaborate, please?

8 Q. Sure. Right. So are you
9 confused about probably there are radios
10 under the control of two different
11 telecommunications providers? Is that --

12 A. Well, I'd like clarification on
13 that first. That would be great.

14 Q. Sure. I mean, what's the
15 confusion?

16 A. So what do you mean they're
17 under the control of? You mean they're
18 within two different networks? They're --
19 what -- are they in the same network but
20 somehow one network has control over it?
21 I don't know what you mean.

22 Q. The radios have two different
23 telecommunications providers.

24 A. Okay. So you're talking about
25 two cellphones that are in two different

1 BUEHRER, Ph.D.

2 networks. All right? So they're under
3 the control of two different service
4 providers.

5 Q. Can they be -- can those radios
6 be integrated by a third party who has no
7 access to the radios in order to perform
8 end-to-end QoS?

9 MR. HUH: Objection. Form.

10 A. I don't know what you mean by
11 integrated. What do you mean integrated?
12 Sorry.

13 Q. Can a third party manage the two
14 radios in order to perform end-to-end QoS?

15 A. I mean, I'm not sure what this
16 hypothetical -- is this related to
17 something in my declaration?

18 Q. The questions are related and
19 particularly to this claim limitation that
20 I'm talking about. But I'm just providing
21 a hypothetical. I mean, that's all it is.

22 A. Right. I understand.
23 Hypotheticals, though, are fraught with
24 issues.

25 I mean, why is the third

1 BUEHRER, Ph.D.

2 party -- what is this mysterious third
3 party? What is the third party doing?
4 And why are they trying to -- and again,
5 what does "integrated" mean? They're just
6 providing end-to-end QoS?

7 Q. Can a third party provide
8 end-to-end QoS for two radios with
9 different telecommunication providers?

10 MR. HUH: Objection to form.

11 A. I guess I would need a lot more
12 information.

13 Q. What information would you need?

14 A. Well, are there agreements in
15 place between these providers and this
16 third party?

17 Q. First let's say there are
18 agreements, and then let's say there
19 aren't. So let's go with the agreements
20 first.

21 Would it be possible?

22 MR. HUH: Objection to form.

23 A. So the third party has no access
24 to the resources whatsoever?

25 Q. Sure.

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2 A. I mean, the question doesn't
3 make any sense.

4 Q. Does that not simplify the
5 answer?

6 A. I mean, it makes the question
7 kind of nonsensical. How can this third
8 party, who doesn't have an agreement in
9 place, who doesn't have any control over
10 the resources provide end-to-end -- I'm
11 not sure I --

12 Q. Right. I mean, you sort of
13 answered the question right there, and
14 that's the question I'm trying to ask you.

15 So, I mean, are you
16 saying that's -- it's not possible, then;
17 correct?

18 MR. HUH: Objection. Form.

19 A. I would -- I would not say it's
20 impossible, because I don't know the -- I
21 don't know the situation. When you start
22 creating hypotheticals, I don't know what
23 you have baked into all of the
24 assumptions.

25 Q. And I'm asking you to the extent

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2 that you believe that there should be
3 assumptions, I'm asking you what those
4 assumptions should be.

5 MR. HUH: Objection to form.

6 A. As I sit here today, I can't
7 think through on the fly all the possible
8 assumptions that I might need to provide.
9 If it's not a specific -- I don't
10 understand how it relates to the opinions
11 I've provided, and I'm hesitant to comment
12 on a hypothetical that -- where I haven't
13 thought through what assumptions are
14 needed and what other information -- it's
15 a pretty broad question.

16 Q. That's fine.

17 Let's turn to Patel. And I'll
18 ask a broad question about Patel.

19 Patel discloses a bandwidth
20 broker; correct?

21 A. Yes. It discloses a bandwidth
22 broker.

23 Q. Is the bandwidth broker in the
24 system of Patel used on the wireline side?

25 MR. HUH: Objection. Form.

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2 A. Okay. So as I state in
3 paragraph 167, a POSITA would have
4 understood that a bandwidth broker is a
5 logical entity that may take either a
6 centralized or a distributed approach or a
7 combination of both. For instance, it
8 would have been obvious based on
9 implementation specifics for Patel's
10 bandwidth broker to be distributed, such
11 that one bandwidth broker is used within
12 the wireless network 12 and another
13 bandwidth broker is used within the
14 wireline IP network 24, as suggested by
15 disclosure of related Patel 764.

16 Q. But you're simplifying that is
17 Patel's bandwidth broker used on the
18 wireline side?

19 MR. HUH: Objection. Form.

20 A. So first, to be clear, my
21 opinions are on the combination of Patel
22 and the two Schelen references. Right?
23 But my opinion is that it would have
24 been -- a POSITA would understand, based
25 on reading Patel, that the bandwidth

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2 broker could be distributed both in the
3 wireless and in -- within the wireline
4 network to achieve the end-to-end QoS.

5 Q. So is your testimony that Patel
6 discloses a bandwidth broker used on the
7 wireline side?

8 A. So I think -- my testimony -- I
9 think as I said, my testimony is that a
10 POSITA would have understood, reading
11 Patel, that the bandwidth broker could be
12 distributed in both the wireless and the
13 wireline networks to control both.

14 Q. Does Patel explicitly describe
15 the bandwidth broker used on the wireline
16 side?

17 A. So Patel -- in Patel, the goal
18 is clearly to provide end-to-end QoS, and
19 thus, a POSITA would know that the
20 bandwidth provider, which they know would
21 be distributed -- can be distributed --
22 can be certainly -- it would have been
23 obvious to have a bandwidth provider that
24 controls the wireline and controls the
25 wireless. And certainly, inside the

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2 combination of Patel, Schelen and Schelen,
3 that would -- it would have been obvious
4 to have a bandwidth broker controlling the
5 wireline portion.

6 Q. So it's your testimony that
7 Patel alone does not disclose a bandwidth
8 broker on the wireline side?

9 A. My testimony is that a POSITA
10 reading Patel would have -- it would have
11 found it obvious or would have understood
12 that the bandwidth provider would also
13 control the IP -- the wireline portion but
14 that certainly, in looking -- looking for
15 additional details on implementing this
16 system, the combination with Schelen and
17 Schelen would absolutely disclose and
18 make -- render obvious having a bandwidth
19 broker controlling the IP resources or
20 controlling the wireline portion.

21 MR. HUH: Hey, Counsel, if we're
22 going to do lunch, and you guys are on
23 Eastern time, and Dr. Buehrer, you
24 know, if you're looking to have lunch,
25 it's already 12:30 your time about.

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2 I'm fine with going, but if we're
3 going to go longer, you may want to
4 pick an opportune time for lunch. I'm
5 not forcing the issue. You guys -- I
6 think you're ahead of me. But just be
7 mindful of that. So Michael, if you
8 want to take lunch, you know, we can
9 accommodate that.

10 THE WITNESS: I guess --

11 MR. PYMENTO: It's up to you.

12 THE WITNESS: I'm sorry. Go
13 ahead. Julian, what were you saying?

14 MR. PYMENTO: You could take
15 lunch later also. It's up to you
16 whether you want to do it now or
17 later.

18 THE WITNESS: Well, we could go
19 maybe another 15 minutes and then have
20 lunch.

21 MR. PYMENTO: That works for me.

22 THE WITNESS: Okay.

23 BY MR. PYMENTO:

24 Q. Referring to the rest of the
25 claim limitation we were discussing in the

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2 '601 patent, do you see the term
3 "path-sensitive call admission control"?

4 A. Yes.

5 Q. What is your understanding of a
6 path-sensitive admission control?

7 MR. HUH: Objection. Form.

8 A. So -- so admission -- call
9 admission control is simply the process of
10 determining which new flows you accept
11 into the network. And path-sensitive call
12 admission control simply takes the path
13 into account when making those decisions.

14 Q. In your opinion, does Patel
15 disclose an admission control?

16 MR. HUH: Objection to form.

17 A. Yes. I'm sorry. Could you
18 repeat your question to make sure I
19 remember the exact phrasing?

20 Q. Does Patel disclose an admission
21 control?

22 A. Yes. I believe it does.

23 Q. Could you point me to where it
24 does?

25 A. Sure. In the summary of the

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2 invention, they talk about requests coming
3 in for specific services and then the
4 bandwidth broker has to make a decision as
5 to whether or not to grant that request.
6 That is clearly admission control.

7 Q. And in your opinion -- we
8 touched on this briefly before -- does
9 Patel's bandwidth broker make requests to
10 a resource manager?

11 MR. HUH: Objection. Form.

12 A. So as I say in paragraph 214,
13 Patel-225 discloses that the resource
14 manager receives requests for wireless
15 services from the bandwidth broker.

16 Q. Sorry. Which paragraph was
17 that?

18 A. Paragraph 214.

19 Q. So in other words, a bandwidth
20 broker makes a request to a resource
21 manager; correct?

22 MR. HUH: Objection. Form.

23 Q. I'll actually rephrase the
24 question.

25 Does Patel disclose a bandwidth

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2 broker in making requests to a resource
3 manager?

4 A. Does -- the question is does
5 Patel disclose a bandwidth broker in
6 making requests for -- to a resource
7 manager? That's the question?

8 Q. Yes.

9 A. Okay. So again, in my -- in
10 paragraph 214, I say Patel discloses the
11 resource manager receives requests for
12 wireless services from a bandwidth broker.

13 Q. Right. And I'm sort of
14 rephrasing it just to say does Patel
15 disclose a bandwidth broker that makes
16 requests to a resource manager?

17 MR. HUH: Objection. Form.

18 A. So as I say here, so the
19 bandwidth broker can -- so -- I'm sorry.
20 It can be that the resource manager
21 receives requests from the bandwidth
22 broker, but also, the bandwidth broker can
23 negotiate with the resource managers in
24 order to broker the bandwidth.

25 Q. Okay. So I know we said we

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2 would go on for 15 minutes more, but I'm
3 actually almost done. I don't know if you
4 want to just power through my remaining
5 questions, and then we can call it, unless
6 of course your counsel has additional
7 questions. It's up to you.

8 A. Do you have a rough guesstimate
9 of how long you think it will be? I know
10 there's no guarantees, but--

11 Q. I would say 30 minutes tops.
12 But --

13 A. Okay.

14 Q. -- it could be less.

15 A. All right. Yeah. I could do
16 that.

17 Q. Okay. Great.
18 Let's turn to Patel, Column 6,
19 line 22.

20 Just let me know when you're
21 there.

22 A. Okay. I'm there.

23 Q. Do you see where it says,
24 "Figure 2 illustrates wireless service
25 terms for a service level agreement (SLA)

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2 in accordance with one embodiment of the
3 present invention"?

4 A. Yes, I see that.

5 Q. As a person of ordinary skill in
6 the art, do you possess a certain
7 understanding of the term "SLA" or
8 "service level agreement"?

9 A. Are you asking if I have a broad
10 understanding of service level agreement,
11 or more specifically what it means in
12 this -- in this context?

13 Q. If you could, could you please
14 describe both?

15 MR. HUH: Objection to form.

16 A. So a service level agreement, as
17 it says in Patel, it can be used to --
18 essentially, it's a message or a
19 communication between potentially a
20 consumer and the bandwidth broker or
21 between a bandwidth and the resource
22 manager, and it defines several
23 characteristics of the request -- of the
24 resources requested.

25 Q. Is it fair to also describe an

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2 SLA as an agreement between providers and
3 wireless users?

4 A. I wouldn't restrict it to that,
5 no.

6 Q. Is it possible that an SLA is an
7 agreement between providers and wireless
8 users?

9 MR. HUH: Objection. Form.

10 A. It says the SLA can -- I'm
11 sorry. Strike that.

12 I don't see where in Patel it
13 uses that exact phrase.

14 Q. Would you turn to Column 6,
15 line 4.

16 Do you see where it says, "As
17 described in more detail below, the
18 bandwidth providers 28 may receive
19 requests for wireless services directly
20 from consumers and broadcast the request
21 to network providers capable of providing
22 the specified wireless services"?

23 Do you see that?

24 A. Not -- okay. Now I found it.

25 Q. Do you see it?

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2 A. I see it now, yes.

3 Q. Okay. Is that section referring
4 to SLAs?

5 A. I don't know that that
6 particular section is referring to SLAs.

7 Q. You don't know or you can't
8 tell?

9 A. That particular paragraph does
10 not seem to be describing SLAs or does not
11 discuss SLAs. It's just talking about
12 requests in general.

13 Q. Do you see Column 5, lines 31 --
14 the paragraph beginning at line 31 of
15 Column 5?

16 A. Line 31 of Column 5. Yes.

17 Q. Is that paragraph discussing
18 SLAs?

19 A. So at the end of the paragraph,
20 it does discuss SLAs. It says, "The
21 agreed-upon terms define a SLA and may
22 specify a wireless region, price, time,
23 type of service, bandwidth, and other
24 suitable conditions of service. The SLA
25 will be checked and enforced/ensured by

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2 the network elements during use of the
3 wireless service as packets are
4 transmitted over the cellular network."

5 Q. And the agreed-upon terms in the
6 section you just read are agreed between a
7 resource manager and a requester; correct?

8 MR. HUH: Objection. Form.

9 A. It says, "Based on the request
10 and the response, additional negotiations
11 may occur between the resource manager and
12 the requester in order to agree on the
13 terms -- to agree on terms at which the
14 wireless service will be provided."

15 Q. Is it your testimony that
16 Patel's bandwidth broker discloses the
17 claimed resource manager?

18 A. Say that again?

19 Q. Is it your testimony that
20 Patel's bandwidth broker discloses the
21 claimed resource manager?

22 MR. HUH: Objection. Form.

23 A. So it's my testimony that in
24 Patel-225, the bandwidth provider or
25 bandwidth broker corresponds to the

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2 network resource manager.

3 Q. Is it your testimony that Patel
4 discloses bandwidth brokers that
5 communicate with other bandwidth brokers?

6 MR. HUH: Form.

7 A. So in paragraph 169, I state
8 that "Patel-225 discloses that the
9 bandwidth brokers control and allocate
10 internet or other network bandwidth and
11 that the bandwidth brokers manage the
12 allocations of bandwidth within their
13 network domain and communicate with the
14 bandwidth brokers of other network domains
15 to negotiate QoS parameters." And both of
16 those are quotes or parts of quotes or --
17 yeah. They're essentially full quotes
18 from Patel.

19 Q. You mentioned earlier that you
20 reviewed the institution decision in this
21 case prior to this deposition.

22 Based on reviewing that
23 decision, did you want to revise anything
24 in your declaration?

25 A. Not that I -- again, I

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2 skipped -- I skipped the institution
3 decision. But at this time, I don't have
4 anything I'd like to change in my
5 declaration.

6 MR. PYMENTO: No further
7 questions from me. I'll pass the
8 witness.

9 MR. HUH: Thank you, Counsel.
10 Give me two minutes, please. I'll be
11 right back shortly.

12 MR. PYMENTO: Sure.

13 (A recess was taken from 1:14
14 p.m. until 1:15 p.m.)

15 MR. HUH: No questions from
16 petitioner. Thank you, everybody. I
17 appreciate it.

18 (TIME NOTED: 1:16 p.m.)

19
20 -----
21 R. MICHAEL BUEHRER, Ph.D.

22
23 -----
24 Subscribed and sworn to
25 before me this _____
day of _____, 2024.

Notary Public

I N D E X

WITNESS	EXAMINATION BY	PAGE
R. MICHAEL BUEHRER	MR. PYMENTO	3

E X H I B I T S

DEPOSITION	DESCRIPTION	PAGE
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Exhibit 3	Curriculum vitae of R. Michael Buehrer	9
Exhibit 4	United States Patent No. 7,043,225	9
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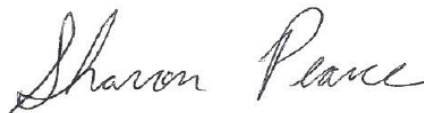
CERTIFICATION

I, SHARON PEARCE, RDR, CRR, CRC,
NYRCR, a Notary Public for and within the
State of New York, do hereby certify:

That the witness whose testimony as
herein set forth, was duly sworn by me;
and that the within transcript is a true
record of the testimony given by said
witness.

I further certify that I am not
related to any of the parties to this
action by blood or marriage, and that I am
in no way interested in the outcome of
this matter.

IN WITNESS WHEREOF, I have hereunto
set my hand this 28th day of December,
2023.



SHARON PEARCE

RDR, CRR, CRC, NYRCR

* * *

ERRATA SHEET
VERITEXT/NEW YORK REPORTING, LLC

CASE NAME: CISCO SYSTEMS, INC. v.
NETSOCKET, INC.
DATE OF DEPOSITION: December 15, 2023
WITNESS' NAME: R. MICHAEL BUEHRER, Ph.D.
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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.

VERITEXT LEGAL SOLUTIONS

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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