

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

TOAST, INC.

Petitioner, IPR2023-01408
V. U.S. Patent No. 9,741,050
GRATUITY, LLC
Patent Owner.

ZOOM VIDEOTAPED DEPOSITION OF

IAN H.S. CULLIMORE, PH.D.

Tuesday, September 3, 2024

8:04 a.m. PST

TAKEN BY:

ANDREW ONG, ESQ.

ATTORNEY FOR PATENT OWNER

REPORTED BY:

BELLE VIVIENNE, RPR, CRR, NJ-CRR,
WA/CO/NM-CCR

NATIONALLY CERTIFIED REALTIME
COURT REPORTER

VERITEXT LEGAL SOLUTIONS

JOB NO. 6881006

866.299.5127

1 explain was that to engineers, say, it
2 had been well understood, the
3 technologies for doing servers and
4 clients and networking. You know, I've
5 always thought that cloud was, as I've
6 said before, more of a marketing term
7 than an engineering term. So as to when
8 engineers would start to use it, I'm --
9 I'm not sure, to tell you the truth.

10 Q. Understood, but -- but thank
11 you for that. Thank you for that
12 clarification.

13 So let me ask you this then:
14 Do you agree that the -- you know, the
15 architecture and technology underlying
16 cloud computing was known before
17 September of 2012?

18 A. Yes. I think that's correct
19 that it was all built on what established
20 internet technologies.

21 Q. Okay. Thank you.

22 Do you agree that HTTP, XML
23 and HTML are communication protocols that
24 can support a cloud-based infrastructure?

25 A. Well, it's a little bit the

1 other way around. They -- they are
2 protocols, three of many different
3 protocols, that run on top of an internet
4 architecture.

5 Q. So I guess I -- I was
6 specifically talking about cloud-based.
7 So I'll ask the question again and you
8 can answer it as you see fit.

9 So do you agree that HTTP,
10 XML and HTML are communication protocols
11 that can be used to support a cloud-based
12 infrastructure?

13 A. I -- I've a slight problem
14 with that word "support" because really
15 it's a case of it just being -- of them
16 being communications protocols on top of
17 other communications protocols, so
18 it's -- it's not really a support. It's
19 a bit of a different layered
20 architecture.

21 Q. Do you agree that HTTP, XML
22 and HTML are communication protocols that
23 can be used in a cloud-based
24 architecture?

25 A. Given that the cloud-based

1 architecture, you know, has the servers
2 that can support those protocols, then,
3 yes.

4 Q. And do you agree that HTTP,
5 XML and HTML were well known or were --
6 strike that.

7 Do you agree that HTTP, XML
8 and HTML were communication protocols
9 that were well-known as of September
10 2012?

11 A. I'd certainly agree with
12 HTTP and HTML because they're great,
13 quite old, longstanding protocols. As to
14 XML, I'd have to cast my mind back or do
15 a bit of research as to when that came
16 into being more so. I mean, it's really
17 an extension of HTML.

18 Q. If you can turn to your
19 declaration so it will be Exhibit 2006,
20 paragraph 42. And feel free to read that
21 to yourself and let me know when you're
22 ready.

23 A. Yes. I've read that.

24 Q. So I'll just read it. So 42
25 says, "Cloud-based POS system were

1 significantly ease the burden of hardware
2 and software maintenance, correct?

3 (Cross talk.)

4 MR. WRIGHT: Objection to form.

5 You can answer.

6 A. It depends on what viewpoint
7 they're starting from, which I've said
8 before. If -- if they're starting with a
9 fresh sheet of paper and a new design,
10 that would be one consideration. If
11 they're starting with legacy systems,
12 that would be another consideration.

13 BY MR. ONG:

14 Q. So let me just ask again.

15 So what are possible
16 benefits of a cloud-based implementation
17 that would have been understood by a
18 person of ordinary skill in the art as of
19 September 2012?

20 MR. WRIGHT: Objection to form.

21 You can answer.

22 A. Well, the basic thing is
23 that somebody else is running the servers
24 for you looking after them.

25 BY MR. ONG:

1 Q. What else?

2 A. That's it principally. And
3 by that, I mean backup power in case of
4 power outage, swapping out bad servers,
5 load balancing. Those are the sort of
6 issues you'd have to -- to weigh up.

7 Q. So that sounds like -- is
8 that not easing the burden of hardware
9 and software maintenance?

10 MR. WRIGHT: Objection to form.

11 A. Well, there are other
12 considerations because, you know, the
13 choice is -- I mean, for instance, here
14 in my office, I've got two local servers
15 that I run here --

16 (Cross talk.)

17 (Reporter clarification.)

18 A. -- local servers that I run
19 here and look after myself.

20 There's -- it's not all
21 upside with cloud. If you're using
22 obviously commercial platforms like
23 Microsoft Azure or Amazon Web Services,
24 AWS, then there's a cost involved in that
25 as well.

1 So what -- as of September
2 2012, aside from having somebody else
3 host the servers, what are other possible
4 benefits that would have been understood
5 by a person of ordinary skill in the art
6 of using a cloud-based implementation of
7 a POS system?

8 A. Well, you're -- you're
9 off-loading -- like I said before, you're
10 off-loading the maintenance and having to
11 actually physically run the servers and
12 keep them up and running and, you know,
13 the power running to them and all that
14 sort of stuff, so that's the burden taken
15 off you. That's one thing.

16 Q. What other benefits can you
17 tell me as you sit here today?

18 MR. WRIGHT: Objection to form.

19 You can answer.

20 A. Well, I mean, conversely,
21 that means that you don't have to run
22 your own local servers in -- in your
23 establishment. You don't have to worry
24 about power cuts and the cost of the
25 electricity and other matters like that.

1 BY MR. ONG:

2 Q. Are there any other benefits
3 of a cloud-based implementation that a
4 person of ordinary skill in the art would
5 have understood as of September 2012?

6 A. It certainly could be
7 implementation development benefits, you
8 know, this is something I've obviously
9 personally been very involved in over the
10 years and decades of developing such
11 software. And there can be significant
12 challenges in developing server software,
13 which can be alleviated by using cloud
14 systems because companies like Microsoft
15 and Amazon have tried to make it easier
16 to develop these sort of server systems.

17 Q. Are you familiar with the
18 term "Software as a Service"?

19 A. Yes, I am.

20 Q. And that's like -- that's --
21 shorthand, I guess, is SaaS, S-A-A-S; is
22 that correct?

23 A. SaaS, that's correct.

24 Q. Can you just tell -- what
25 is -- what is SaaS, I mean, generally?

1 you mean by consider. There's consider
2 thinking about and there's considering
3 actually putting it down in the
4 declaration in writing.

5 BY MR. ONG:

6 Q. Did Marshall's discussion of
7 a multi-employer embodiment have any
8 effect on the opinions set forth in your
9 declaration?

10 A. I find it hard to answer
11 that. I mean, I took in account
12 everything that I'd read and thought
13 about in preparing my declaration.

14 Q. But you didn't discuss the
15 multi-employer embodiment in your
16 declaration, correct?

17 A. Not that I recall, no.

18 Q. So in the context of
19 Marshall's system when they're talking
20 about a multi-employer embodiment, a
21 person of ordinary skill would understand
22 that multiple employers could mean
23 multiple restaurants in a chain, for
24 example, correct?

25 MR. WRIGHT: Objection to form.

1 A. No, I didn't say impossible.

2 Q. So it's possible for -- so
3 is it possible for a person of ordinary
4 skill in the art to implement Marshall in
5 the cloud as of September 2012?

6 MR. WRIGHT: Objection to form.

7 A. I couldn't say for sure
8 without knowing more deeply what the
9 architecture of Marshall was.

10 BY MR. ONG:

11 Q. So sitting here today,
12 having reviewed the Marshall patent
13 publication, you are unable to provide an
14 opinion as to whether a person of
15 ordinary skill in the art as of September
16 2012 would have had the technical
17 knowledge to implement Marshall in the
18 cloud; is that correct?

19 A. Correct, I'm not sure if
20 they could or not.

21 Q. Okay. So if a person of
22 ordinary skill in the art implemented
23 Marshall in the cloud, is one benefit of
24 such an implementation that you have just
25 one Marshall system in the cloud as

1 opposed to having a separate system at
2 each and every client business system?

3 A. Yes.

4 Q. And in that implementation,
5 an improvement to Marshall's system in
6 the cloud means that each of the client
7 business systems is -- immediately
8 obtained the advantage of that
9 improvement without further software
10 distribution; is that correct?

11 MR. WRIGHT: Objection to form.

12 A. Yes. Well, that's the
13 theory behind cloud-based software.

14 BY MR. ONG:

15 Q. Can you turn to page --
16 sorry, paragraph 82 of your declaration,
17 please?

18 A. 82?

19 Q. Yeah, 82, eight, two.

20 A. Yeah.

21 Q. In the second sentence there
22 you, say, "Browsers and their
23 applications are client-side and web
24 portals are server-side."

25 Do you see that?

CERTIFICATION

I, BELLE VIVIENNE, a Nationally
Certified Realtime Reporter, 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 6th day of
September 2024.

Belle Vivienne

BELLE VIVIENNE, CRR, CCR, RPR

* * *