DAVID GELERNTER November 5, 2009

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UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT
EASTERN DIVISION OF TEXAS
TYLER DIVISION

MIRROR WORLDS, LLC

Plaintiff(s),

VS

Action No.

6:08 CV 88 LED

APPLE, INC.

Defendant(s).

VOLUME II

Pages 233 - 380

VIDEO DEPOSITION OF DAVID GELERNTER

DATE: November 5, 2009

HELD AT

Omni Hotel 155 Temple Street New Haven, CT

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- 1 Lifestream concept could be implemented; isn't
- 2 that right?
- 3 MR. AN: Objection; form.
- 4 THE WITNESS: Again, there is a big
- 5 difference between a client server
- 6 architecture and enterprise management
- 7 system, which implies a client server
- 8 architecture.
- 9 As I said -- I said the client
- 10 server architecture was not inconsistent
- 11 with our view of this patent. I didn't
- 12 recall that we stated it explicitly. I
- 13 stand by exactly what I said, it's not
- inconsistent with this view, but client
- server doesn't imply enterprise
- information systems.
- 17 BY MR. CHERENSKY:
- 19 disclosed -- client server architecture is
- 20 disclosed in your 227 Patent?
- 21 A Yes.
- 22 O Okay. You said there were differences
- 23 between the client server architecture and
- 24 enterprise management architecture. What are the
- 25 differences between those two concepts, as that

		Page	286
1	term "enterprise information management system"		
2	is used in Claim One?		
3	MR. AN: Again, your independent		
4	understanding separate from		
5	communications with counsel.		
6	THE WITNESS: Okay. My independent		
7	understanding is that an enterprise		
8	information management system, insofar		
9	as it implies a large number of clients		
10	and potentially many servers, and a		
11	potentially dynamic architecture in		
12	which servers, new servers enter and old		
13	ones drop out, new client machines enter		
14	and old ones drop out, and as I say,		
15	there may be many servers, and there may		
16	be many, I should say very many, not		
17	order of ten but order of a hundred,		
18	hundreds or thousands or more, of		
19	clients, implies a completely different		
20	kind of system.		
21	The system a system that is		
22	merely an ordinary client server system		
23	for a dozen nodes or a normal sort of		
24	work group environment would break		
25	potentially instantly in an enterprise		

Page 287 1 environment and would require a 2 completely different approach to making 3 the system work. I don't think we were in a position 4 to assert, when we wrote this patent --5 6 well, we didn't write it -- when the patent was written under our auspices or 7 whatever -- I don't think we were in a 8 9 position even to assert that it was 10 possible to have implementation for an 11 enterprise management system. BY MR. CHERENSKY: 12 Is an enterprise information management 13 system a type of client server architecture? 14 15 I am trying -- why does that strike me as wrong? Type? Is it a type -- is an 16 17 enterprise management system a type of client server architecture? 18 Like -- I don't know -- it's like saying 19 is a refrigerator a type of freon. 20 No. 21 includes freon. I mean an enterprise management 22 system includes a client server architecture. 23 But it's a whole apparatus. It's a big lot of machinery that is not implied by client server 24

25

architecture.

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1
              How many -- you said a large number of
          0
 2
     clients -- strike that.
              You said that a client -- strike that.
 3
 4
              You said that enterprise information
     management system includes a large number of
 5
 6
     clients. What is the number of clients at which,
     in your opinion, the system would have to be
 7
 8
     described as an enterprise information management
 9
     system rather than a client server architecture?
10
                   MR. AN: Objection: form.
                   THE WITNESS: Well, one of the
11
12
              privileges we have in computer science
13
              is not answering questions like that. I
              mean, there isn't a particular threshold
14
15
              in it.
                   But as I said, order of hundreds
16
              rather than order of tens. I mean, if
17
              there was -- if there were a dozen, it
18
19
              would not be an enterprise management
20
              system. If there were 200, it would be.
21
     By MR. CHERENSKY:
22
          0
              Can an enterprise information management
23
     system consist of a single server with a large
     number of clients?
2.4
25
          Α
              Depends.
```

- 1 Q So does that mean yes, it can consist of
- 2 a single server plus a large number of clients?
- 3 A No. It depends what you mean by a
- 4 server. I may build a multi-computer server,
- 5 multi-processor server with 10,000 processors in
- 6 it. Now, whether you call that a server or
- 7 10,000 servers depends on your point of view.
- 8 The ordinary way -- I mean the natural
- 9 way, intuitive way in which I would support many
- 10 clients with a single server is by building a
- 11 multi-computer, using that as a server.
- 12 That being the default high performance
- 13 architecture.
- 14 Q Are there systems -- are there
- 15 enterprise information management systems that
- 16 some computer scientists will consider client
- 17 server architectures and others would not?
- 18 MR. AN: Objection; form.
- 19 THE WITNESS: That some computer
- 20 scientists would consider client server
- 21 systems.
- 22 BY MR. CHERENSKY:
- 23 Q Let me withdraw the question and ask,
- 24 hopefully, a better one.
- So, in the spectrum that has client

- 1 server architectures at one point in the spectrum
- 2 and an information system -- an enterprise
- 3 information management system at another point in
- 4 the spectrum --
- 5 A It's not a spectrum. Those are not two
- 6 ends. The enterprise management system is a
- 7 client server architecture, with added high
- 8 performance parts or with high performance
- 9 reimplementations. So it wouldn't be incorrect
- 10 to refer to an enterprise management system as a
- 11 of species client service system, but it would be
- 12 uninformative.
- 13 That wouldn't be the normal way of --
- 14 well, depends on context. Ordinarily, I wouldn't
- 15 speak in those terms. Maybe in some cases I
- 16 would.
- 17 Q What are the added high performance
- 18 parts or high performance implementation features
- 19 that are in an enterprise information management
- 20 system but not in a client server architecture?
- MR. AN: Objection; form.
- 22 THE WITNESS: Several parts having
- to do with scalability and having to do
- 24 with a dynamic name space.
- 25 Techniques -- when you have an

Page 291 1 enterprise management system with 2 potentially a large number of clients, all of those clients are contributing to 3 a mainstream, which means that there 4 5 needs to be a data structure capable of 6 indexing every word and every document produced by every client. 7 8 Now, techniques that will work for a 9 period of N months with ten clients will fail in much less than N months if there 10 11 are a hundred clients. You need different kinds of 12 13 implementations to deal with the sheer 14 volume of stuff generated by large 15 numbers of users. There is also the issue of nodes 16 17 dropping in and out, in addition to the 18 nature of the server. Well, nodes 19 dropping in and out in an enterprise 20 management system, I hire somebody new 21 and I buy them a computer, and I plug it in. 22 23 That computer was unknown to the 2.4 system previously. It's got to make 25 itself known to the other computers in

Page 292 1 the system and has to identify itself. 2 It has to establish a tag and fall in with the communication protocol; the 3 system has to update its tables. Likewise, if I throw out some old 5 6 computers and buy some new ones because the enterprise management is large 7 8 numbers of people, therefore, more 9 dynamic -- large numbers of people -- I should say large numbers of clients. 10 11 It's also the case that -- well, this could be a separate problem or this 12 13 could be the same problem, depending how 14 you look at it. 15 You need new strategies to deal with 16 indexing enormous amounts of 17 information. 18 Now, this may imply a fundamentally 19 different approach to the server. 20 Ordinarily a rational approach would 21 be to say, I am not going to have a one-processor server. I will have a 22 23 multi-node or multi-processor or 2.4 multi-computer server. 25 That implies that I need to rewrite

1 my code -- I need to rewrite the 2 program, so instead of running on only one computer, it runs on a lot of 3 computers simultaneously. That brings all sorts of issues 5 6 having to do with how great a structure is set up and how things are identified 7 8 and a lot of stuff implied in the move 9 from conventional small volume server to multi-computer, multi-node, high volume 10 11 server. 12 BY MR. CHERENSKY: Dr. Gelernter, were you employed at 13 Mirror Worlds Technologies in 2001? That's the 14 15 date -- the year the 999 Patent was filed? I was certainly associated with them. Α 16 17 There was a period in which -- there was a period in which I was an unpaid associate. Although, 18 actually, I think I had a title. It wasn't a 19 paying position, but there was a title. 20 Then there was a period in which I was 21 22 paid, with a different title. I certainly -- I certainly was associated with them. And I am 23 24 pretty sure that I had a title, that my title was 25 Chief Scientist.

Page 380 1 STATE OF CONNECTICUT I, JENNY C. EBNER, a Registered Professional Reporter/Commissioner within and for the State of Connecticut, do hereby certify that 3 pursuant to Notice I took the deposition of DAVID GELERNTER, on November 5, 2009, at the Omni Hotel, 155 Temple Street, New Haven, CT. 5 I further certify that the above named deponent was by me first duly sworn to testify to the truth and nothing but the truth concerning his knowledge in the matter of the case of MIRROR WORLDS, LLC VS APPLE, INC., now pending in the United States District Court District of Connecticut of Eastern Division of Texas, Tyler Division. 10 I further certify that the within testimony was taken by me stenographically and 11 reduced to typewritten form under my direction by means of COMPUTER ASSISTED TRANSCRIPTION; and I 12 further certify that said deposition is a true record of the testimony given by said witness. 13 I further certify that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken; and further, that I am not 15 a relative or employee of any attorney or counsel employed by the parties hereto, nor financially 16 or otherwise interested in the outcome of the 17 action. WITNESS my hand and seal this 9th day of 18 19 November, 2009. 20 21 Jenny C. Ebner, R.P.R., L.S.R. 22 Commissioner 23

My Commission expires: August 31, 2010

License Registration Number: 00030

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