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B. Maggs

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

LG ELECTRONICS, INC., et al
Petitioners

v.

STRAIGHT PATH IP GROUP, INC.
(FORMERLY KNOWN AS INNOVATIVE COMMUNICATIONS
TECHNOLOGIES, INC.)
Patent Owner

Case IPR2015-00196
Patent 6,131,121
Case IPR2015-00198
Patent 6,009,469
Case IPR2015-00209
Patent 6,108,704

DEPOSITION OF BRUCE M. MAGGS, Ph.D.
Washington, D.C.
August 6, 2015

Reporter: Mary Ann Payonk

Job No. 95058

B. Maggs

August 6, 2015
9:04 a.m.

Deposition of BRUCE M. MAGGS, Ph.D., held at 901 New York Avenue, N.W., Washington, D.C., pursuant to Notice before Mary Ann Payonk, Nationally Certified Realtime Reporter and Notary Public of the District of Columbia, Commonwealth of Virginia, States of Maryland and New York.

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APPEARANCES:
ON BEHALF OF PETITIONER:
SHARIF JACOB, ESQUIRE
KEKER & VAN NEST
633 Battery Street
San Francisco CA 94111

RAJEEV GUPTA, Ph.D., ESQUIRE
FINNEGAN HENDERSON FARABOW
GARRETT & DUNNER
901 New York Avenue, N.W.
Washington, D.C. 20001

ON BEHALF OF PATENT OWNER:
MICHAEL NEWMAN, ESQUIRE
NICHOLAS ARMINGTON, ESQUIRE
MINTZ LEVIN COHN FERRIS
GLOVSKY and POPEO
One Financial Center
Boston, Massachusetts 02111

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APPEARANCES (Cont'd.)
ON BEHALF OF VIZIO:
RICHARD WELLS, ESQUIRE
BAKER & McKENZIE
815 Connecticut Avenue, N.W.
Washington, D.C. 20006

ON BEHALF OF CISCO SYSTEMS, INC.:
JASON LISS, ESQUIRE
WILMERHALE
60 State Street
Boston, Massachusetts 02109

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MR. NEWMAN: For the record, the parties have an agreement with respect to this deposition. The parties have agreed that a single consolidated deposition would be used for three related IPRs. Those IPRs are IPR 2015-00196, IPR 2015-00198, and IPR 2015-00209. The parties agree that this deposition can be used in each of those three separate IPRs.

In exchange, the parties have agreed to attempt to limit depositions in this matter to a single day; however, the parties have agreed to reserve a second day in the unlikely event that more time is reasonably required. That said, the parties will make every effort to complete depositions in a single day.

MR. JACOB: That agreement is a reciprocal arrangement and also applies to any experts that Straight Path furnishes.

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 2 BRUCE M. MAGGS, Ph.D.,
 3 called as a witness, having been duly
 4 sworn, was examined and testified as
 5 follows:
 6 EXAMINATION
 7 BY MR. NEWMAN:
 8 Q. Good morning, Dr. Maggs.
 9 A. Good morning, Mr. Newman.
 10 Q. Are you aware that this deposition
 11 has now begun and that you may not consult with
 12 counsel during any break regarding the
 13 substance of your testimony --
 14 A. Yes, I do. Thank you.
 15 Q. -- that you have given or you expect
 16 to give today?
 17 A. Yes, I am. And thank you for the
 18 reminder.
 19 MR. JACOB: And that instruction is
 20 not quite right. At the point at which
 21 you pass the witness, I'm permitted to
 22 consult with him. But before, before he
 23 passes the witness, we're not permitted
 24 to consult during any breaks.
 25 MR. NEWMAN: That's not my

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 2 owned by eBay, and I was deposed after
 3 providing an expert report for a district
 4 court.
 5 Q. Do you still have the expert report
 6 from the 2008 litigation IDT versus Skype?
 7 A. I don't know.
 8 Q. Do you have the testimony or the
 9 transcript from that deposition?
 10 A. I don't know. Whatever I was
 11 instructed to do about materials after that
 12 case settled, I complied with. And it's been a
 13 long time. I would have to go look and see
 14 what I was permitted to retain.
 15 Q. But you did not rely on either that
 16 expert report or the deposition testimony in
 17 the IDT versus Skype case in forming your
 18 opinions as expressed in your declaration in
 19 these IPRs?
 20 A. No, I did not.
 21 Q. When was the second time you were
 22 deposed with respect to these patents?
 23 A. I was deposed last year by Mintz
 24 Levin in a -- I don't know what you call it,
 25 but a case before ITC that was brought against

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 2 understanding of the rules, but we can
 3 have a discussion off the record with
 4 respect to that.
 5 BY MR. NEWMAN:
 6 Q. Can you please state your name for
 7 the record?
 8 A. My name is Bruce MacDowell Maggs.
 9 Q. Your date of birth, please?
 10 A. May 9, 1963.
 11 Q. Have you been deposed before?
 12 A. Yes, I have.
 13 Q. Have you been deposed before with
 14 relationship to any of the asserted patents at
 15 issue in these IPRs?
 16 A. Yes, I have.
 17 Q. How many times have you been deposed
 18 with respect to the patents at issue in these
 19 IPRs?
 20 A. Twice prior to this deposition. This
 21 will be the third.
 22 Q. When was the first time?
 23 A. The first time was in -- I believe
 24 was in 2008. There was litigation by -- I
 25 believe it was IDT versus Skype, which was

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 2 Sony and other respondents.
 3 Q. Was that the 892 investigation at the
 4 ITC?
 5 A. I don't remember the number. I'd
 6 have to look that up.
 7 Q. And do you still have your expert
 8 reports from that ITC investigation?
 9 A. I have a redacted copy of my expert
 10 report.
 11 Q. And do you have the deposition
 12 transcript from the ITC investigations
 13 deposition?
 14 A. No, I don't.
 15 Q. So you didn't rely on the deposition
 16 transcript in the ITC to inform your opinions
 17 in your declaration --
 18 A. No.
 19 Q. -- submitted here?
 20 A. No.
 21 Q. Did you rely on your expert report
 22 submitted in the ITC in forming your opinions
 23 in the declaration you've submitted in these
 24 IPRs?
 25 A. No, I did not.

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2 Q. So I just handed you an exhibit
3 that's marked LG Electronics Exhibit 1002. It
4 goes from page 1, ends at page 75. Do you
5 recognize this document?

6 A. Yes, I do.

7 Q. And what is it?

8 A. This is one of the three declarations
9 that I submitted. This one concerns what we
10 call the '704 patent. It was submitted as part
11 of this IPR.

12 Q. Did you draft this declaration?

13 A. Yes, I did.

14 Q. And do you understand that the '704
15 patent is the parent to the '121 and the '469
16 patents?

17 A. Yes, I do.

18 Q. Are the statements in this
19 declaration true to the best of your knowledge?

20 A. They are. I noticed one small
21 typographical error. I don't think it's of any
22 import, and I'm happy to point that out to you.
23 But yes, I believe these statements are true.

24 Q. Is it the WINSWINSWINS?

25 A. Actually, I didn't even count that

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2 one, but that was a little exuberance there.
3 May I point it out to you?

4 Q. Yes, please.

5 A. There's a figure on page 11, and in
6 paragraph 13 above the figure, it says, near
7 the bottom, it says "LANS 3 and 4." I believe
8 that should say "LANS 2 and 3." It's a minor
9 typo. It's just summarizing a figure from
10 another document.

11 Q. In paragraph 13, that's summarizing
12 the figure from a reference called Perkins;
13 correct?

14 A. That's correct. And I think this
15 typographical issue is in all three of my
16 declarations.

17 Q. Did you rely on the Perkins reference
18 in coming up with your opinion in this
19 declaration?

20 A. No. Perkins is here as an
21 illustration of the state of the art at the
22 time.

23 Q. So the Perkins reference is not
24 before PTAB in this matter; correct?

25 A. Well, I don't know the answer to

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2 that, but it isn't the basis of my conclusions
3 regarding obviousness.

4 Q. Do you think the Perkins reference
5 could have been reasonably raised with PTAB?

6 MR. JACOB: Objection, legal
7 conclusion, foundation.

8 A. I think the Perkins reference is
9 interesting because it was once before the
10 patent examiner, and the inventors or their
11 counsel explained to the examiner that Perkins
12 did not support point-to-point communications
13 because packets passed through gateways. I
14 think that that's an interesting issue. I
15 think depending on how that's resolved, this
16 reference could very well anticipate the
17 patents, but it's not the basis of my opinions
18 in this declaration.

19 BY MR. NEWMAN:

20 Q. So you think that it could have been
21 brought before a PTAB?

22 MR. JACOB: Legal conclusion,
23 foundation.

24 A. I don't know all the rules about what
25 can be brought before PTAB. It's a written

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2 reference, so as far as I know, you can bring
3 written references before PTAB. It's prior
4 art. But otherwise, I can't answer that
5 question.

6 BY MR. NEWMAN:

7 Q. So where do you currently work?

8 A. My full-time position is at Duke
9 University in Durham, North Carolina.

10 Q. Proud of the Blue Devils this year?

11 A. That was a nice basketball season. I
12 also hold a part-time position one day a week
13 with Akamai Technologies, a company that I
14 helped create.

15 Q. And at Duke you teach classes to
16 undergraduates?

17 A. Yes, I teach classes to both
18 undergraduates and graduate students. I
19 typically teach an undergraduate course in the
20 fall and a graduate course in the spring.

21 Q. What courses do you teach to the
22 undergraduates?

23 A. Well, this fall I'm going to teach a
24 course on computer security. I did that also
25 last fall. In the past, I've also taught

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2 courses on algorithms, discrete math for
3 computer scientists. Before joining Duke at
4 Carnegie Mellon I taught courses on computer
5 networking, computer systems, computer
6 programming. I like to say that one of the
7 advantages of being a professor is that
8 eventually, you get a thorough undergraduate
9 education in your field.

10 Q. What's a computer system?

11 A. Well, it's a broad term, but when I
12 say "computer systems," talking about the
13 hardware that -- computer hardware. Also,
14 issues like operating systems. Some people
15 would view computer systems even more broadly
16 to include issues like computer networking,
17 databases. But in the computer systems courses
18 I taught, we began by explaining at a low level
19 how the processor works, what the instruction
20 set for a processor looks like, and then worked
21 our way up explaining, you know, how an
22 operating system would manage multiple tasks
23 running simultaneously, a little bit about how
24 compilers try to optimize the code so that it
25 runs faster. Systems courses are about what

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2 well defined. In some sense, an operating
3 system is an application. There are many
4 devices where you would say that the only thing
5 running on the device is the operating system,
6 and yet it's providing some application
7 functionality. So, you know, typically, those
8 are separate things, but not always.

9 Q. In paragraph 4 of your declaration,
10 which is page 6, you mention that you teach
11 courses on basic computer systems and
12 undergraduate courses on operating system
13 design and implementation.

14 A. Yes, that's correct.

15 Q. In your course regarding operating
16 system design and implementation, what sort
17 of -- what do you teach during that course?

18 A. Well, I taught that course four times
19 at Carnegie Mellon, and in this course, we
20 guide the students through the programming of
21 an operating system. So they write a program
22 that acts as an operating system, and it's --
23 it's not in a simulator. It really runs on a
24 bare PC hardware.

25 And so, for example, they start out

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2 the platform looks like on which you then build
3 applications.

4 Q. What are applications?

5 MR. JACOB: Legal conclusion.

6 A. On a very high level, applications
7 are computer programs that are designed to help
8 users solve different tasks or provide
9 different capabilities or services for users.

10 BY MR. NEWMAN:

11 Q. And what is an operating system?

12 A. Well, that's a complicated question,
13 but an operating system can be viewed as
14 providing an interface between the hardware and
15 application programs. It -- the operating
16 system helps manage application programs and it
17 provides them, when necessary, with access to
18 the hardware.

19 Q. An operating system is distinct from
20 an application program; correct?

21 A. Well, we would normally view those
22 two things separately. You know, there's a
23 technical sense in which an operating system
24 runs with privileges and applications don't,
25 but at the same time, the line is not super

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2 by writing some code that can manipulate the
3 computer display. So you can tell it, you
4 know, draw some characters at this location on
5 the screen. They write some code for receiving
6 input from the keyboard. And then they move on
7 to write code to manage tasks that are running.
8 And then they write code for managing threads,
9 and there's a lot of focus on concurrency, how
10 would an operating system support multiple
11 programs running simultaneously on the
12 operating system or multiple threads running
13 within a single program.

14 Q. The multiple programs that you're
15 referencing there are multiple application
16 programs?

17 A. They could be, yes.

18 Q. What are the components of an
19 operating system?

20 MR. JACOB: Form.

21 A. So there's no fixed answer to that in
22 the sense that there are different ways that
23 you could write an operating system. I could
24 give an example. In the operating system that
25 the students prepare, one component is or one

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