IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

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| CLOUDOFCHANGE, LLC | * | May 18, 2021 |
| | * | |
| VS. | * | CIVIL ACTION NO. W-19-CV-513 |
| | * | |
| NCR CORPORATION | * | |

BEFORE THE HONORABLE ALAN D ALBRIGHT
JURY TRIAL PROCEEDINGS
Volume 2 of 4

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CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 1 of 307

(May 18, 2021, 8:37 a.m.)
THE BAILIFF: All rise.
THE COURT: Thank you. You may be seated.
I understand there's some issues we need to take up. Happy to do it.
MR. BARR: Yes, Your Honor.
There's an evidentiary issue, and then I think the parties have a few disputes about some slides today.
THE COURT: Okay.
MR. BARR: So in regard to the evidentiary issue, the Court had granted NCR first set of Motion in Limine No. 5 which kept out any testimony about NCR's overall economic status of the company, company-wide, as opposed to just the product line.
Yesterday we believe that Ms. Collings opened the door on NCR Corporation's total revenue in her questioning of Ms. Schoonover, specifically when she was asking Ms. Schoonover about the company-wide enterprise Google license of $22 million a year. And she got Ms. Schoonover to testify -- and by the way, this is the first time we've heard this in this case -- that NCR attributes $5.4 million of that total license to the NCR Silver product. And I have the testimony here from --
THE COURT: I remember. I was listening.
MR. BARR: Yes. Since the costs are a hotly debated issue and we've argued that the costs that they're attributing to this product line are overstated, that we believe that we are



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 2 of 307

deprived of an opportunity to cross-examine on this issue without being able to draw the comparison of the $22 million --

THE COURT: Mr. Barr, you are able to cross-examine on anything that was raised by opposing counsel during her direct of this witness.

MR. BARR: Thank you, Your Honor.

THE COURT: It's cross-examination. If either side of you -- let me explain something. Here's the way I see the world. If you keep out -- in fact, I'm just going to -- I'm going to pick on this witness just for -- this is a hypothetical. But for example, if this witness had a DWI in her past and I said it doesn't come in, it's not relevant. And you put her on and we got through it. And then the other side on cross says something that makes her answer something and then says, oh, she opened the door by answering it. That's not opening the door in my opinion.

However, in the case where you have put on -- it's your motion in limine, and you ask a question that opens the door, that's when I see opening the door.

And so in other words, as I've allowed counsel for defendant, Ms. Collings, to ask this witness anything about anything you asked her in your direct or cross, however you want to look at it, you were free to cross-examine this witness on anything that Ms. Collings brought out on her examination.

MR. BARR: Thank you, Your Honor.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 3 of 307

Then we had a few arguments about slides. I think Ms. Cameron was going to handle those.

MS. CAMERON: May I approach, Your Honor?

THE COURT: Yes, ma'am.

MR. BAKER: Your Honor, I just wanted to -- revenue was not raised yesterday. I just want to make sure all of our revenue was not raised. I want to make sure Mr. Barr understands that when it comes time to cross-examine him.

THE COURT: You all keep coming here and saying, I want you to tell the other side what they can do. I can't. If Mr. Barr asks a question that you think is objectionable, say, I object. Or --

MR. BAKER: Yes, Your Honor.

THE COURT: In this case Ms. Collings will.

Now, what has, in my opinion, been waived is the sense that this issue can't be touched on at all, because it's so -- that's the limine.

MR. BAKER: Oh, yes, Your Honor.

THE COURT: I get that. If Mr. Barr or any of you asks a question the other side thinks is -- and by the way, I hate to say this, but you're really not the right person to be standing up and arguing this. It's really Ms. Collings. But since you're there anyway, I'll go ahead and make my point.

Whoever's -- just stand up and object that it's not relevant. I heard the testimony yesterday. And if I think



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 4 of 307

it's relevant, I'll let it in, and if I don't -- but all that's happening here is Mr. Barr won't be violating the limine in the sense he had to approach the bench first.

MR. BAKER: Yes, Your Honor.

THE COURT: He can ask whatever questions he wants that -- as can all of you on cross. You can ask whatever questions you legitimately think were raised on the other person's examination, and you will not be in trouble with me because it was something that was covered by a limine.

Now, that doesn't mean what Mr. Barr asks this witness I think will be relevant. If he asks something that is objected to as irrelevant and the reason is stated why it's irrelevant, I might sustain the objection. But you don't have to worry that you will run afoul of the motion in limine. And so that's all I'm ruling.

MR. BAKER: All right. Thank you, Your Honor.

THE COURT: Yes, ma'am.

MS. CAMERON: Good morning, Your Honor.

THE COURT: Good morning.

MS. CAMERON: I've handed to you a copy of the slides that -- for NCR's examination of Dr. Ikizler we've objected to in our objection exchange last night. Specifically we're objecting to the design-around discussion in Dr. Ikizler's slides. It was our understanding during the Daubert motion discussion of Dr. Ikizler that the Court said the design-around



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 5 of 307

would only come in if they could identify paragraphs in Dr. Chatterjee's report where he specifically addressed customer acceptance of the design-around.

THE COURT: Correct.

MS. CAMERON: We've scoured those reports and we have not found any reference to customer acceptance.

THE COURT: Well, help me out here again. I can't remember these things. Whose witness is -- it's their witness, right?

MS. CAMERON: Yes, Your Honor.

THE COURT: Dr. Ikizler -- the fight here is over Dr. Ikizler, which is I-k-i-z-l-e-r.

MS. CAMERON: Yes, Your Honor.

THE COURT: I'm assuming that the defendant is going to put their -- Dr. Chatterjee on before they put on Dr. Ikizler, right?

MS. CAMERON: I believe that's correct, Your Honor.

THE COURT: So why am I taking this up now? Because if they don't lay a foundation through Dr. Chatterjee, then Dr. Ikizler's not going to get to talk about it if there's an objection. And Dr. Chatterjee's not going to get to talk about it unless there's something in his report.

So we're going to cross that bridge, I think, during Dr. Chatterjee's direct, is my guess.

MS. CAMERON: Okay.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 6 of 307

THE COURT: So unless -- I mean, I'm happy to rule on something, but my guess is we will not be taking this up until Dr. Chatterjee is on the stand. And if he -- this isn't limited to this subject. If any of your experts try to put on evidence during direct that is not in their report, it's not coming in.

And if I haven't told you all this -- I've lost track of who I've told these things to. Here's the way I anticipate you all being able to react in this situation. Mr. Barr is putting on --

Mr. Barr, who's your first expert?

MR. BARR: My first expert will be Ms. Salters.

THE COURT: Okay. Mr. Barr's putting on Ms. Salters. I'm assuming Ms. Collings is going to be cross-examining her, but it doesn't matter. Whoever is cross-examining her. Ms. Collings stands up and says, I object, Your Honor. That's not in Ms. Salters' expert report.

I expect that Mr. Barr -- whoever's putting on Ms. Salters -- to be able to say, oh, yes, it is, Judge, because it's on Page 61. Because right next to the question that you're asking on direct you will have referenced where in the expert report it is.

And if Ms. Collings says, no, it isn't, then you'll show me Page 61, or whatever it was, of the expert report. And if it's in there, then I assume we will not have a lot



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 7 of 307

more it's-not-in-his-report objections because the person putting the witness on on direct will be able to immediately identify where in the report something that would just -- is the foundation for that testimony would come from.

But that is the way I anticipate it will go on direct of the experts.

Is there anything else we need to take up?

MS. COLLINGS: Your Honor, I have one objection, and it's along those same lines.

THE COURT: You're better off at this microphone.

MS. COLLINGS: May I approach?

THE COURT: Yes, ma'am. Of course.

MS. COLLINGS: Thanks. Briefly, Your Honor. In the demonstrative slide presentation that plaintiffs provided us last night --

THE COURT: For who?

MS. COLLINGS: For Ms. Salters.

THE COURT: Uh-huh.

MS. COLLINGS: There was included in those slides an opinion that we do not feel was included in her report. And so we have an objection to that part of the slide presentation.

THE COURT: Well, let's do this. How soon will we see Ms. Salters?

MR. BARR: She will be after Mr. Crouse. The issue I have with this, Your Honor, the parties had agreed --



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 8 of 307

THE COURT: I'm just saying, here's what I'm going to do. I'm sorry. So we have --

MR. BARR: Ms. Schoonover then Crouse then Salters.

THE COURT: So what we'll do is before we take up Ms. Salters, I'll just look at the slide, and you all can tell me what the issue is. I'll take it up at that time.

MR. BARR: One other question I had in the -- due to the Court's -- the pretrial rulings, Your Honor, related to Ms. Crouse and Ms. Salters, the plaintiffs may want to make an offer of proof. And I was wondering, do we just -- can we wait till the end of the day after these witnesses testify to do that?

THE COURT: Sure. Yes.

Do you want these back?

MR. BARR: Thank you, Your Honor.

MS. CAMERON: We have one more issue.

MR. BARR: The exhibits we were going to read into the record.

THE COURT: Okay. Before we get there, let me ask you all a question. And I feel like at this point that I'm being a tattle tale, but I'll say it anyway. It's my understanding that our jury is sitting in the jury room feeling very comfortable and none of them are wearing masks. If they feel comfortable, it seems to me, in a jury room, which is much smaller than where they're sitting most of the time not wearing



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 9 of 307

masks, seems to me they would feel comfortable not wearing masks in here, which I'm happy to accommodate them. I'm happy to accommodate all of you.

However, if either of you has -- it's your case, not mine. If either of you have an objection to me allowing them to be unmasked and you all to be unmasked, I need to hear it now rather than when someone's unhappy however this case turns out.

So if you all are okay with me allowing the jurors not to wear masks, I'm okay with that. If either side wants to continue the practice we've had of requiring everyone to wear masks, I'm happy to do that. In other words, the veto will work here.

So, Mr. Barr, where are you on the mask question?

MR. BARR: The plaintiffs have no objection to dispensing with the masks, Your Honor.

THE COURT: Ms. Collings?

MS. COLLINGS: Your Honor, defendants have no objection.

THE COURT: Okay. Then I'm going to let them know.

Is there anything else we need to take up?

Oh, I'm sorry. Yes, ma'am.

Here's what we're going to do. I don't need to be here for this, as exciting as it is. I'm going to go back after you finish reading -- and by the way, actually, go ahead, because occasionally someone says, no, I don't agree that that's in there. So if you'll go ahead and read them in.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 10 of 307

If defendants will listen, and then I'll listen to defendant's list as well. So this is defendant's opportunity to tell me if the list is wrong.

MS. CAMERON: Good morning, Your Honor. And we did share and exchange this list and double-check --

THE COURT: Well, in that case, are you all both okay with the list you've exchanged?

MR. PHIPPS: Yes, Your Honor.

THE COURT: Okay. Then I'm going to go back for just a second. You all get ready, and we're going to bring the jury back in in about five minutes.

Does that work for everyone?

MS. COLLINGS: Yes, Your Honor.

MR. BARR: Yes, Your Honor.

THE COURT: Okay. I'm going to let the jury know they don't have to wear masks.

THE BAILIFF: All rise.

(Recess taken from 8:49 to 8:55.)

THE BAILIFF: All rise.

THE COURT: Please remain standing for the jury.

(The jury entered the courtroom at 8:56.)

THE COURT: Good morning, everyone. You may be seated.

If we could have the witness back on the witness stand, please.

MR. BARR: May I approach, Your Honor, with the witness



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 11 of 307

binder?

THE COURT: Yes, sir.

And just a friendly reminder, you're still under oath from yesterday.

THE WITNESS: Okay.

MR. BARR: May I proceed, Your Honor?

THE COURT: Yes, sir.

REDIRECT EXAMINATION

BY MR. BARR:

Q. Good morning, Ms. Schoonover.

A. Good morning.

Q. Ms. Schoonover, do you recall --

(Simultaneous speakers.)

BY MR. BARR:

Q. Yesterday afternoon, do you recall when Ms. Collings was asking you about your work with the Radiant company?

A. Yes.

Q. And Radiant was the company, I think you told us, that was purchased by NCR; is that right?

A. That's correct.

Q. And I believe you said that you worked at Radiant for awhile, and then in 2011, when NCR purchased Radiant, you came along with the company and had basically the same job at NCR with the Silver product; is that right?

A. Yes.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 12 of 307

Q. Now, when you were at Radiant company, the address of the office that Radiant had was 3925 Brookside Parkway, Alpharetta, Georgia; is that right?

A. I believe that's the address.

Q. Okay. And isn't it true that that office building, where Radiant had been occupying and the Radiant Silver product had been worked on, that same office was then used by NCR as one of their corporate offices after the acquisition of Radiant, right?

A. Yes.

Q. Now, yesterday Ms. Collings also asked you about the technology go-to-market expense.

Do you remember that?

A. Yes.

MR. BARR: And if we could put up Exhibit -- Joint Exhibit 89, please.

BY MR. BARR:

Q. And you recall that these questions that she was asking you about the technology go-to market were in the context of this Google Cloud addendum, which Google -- or NCR Corporation, the company, the whole company, has agreed to pay Google for cloud services and other computer-related services for the entire NCR company; is that right?

A. Yes.

Q. And I think we talked about yesterday, Ms. Collings



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 13 of 307

in her questions, she asked you to confirm the $22 million a year that NCR Corporation pays to Google for those services.

Do you recall that?

A. Yes. That's for NCR corporate, that's the money that we pay. Yes.

Q. And that's for the whole company, NCR, right?

A. Yes.

Q. That's not just for this product line that we've accused of infringement in this litigation; is that right, ma'am?

A. That's right.

Q. And I think you already told me yesterday that it wouldn't be fair to charge costs to the NCR Silver product line alone that benefit the entire NCR Corporation, right?

A. Yes.

Q. And I believe you also told us yesterday that the percentage of that $22 million that NCR is charging as costs to the NCR Silver product line was about $5.4 million, right?

A. I'm sorry. Can you repeat -- repeat that?

Q. Yes. I'd be happy to.

I believe you told us yesterday that the percentage of the total $22 million annual costs for the Google license, that of that 22 million, over 5 million was being charged to the NCR Silver product line alone?

A. Yes. So that 5.4 million reflects hosting costs. A



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 14 of 307

large portion of it is the Google hosting costs.

Q. And I think you told us that the way that that 5.4 million was calculated was some algorithm that the accountants did; is that right?

A. Our finance team allocates a percentage. Yes.

Q. And to be fair, an algorithm is just a fancy word for math, isn't it, ma'am, in this case?

A. It is a math calculation. Yes.

Q. It's a pretty simple math calculation, isn't it, here?

A. It is relative use of that service, each product is allocated.

Q. And how it works out, how this math works out, according to NCR, is that they're charging the NCR product line -- NCR Silver product line, which we've heard has 100 people working on it, right, and which we've heard earns about $25 million a year in total revenue, right?

A. Yes.

Q. NCR decided to allocate costs of $5.4 million to that $25 million product line, right?

A. A portion of the 5.4 million. Yes.

Q. No. The total is 5.4 million, which is a portion of the 22 million, right?

A. Yes. But that's our total hosting costs, it's not all Google. A majority of it is Google, for the Google Cloud.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 15 of 307

I'm just -- yeah.

Q. I don't want to quibble with you about what it is.

A. I'm just being --

Q. The point is --

A. -- precise. Okay.

Q. -- $22 million in costs that relate to something that NCR Corporation, with 34,000 employees and 140 locations, is benefitting from, right?

A. Yes. 20,000 employees. Yes.

Q. Okay. There's only 20,000 employees, not 34,000?

A. Roughly. I think so.

Q. Okay. I think Mr. Baker told us a different number, but...

A. Oh, okay. I could be wrong.

Q. You would know better than me and probably him.

A. Okay.

Q. But the point is, again, 22 million a year paid to Google by NCR Corporation, right?

A. Yes.

Q. For something that benefits -- for some services that benefit NCR Corporation, right?

A. Yes.

Q. Those services also benefit NCR Silver as a part of that corporation, right?

A. Yes.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 16 of 307

Q. But you're charging NCR Silver with 25 percent of the total costs that's paid to Google, right?

A. Yes.

MS. COLLINGS: Object, Your Honor. That mischaracterizes her testimony that she just gave today.

THE COURT: Counsel, handle it on redirect.

This witness is perfectly capable -- if Mr. Barr -- she hasn't -- she hasn't yet directly answered a question he's asked this morning with a yes or no.

If she feels that he is misrepresenting to her what she said, she's perfectly capable of letting us know. She's been doing that all morning so far. And frankly, I would probably appreciate it if her answers were a little more direct with a yes or no.

BY MR. BARR:

Q. So what we're talking about in these questions that Ms. Collings asked you was the percentage of the Google costs that's charged for the entire company should be charged to this small product line, right?

A. To the product line. Yes.

Q. And you would agree with me that NCR Silver is not even close to 25 percent of the total revenues of the NCR Corporation, right?

A. I don't know the exact number, but yes.

Q. But you know it's not close to 25 percent, right?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 17 of 307

A. Yes.
Q. And, in fact, if we looked at the $26.6 million of revenue that NCR Silver made, according to Joint Exhibit 86, for the year 2020, that would be less than one-half of 1 percent of NCR Corporation's annual revenues in 2020 of $6.2 billion, right?
MS. COLLINGS: Object, Your Honor. There's been no evidence. There's no foundation for what NCR Corporation's revenue has been in 2020 or any other year.
And frankly, Your Honor, that's not relevant to the issues pertaining to NCR Silver particularly.
THE COURT: Overruled.
BY MR. BARR:
Q. So your argument is -- or NCR's argument, to be fair, is that a product line that makes less than one-half of 1 percent of NCR Corporation's $6.2 billion in revenue should pay 25 percent of a cost that is attributable to the entire NCR Corporation; is that correct?
A. It's not based on revenue percentage.
Q. Now, does NCR host any of its software in-house?
A. Not that I'm aware of.
Q. Does NCR have any servers?
A. Not for NCR Silver.
Q. All right.
MR. BARR: Could we have a look at the Exhibit 88?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 18 of 307

BY MR. BARR:

Q. I'd like to go back to what Ms. Collings was asking you about yesterday when she was asking you about the D&A costs.

Do you remember that?

A. Depreciation amortization. Yes.

Q. Okay. So you know that D&A means depreciation and amortization; is that right, ma'am?

A. Yes.

Q. But you -- when did you learn that?

A. I see the line depreciation and amortization on the detailed cost line.

Q. So what is depreciation and amortization in the context of costs?

A. In the context of costs, we -- so the way R&D works is, research and development, developers develop features. And that's a high cost to develop those features, all the costs for the engineering time.

And so when we're developing those features, accounting rules allow us to capitalize that, which means we don't have to incur that cost in that year in the financials.

We can then wait until the feature is ready to go to market, and then we amortize those costs over five years against that revenue.

So that's why you don't see that cost in the year we incur



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 19 of 307

it. We capitalize it over future years.

Q. And in that -- and in the example you just gave, that is depreciation and amortization of employee costs that were actually working on the NCR Silver product, correct?

A. That's correct.

Q. But I believe NCR's financial statements also attribute a depreciation and amortization of hardware costs to NCR Silver; is that right?

A. There are like office equipment and employee equipment that gets amortized over years too. Yes. That's a small percentage of it.

Q. So to make sure we're clear on this, if we see millions of dollars in depreciation and amortization in Exhibit 88, you're saying all of that relates only to employee costs and none of that relates to any computers or equipment or buildings or anything like that?

A. I'm saying the majority of it is for the engineering costs, but it does include other depreciation as well, office, equipment.

Q. Because we could agree that it would be double counting, wouldn't it, if you charged NCR Silver with this 25 percent of the Google license for web server hosting in the cloud, and then also depreciated and amortized the cost of a bunch of old computer servers that NCR Silver has, right?

A. If -- I'm not sure why it would be double counting.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 20 of 307

It's -- if you're amortizing it, those are costs incurred in previous years, and then you are showing the costs on the financial statement when it's ready to be depreciated.

Q. So you're telling us that in the event we see depreciation and amortization in the financials of NCR, that we can count on it that you're not trying to double count depreciation and amortization for any of the computers that you're getting from Google, right?

A. No. We don't pay for those -- we pay for the hosting service.

Q. Okay.

MR. BARR: Pass the witness, Your Honor.

RECROSS-EXAMINATION

BY MS. COLLINGS:

Q. Good morning, Ms. Schoonover.

A. Hello.

Q. The $5.4 million go-to-market -- technology go-to-market costs that counsel was just asking you about.

A. Yes.

Q. Is 100 percent of that $5.4 million technology go-to-market costs attributable to the Google Cloud agreement that counsel referenced?

A. No. Not 100 percent.

Q. Okay. What else is included in that $5.4 million?

A. So we transitioned from Amazon Web Services hosting



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 21 of 307

to Google Cloud, and so there was some additional charges for the Amazon Web Service hosting included in those numbers while we were transitioning.

Q. So between 2019 and 2020 NCR Silver transitioned hosting services from AWS to Google?

A. Yes.

Q. So a portion of the $5.4 million that you see for technology go-to-market and 5.4, some part of that is the Google Cloud NCR Silver-apportioned costs and some of that is sort of residual AWS hosting?

A. Yes. Well, yes.

Q. Does NCR Silver get any computers from Google?

A. No.

Q. Okay. So NCR Silver is not taking a depreciation or amortization charge against any Google computers?

A. Not that I'm aware of. No.

Q. Counsel asked you about the old Radiant address. Do you recall that?

A. Yes.

Q. Do you know -- back in 2018 do you know what was housed in that old Radiant address that became part of NCR's real estate?

A. So it was employees that were part -- worked for Radiant Systems stayed in that building when they acquired Radiant Systems. So it's a small building. It's not a



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 22 of 307

headquarters or -- it's --

Q. Thank you.

A. Yeah.

MR. BARR: Nothing further, Your Honor.

THE COURT: May this witness be dismissed?

MS. COLLINGS: Yes.

THE WITNESS: Thank you.

MR. YATES: Your Honor, plaintiff calls Gregory Crouse to the stand.

(The witness was sworn.)

DIRECT EXAMINATION

BY MR. YATES:

Q. Good morning.

A. Good morning, sir.

Q. Would you please introduce yourself to the jury?

A. Good morning. I'm Greg Crouse.

Q. And where do you live?

A. I live in Flower Mound, Texas which is a suburb of Dallas.

Q. And why are you here?

A. I'm here as a technical expert.

Q. Can you please describe your formal education after high school?

A. My formal education out of high school is I attended the University of Texas at Austin. I achieved a bachelor of



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 23 of 307

business administration in finance, and I graduated in 1992.

Q. Did you start computer programming at the University of Texas?

A. No, sir. I did not. My father, who's an absolutely amazing man, learned -- and knew in the '70s that computers were going to be a big deal. And so he, much to my chagrin at the time when I was eight, made me go to computer camp. And so in 1978 I was beginning to program, and I've programmed pretty much since then nonstop.

Q. Where did you go to work immediately after UT?

A. Straight out of UT I went to a company called Andersen Consulting which is now Accenture. And one of the things I did there was I coded for the first two years, as many do when they start out at Accenture, especially back then. So I coded for a number of -- for two years then.

Q. So you were a professional programmer for Andersen Consulting?

A. I was. Yes.

Q. And after that what did you do at Andersen Consulting?

A. I moved up through the ranks; I was there for about 12 years. Moved up through the ranks and began doing technical architecture work, then I became a program manager. And then by the time I had left, I had -- I was what we called a project executive which is a person who ran entire large, you know, big



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 24 of 307

engagements.

Q. And what have you done since then?

A. Since then I've moved around the big four -- big four style consulting, big technology consulting companies like BearingPoint, KPMG, Perot Systems, Navigant, et cetera, all the while doing technology consulting.

Q. Two of your former employers are bolded on this slide. Why are BearingPoint and Dell/Perot Systems bolded?

A. These are bolded because at this period of time I was actually hands-on building point-of-sale solutions for clients. And we'll talk about specifically which clients I was building those for in a bit. But that's what I was doing, was hands-on building pretty expansive point-of-sale solutions for clients.

Q. And that would have been in the time frame from 2004 to 2009?

A. Yes, sir. Roughly. About 2005 to 2009.

Q. Tell me about your first point-of-sale project.

A. Sure. My first one was a company called Washington Mutual which is now owned by Chase Bank.

(Clarification by Reporter.)

BY THE WITNESS:

A. My first implementation was for a company called Washington Mutual which is now Chase Bank. I was working for BearingPoint. One of the things Washington Mutual wanted to do was eliminate all the paper within their branch banking



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 25 of 307

operations. And so what they wanted to do was employee point-of-sale terminals within all throughout their branch in all the different activities that a branch would perform and use point-of-sale devices to remove paper from the branch operating environment.

BY MR. BARR:

Q. And what vendor of point-of-sale systems did you evaluate for this project?

A. When we started we evaluated about seven. I don't remember all of them. I do remember the three finalists, which were Hypercom, VeriFone and IBM. And of those three finalists in this implementation we chose a company called Hypercom to be the point-of-sale solution throughout the branch banking environment for Washington Mutual.

Q. And at this time who actually built the terminals for this project?

A. Myself and my team of programmers were building the screens and building all the interfaces with all the various systems. It was us.

Q. Tell the jury about your second point-of-sale project.

A. My second project was with BearingPoint, which was the spin-off of KPMG's technology consulting firm. And the client here is Hibernia Bank which is now owned by Capital One. Hibernia had a very similar situation. They had a dire need to



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 26 of 307

get rid of the paper, because they had lost a lot of paper in their branch operations through Hurricane Katrina. And so that gave them an impetus to just remove paper so that kind of damage would never occur to their operations.

So, again, we were looking at different point-of-sale solutions to remove paper from the operations and improve overall customer feel and customer interaction with that project.

Q. And did this system handle transactions?

A. Yes, sir. It did. There's a number of transactions that were performed. It was used in the teller line to do deposits and withdrawals, which I consider a transaction. It did loan transactions. It did on-boarding documentation for clients or for on-boarding customers. So it certainly was very transaction-enabled.

Q. Tell the jury about your third point-of-sale project.

A. My third point-of-sale was with Perot Systems, and this is with Chase Bank. And what Chase was looking to do was speed up the teller line. And so what they wanted to do was they wanted to have customers pre-authenticate. So they would insert a -- swipe or insert their debit card and that would pre-authenticate them for the environment. And then they wouldn't have to go through the whole point of showing an ID and all that fun stuff. And it pretty much -- it very well improved the branch operations or the teller operations.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 27 of 307

Q. And who built the terminals for this project?
A. Myself and my team of technologists did.
Q. And do you recall the terminal vendor?
A. In this one the IBM terminal was the winner in that one.
Q. And these first two projects were when you were at BearingPoint; is that correct?
A. Yes, sir. That is correct.
Q. And the third was when you were at Perot Systems which is now Dell?
A. Yes, sir. That's correct.
Q. And what was the time frame again?
A. The whole period of time is roughly 2005 to 2010 for all of these.
Q. And did any of these projects use the technology described in the patents?
A. No, sir. They did not.
MR. YATES: Your Honor, I'd like to tender Mr. Crouse as an expert.
MR. PHIPPS: Your Honor, we maintain our objections to the Daubert motion. We move the Court to --
THE COURT: He'll be tendered as an expert.
MR. YATES: Thank you, Your Honor.
BY MR. YATES:
Q. So let's transition to talking about the patents.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 28 of 307

What can you tell me about the '640 patent and the '012 patent?

A. The '640 and '012 patents we've talked about throughout this case so far, these are titled the web-based point-of-sale builder. They share a common specification. They share a priority date of February 5th of 2008, and the Joint Exhibits 3 and 4 contain the file histories for these patents.

Q. And what did you do to analyze the patents?

A. I of course read the patents. I also examined the file history to see the back and forth between the Patent Office and the filers. I also looked at all of the documentation -- well, not all the documentation, but most of the documentation that was submitted through the production through this case.

Q. And did you review the Court's claim construction?

A. I absolutely reviewed the Court's claim construction --

MR. YATES: Next slide.

BY THE WITNESS:

A. -- yes, sir.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. Now, is this the same construction that the jurors should have in their juror notebook?

A. I believe so. Yes, sir.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 29 of 307

MR. YATES: We can go to the next slide, please.
BY MR. YATES:
Q. So what does this slide show us?
A. This slide is Figure 3 from the patents. I believe it's been shared before. What it shows is the -- what I would call the technology architecture for the patents that are in suit here.
MR. YATES: Can we go to the next slide, please?
BY MR. YATES:
Q. And here we have Figures 4A, 4B and 5 from both patents. And what do these slides teach us? What do these figures teach us?
A. These slides teach us the operation of building, using these -- the web-based builder to build. So on the right in Figure 5 this is the overall workflow that in this case a merchant would go through to build -- to build screens. And as you can see, they are selecting, they are editing, they are selecting, editing, doing a number of items through this workflow to create -- to create the screens and the point-of-sale terminal.
On the left side we show an abstract of the point-of-sale terminal itself. On the top we see basically a design specification for what the screens should look like on the top in 4A. And 4B is an abstract of what the screen, as an abstract, would really look for. It would contain an item



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 30 of 307

name, it would contain a price, it would contain a cost, et cetera.

Q. So is 4A the before?

A. Yes, sir. The 4A's the before.

Q. And is 4B the after?

A. 4B is the after. Yes, sir.

Q. And is that described in the patent?

A. It is. Yes, sir.

MR. YATES: We'll move to the next slide, please.

BY MR. YATES:

Q. Can you briefly describe some of the innovations in the patent?

A. Yes, sir. I can.

Roughly, there were four major innovations in the patents. The first one being a web-based point-of-sale builder. It's important to note that at the time of the invention, in 2008, it was important to note that web-based -- building web-based point-of-sale solutions weren't really big in the market yet. So this was a major innovation at the time.

Q. And what's the next innovation in the patent you want to talk about?

A. The next innovation is around open-source technologies, using languages and products that are more open in nature versus closed. And I think this is an interesting innovation because at the time, as I mentioned, in 2008, all of



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 31 of 307

the solutions that I dealt with in the point-of-sale world were all very proprietary. You have proprietary languages, closed hardware, and those were the solutions you had to choose from.

And so this was, again, another major innovation in the fact that you could buy -- you could basically use components that are relatively much less expensive.

Q. And what's the third innovation in the patents you'd like to talk about?

A. The third major benefit is merchant configurability. This is -- this is a -- this is a case where the merchant is in control of his own destiny, if you will, in developing point-of-sale solutions, point-of-sale screens.

As I mentioned, in my time of building these solutions, from 2005 to 2010, roughly, my team and myself were actually the people who were hired to build these, and enabling a merchant to be able to not use people like me is incredibly powerful.

Q. And what's the last of the innovations that you want to discuss this morning?

A. The last innovation I want to discuss this morning is it's -- this is a hostable -- a hostable solution, which means that components of hardware could be put in different locations that don't necessarily have to be the merchant.

Again, at the time, it was very prominent for most of the hardware, if not all the hardware, to be on site at a merchant



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 32 of 307

location. Merchants aren't technologists. They don't want to maintain servers and a bunch of hardware, and this is a nice innovation where the merchant doesn't have to maintain those servers anymore.

Q. Did you also analyze NCR Silver as part of your assignment for this case?

A. Yes, sir. I did.

Q. And did you reach any conclusions about whether NCR Silver infringed the asserted claims of the '640 and the '012 patent?

A. I do. I find that NCR Silver, the accused product, does infringe on the patents, '640 and '012.

Q. And what did you look at during your investigation of NCR Silver?

A. I looked at a number of things. One thing I did do was I went -- I traveled to Atlanta and went to the NCR headquarters and put hands on keyboard, if you will, and actually used the system in their environment, using their hardware and software, and actually observed, inspected, used NCR Silver there.

Q. And you were able to use your laptop during your inspection?

A. Yes, sir. That was one thing -- was one thing I was told to do, is when I used the Back Office function, where I did the majority of the building functions, I was instructed to



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 33 of 307

use my personal laptop, which is nothing special. And that's what I used.

Q. What else, besides your inspection, did you do to analyze NCR Silver?

A. I analyzed the NCR Silver videos that are on YouTube, many of them. I used extensively the Joint Exhibit No. 30, which is a U.S. training video. I found that to be very helpful, but I have examined numerous videos that instruct or teach how to use NCR Silver.

Q. On your inspection, were there any surprises?

A. No, sir. No surprises. I found the system to be, as I expected, from -- I did view the videos before I used the system, and I found it -- I found it to be within my expectations.

Q. And you read the product documentation as well?

A. Yes, sir. I did. I did read that again before my inspection. I had read the product documentation, and I found it all to be very consistent with my experience using the system.

Q. Can you walk us through the asserted claims?

A. Yes, sir. I'd be happy to.

Q. So what are the asserted claims of the '640 patent?

A. The asserted claims of the '640 patent are Claims 1, 3, 4, 5, 6, 11, 12 and 13.

Q. All right.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 34 of 307

MR. YATES: If we can go to the next slide, please.
BY MR. YATES:
Q. What does this slide show us?
A. This slide shows us Claim 1 of the '640 patent.
Q. And what does the next slide show us?
A. The next slide shows us the preamble of Claim 1 of '640, and this is titled "Web-Based Point-of-Sale Builder, System Comprising."
Q. So there in the heading we have a web-based point-of-sale builder system comprising?
A. Yes, sir.
MR. YATES: And if we could go back one slide.
BY MR. YATES:
Q. We see that that's the first element here on this chart when we walk through the claims?
A. Yes, sir. That's correct.
Q. All right.
MR. YATES: If we could go ahead one more.
BY MR. YATES:
Q. And did the Court construe any of the terms in the preamble?
A. Yes, sir. It did. The Court construed a web-based point-of-sale builder system to mean "a point-of-sale system" -- "a point-of-sale builder system that requires the Internet."



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 35 of 307

Q. And does NCR Silver satisfy this claim element?
A. Yes, sir. It does.
Q. And did you observe the NCR Silver includes this element during your inspection?
A. Yes, sir. I did. As I mentioned, when I was using my laptop to do building functions, I did experience a web-based builder requiring Internet -- well, web-based builder. Sorry.
Q. And what other evidence, besides your inspection, shows that NCR Silver meets this claim element?
A. There was -- there were many pieces of evidence. One I like to use was Joint Exhibit 30, which is the U.S. training video. And what it shows very clearly here is a web-based builder.
So what we see here on the screen is we see a web browser, a standard web browser. We see this web browser displaying a web page. This web page also has HTTPS in the URL line. And what we're seeing here specifically is we're seeing that we're adding a category. And as we add a new category, we see the pop-up pop up, and we can add a new category.
Q. And this would be part of building, correct?
A. Absolutely. Yes, sir.
MR. YATES: Next slide, please.
BY MR. YATES:
Q. What do we see here?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 36 of 307

A. I'm still on the same screen. I'm sorry. Oh, my apologies.

This is the next -- my apologies. This is the next screen of building.

So what we did before was we added a category, and now what we've -- we're adding items into that category. And so this would roll up to what we just did before in the previous screen.

So again, this is further building. We're at the point where we're adding an item at this point.

Q. So there's actually a button that says "add item"?

A. Yes, sir. And that's what we've highlighted here, is the "add an item" button.

MR. YATES: Can we go to the next slide, please?

BY THE WITNESS:

A. Yeah. So this is the next screen in the workflow of adding an item, and what we're doing is we're doing a basic item setup. And what we're doing here is we are entering the item name. In this case we're entering -- we're adding horchata ice cream, and that's going to be our item that we're going to add. And so that's this portion, the basic item setup portion of building.

MR. YATES: Go to the next slide.

BY MR. YATES:

Q. What is this slide showing us now?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 37 of 307

A. This slide is showing us that the elements of Claim 1, that we just discussed in the preamble, have been met.

Q. And so that's why the box is checked?

A. Yes, sir. That's why the box is checked.

Q. What is the next claim element?

A. The next claim element is "one or more point-of-sale terminals that display POS screens."

Q. And did the Court construe any of these terms?

A. Yes, sir. It did. It construed POS screens to mean "a POS terminal's visual display depicting selection keys or buttons."

Q. And does NCR Silver include this element?

A. Yes, sir. It does.

Q. And did you observe this on your inspection?

A. Yes, sir. I did. I was able to use -- as I mentioned, at the NCR site, I was able to use multiple point-of-sale terminals, and they were all displaying point-of-sale screens.

Q. And what other evidence shows that NCR Silver meets this claim element?

A. What we've shown here is, again, Joint Exhibit 30, which is a training video.

This screen is showing -- this is the "my device" screen, so this is basically what a merchant would look at to see all the point-of-sale devices that they are using within their



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 38 of 307

environment, and they would be able to name them and control what is within their environment to be used.

Q. So this is how the Back Office software gives you the list of your devices, your point-of-sale terminals?

A. Yes, sir. That's correct.

MR. YATES: Next slide.

BY MR. YATES:

Q. What does this slide show us?

A. This slide shows us an actual point-of-sale terminal. This is the point-of-sale device itself. So this is basically the output of the building process that we went through.

And so what we see here is, we see the point-of-sale screen. That's what's here on the right. This is this visual display. And what we can see here with the -- we're talking about, you know, tea and frozen yogurt, these are the selection keys or buttons that are part of the point-of-sale device.

Q. What does the next slide show us?

A. The next slide shows us that the elements that we just discussed of Claim 1 have been met by NCR Silver.

Q. What's the next claim element to discuss?

A. The next claim element we're going to discuss is an "Internet connection from said one or more point-of-sale terminals to a web server."

Q. And did the Court construe any of these terms?

A. Yes, sir. The Court did construe a web server to



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 39 of 307

mean "hardware and software that uses HTTP, or hypertext transfer protocol, to serve data or files that form web pages."

This construction also includes the secure version, HTTPS, and the insecure version of just HTTP.

Q. And is this definition why a bunch of the slides have web browser indicated or HTTP pointed out or highlighted or red arrows?

A. Absolutely correct. That's why we've done that.

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. Did you observe this claim element during your inspection?

A. I did. As I mentioned, as I used my laptop, I was connected to the Internet. I was connected to the Internet and I was able to -- so that was the builder environment. And for the point-of-sales themselves, we're also connected to the Internet. And I saw what we very similarly see on the screen, the point-of-sale denoting that it was connected to the Internet.

Q. So besides what you observed personally, what other evidence shows that NCR Silver meets this claim element?

A. Right. So, again, this is Joint Exhibit 30, the training video. And this is showing what I saw on my observation, that there's a little cloud icon in the top right and it's a green icon and it says you're connected. And it



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 40 of 307

requires an Internet connection, and it is connected.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. What does this show us?

A. This shows us that the elements of Claim 1 that we just discussed have been met by NCR Silver.

Q. And the box is checked?

A. Yes, sir. The box is checked.

Q. What's the next claim element?

A. The next claim element is "one or more local or remote PC workstations."

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this claim element with NCR Silver during your inspection?

A. I did. Yes, sir. As I mentioned, I was using my laptop which is a workstation. And I was able to leverage that workstation within the NCR Silver environment.

Q. And what other evidence?

A. The other evidence was that, as I mentioned earlier, there was NCR hardware there set up as workstations, and I was able to use those workstations that were set up to build screens.

Q. And what other evidence shows?

A. The other evidence here, again, is Joint Exhibit 30,

the training video. What this is, again, showing, we're showing a web browser, we're showing the web browser on a workstation, we're showing here the Back Office. And this specific example is around the activity summary, and it's showing activity that would happen to the Back Office, just a listing of transactions or activity that has occurred in the environment.

Q. Now, can an iPad function as both a PC workstation as claimed and a point-of-sale device?

A. Yes, sir. It can function as both, either individually or together.

Q. And what does this slide show us?

A. This slide shows us the various types of PC workstations that could be used within the NCR Silver environment. We've got computers and tablets, and we have the more standard point-of-sale terminal-type devices on the right four.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. And what is this showing us?

A. This slide is showing us that the claim -- the components in Claim 1 that we just discussed have been met by NCR Silver.

Q. So what's the next claim element?

A. The next one is a "point-of-sale builder software



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 42 of 307

that runs on said web server, wherein said local or remote workstations are utilized to build or edit said POS terminals in realtime from anywhere in the world and over the worldwide web."

Q. And did the Court construe any of these terms?

A. Yes, sir. It did. The Court construed "point-of-sale builder" to mean its plain and ordinary meaning, wherein the plain and ordinary meaning means software that builds the POS terminals.

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this element during your inspection?

A. Yes, sir. I did. I was able to, as I mentioned, use my laptop to build the screens. And these screens -- as I mentioned, I was connected to an Internet connection, and when I made changes on my device, the changes were propagated immediately to the rest of the devices within the environment.

Q. And you were able to do this over the worldwide web?

A. Yes, sir.

Q. And what other evidence shows that NCR Silver meets this claim element?

A. There was quite a bit. I've centered here, again, on Joint Exhibit 30 which is a training video. And what we show here is, again, a web browser displaying a web page performing



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 43 of 307

building functions. And, again, this is connected to the Internet. You can see the URL -- you can see the HTTPS URL in the URL line which is connected over the Internet. And in this case, again, we are performing building functions. And in this case we're adding a new category.

MR. YATES: Next slide.

BY MR. YATES:

Q. So continuing on in the video, what does this show us?

A. Yes, sir. This is similar to what we've talked before. This is, again, continuing on in the build process. We're doing it over the worldwide web, we are doing it over -- we are doing it in a web browser. And we're doing the next step here, after adding a category, we are adding items that roll up into that category. And in this case, again, we're adding horchata ice cream.

Q. And what does the next slide show us?

A. The next slide shows us our completed product, if you will. This is the point-of-sale terminal itself. And as you can see, the button here is horchata ice cream. You can see its price. And this is -- again, this is our completed product that we just did when we did the add-an-item function.

MR. YATES: Next slide.

BY MR. YATES:

Q. What do we have here?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 44 of 307

A. We have here the claim elements that we just discussed have been met by NCR Silver.
Q. And so the box is checked?
A. Yes, sir. The box is checked.
Q. What's the next claim element?
A. Next claim element is "wherein said web servers are provided as a vendor subscription service, wherein web server software resides and is hosted on said vendor's remote servers."
Q. And did the Court construe any of these terms?
A. Yes, sir. The Court did construe "said web servers are provided as a vendor subscription service" to mean "wherein a web server is provided by a vendor to a subscriber as a subscription service."
Q. And did you observe this during your inspection?
A. Yes, sir. I did. When I -- as I mentioned, I was in the NCR environment. I noticed that there were no -- there wasn't any big fancy servers in the room. I do understand, from reading earlier in the case, that the Google Cloud is being leveraged for this environment. So not seeing servers in that room was not a surprise to me.
Q. And does NCR Silver satisfy this claim element?
A. Yes, sir. NCR Silver does satisfy this claim element.
Q. And when you used your laptop, did you need to get



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 45 of 307

credentials or something?

A. Yes. That's a good point. When I -- I was instructed to use my personal laptop. As I mentioned, it was nothing fancy, just as a standard laptop with a standard web browser. And to perform the building functions I was giving -- given another individual's log-in credentials to perform those building functions.

Q. And what other evidence shows that NCR Silver meets this claim limitation?

A. Yes, sir. We had -- there was quite a bit. But here what we're showing on Joint Exhibit 80 is an excerpt of the NCR Silver merchant agreement. And what this says very clearly, it says NCR Silver -- and we've underlined it. NCR Silver software as a service suite of applications and the related hardware and software.

Q. And so the merchant agreement, this is the same merchant agreement that was discussed among several witnesses yesterday; is that correct?

A. Yes, sir. It is.

Q. And the merchant agreement has an agreement that covers not only software as a service but also hardware?

A. Yes, sir. That's correct.

Q. And that's the related hardware that makes the whole NCR system work?

A. Yes, sir. That's correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 46 of 307

Q. And --

MR. PHIPPS: Objection, Your Honor. Mischaracterizes the document. I believe that Mr. Yates is testifying as to what it means.

THE COURT: Overruled.

MR. PHIPPS: Thank you, Your Honor.

MR. YATES: If we could go to the next slide, please.

BY MR. YATES:

Q. So you've highlighted NCR websites, servers and systems. Again, we're still in the merchant agreement in Section 9.1. What are you wanting to show here?

A. We're trying to show here that this is NCR's websites, NCR servers and NCR systems that they are requiring someone to subscribe to.

Q. And so NCR clearly has websites if they put it in their contract?

A. Yes, sir.

Q. And they clearly have servers?

A. Yes, sir.

Q. And the relationship with the merchant governs the NCR websites and servers, at least with respect to that merchant?

A. Yes, sir. That's clear to me.

MR. YATES: Can we go to the next slide?

BY MR. YATES:



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 47 of 307

Q. What is this slide showing us?

A. This slide shows us an excerpt, again, of the Joint Exhibit 30 which is the training video. And what we're seeing here is we're seeing the "my account" screen, which is what a merchant would look at to see the status of their account. They can see their account number, et cetera.

What we're highlighting here is the fact that the account status is active. And so the system is able to be used by the merchant at this point.

Q. And can NCR disconnect your -- based on your subscription?

A. Yes, sir. If you refer again to the merchant agreement, there are instances in which they can shut off the system and this would go to inactive.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. What is this showing us?

A. This is showing that the claim elements of Claim 1 that we just discussed have been met by NCR Silver.

Q. And so we've checked the box?

A. Yes, sir. We've checked the box.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. So what is the next element?

A. The next element of Claim 1 is "wherein subscriber



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 48 of 307

company's point-of-sale terminals access and repeatedly interact with said web server software from said vendor's remote servers in order to perform the subscriber's desired terminal function over a network wherein the network comprises the Internet."

Q. And did you observe this claim element on your inspection in Atlanta?

A. Yes, sir. I did. As I mentioned, I was able to use my laptop, connect it to the Internet. But what I was able to do is see the transactions that I was doing on the physical workstations that NCR provided, and was able to compare what was happening between all the various technologies and witness the transactions occurring over a network.

Q. And so on this slide we have a browser; is that correct?

A. Yes, sir. On this slide -- this is an excerpt of again Joint Exhibit 30, the training video. This is showing again in a browser. It's displaying a web page, and it's showing the transactions that have occurred in that environment at the period of time that we wanted to look at.

Q. And we're using HTTPS, and there's an arrow up there showing that?

A. Yes, sir. That's correct. So as I mentioned, this is a web page in a browser. And in the URL line we're seeing very clearly again this is HTTPS which is a URL connection to



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 49 of 307

the Internet.

Q. And so in this video the evidence we see under this POS transactions, those are transactions that are taking place on a point-of-sale terminal. And that information's being reflected back here in the Back Office?

A. Yes, sir. That's correct. If we look at the station that says it's Silver's iPad. So these transactions occurred at that station on the date of 2/22/2017, and these are the transactions that had occurred at that time.

Q. Is there any doubt that this is a web server?

A. No, sir. There is no doubt.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. What does this show us?

A. This shows us that the claim elements that we just discussed of Claim 1 have been met.

Q. So that's why the box is checked?

A. Yes, sir. That's why the box is checked.

Q. And so is Claim 1 of the '640 patent infringed by NCR Silver?

A. Yes, sir. It is.

Q. All right. Let's move on to Claim 3 of the '640 patent.

What's the next asserted claim element?

A. So this is Claim 3. It is dependent on Claim 1, so



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 50 of 307

it's dependent on Claim 1. So it brings in the components of Claim 1 that we've just discussed.

It adds the claim language of "wherein use of said builder requires no special training."

Q. And so because this is a dependent claim, it brings in all of the elements we went through from Claim 1; is that correct?

A. Yes, sir.

Q. And all of your analysis from Claim 1 and all the claim constructions would apply here as well?

A. Yes, sir. That's correct.

Q. All right. Does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

As I mentioned, in my -- in my experience using the system, I came to Atlanta armed with reading some documentation and watching some training videos. And I was able to, within seconds, be able to start building -- building screens, and I had no special training to use the system.

Q. And what other evidence shows that NCR Silver meets this claim element?

A. There's quite a bit, but here we've highlighted the NCR Silver website itself. And it's using some marketing terms, and they highlight the fact that it's easier, it's simple to use, no more days of training new employees, you can



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 51 of 307

use the system in minutes.

All of these things are consistent with my experience.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what does this show us?

A. This is showing us that Claim 3, what we've just discussed, the elements of Claims 3, have been met through NCR Silver.

Q. And so the box is checked?

A. Yes, sir. The box is checked.

Q. What's the next asserted claim?

A. The next asserted claim is Claim 4. And it again is dependent on Claim 1. It adds the language "wherein the testing of said POS screens is done iteratively in realtime while said POS terminals are simultaneously in use during store and business operation hours."

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this in your inspection in Atlanta?

A. I did. And again, I used my laptop to perform building functions, and I was able to immediately see the functions that I built show up on the terminals that were there on site.

Q. And what other evidence shows that NCR Silver meets



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 52 of 307

this claim element?

A. There was quite a bit, but we've looked at -- we've taken an excerpt from Joint Exhibit No. 70 and shown the synchronization activity. And what this means is all of the various devices within an environment need to have the same menu items on them.

And so what this is showing is a synchronization activity, and it's happening relatively consistently. As you can see, there's a -- three minutes later, their devices are syncing.

And what it's doing is taking the information that has been entered and all the screens that have been built and propagating them out to all the various devices.

Q. And in your working of the system, if you made changes, did those things sync like immediately?

A. Yes, sir. If you press that button, it will -- it will trigger an immediate synchronization.

MR. YATES: Next slide.

BY MR. YATES:

Q. So what does this show us?

A. This shows us that the elements of Claim 4 that we just discussed have been met by NCR Silver.

Q. So what's the next asserted claim?

A. The next asserted claim is Claim 5. It is again dependent on Claim 1. It adds the claim language of "wherein no specialized hardware or software was required to implement



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 53 of 307

said POS builder and wherein no one on site" -- sorry -- "wherein no on-site in-store server is required."

Q. So to make sure on that last part, it's "wherein no on-site in-store server is required"?

A. Yes, sir. That's correct.

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this during your inspection in Atlanta?

A. I did. Yes, sir.

As I mentioned, I used my laptop, which was, again, nothing special, a nothing special browser, completely off the shelf, and was able to use the system. In addition, the hardware that was provided by NCR was all standard -- standard stuff that one would buy off the shelf.

Q. And what other evidence shows that NCR Silver meets this claim element?

A. In this instance, we've shown the NCR Silver U.K. site, and it talks about how it's using off-the-shelf technology. It talks about how it used to be your business had a computer on site. It talks about consumer-grade, off-the-shelf hardware, such as the iPad, as a POS device.

Q. And when we look at the screen, this is NCR saying, remember how things were before the cloud?

A. Yes, sir. That's correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 54 of 307

MR. YATES: Next slide.
BY MR. YATES:
Q. And what does this show us?
A. This slide shows us that the elements of Claim 5 that we've just discussed are met by NCR Silver.
Q. So the box is checked?
A. Yes, sir. The box is checked.
Q. What's the next asserted claim?
A. The next claim is Claim 6. Again, it's dependent on Claim 1. It adds the claim language of "wherein said POS builder is usable to deliver POS application solutions using software as a subscription service, or SaaS."
Q. And does NCR Silver satisfy this element of the claim?
A. Yes, sir. It does.
Q. And what evidence shows that NCR Silver meets this claim element?
A. The major element is -- as we discussed here, is the merchant agreement. And what the merchant agreement says is -- as we discussed before, it says clearly, as we -- and we've highlighted here, NCR Silver software as a service suite of applications, the related hardware and the software.
MR. YATES: Next slide.
BY MR. YATES:
Q. And again, this shows that NCR's merchant agreement



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 55 of 307

refers to NCR websites and servers and systems?

A. Yes, sir. That's correct. And we've highlighted that here.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what are we showing here?

A. This is a screen we've looked at before. This is the Back Office "My Account" screen. And again, it is showing that the account -- the account status, in this case, is active. So their subscription is active, and they're able to use the service which is subscribed to.

Q. And Ms. Schoonover testified about subscription and other information yesterday, correct?

A. Yes, sir. That's correct.

MR. YATES: Next slide.

BY MR. YATES:

Q. What does this show?

A. This slide is showing that the elements that we've just discussed of Claim 6 are met through NCR Silver.

Q. And what is the next asserted claim?

A. The next asserted claim is Claim 11. It is again dependent on Claim 1. It adds the language "wherein said POS builder adds items to be associated with said keys or buttons."

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 56 of 307

Q. And did you observe this claim element during your inspection in Atlanta?

A. I did. Yes, sir.

As I mentioned, using my laptop, I was able to perform building functions. I was able to add items. These items then appeared with associated buttons. So yes, sir.

Q. And what other evidence are you offering?

A. The other evidence we have here is -- and we've seen this screen before, it's Joint Exhibit 30, the training video. Again, we're doing a basic item setup here.

We are adding the item horchata ice cream, and we can see that there's associated buttons -- that there's going to be an associated button that we've created here by doing this item setup.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what are we seeing here?

A. This is what I was alluding to here. This is again Joint Exhibit 30, the training video. This is showing the point-of-sale screen itself, and it is showing the associated key or button that we've just created. And we can see here it's again horchata ice cream. And we can see as we click it, here's the variations we can pick. We can pick a small, medium or large size horchata ice cream.

MR. YATES: Next slide.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 57 of 307

BY MR. YATES:

Q. And what is this showing us?

A. This slide is showing us that the elements of Claim 1 that we've just discussed have been met through NCR Silver.

Q. Of Claim 11?

A. Claim 11. I'm sorry. Did I misspeak? My apologies.

Q. And so the box is checked?

A. Yes, sir. The box is checked.

Q. What's the next asserted claim?

A. The next claim is Claim 12. It is dependent on Claim 1 that we just discussed. It adds the language "wherein said POS builder assigns attributes such as item name, price, cost, group, taxable and inventory status to said items."

Q. And does NCR Silver satisfy this element of the claim?

A. Yes, sir. It does.

Q. And did you observe this on your inspection?

A. I did. Yes, sir. As I noted previously, using my laptop building point-of-sale screens, I was able to add -- I think the number is 15 or so -- different attributes for each of these associated menu items. So it gets pretty detailed on what you can add to these items.

Q. And what other evidence do you have?

A. We have again the training video in front of us. Again, this is the basic item setup screen, but we're



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 58 of 307

highlighting a few different things here. We're highlighting the fact that it has inventory, it has categories or groups, it has price information, it has tax categories. And so it has many of the elements that we've discussed.

MR. YATES: Next slide.

BY MR. YATES:

Q. So I don't think we've seen this slide before. What is this slide showing us?

A. Yes, sir. This is a new slide for us. This is -- this is the extended item setup. This is where we get to more detailed information that one would add to each associated item. And so you're adding things like variations. Do you want to have, as we just saw, the small, medium or large modifiers? Do we want to add a topping on our ice cream? Et cetera. We can add bar codes, et cetera. But there's quite a bit of extended data we can add here through this screen.

Q. And this is still all building; is that correct?

A. This is all still building, absolutely, sir.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what is this showing us?

A. This slide is showing us that the elements of Claim 12 that we've just discussed have been met.

Q. So we've checked the box?

A. We have checked the box.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 59 of 307

Q. What's the next asserted claim?
A. The next claim is Claim 13. It is dependent on Claim 12 that we've just discussed. It adds the language, "wherein said attributes are stored, retrievable and changeable from a Back Office database stored on said web server."
Q. And does NCR Silver satisfy this claim element?
A. NCR Silver does satisfy this claim requirement.
Q. And did you observe this during your inspection?
A. I did. I was able to, as I mentioned, use my laptop, make -- add items, et cetera. I was able to see these items on different devices, make changes to these items in different -- on different devices. And they were all clearly stored on -- clearly stored in a database, and it was clearly with a web server.
Q. And what other evidence shows that NCR Silver meets this claim element?
A. As we've shown before, this is again the training video. We're showing the basic items setup screen again, and we're showing a web page, a web browser, the HTTP in the URL line. We're -- you know, we're adding the item horchata ice cream, and we're showing that all these attributes are retrievable and changeable.
MR. YATES: Next slide.
BY MR. YATES:
Q. And again, we've seen this slide before?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 60 of 307

A. Yes, sir. Again, this is again an example of how one could retrieve and change details that one had previously built for these menu items.

Q. And does NCR specifically mention having a database?

A. It does, absolutely. Yes.

MR. YATES: Can we go to the next slide?

BY MR. YATES:

Q. What is this slide showing us?

A. This slide shows us -- and this is Joint Exhibit 69 -- overview of NCR point-of-sale, and the video here, the voiceover says, "Back Office," which is really just a website you log into, that's where you find customer management page and database.

Q. So this is one of the YouTube videos that we've discussed?

A. Yes, sir. It's one of the YouTubes that one could find on YouTube posted by NCR.

MR. YATES: Next slide.

BY MR. YATES:

Q. So what is this showing us?

A. This shows us the elements of Claim 13, that we've just discussed, have been met through NCR Silver.

Q. And the box is checked?

A. Yes, sir. The box is checked.

Q. What are your opinions about the asserted claims of



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 61 of 307

the '640 patent?

A. As we've discussed, my opinion on the claims of '640, 1, 3, 4, 5, 6, 11, 12 and 13, have all been met by NCR Silver.

Q. Well, let's transition to the '012 patent.

What are the asserted claims of the '012 patent?

A. The asserted claims of the '012 patent are Claims 1 through 4 and 9.

Q. Can you show us Claim 1? Is this Claim 1?

A. Yes, sir. This is Claim 1 of the '012 patent.

Q. And what is the preamble of Claim 1?

A. The preamble of Claim 1 is, a web-based point-of-sale builder comprising.

Q. And did the Court construe any of these terms?

A. The Court did construe web-based point-of-sale builder system to mean a point-of-sale builder system that requires the Internet.

Q. And this is the same construction as used in the other patent?

A. Yes, sir. It is.

Q. And does NCR Silver satisfy this element of the claim?

A. Yes, sir. It does.

Q. And did you observe that NCR Silver includes this element during your inspection?

A. I did. As I mentioned -- as I mentioned before, I



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 62 of 307

was using my laptop with a browser, and I was performing building functions using the web.

Q. And what other evidence shows NCR Silver meets this element?

A. As we discussed before, this is a training video, and we're showing here an excerpt from that video. And it's showing, very clearly, a web browser displaying a web page using HTTPS. And in this case, we are again adding a category. And in this case, when we add a category, we get the pop-up of where one would add a new category.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what is this slide showing us?

A. This slide is showing us a different video. It's Joint Exhibit 76. And what this is is this is from the marketing team, I would presume. Marketing teams have a -- do a good job of taking pretty complex topics and making them relatively simple. And what it's saying here is, it's powered -- it's powered by cloud-based software.

Q. So over here, on the right, it's saying, powered by cloud-based software?

A. Yes, sir.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what is this slide showing us?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 63 of 307

A. This shows us the elements that we've just discussed of the preamble of Claim 1 of '012 have been met by NCR Silver.

Q. And so the box is checked?

A. Yes, sir. The box is checked.

Q. What's the next claim element?

A. The next claim element is, a web server including a POS builder software installed therein -- therein -- thereon.

Q. And did the Court construe any of these terms?

A. Yes, sir. The Court construed a point-of-sale builder software to mean its plain and ordinary meaning, wherein plain and ordinary meaning means "software that builds the POS terminals."

It also construed the web server to mean "hardware and software that uses HTTP, or hypertext transfer protocol, to serve data or files that form web pages."

And as we discussed, this construction includes the secure and insecure version of HTTP.

Q. So HTTP and HTTPS?

A. Yes, sir.

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this claim element with NCR Silver during your inspection?

A. Yes, sir. I did. As I mentioned before, using my laptop with its standard browser I was able to -- I was able to



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 64 of 307

build screens, and I was definitely interacting with the web server in doing so.

Q. And what other evidence shows that NCR Silver meets this claim element?

A. As we discussed a few times, we're looking at the training video here, and we are showing clearly that it's a web browser displaying a web page. It's got HTTP in the URL line. And in this case we're again adding a new category.

Q. And adding a new category's part of building?

A. Absolutely. Yes, sir.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what is this showing us?

A. This is -- this is the guide to NCR Silver, Joint Exhibit 82A. And what it is showing, what we've highlighted here, is NCR Silver Pro is a cloud-based point-of-sale solution. You access Silver Back Office through a web browser to configure the majority -- a majority of your store settings, track transactions, market to your customers and update your menu.

Q. And configuring the majority of your store settings and updating your menu, those are building?

A. Yes, sir.

MR. YATES: Next slide.

BY MR. YATES:



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 65 of 307

Q. So what is this showing us?
A. This slide is showing the claim element of Claim 1 that we just discussed have been met through NCR Silver.
Q. What is the next claim element?
A. The next claim element is one or more POS terminals generated by said POS builder software and said one or more POS terminals configured to be accessible at one or more terminal devices. Said POS terminals configured to accept POS transactions and collect corresponding transaction data.
Q. And does NCR Silver satisfy this element of the claim?
A. Yes, sir. It does.
Q. And did you observe this claim element on your inspection?
A. Yes, sir. I did. As I mentioned, I was able to use, you know, my laptop and perform building functions. And as I was building screens, I could see -- I could see the various -- various devices display those screens. And I could see the transaction data as I performed transactions on my -- again, back on my laptop from the Back Office.
Q. And so what other evidence shows NCR Silver meets this limitation?
A. We have two excerpts here. We have Joint Exhibit 69 which is the left, which is the image of the workstation here. And on the right we see an extract from the training video

again of the finished product of a point-of-sale terminal. And we're seeing our -- that we're ready to start accepting transactions here.

MR. YATES: Next slide.

BY MR. YATES:

Q. What are we seeing here?

A. One thing we're seeing here is we're seeing the -- again, the -- as we've discussed, we've seen the builder software in a web browser with HTTP, and we're going through the extended item setup functionality.

MR. YATES: Next slide.

BY MR. YATES:

Q. What do we see here?

A. What we see here is, again, we've seen a screen like this before, and this is the Back Office. This is the point-of-sale transaction screen. And what this is showing is all the transaction data that has occurred within that environment at the time one would want to look at it. And specifically we're looking at the station iPad and the transactions that occurred in September of 2015.

Q. And this is being done through a browser with HTTP through a web page?

A. Yes, sir. It's consistent with the rest of the slides we've shown. This is a standard browser with a web page doing HTTPS and displaying all this information in a web page.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 67 of 307

MR. YATES: Next slide.
BY MR. YATES:
Q. And what does this show us?
A. This shows us again marketing, simplifying an important term. And what we're saying here is they -- NCR Silver tracks sales.
Q. So tracking sales is how a marketing guy would simplify the POS transactions and transaction data?
A. Yes, sir. That's correct.
MR. YATES: Next slide.
BY MR. YATES:
Q. What do we see here?
A. What we see here is the claim elements of Claim 1, that we just discussed, have been met through NCR Silver.
Q. What's the next claim element?
A. The next element is "a POS builder interface configured to be accessible via network communication with said web server over a communications network."
Q. And did the Court construe any of these terms?
A. Yes, sir. It did.
It construed POS builder interface to mean plain and ordinary meaning, wherein plain and ordinary means "an interface, the POS builder software."
Q. And does NCR Silver satisfy this element of the claim?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 68 of 307

A. Yes, sir. It does.

Q. And did you observe this claim element with NCR Silver when you were in your inspection?

A. Yes, sir. I did.

As I mentioned, I used my laptop with an Internet connection, and I was using that browser with an Internet connection, using -- connecting to a web server. And again, as I mentioned, it's -- I had an Internet connection, so it was connected over a network.

Q. And is there other evidence, besides your inspection, that shows this claim element is met?

A. Yes, sir. Again, focusing on the training video, Joint Exhibit 30, what we show here is, the builder interface, again, you know, we're adding a category. And we have -- we have here a web browser displaying a web page using HTTPS in the URL line; and as we've discussed previously, this is the function of adding a category.

MR. YATES: Next slide.

BY MR. YATES:

Q. What does this show us?

A. This shows us the elements of Claim 1 that we just discussed have been met through NCR Silver.

Q. And what's the next claim element?

A. The next claim element is "wherein said POS builder interface is configured to be utilized to access said builder



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 69 of 307

software for programatically creating or modifying said one or more POS terminals in realtime over the communications network."

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this claim element during your inspection?

A. I did, sir. As I mentioned, I used my laptop to do building functions. And as I -- as I added screens and items, I was able to look at the point-of-sale terminals, and they had the information that I had created, all the menu items, et cetera, instantaneously over the network that I was connected to.

Q. And were you able to go back in and modify those same items?

A. I was. Yes, sir.

Q. Is there other evidence, besides your inspection?

A. Yes, sir. There was a bit. And we looked at -- we've excerpt -- created an excerpt from Joint Exhibit 69, and what we're seeing here is the -- we've seen this before, but this is another -- this is the extended item setup screen in a browser with the web page with HTTPS. And what we're showing here is, we're adding variations or adding line -- adding item modifiers.

Q. And compared to other versions of this picture,



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 70 of 307

they've scrolled down a little bit from some of the other snips from other videos?

A. Very good point. What we're highlighting here, the other thing is, we're showing more of the functionality in the extended item setup. We're showing that we can do a barcode. We can assign printers, and we can look at different, you know, tax regimes that might exist for different categories of items that are sold.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what is this showing us?

A. This slide is showing us the elements of Claim 1 that we've just discussed have been met by NCR Silver.

Q. What's the next claim element?

A. The next claim element is: "Wherein said POS builder software is configured to interact with said one or more POS terminals over the communications network in order for the web-based point-of-sale builder system to perform functions in accordance with instructions sent from the POS builder interface."

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this during your inspection?

A. Yes, sir. I did.

And what I saw was, I was able to -- as I've mentioned, I



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 71 of 307

was able to perform building functions, and those builder functions were propagated to all the devices on the network.

Q. And is there other evidence that shows this claim element?

A. Yes, sir. There is.

We've picked an extract of Joint Exhibit 70. And what -- again, we've seen a similar screen here. We've seen -- this is the synchronization activity that occurs within the Silver environment, ensuring that all the devices on the network are synchronized or have the same items that I previously built. And we're showing how that's synchronized.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what is this slide showing us?

A. This slide shows us that the claim element that we just discussed in Claim 1 have been met through NCR Silver.

Q. So what's the next claim element?

A. The next claim element is wherein said POS transactions and corresponding transaction data from said one or more POS terminals are configured to be transmitted to said web server by the communications network.

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this claim element in NCR Silver during your inspection?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 72 of 307

A. I did. Yes, sir. As I mentioned a few times, I was able to perform transactions on the various devices connected to the network. And these transactions were communicated over the network to the centralized Back Office.

Q. And what other evidence shows NCR Silver meets this claim element?

A. What we picked here is Joint Exhibit 69. And this is showing that -- again, we've seen this screen before. This is showing -- the Back Office showing the list of transactions that have occurred in that environment.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. What does this show?

A. This slide is showing that the elements of Claim 1 that we've just discussed have been met through NCR Silver.

Q. And what's the next claim element?

A. The next claim element of Claim 1 is wherein each point-of-sale transaction is correlated with corresponding transaction data occurring at said one or more POS terminals.

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this claim element during your inspection?

A. Yes, sir. I did. As I've mentioned previously, I was able to perform transactions and see those transactions



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 73 of 307

occur at different point-of-sale terminals. But each point-of-sale terminal was able to do a transaction. I was able to track where that transaction actually occurred.

Q. And here we see that it's being viewed by a web server. So this is the Back Office, correct?

A. Yes, sir. So we have an excerpt here of Joint Exhibit 69. And so this is, again, what we've shown before. This is highlighted in the transaction screen that allows one to look at the transactions that have occurred in that environment.

MR. YATES: Next slide.

BY MR. YATES:

Q. So what does this show us?

A. This slide is showing us that the claim elements of Claim 1 that we've just discussed have been met through NCR Silver.

Q. So is Claim 1 of the '012 patent infringed by NCR Silver?

A. Yes, sir. That's correct.

Q. And what is the next asserted claim?

A. The next asserted claim of '012 is Claim 2. It is dependent again on Claim 1. It adds the claim elements of wherein instructions to the POS builder interface for programmatic creation and modification of the one or more POS terminals are not formatted in programming code.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 74 of 307

Q. Okay. Now, why is this claim important?
A. This is important again, as I explained, in my experience of using these in the period of time here in 2005, 2010 roughly. It was important to use programming code to create screens. And so this element of Claim 2 is saying you're able to create or modify terminals without the use of programming code which was very prevalent at the time.
Q. So the patents aren't limited to a particular programming language or a particular source code?
A. No, sir. That's correct.
Q. And does NCR Silver satisfy this claim element?
A. NCR Silver does satisfy this claim element.
Q. And did you observe this claim element during your inspection?
A. Yes, sir. Absolutely.
As I mentioned, in -- different than my experience of building point-of-sale terminals a while ago, I was able to build screens relatively quickly and easy without the use of any programming code.
Q. And what other evidence shows that NCR meets this claim element?
A. We've picked Joint Exhibit 30 again, and this is a screen we've seen before. But this is again showing the creation, the building process, occur without the use of programming where we are going through and making decisions



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 75 of 307

about what we want to add from variations and modifiers and et cetera, doing all these things, again, building screens without using programming code.

MR. YATES: Next slide.

BY MR. YATES:

Q. And what does this show us?

A. This is a screen we've seen before from Joint Exhibit 30, the -- the training video. And this is showing again the finished product, if you will. We're showing the point-of-sale terminal. We're showing the item that we built before, that we created. And again, this is the horchata ice cream that we built previously.

MR. YATES: Next slide.

BY MR. YATES:

Q. So what is this showing us?

A. This slide shows us the elements of Claim 2 that we've just discussed have been met through NCR Silver.

Q. So the box is checked?

A. Yes, sir. The box is checked.

Q. What's the next asserted claim?

A. The next asserted claim is Claim 3. It is also dependent on Claim 1. It adds the language of wherein said one or more POS terminals are tested iteratively in realtime while said one or more POS terminals are operable to accept POS transactions.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 76 of 307

Q. And does NCR Silver satisfy this claim element?
A. Yes, sir. That's correct.
Q. And did you observe this claim element in NCR Silver during your inspection?
A. I did. Yes, sir.
As I mentioned, I was able to use my laptop, build screens, then go to the -- then go to the point-of-sale workstations that were provided by NCR and see those being added -- see those being added instantaneously.
Q. And what other evidence shows that NCR Silver meets this claim element?
A. We've seen this screen before. This is the extract of Joint Exhibit 70. And what this is showing -- again, this is showing the synchronization activity. Again, taking the things that one had built -- in this case, me -- and show them propagated to the various devices on the network.
MR. YATES: Next slide, please.
BY MR. YATES:
Q. And what is this showing us?
A. This is showing us -- again, this is the point-of-sale terminal itself. And what it is showing us here is there's an available training mode that one could enter from the point-of-sale device itself.
Q. And that would be on Joint Exhibit JTX-21?
A. Yes, sir. That's correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 77 of 307

Q. And that's another one of the YouTube videos?
A. Yes, sir. It is.
MR. YATES: Next slide.
BY MR. YATES:
Q. So what does this show us?
A. This shows us the claim elements of Claim 3 that we've just discussed have been met through NCR Silver.
Q. And what is the next asserted claim?
A. The next asserted claim is Claim 4. It is also dependent on Claim 1. It adds the claim language of wherein at least one of said POS builder interface and said one or more POS terminals are configured to be implemented without specialized hardware or software at a given terminal device.
Q. And does NCR Silver satisfy this claim element?
A. Yes, sir. It does.
Q. And did you observe this during your inspection?
A. Yes, sir. I did. As I mentioned previously a few times, I used my laptop which was a standard laptop, not specialized hardware in any way. I was able to perform building functions. Those building functions were then sent to devices that were just standard off-the-shelf hardware configured to be workstations.
Q. And what other evidence shows that NCR Silver meets this claim element?
A. This is -- we've seen this before as well. This is

the UK site for NCR Silver. And it again highlights the fact that NCR Silver uses off-the-shelf technology. Used to be your business had a computer on site using consumer-grade off-the-shelf hardware such as the iPad as a POS device.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. What is this showing us?

A. Again, we've seen this slide before, but I wanted to highlight something different that the marketing team had said. And they say in the bottom right: NCR Silver turns your iPad into a mobile POS.

Q. So that's how the marketing guys simplify this?

A. I believe so. Yes, sir.

MR. YATES: Next slide.

BY MR. YATES:

Q. What does this show us?

A. This slide shows us that Claim 4 that we've just discussed has been met through NCR Silver.

Q. So we can check the box?

A. We can check the box.

Q. And what's the next asserted claim?

A. The next claim is Claim 9. It is dependent on Claim 1. It adds the language wherein said one or more POS terminals, once generated, are configured to operate independently of said web server.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 79 of 307

Q. And does NCR Silver satisfy this claim element?

A. Yes, sir. It does.

Q. And did you observe this behavior?

A. Not by my own hands, but we did look at a few videos that do highlight the fact that NCR Silver will work in offline mode, if you will, right? So we've talked about previously food trucks and other items.

I think this is also important because at the time of, you know, 2005 to 2010 when I was building these systems, merchants typically didn't have a reliable Internet connection. So it was -- or a reliable connection at all, really, to their payment processor. And it was important to have processing systems to have the ability to be able to go it alone, if you will.

And so this is -- this is -- what this highlights here -- and we've heard it through testimony here -- here earlier -- is that NCR Silver can function without a connection always being on.

Q. And you're referring here to the JTX-21, again, one of the videos that we've talked about before?

A. Right. This -- so what this is showing is, you can -- you can operate over a WiFi network or a cellular network, et cetera. Yes. That's what this video is pointing out.

MR. YATES: Next slide, please.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 80 of 307

BY MR. YATES:

Q. So --

A. And this -- sorry. Go ahead.

Q. What's this slide showing us?

A. This slide is a -- this is an extract of the NCR website. The top part is an excerpt of the NCR website, and what it says -- what that is saying is, it's answering the question: Will the system, NCR Silver, work without an Internet connection?

And the answer is: Yes. The system will work without an Internet connection. Other transactions will sync when Internet connectivity is restored.

Q. So bottom line is, you need to have the Internet in order to have your transaction data show back up in the Back Office?

A. That's correct. You would be in standalone mode, and your information would be there until you connected to the Back Office.

Q. But if the Internet's down or you're in a food truck, NCR Silver can work -- once it's already been generated, can operate independently of the web server?

A. Yes, sir. That is correct.

Q. And does the patent teach us anything about that?

A. The patent does, and what we've displayed here in the bottom right is the extract from the '640 patent. And it says



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 81 of 307

very similar language: However, if the web goes down, the POS terminals continues to operate. There is a "loose coupling" of the POS to the Back Office.

MR. YATES: Next slide, please.

BY MR. YATES:

Q. So what does this show us?

A. This shows us that Claim 9, that we've just discussed, have been -- the elements of Claim 9 have been met through NCR Silver.

Q. And we can check the box?

A. Yes, sir. We can.

MR. YATES: Next slide.

BY MR. YATES:

Q. So do you have opinions about the asserted claims of the '012 patent?

THE COURT: Mr. Yates, I think now, since we're shifting to another patent, would be a good place to take a break.

MR. YATES: Be a great time to take a break, Your Honor.

THE COURT: Unless you all wanted to stay here a little while longer. I'm kidding.

He got it at least.

MR. YATES: If I may, Your Honor, we are through going through the claims of the patents, but it is still a great time to take a break, Your Honor.

THE COURT: Very good.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 82 of 307

Ladies and gentlemen of the jury, we'll take a recess of 10 to 15 minutes. Remembering my instructions that you may not discuss the case amongst yourselves while you're in the jury room, you are dismissed.

THE BAILIFF: All rise.

(Jury exited the courtroom at 10:20.)

THE COURT: Thank you. You may be seated.

Do we anticipate this gentleman taking the rest of the day -- rest of the morning until lunch? And that's --

MR. YATES: On behalf of plaintiff, we have a few more topics that are not slides, are not element-by-element analysis that we'd like to walk through. And we are --

THE COURT: No. Here's --

MR. YATES: Very short amount of time.

THE COURT: I'm being too mystical. We had an issue to take up regarding the next witness. If we're going to -- if this witness will take all the way through lunch or close to it, then we can wait to take up the slide if you think that -- if you think that this witness won't, then we should take it up now. But my sense is he'll go through the morning.

MR. YATES: Strictly based on plaintiff, I can't commit that to Your Honor.

THE COURT: No, no. I'm just saying.

MR. PHIPPS: Your Honor, I believe that I can finish up my cross-examination by lunch.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 83 of 307

THE COURT: That's fine. So what we'll do is we'll -- and you don't have to -- we don't have to do anything. It's just, I want to make sure we didn't have to take a weird break for me to look at the document.

So whenever we finish with him, either before or after lunch, what we'll do is after lunch before the jury comes in I'll take up the issue of the slide for the next -- the next witness is the damages expert, correct?

MR. BARR: Yes, Your Honor.

THE COURT: Okay.

Anything else, Mr. Yates or Barr, we need to take up before I go back?

MR. BARR: No, Your Honor.

THE COURT: Counsel?

MR. PHIPPS: No, Your Honor.

THE BAILIFF: All rise.

(Recess taken from 10:22 to 10:36.)

THE BAILIFF: All rise.

THE COURT: Please remain standing for the jury.

(The jury entered the courtroom at 10:36.)

THE COURT: Thank you. You may be seated.

Mr. Yates, you may resume.

MR. YATES: If we could go to the next slide, please.

BY MR. YATES:

Q. And what is this, Mr. Crouse?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 84 of 307

A. This is an excerpt of the patents. It's Figure 3, and we've seen this before. As I've mentioned, this is architecture, a high-level architecture diagram, that describes the components within the patents-in-suit here.

MR. YATES: And could we go to the next slide?

BY MR. YATES:

Q. So what are we seeing here?

A. What we're seeing here -- I believe we've seen this slide before as well -- is we've taken that same excerpt that we've just talked about from the patents-in-suit and we've added modern day components here. This is not trying to replace the claim-by-claim analysis that we just went through, but, again, we're trying to kind of show very modern components with something that's, you know, a little older.

Q. So did you suggest this to help the jury visualize what the patent, you know, teaches from 2008 to systems that are here today in 2021?

A. Yes. That's an important point. I think some of these diagrams and patents are -- they don't -- you know, they might not make sense to, you know, the layperson or anybody. But so what we've added -- tried to do is add components that people would understand, right?

Q. And so if we look in the gold seal copy of the patent, it's this picture here?

A. Yes, sir. That's correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 85 of 307

Q. Okay. But infringement is actually determined by the claims, which are in the back of the patent, correct?

A. Yes, sir. That's correct.

Q. And so the jurors have in their jury notebook a copy of Joint Exhibit 1 and Joint Exhibit 2.

Is that your understanding?

A. That is my understanding. Yes, sir.

Q. They don't have a nice, pretty government one, do they?

A. I don't believe so.

MR. YATES: We can go to the next slide.

BY MR. YATES:

Q. Do you have any other opinions related to this case?

A. Yes, sir. I do. I want to highlight two areas of opinions.

Number one is, I've got some -- I have some opinions around the validity of the patents. I expect to deliver that testimony after Dr. Chatterjee testifies.

The other thing I want to discuss is, it's common for me -- it happens often as a technical expert -- to advise or assist damages experts. And I understand this to be common for technical experts, to advise damages experts on technology.

Damages experts are not usually technology experts, and one of the things I'm engaged to do is make technology concepts understandable to accounting-type people.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 86 of 307

Q. And before we get into that, I'd like to -- you know, you were here when they showed a slide from Dr. Chatterjee of an architecture diagram that was showing an application server.

You were in the courtroom when that happened?

A. Yes, sir. I was.

Q. And you're expected to answer some questions in a few minutes from Mr. Phipps about that diagram and other thoughts?

A. I presume I would. Yes, sir.

Q. Okay. And did any of the claims that we went through require an application server?

A. No, sir. They do not.

Q. And the claims only really required a web server; is that correct?

A. Yes, sir. That is correct.

Q. And in this case we have a specific definition given to us from the Court of the web server, correct?

A. Yes, sir. We do.

Q. And through all of this analysis, you applied to whatever's up in the Google Cloud in the Back Office this Court's particular construction about web server, correct?

A. Yes, sir. That is correct.

Q. And so regardless whether or not that web server is assisted with application servers or database servers or other technical components, do you believe that the claims are infringed by NCR Silver?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 87 of 307

A. Yes, sir. That's correct. It's common to have assisting devices assist a web server to create web pages. So yes, sir.

Q. Well, let's move on to your testimony that was -- and your opinions that was asked out by the damages people.

MR. YATES: If we could go to the next slide.

BY MR. YATES:

Q. At a high level, can you please identify benefits of the patent?

A. Yes, sir. As I mentioned before, one of the key benefits of the patents here are the customers of any skill level -- in this case, the customer is the merchant -- of any skill level can manage their point-of-sale system directly.

As I mentioned previously, that is a big difference from how I experienced it in the mid-2000s and I believe how most people experienced point-of-sale terminals in the 2000s, is they had to employ people like me to build these screens.

Q. And so that's one benefit. What are some other benefits?

A. Yes, sir. Another benefit is the Back Office server resides on a hosted platform. And again, that's a key benefit. It was common for merchants to have server hardware locally to manage communication traffic.

It goes on to say that that web-based builder is flexible, easy to use and accurate. It -- the other great thing about



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 88 of 307

putting the Back Office somewhere else is, it makes it available to be managed anywhere in the world, and it also allows that it can be managed in realtime.

Q. So how do these benefits that you've just explained to the jury relate to the innovations that we discussed on, oh, I don't know, Slide 7 or 8 or 10, a long time ago?

A. Right. I think what they show is is these innovations were innovative and, you know, NCR Silver is employing these innovations within their offering.

Q. And so of most interest to the innovations would be whom?

A. Merchants.

Q. Merchants.

And of most interest to the benefits would be?

A. Right. I think one of the key points here is, what we've been talking about earlier is a benefit to a manufacturer of a point-of-sale terminal. What are the -- you know, making it easy to use makes it -- as we showed marketing screens. And so that's marketed towards -- to merchants to buy something from a manufacturer. These are benefits for the merchant itself, right?

And so it's not benefitting -- these benefits are for the merchant, not necessarily for a manufacturer like NCR.

MR. YATES: Now, if we go to the next slide.

BY MR. YATES:



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 89 of 307

Q. Can you explain to the jury your understanding of point-of-sale systems generally?

A. Yes, sir. As I mentioned, I've built numerous point-of-sale systems, and they're relatively complicated. There's hundreds, if not thousands, of functions that occur within a point-of-sale system.

And talking about hundreds of -- hundreds or thousands of things is not very fun, and it's very hard to do. And so what I endeavored to do was categorize all of these functions into discrete categories, or buckets, if you will.

And I've categorized all the hundreds or thousands of functions within a point-of-sale server -- point-of-sale system within these six categories.

Q. Well, can you elaborate on your first bucket, transaction management?

A. Yes, sir. So the transaction management is -- it's the backbone, if you will, of a point-of-sale system. It is what we all think about a point-of-sale system is, is giving a credit card, doing a transaction, giving money, taking -- getting change back, all the things that happen with a transaction. A point-of-sale system must do that. It is, as I mentioned, the backbone of a point-of-sale system.

Q. And the next bucket is inventory management. What's that?

A. Yes. So inventory management is a system -- and



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 90 of 307

we've heard this through some testimony earlier. The system needs to understand what is being sold, right? It needs to understand what items are being sold, if it's a pretzel, it's a pizza, what have you. It also should understand if you run out, right? You don't want to sell things that you don't have, right? That makes people angry. So having the point-of-sale system understand what's being sold is important.

Q. And that's a gigantic differentiator from, you know, just a cash machine or a cash register that just understands maybe the payment side of a transaction, correct?

A. Yes, sir. You're absolutely correct.

Q. What is your third bucket --

A. The third bucket --

Q. -- content management? Sorry.

A. Sorry. Yeah. The third bucket is what I call content management. So this is what we discussed. The information that's on the device, so the representation and the data that goes along with the items, so the variations, the prices, et cetera. And so being able to add, manipulate, change those items, is what I'm terming content management.

Q. So that would include describing for the items?

A. Yes, sir. The items, the descriptors. And I think in the NCR Silver case we have 15 describers or attributes, if you will, of these items. And so all that, again, is content that a merchant can manage.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 91 of 307

Q. Please explain your fourth bucket, POS infrastructure.

A. Yes, sir. The infrastructure is the physical components. This is the things we're touching, whether it be keyboards, whether it be tablets, whether it be cash registers. It's the hardware -- the hardware, the things that are physical that allow the system to operate.

Q. And your fifth bucket, reporting?

A. Yes, sir. Reporting. Reporting is -- and we've seen some of the screens here through the presentation. Reporting is showing transaction data. How much money did we make in this store? How much is, you know, Susie at Terminal A -- you know, how much did she ring up today? Understanding the transactions that have happened in the environment is important to a point-of-sale solution.

Q. And your sixth bucket is security?

A. Sixth bucket is security. I would be remiss if I didn't talk about it. Security's important, as we all know. And so protecting the information that you have in your system is important.

Q. So you created these six buckets for a generic point-of-sale system. And of the various features, hundreds of features, you more or less mapped them into these six buckets?

A. Yes, sir. That's correct.

Q. Okay. And this applies to all point-of-sale systems?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 92 of 307

A. Yes, sir. That's correct.

Q. Okay. Why are four of them highlighted in yellow?

A. The four that are highlighted in yellow are what I would consider core components of a point-of-sale environment.

So transaction management, inventory management, content management, the infrastructure. That's core to -- core to the system itself.

The un-bolded items of reporting and security are important, and I'm not saying they're not. What I am saying is, there are other ways you can fulfill those components.

So for reporting, for instance, you can extract the data from the system and perform your analytics in another analytics engine. You could use Excel. You could use -- you know, if you have another platform to do analytics on, you don't need to rely on the point-of-sale system to do that for you.

And the same thing goes for security. As I mentioned, security is very important, but there -- if you already have security regimes in place to protect your environment, you have physical security, you have workstation security or Windows security, you can protect your environment in other ways. You do not have to rely on your point-of-sale solution to do that for you.

Q. So how do your buckets relate to NCR Silver?

A. So these buckets certainly do relate to NCR Silver. NCR Silver does offer the components that we've discussed. It



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 93 of 307

clearly offers transaction handling. It clearly offers inventory management. It clearly offers content management and --

MR. PHIPPS: Your Honor, I object. I believe that this is getting into the apportionment issue, which we dealt with previously.

THE COURT: I can't hear what you're saying.

MR. PHIPPS: Oh. Your Honor, I object. I believe this is getting into the apportionment issue that we dealt with previously pretrial.

THE COURT: Let me hear the question again.

MR. YATES: I was asking how this relates to NCR Silver, and Mr. Crouse was going over how the four items here on the slide, that NCR Silver offers those components.

And we are very aware of Your Honor's guidance earlier.

THE COURT: And how would this violate it?

MR. PHIPPS: Yes, Your Honor. The last two bullet points purport to indicate that those are factors that drive demand for NCR Silver.

And again, this witness has not done any consumer surveys nor spoken to consumers in connection with preparing his report. And, therefore, we feel that he is not able to offer an opinion on what drives demand based on these factors that he has identified.

THE COURT: Mr. Yates?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 94 of 307

MR. YATES: First of all, we believe that they tried to -- this on their motion, and that part of the motion was denied.

THE COURT: I agree.

MR. YATES: There's a technical apportionment --

THE COURT: The objection will be overruled.

MR. YATES: Thank you, sir.

BY MR. YATES:

Q. I believe we were talking about your first bullet, which says, NCR Silver offers the following high level components.

Was that where we were?

A. Yes, sir. I believe so. I've lost my place a little bit, so I'll --

Q. I think you were on --

A. If I backtrack, I apologize.

Q. I think you were on content management.

A. Okay. Yes, sir.

As we've shown through a lot of the presentation here, we've shown that NCR Silver does have content management. We saw the items being shown, the items being changed, the items being manipulatable, you know, changed and added, et cetera.

And so it's -- it does offer content management.

Q. And the fourth item there, POS infrastructure, how does that relate to NCR Silver?

A. Yes, sir. As we've shown through the merchant



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 95 of 307

agreement and other exhibits here, that there is an infrastructure that is acquired -- required for the system to work, and NCR does provide that.

Q. These four components are covered by the inventions and the patents. And by explanation, meaning the patents have claim language that relates to NCR's implementation of those four components; is that correct?

A. Yes, sir. That's correct.

Q. And do you have any other opinions about these four components at NCR Silver?

A. So these four components are differentiating in general, right? So the -- the patents have created differentiators, as we discussed earlier, in these categories, and by doing so have created demand.

And I think we've talked about, interestingly, earlier, I forget the name of the consulting firm, but we talked about it. And they highlight the same four factors as driving demand for point-of-sale terminals -- point-of-sale systems generally.

So these innovations in these areas do drive demand.

MR. YATES: Can we move up into I think the first backup slide?

BY MR. YATES:

Q. Sorry. Since you brought this up, we have something that was shown yesterday.

This is PTX-117, and this is already, I believe, entered



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 96 of 307

into evidence.

Is this what you were talking about, Mr. Crouse?

A. Yes, sir. That is. And -- yes, sir. And I haven't seen -- I didn't see the back of the slide -- the backup of this slide until this week. And so it was just kind of happenstance --

MR. PHIPPS: Objection, Your Honor. This is not in his report. He admitted he just saw it this week.

MR. YATES: This exact exhibit was an exhibit to Ms. Schoonover's deposition, which he did read.

I think, if I may say, that he hasn't seen a blowup of this slide until this week, and we will concede he didn't see or create the annotations on the slide until preparation for this trial.

THE COURT: But has he addressed in his report each of these issues?

MR. YATES: He's addressed all of these issues in his report, Your Honor. He has not addressed them in the context of this slide, to be candid.

THE COURT: I'll overrule the objection.

MR. YATES: Thank you.

BY MR. YATES:

Q. So this was the presentation that Mr. Barr, I believe, went over with Ms. Schoonover and they went and talked about yesterday, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 97 of 307

A. Yes, sir. That's correct.
Q. And so what's highlighted here is, merchant demand for payments capability integrated with inventory control, order management and POS functions across in-store, online and mobile devices is forcing industry collaboration and opening up opportunities?
A. Yes, sir. That's correct.
MR. YATES: And if we could go back to where we were in the presentation before.
BY MR. YATES:
Q. And so you believe those map to the four high-level components that you created and offered to opine on NCR Silver?
A. Yes, sir. That is correct.
Q. And that's what you mean when you say these four components are significant infringing drivers of demand for NCR Silver?
A. That's correct. And I would also highlight we performed, as I mentioned, through my implementations of point-of-sale systems, we did do market surveys with consumers who use these devices, both the individuals in the stores or the branches, as well as consumers, direct consumers themselves. And they -- we discussed how -- is the ease of use of systems -- easy to transact -- transaction handling important. And that's one of the many things we would ask consumers. And, indeed, this does --



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 98 of 307

MR. PHIPPS: Objection, Your Honor, hearsay.
THE COURT: Hearsay?
MR. PHIPPS: Yes. He says he's talking to consumers.
THE COURT: Is he not an expert?
MR. PHIPPS: Yes, Your Honor. But we have not seen these discussions in his report.
THE COURT: Well, those are two -- your objection to hearsay is overruled. Do you have another objection?
MR. PHIPPS: Yes, Your Honor. In terms of what's in his report, he doesn't recount any discussions with consumers.
MR. YATES: We'll withdraw the question, Your Honor.
If we could go to the next slide, please.
BY MR. YATES:
Q. And I think these are your -- well, do you have any other opinions that you'd like to share?
A. Yes, sir. I do. My first opinion -- my first other opinion is while legacy POS systems continue to exist, I'm not aware of any commercially acceptable noninfringing alternatives that achieve the same benefits as the patents in suit.
Q. Are you aware of any cost effective alternate ways to design around the patents-in-suit?
A. No, sir. I'm not aware of any cost-effective ways to do that.
MR. YATES: Your Honor, subject to our offer of proof that we'll make later today, pass the witness.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 99 of 307

THE COURT: Ladies and gentlemen of the jury, whenever I see, in these trials, these wonderful people who walk up each time and do all the technical stuff, I always wish I had someone at home who was as good that could fix everything for me.

I never thank them, but we have -- always have great technical help in here for the lawyers, you know, to make it easier for all of us. So let me thank them for all of us.

You may proceed.

MR. PHIPPS: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. PHIPPS:

Q. Good morning, Mr. Crouse.

A. Good morning, Mr. Phipps.

Q. You just talked about four factors that you pulled out in your report of general features that are relevant to POS technology, correct?

A. Yes, sir. That's correct.

Q. And were you here when Mr. Olson testified?

A. Yes, sir. I was.

Q. Okay. And you heard him talk about his prior art experience with Starbucks, correct?

A. Yes, sir. I heard that.

Q. And I went through all four of those factors with him, and he admitted that the POS system that he used at



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 100 of 307

Starbucks had all those features, didn't he?

A. Yes. I believe he did admit that.

Q. Okay. If those features are common to POS systems and they were in the prior art and they weren't invented by Mr. Olson, those can't be relevant features that the plaintiff can claim that they're entitled to revenue from because they drive demand for NCR Silver, because, again, those are the same factors and features that were available at the POS systems at Starbucks when Mr. Olson started working there, correct?

A. No, sir.

Q. You disagree with that?

A. I do disagree with you, sir.

Q. All right. But you do agree that Mr. Olson conceded that all of those four features were present in the Starbucks POS system and the prior art, don't you?

A. I do agree that he said that. Yes, sir.

Q. Okay. Thank you, Mr. Crouse.

And did you see me cross out the word "patented features" with respect to the opening slides of those four factors and write in "prior art"? Did you see me do that?

A. I did not, sir. I'm sorry.

Q. Okay. Let's talk about your education.

You have a bachelor of business degree in finance, correct?

A. Yes, sir. That's correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 101 of 307

Q. And that's your only formal education is a degree in finance, correct?
A. That's correct.
Q. But you're being offered in this case as a technical witness, correct?
A. Yes, sir. That's correct.
Q. As a technical expert, correct?
A. Yes, sir. That's correct.
Q. But your only formal degree is in finance, correct?
A. Yes, sir. That's correct.
Q. You do not have a bachelor of science degree in computer engineering, do you?
A. No, sir. I do not.
Q. You do not have a bachelor degree in software engineering, do you?
A. No, sir. I do not.
Q. You do not have a bachelor of science degree in computer science, do you?
A. No, sir. I do not.
Q. During your tenure at the University of Texas in Austin, you did not take any courses on software coding, did you?
A. No, sir. I did not.
Q. You do not have any patents, do you?
A. No, sir. I do not.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 102 of 307

Q. You do not consider yourself to be an inventor, do you?
A. No, sir. I do not.
Q. You did not design any new computer hardware in connection with your work experience, did you?
A. No, sir.
Q. Prior to being involved in this case, you had not reviewed any U.S. patents other than the ones your father had, correct?
A. Yes, sir. That's correct.
Q. Prior to this lawsuit, you had never heard of or reviewed the two asserted patents?
A. Yes, sir. That's correct.
Q. And prior to this lawsuit you had never heard of Wayne Baratta or Quentin Olson; is that correct?
A. Yes, sir. That's correct.
Q. Prior to this lawsuit you had never heard of CloudofChange, correct?
A. Yes, sir. That is correct.
Q. And you had never heard of any of their predecessor entities such as InteRegister or Tyramm, correct?
A. Yes, sir. That is correct.
Q. In your work experience involving POS systems, you never worked on a POS system involving an app from the Apple Store or any system on an iPad, have you?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 103 of 307

A. No, sir.
Q. This is the first case in which you are providing an opinion on POS systems, correct?
A. Yes, sir.
Q. Okay. This is the first case in which you're providing an opinion on patent infringement, correct?
A. Yes, sir.
Q. This is the first case in which you are opining, or providing an opinion as to patent invalidity issues, correct?
A. Yes, sir. That's correct.
Q. This is the only case in which you have served as an expert witness where the case involved a patent, correct?
A. Yes, sir. That's correct.
Q. In preparing your report in this case you did not speak to any consumer who actually used NCR Silver, did you?
A. No, sir. I did not.
Q. Other than the HTML code on this login screen, you have not reviewed any source code for NCR Silver, have you?
A. Yes, sir. That's correct.
Q. You inspected NCR Silver only once, and that occurred on February 22, 2021 and lasted for about two hours, correct?
A. Yes, sir. That's correct.
Q. During that inspection you didn't review any source code, did you?
A. No, sir. I did not.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 104 of 307

Q. After graduating with your degree in finance, you went to work for Andersen Consulting which is now called Accenture, correct?

A. Yes, sir. That's correct.

Q. During your time at Accenture you did not work on POS systems, did you?

A. No, sir. I did not.

Q. You were employed at Accenture for 12 years, from 1992 to 2004, correct?

A. Yes, sir. That's correct.

Q. And you didn't work on any POS systems during that time frame?

A. No, sir. I did not.

Q. In 2004 you then went to work for BearingPoint, correct?

A. Yes, sir.

Q. It was at BearingPoint that you alleged to have first worked on your first point-of-sale system, correct?

A. Yes, sir.

Q. And that was in 2004?

A. Yes, sir.

Q. You describe the project as leveraging point-of-sale solutions to help the bank go paperless when processing loan documents, correct?

A. And other transactions, but yes, sir.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 105 of 307

Q. You consider the bank essentially to be a merchant in that scenario, correct?
A. Yes, sir. That's correct.
Q. You mentioned that you worked with most of the major vendors of POS terminals, and that included IBM, Hypercom, VeriFone and about five others, correct?
A. Yes, sir. That's correct.
Q. So at that time there were numerous POS vendors in the market in 2004, including IBM, correct?
A. Yes, sir. That's correct.
Q. And those manufacturers also provided POS builder software, correct?
A. Yes, sir. They did.
Q. And those system included POS terminals with touch screens, POS builder software and PC workstations, correct?
A. Yes, sir. That's correct.
Q. You consider those commercially available POS builder systems that were in the prior art time frame of 2004 to 2007 to be different from the web-based POS terminal systems of the asserted patents, don't you?
A. Yes, sir. I do.
Q. Those prior art systems that included builder software were used by you and your team back in the corporate office to do the building, correct?
A. Yes, sir. That statement is correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 106 of 307

Q. Those prior art systems that included builder software were not used by the bank tellers to build their own POS terminals, were they?
A. No, sir. They were not.
Q. You were employed with BearingPoint for about three years, correct?
A. Yes, sir.
Q. You left BearingPoint in 2007?
A. Yes, sir. Correct.
Q. In 2007 you then became employed by Perot Systems?
A. Yes, sir. That's correct.
Q. You worked on one project that you called a POS system, and that included a project for Chase Bank wherein they wanted to speed up the teller process, correct?
A. Yes, sir. That's correct.
Q. You indicated that your team used a POS builder, but it was you and your team that did the building, correct?
A. Yes, sir. That's correct.
Q. So if you, back in the corporate offices of Perot Systems, were building a POS, that is different from the asserted claims, correct?
A. Yes, sir. That's correct.
Q. And IBM made the POS builder software that you used at Perot Systems, correct?
A. Yes, sir. That's correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 107 of 307

Q. It was you and your team, back in the corporate office, that used the IBM builder software to build the POS screens, the look and feel of them, correct?

A. Yes, sir. That's correct.

Q. Your team of builders could use a test environment to build the POS terminals, correct?

A. Yes, sir. That's correct.

Q. Those systems were fairly complex, difficult to use, so you had to be very diligent in your level of testing, correct?

A. Yes, sir. That's correct.

Q. Those systems used IBM POS terminals, IBM builder software, IBM PC workstations and Dell servers on the back end, didn't they?

A. Yes, sir. That's correct.

Q. Those Dell servers were hosted at a remote centralized location, correct?

A. I'm sorry. Could you -- I wasn't following for a moment.

Q. The Dell servers that were used in your prior art POS activities, those were hosted at a remote, centralized location, correct?

A. It's the word "hosted" I'm having an issue with. So these were on-premises implementations, so they weren't necessarily hosted, but...



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 108 of 307

Q. Okay. Could we look at your transcript, Page 45, Lines 2 through 6?

And my question was, were those Dell servers?

And your answer was, if you could read that.

A. I think that's consistent with what I just said. These were not hosted at a third party. It was hosted in a centralized location for Chase.

Q. Correct. And I didn't ask you right now if it was a third party, but I asked if they were hosted at a remote, centralized location.

And that is true, correct, Mr. Crouse?

A. Hosting -- and I'm not trying to be difficult, and I apologize.

Q. I understand.

A. But hosting is typically a relationship where a third party is hosting it for you, and it was merely something that, in this case, Chase owned.

Q. Okay. But does your answer say there that it was hosted on the centralized location?

A. Yes, sir. It does.

Q. Okay. Thank you, Mr. Crouse.

To build those POS terminals, your team was involved in coding, correct?

A. Yes, sir. Myself and the team. Yes.

Q. There was coding involved because you were actually



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 109 of 307

manipulating the look and feel of the device of what was being represented on the device.

So the shape of the buttons, the location of the buttons, all of that was programmatic, correct?

A. Yes, sir.

Q. You consider what the bank tellers or the merchants were doing was more of a data entry exercise, correct?

A. I wouldn't say it was data entry.

Q. Okay. Can we look at your deposition, Page 46, Lines 2 through 5?

And then on Lines 4 to 5, do you see the phrase "that was more of a data entry exercise"?

A. Right. And this is talking about the transaction itself, not the building.

Q. Correct. In other words, the transaction that the tellers were doing, you consider that a data entry exercise?

A. Yes, sir. They would enter in the amount of data -- the amount of money being received. That's correct.

Q. Yes, sir. And that was a data entry exercise?

A. Yes, sir.

Q. Okay. Thank you.

If your team was building, because you -- certainly were programming, because you -- again, you were changing the look and feel of the entire enterprise. In other words, it was your team that was programming, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 110 of 307

A. Yes, sir. That's correct.
Q. Your team that was programming, changing the look and feel of the entire enterprise, they were involved in actual computer coding, correct?
A. Yes, sir. That is correct.
Q. In connection with using that system for customer on-boarding, you consider that adding the customer's name for the first would be a data entry exercise.
I'm sorry. We've already covered that.
A. Yes, sir. That's correct.
Q. All right. And it was your centralized team that performed the function of what you characterize as building point-of-sale content, correct?
A. Yes, sir.
Q. The POS software that your team built was loaded onto the POS terminal at a central location, and then the devices were shipped to the branches, correct?
A. Yes, sir. That's correct.
Q. The teller or customers could not make changes to the prebuilt POS terminal software that was preloaded or shipped to the customers, could they?
A. You're right. Yes, sir.
Q. The customer could not build the POS terminal, correct?
A. Correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 111 of 307

Q. The customers who used the prebuilt terminal software in this Chase example could not change the buttons or where they went, correct?

A. Yes, sir. That's correct.

Q. IBM wrote that POS builder software, correct?

A. Yes, sir. It did.

Q. But you do not recall at your deposition the name of the POS builder software from IBM, did you?

A. No, sir.

Q. The remote servers hosting that system that your team built were IBM servers and those IBM servers were not web servers, correct?

A. That is correct.

Q. Your prior work experience involving bank systems did not involve the sale of food, did not involve the sale of retail items and did not involve the processing of credit card transactions, correct? And I'm talking about all of your prior art experience.

A. Yes, sir. You're correct.

Q. Didn't involve any of those?

A. Yes, sir. You're correct.

Q. So no sale of food, no sale of retail items and no processing of credit card transactions?

A. You're correct, sir.

Q. Instead, those banks were selling loans and



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 112 of 307

processing transactions around currency transactions and loans and know-your-customer type transactions, correct?

A. Yes, sir.

Q. Let's talk about your inspection of NCR Silver. During your inspection of NCR Silver, you were not able to change the size or shape of the buttons, were you?

A. No, sir.

Q. I'm sorry?

A. No, sir.

Q. Okay. And you were not able to move the buttons around relative to each other, were you?

A. I was.

Q. Okay. Let's look at your deposition testimony. Page 134, Line -- I'm sorry -- 10 through 13.

And I asked you this question and you gave this answer.

Mr. Crouse, but in terms of moving the buttons around relative to each other, you could not do that with NCR Silver, correct?

And your answer was?

A. My answer was, that is correct.

Q. You were not able to change the reference points between a button and a database, were you?

A. No, sir.

Q. When you used the NCR Silver product during the inspection, you didn't change the source code on the existing

POS devices, did you?

A. No, sir.

Q. Now, you mentioned that you reviewed some -- something in a GitHub repository. Do you remember that?

A. Yes, sir.

Q. Okay. But that did not include any source code, did it?

A. No, sir. It did not.

Q. You understand that you -- and let's -- now that we've talked about some of your experience and the inspection, we're going to talk about your opinions on infringement of the claims.

And would you agree that you have to use the Court's construction in your analysis?

A. I would agree with that. Yes, sir.

Q. And the Court defined point-of-sale builder software to mean software that builds the POS terminals, correct?

A. Yes, sir.

Q. All right. But in your word you used the word "content" which is not in the Court's construction, correct?

A. That is correct.

Q. You chose not to use that construction, didn't you?

A. No, sir. That's not correct.

Q. And let's look at your transcript on Page 147, Line 25. Let's see here. Okay. Starts off on Page 147.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 114 of 307

My question, Mr. Crouse, is the Court's construction broader than the definition that you're using with the word "content"?

And you responded?

A. I don't have any disagreement with the Court's construction.

Q. And then I said, Then why aren't you using it?

And your answer?

A. My answer was, I just chose not to. I'm not a robot. I don't just pick. It's not a copy-and-paste exercise.

Q. So when I asked you why aren't you using the Court's construction, you responded, I chose not to, correct? That was your response?

A. Yes, sir. That was my response.

Q. Now, you define POS content to mean the data, correct?

A. Yes, sir.

Q. And your use of the word "content" as compared to data, you believe that there could be data in NCR Silver that determines the size of the button. And you call that data, correct?

A. I'm sorry. Could you repeat? My apologies.

Q. Yes, sir. Mr. Crouse, in your use of the word "content" as compared to "data," you believe that there could be data in NCR Silver that determines the size of the button,



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 115 of 307

and you call that data, correct?

A. Yes, sir.

Q. But you don't know if NCR Silver does that or not, do you?

A. Yes, sir. That's correct.

Q. Okay. So you don't know?

A. That's correct.

Q. In your report you indicate that you believe that a POS builder is something that has the ability to add, delete or maintain items as well as the items related to metadata in a POS system, correct?

A. Yes, sir.

Q. So you believe that the ability to simply add, delete and maintain items is building the POS terminal, don't you?

A. Yes, sir. That's correct.

Q. You admit that the word "metadata" does not appear in any of the asserted patents, don't you?

A. Yes, sir. That's correct.

Q. You admit that the word "metadata" is not included in the Court's construction, don't you?

A. Yes, sir. That's correct.

Q. In your report, you reference open-source technologies, correct?

A. Yes, sir. I do.

Q. And you agree that the asserted claims do not require



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 116 of 307

the use of open-source technologies, correct?
A. Correct.
Q. You define the asserted patents as being merchant-configurable builder, and you consider that to be allowing the end user to do the configuration building, correct?
A. Yes, sir.
Q. You understand the asserted patents to allow the merchant to build their own system, correct?
A. Yes, sir.
Q. You admit that the word "cloud" does not appear in the asserted patents, don't you?
A. I do. That's correct, sir.
Q. You agree that Claim 1 of the '640 patent requires that the builder run on a web server, don't you?
A. Yes, sir.
Q. Okay. So it has to be on a web server.
You agree that Claim 1 of the '012 patent requires that the POS builder be installed on a web server?
A. Yes, sir. That's correct.
Q. So either installed on or runs on?
A. Or runs on. Yes, sir.
Q. But you don't know, with respect to NCR Silver, where physically the alleged POS builder software resides, do you?
A. Correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 117 of 307

Q. You do not know which aspects of the remotely hosted software used with NCR Silver is hosted on a web server versus an application server, do you?

A. No, sir.

Q. Okay. Let's look at the term "programatically creating" in Claim 1 of the '012 patent. That's on Slide 80 of your presentation.

You understand that that part of Claim 1 of the '012 patent to mean "through the efforts of developing code," don't you?

A. I'm sorry. I wasn't following you.

Q. Oh, I'm sorry.

MR. PHIPPS: If we could get up Slide 80 --

BY THE WITNESS:

A. That would be helpful. I'm sorry. It's a lot of --

MR. PHIPPS: -- from the presentation that you used with Mr. Yates. Sorry.

BY THE WITNESS:

A. Appreciate you.

Thank you.

MR. PHIPPS: Now, we just need -- oh, yeah. That's fine. Okay.

BY MS. PHIPPS:

So Claim 1 is on Slide 12, but you remember that being a limitation of Claim 1 of the '012 patent, correct --



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 118 of 307

A. Yes, sir. That's correct.
Q. -- "programatically creating"? Okay.
And so my question to you was: As to that term, that is in Claim 1 of the '012 patent, you understand that to mean "through the effort of developing code," correct?
A. No, sir. I do not.
Q. Okay. So let's look at your deposition, your second deposition.
MR. PHIPPS: So the second transcript, Page 94.
Okay. Lines 10 through 13.
BY MR. PHIPPS:
Q. And I asked you this question, and you gave this answer.
Mr. Crouse, what do you understand programatically creating to mean?
A. My answer was, through the effort of developing code.
Q. Thank you, Mr. Crouse.
And in connection with your report in trying to determine whether or not NCR Silver meets that limitation, you observed -- you say that you observed that during your inspection, correct?
A. Observed what? I'm sorry.
Q. You say that to determine whether or not NCR Silver meets that limitation which is through the effort of developing code, the basis for your opinion that NCR Silver meets this



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 119 of 307

limitation is your observation of using NCR Silver during the inspection, correct?

A. Yes, sir.

Q. And then you had another slide on Slide 80 which is just an output of an NCR Silver screen, correct?

A. Could you --

Q. We -- yeah.

MR. PHIPPS: If we can bring up 80 again.

BY THE WITNESS:

A. Yeah.

BY MR. PHIPPS:

Q. So during your testimony the only two things that I heard about this limitation was you mentioned your inspection?

A. Yes, sir.

Q. And then you showed this slide, which is something that a consumer can see. And you've already admitted that you never reviewed any source code in connection with this case, correct?

A. Correct.

Q. So what my question is to you is that the only basis you have for that limitation in Claim 1 of the '012 patent, is that you used the system, inspected it in Atlanta for about two hours and that you looked at this screen which is a printout from a YouTube video, correct?

A. Yes, sir.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 120 of 307

Q. And that's the only thing you testified about the basis for your opinion as to NCR Silver as to Claim 1 of the '640 -- '012 patent as to this limitation, correct?

A. Yes, sir.

Q. Okay. Now, you talked a little bit about the merchant agreement that is between NCR and a merchant, correct? Do you remember that?

A. Yes, sir.

Q. JTX-80, the merchant agreement?

A. Yes, sir.

Q. Okay. And that's the contract that governs the relationship between NCR and the merchants, correct?

A. Yes, sir.

Q. And then this morning you heard Ms. Schoonover talk about the contract between NCR and Google, correct?

A. Yes, sir. I did.

Q. Okay. And so did you hear Ms. Schoonover say we, NCR, pay for the hosting, correct?

A. Correct.

Q. When you went to the inspection of NCR Silver, you brought your own PC which was a Dell laptop, correct?

A. Yes, sir.

Q. Now, let's talk about how the NCR Silver product is used by a merchant, a consumer. Okay? So they get the software from the Apple App Store, correct, to go on the POS



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 121 of 307

terminal?
A. Yes, sir.
Q. Okay. And if that software is going to be updated, they have to get those updates from the Apple Store, correct?
A. Yes, sir.
Q. And so as part of the merchant agreement, NCR tells customers that they need to get their own Internet access, correct?
A. Yes, sir.
Q. Okay. And so it's the consumers, the merchants that actually use NCR Silver, correct, in their retail operations?
A. Yes, sir.
Q. Okay. So you admit that a merchant who purchases the NCR Silver has to obtain their own Internet access, don't you?
A. Yes, sir.
Q. Okay. You admit that the merchants put NCR Silver into service, don't you?
A. Yes, sir.
Q. You admit that NCR places restrictions on what a merchant can do. But within those restrictions a merchant can -- controls its own use of NCR Silver, correct?
A. Yes, sir.
Q. You admit that merchants benefit from the use of NCR Silver, don't you?
A. Yes, sir. I do.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 122 of 307

Q. You admit that NCR Silver can be used with third-party payment processing systems, don't you?
A. Yes, sir.
Q. You admit that NCR does not provide a web browser, don't you?
A. Yes, sir.
Q. You admit that a merchant can use NCR Silver in a standalone mode, such as food trucks that are not connected to the Internet, don't you?
A. Correct.
Q. You admit that a merchant, in order to use NCR Silver, would need to build content for it to work in their environment, correct?
A. Correct.
Q. And you use the word "content" there, correct?
A. Correct.
Q. Okay. You mean that to be what you define as building, inputting your inventory, what it is you're going to sell, the prices and how much inventory you have, correct?
A. Yes, sir.
Q. Okay. You mean building to be basically uploading what you're selling into the device, correct?
A. No, sir.
Q. Okay. Let's look at your transcript.
MR. PHIPPS: Page 173, Lines 7 through 13.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 123 of 307

BY MR. PHIPPS:

Q. So I asked you, what does that mean?

And your answer was?

A. That means building, inputting your inventory, talking about what it is you're going to sell, what are the prices, what are the varieties, how much inventory you have, basically upload what it is you're selling into the device for it to function.

Q. And that's how you define building, correct?

A. Yes, sir.

Q. You admit that a merchant who has downloaded the app from the App Store can input content from the iPad, don't you?

A. Yes, sir.

Q. Okay. You admit that a merchant cannot change the source code of the app, correct?

A. Correct.

Q. Mr. Crouse, in terms of using NCR Silver, it's the merchant or customer that actually uses it, correct?

A. Correct.

Q. You admit that the merchant benefits from using NCR Silver, don't you?

A. Yes, sir.

Q. Okay. You admit that NCR Silver provides the benefit to merchants, just like any point-of-sale solution, correct?

A. Correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 124 of 307

Q. Merchants who use NCR Silver are able to perform transactions, they're able to do the transaction process, they're able to understand their inventory, they're able to understand what they've sold, correct?

A. Correct.

Q. You agree that NCR places restrictions on how merchants can use NCR Silver, including that merchants aren't allowed to change source code, correct?

A. Correct.

Q. You agree that the merchant must obtain some of the components that are necessary for a merchant to use NCR Silver and that not all of those are provided by NCR Silver, correct?

A. Correct.

Q. If a merchant wants to use a PC workstation that's not the iPad in which the app is downloaded, the merchant has to provide that separate PC workstation themselves, correct?

A. Correct.

Q. When you did your inspection of NCR Silver, again, you mentioned that you brought your own PC workstation in the form of a Dell laptop, didn't you?

A. Yes, sir.

Q. Now, earlier when Mr. Yates was testifying -- and again, we covered this at the beginning of my examination -- you listed six components, but you admitted that the asserted patents did not contribute all of those to the POS industry,



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 125 of 307

didn't you?

A. Correct.

Q. So we heard Mr. Olson admit that those were in the prior art and you yourself admit that the asserted patents did not contribute all of those to the POS industry, correct?

A. Correct.

Q. With respect to Item No. 1, you admit that transaction handling was available in POS systems that you worked on, that existed in the prior art prior to the asserted patents, don't you?

A. Yes, sir.

Q. With respect to Item No. 2, inventory management, that was a feature of POS systems that you worked on and that existed in the prior art to the asserted patents, correct?

A. Correct.

Q. The asserted patents require the use of the Internet, don't they?

A. Yes, sir.

Q. The asserted patents did not contribute to the Internet. They didn't introduce the concept of reporting to the POS industry and they didn't introduce the concept of reporting, did they?

A. No, sir.

Q. You believe that NCR Silver essentials and NCR Silver Pro are separate and distinct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 126 of 307

A. Yes, sir.
Q. You agree that a merchant could not use NCR Silver Essentials to build NCR Silver Pro, don't you?
A. Correct.
Q. Two separate versions of the product, and one can't be used to build the other, correct?
A. That's a correct statement.
Q. You agree that there are features of NCR Silver Pro that a merchant could not configure or build, correct?
A. Correct.
Q. You admit that during the prior art you purchased a POS system to help you serve as a merchant for selling parts for cars, correct?
A. Yes, sir. That's correct.
Q. And that you obtained a POS terminal that had a keypad, that you got it from a bank and you inputted your sales prices and you could swipe a card and send the transaction up the network, correct?
A. Yes, sir. That's correct.
Q. You admitted that even though you inputted prices into that terminal, you did not build the POS terminal software in connection with your use of that POS system, correct?
A. That's correct.
Q. So when you inputted prices in that prior art POS terminals, you didn't consider that building, did you?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 127 of 307

A. No, sir.
Q. You admit that that system that you used to sell car parts was connected to the merchant processor bank by a dial-up, correct?
A. Yes, sir. It was.
Q. Okay. So even though prior to this case you had never heard of the asserted patents or Mr. Baratta or Mr. Olson or the plaintiff, CloudofChange, you were aware of NCR, correct?
A. Yes, sir.
Q. You first heard about NCR a long, long, long time ago, correct?
A. Yes, sir. That's correct.
Q. You have owned stock in NCR Corporation, correct?
A. A long, long time ago. Yes, sir.
Q. You admit that NCR is an inventive company, don't you?
A. I would.
Q. You agree in terms of your infringement analysis that if NCR Silver does not meet all of the limitations of an independent claim, then it cannot infringe any of the dependent claims, correct?
A. Correct.
Q. Okay. Now, we talked about this web server subscription limitation that's in the '640 patent. And you



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 128 of 307

admit that NCR Silver obtains any servers that it does use from Google, and that NCR does not charge merchants a fee for those servers, correct?

A. Correct.

Q. You admit that there is no direct subscription between Google and an NCR customer, correct?

A. Correct.

Q. Now, we talked about where some of the software is in the Back Office, and you said you didn't know where it was. But in terms of this concept of eliminating any use, however minor, of a web server in connection within the NCR Silver, you have admitted that a company would be able to place whatever software it is hosting remotely on a non-web server and avoid the asserted claims of the asserted patents, correct?

A. Yes, sir.

Q. In terms of timing, you testified that the amount of time it would take to switch from a web server to a non-web server would depend on how integral the web server components were, correct?

A. Yes, sir. That's correct.

Q. You admitted that you don't know which aspects of a remotely hosted server used with NCR Silver is hosted on a web server versus an application server, didn't you?

A. That's correct, sir.

Q. You admit that you do not know the internal workings



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 129 of 307

of NCR, don't you?

A. That's a correct statement.

Q. You admit that you do not know how much it would cost NCR to undertake whatever endeavor it would take to completely eliminate any nominal use of a web server in connection with its provision of NCR Silver, correct?

A. Correct.

Q. And it is possible to host remotely a POS builder system, if there was one in this case, on a remote application server, isn't it?

A. Yes, sir.

Q. In terms of the iPad, you understand that that came out in 2010, correct?

A. Yes, sir.

Q. Okay.

MR. PHIPPS: No further questions at this time, Your Honor, for Mr. Crouse. Thank you.

THE COURT: Mr. Yates?

REDIRECT EXAMINATION

BY MR. YATES:

Q. Now, Mr. Crouse, for your patent infringement analysis, did you use and apply the Court's claim constructions?

A. Yes, sir. I did.

MR. YATES: Can we bring up Page 6 of the slide?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 130 of 307

And if you could, could you do 6 and 7? I don't know if that'll show up or not.

BY MR. YATES:

Q. So we saw these slides before. These are the Court's claim constructions. The jurors actually have them in their notebook.

MR. YATES: And can you go to -- I believe it's on Page 6 -- for the claim construction for point-of-sale builder software?

BY MR. YATES:

Q. What is the construction of point-of-sale builder software?

A. Plain and ordinary meaning, wherein plain and ordinary meaning means software that builds the POS terminals.

Q. Now, by building, it doesn't say building software, correct?

A. That is correct.

Q. It doesn't say building other programs, does it?

A. It does not.

Q. It says, software that builds POS terminals, correct?

A. Yes, sir. That's correct.

Q. Is anywhere in the claim constructions or the claims, is source code a necessary element?

A. No, sir.

Q. So any arguments that you didn't look at source code,



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 131 of 307

you didn't opine on source code or anything, doesn't affect anything associated with the claims or the Court's construction; is that correct?

A. That is correct, sir.

Q. And if the Court had construed something as having to deal with source code, we would have asked for that and looked at it, wouldn't we?

A. We would have.

Q. Okay.

MR. YATES: We could look at the construction that's on Page 7 of "programatically creating or modifying said one or more POS terminals in realtime."

BY MR. YATES:

Q. And you applied the Court's construction there, didn't you?

A. Yes, sir. The plain and ordinary meaning of that.

Q. Plain and ordinary meaning.

And what did the patent show us was the plain and ordinary meaning or --

MR. YATES: Strike that, Your Honor.

Could we bring up the patents -- oh, it's -- can we bring up Slide 9, please?

BY MR. YATES:

Q. So we're looking here at the patents. And is this what the patent teaches us is programatically creating or



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 132 of 307

modifying said one or more POS terminals in realtime?

MR. PHIPPS: Your Honor, I object. I believe that you have given your claim construction, and the witness has already testified as to what he understands that to mean.

I'm not sure what this exercise is benefitting, the analysis. We've already covered the topics in the testimony with this witness.

THE COURT: This is cross.

MR. PHIPPS: I understand, Your Honor, but I believe this is getting into a revision of claim construction.

MR. YATES: I don't believe it's a revision of claim construction. I --

THE COURT: I'll overrule the objection.

MR. YATES: Thank you, Your Honor.

BY MR. YATES:

Q. So is Figure 5 what the patent teaches in terms of programatically creating and modifying said one or more POS terminals --

THE COURT: I'm sorry. I just have to put on the record. This not cross. This is redirect. Sorry. For the record. This is redirect after the cross, and that's why I'm allowing him to testify. Sorry. Start over.

MR. YATES: I knew what you meant, sir.

THE COURT: But I want the people who grade my papers to know what I was thinking, so thank you.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 133 of 307

MR. YATES: We'll check that box.

BY MR. YATES:

Q. And, Your Honor, this -- excuse me, Mr. Crouse. And this shows programatically creating and modifying said one or more POS terminals in realtime?

A. Yes, sir. That's correct.

Q. And so we're using the builder program to create and modify, and we end up with these terminals, correct?

A. Yes, sir. That's correct.

Q. And that's the language of the '012 patent, correct?

A. Yes, sir.

Q. This is also the example for the '640 patent that uses the term "build," correct?

A. Yes, sir.

Q. And, in fact, the first entry here on Figure 5 says begin POS build, doesn't it?

A. It does, sir. Yes.

Q. And did you apply the Court's construction when you were doing your infringement analysis?

A. Yes, sir. I did.

Q. Okay.

MR. YATES: Can we go back to Slide 6?

BY MR. YATES:

Q. So again, at the Court's construction for web server, did you apply the Court's construction of web server when you



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 134 of 307

looked at NCR Silver and their entire Back Office?

A. Yes, sir. I did.

Q. And NCR Back Office includes hardware and software; is that correct?

A. Yes, sir. It does.

Q. And it uses HTTP or HTTPS to serve data or files that form web pages?

A. Yes, sir. That's correct.

Q. And they refer to it as a web server in places, correct?

A. They do. Yes.

Q. Even Dr. Chatterjee seems to admit there's a web server, correct?

A. He does. Yes.

Q. Do we need to look further once we understand that we've satisfied the Court's claim construction?

A. No, sir.

Q. Now, if we could go to JTX-1 which is the '640 patent, and I'd like to put in front of you Claim 10 which is an unasserted claim.

MR. PHIPPS: Objection, Your Honor. This is outside the scope of cross-examination.

MR. YATES: I believe I can connect it, Your Honor.

THE COURT: Overruled.

BY MR. YATES:



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 135 of 307

Q. Can you please read unasserted Claim 10?

A. Unasserted Claim 10 is, the web-based point-of-sale builder system of Claim 1 wherein said point-of-sale builder specifies and displays the number, shape and arrangement of selection keys or buttons on said POS screens.

Q. Now, within your report or testimony --

THE COURT: Yes, sir.

MR. PHIPPS: Your Honor, this opinion testimony is not in his report.

THE COURT: Overruled.

BY MR. YATES:

Q. I was just going to ask that. Did you opine in your testimony or anywhere that NCR Silver was infringing this claim?

A. No, sir. It's an unasserted claim.

Q. It's an unasserted claim. So any arguments that NCR wants to make about changing the shape or arrangement of the selection keys is outside the scope of the asserted claims that we're talking about?

A. Yes, sir. That's correct.

MR. PHIPPS: Objection, Your Honor. This theory is not in the report.

THE COURT: Overruled.

MR. YATES: We can remove that slide.

BY MR. YATES:



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 136 of 307

Q. And building does not require being able to change the arrangement of the keys on a point-of-sale terminal, does it?

A. No, sir. It does not.

MR. YATES: Now, if we could go to -- I believe it's Slide 109.

BY MR. YATES:

Q. Now, in your report you talk about content management; is that correct?

A. Yes, sir.

Q. And when we went through your infringement analysis, we didn't use the word "content management," or if we did, it was only occasionally, correct?

A. That's right.

Q. So the opinions about content management were requested by Ms. Salters, correct?

A. Yes, sir. That's correct.

Q. And they were requested to have the damages expert have an understanding of the technology, as is quite common in patent cases, correct?

A. Yes, sir. You're correct.

Q. So when you were describing content management, this had to do with opinions and explanations of the technology, not a claim-by-claim analysis; is that correct?

A. That is correct, sir.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 137 of 307

Q. Now, the concepts do bleed over a little bit, correct?
A. Yes, sir. They do.
Q. Now, these buckets were about POS systems generally, correct?
A. Yes, sir.
Q. So these buckets have existed, but it's a way of -- you suggested, to explain how people look at point-of-sale systems, correct?
A. Yes, sir. That's correct.
Q. So this wasn't meant to imply prior art or not?
A. Correct.
Q. And how Mr. Olson's Starbucks system satisfied these particular buckets would be very different than how the patent describes these buckets?
A. Yes, sir. That's a correct statement.
Q. And there are legacy systems that you would still use these buckets to describe; is that correct?
A. Absolutely, sir.
Q. And yet these buckets are very important for understanding how the innovations and how the patents and the claim elements would be seen and -- by a consumer, by a merchant, by someone who was investigating point-of-sale systems, correct?
A. Yes, sir. That's a correct statement.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 138 of 307

Q. In short, these buckets are a great way to look at demand, right?

A. Yes, sir.

Q. And are these core features, 1, 2, 3, 4 here, drivers of demand for the NCR Silver software and hardware, in your opinion?

A. Yes, sir.

Q. And I'll just ask you one last time. You used the Court's construction in your analysis, didn't you?

A. Absolutely, sir.

Q. Thank you, sir.

MR. YATES: Again, subject to our offer of proof, pass the witness.

MR. PHIPPS: Your Honor, just briefly.

RECROSS-EXAMINATION

BY MR. PHIPPS:

Q. Just one question to clarify the record, Mr. Crouse.

You didn't mention Claim 10, a non-asserted claim, in your report, did you?

A. Yes, sir. That's a correct statement.

MR. PHIPPS: No further questions, Your Honor.

THE COURT: May this witness be excused?

MR. YATES: Subject to the offer of proof, he will be back as an invalidity --

THE COURT: Understood. That's fine.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 139 of 307

MR. YATES: I mean -- sorry. A validity witness --
THE COURT: Got it.
MR. YATES: -- later in our rebuttal case, we presume.
THE COURT: Very good.
Thank you, sir.
THE WITNESS: Thank you, Your Honor.
THE COURT: Your next witness will be your damages expert?
MR. BARR: Yes, Your Honor.
THE COURT: Let's go ahead and do this, if we could. Let's go ahead and -- is she here?
MR. BARR: She is here, Your Honor.
THE COURT: If you could bring her in and just qualify her up, and then we'll take a break for lunch.
MR. BARR: Yes, Your Honor.
(The witness was sworn.)

DIRECT EXAMINATION

BY MR. BARR:

Q. Could you please introduce yourself to the jury?
A. Sure. My name is Ambreen Salters.
Q. And what subject are you appearing on today, Ms. Salters?
A. I'm here as an expert on patent infringement damages.
Q. Have you created some slides to assist you in presenting your testimony today?
A. Yes. I have. They're here on the screen.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 140 of 307

Q. Before we get into your qualifications, could you tell us a little bit about yourself?

Oh, I've got the slide clicker. Sorry.

A. Okay. Got it. Yes.

Q. Tell us a little bit about yourself, Ms. Salters.

A. Sure. So I grew up in Central Texas in an Army base in Central Texas. My mother was a military doctor, so she was stationed at Fort Hood.

Q. All right. And could you tell us about your education, credentials and experience, please?

A. Sure. So I went to both college and graduate school at Baylor University in Waco.

Q. What did you do after you graduated from Baylor?

A. Well, I first began doing financial and economic analysis for the Federal Reserve Bank where I worked for five years.

Q. And I forgot to ask you, when you graduated from Baylor, what were your degrees in?

A. I got a bachelor of business administration degree with a double major in finance and economics as well as a masters of science degree in economics.

Q. Once you graduated, did you do any teaching?

A. I did. From time to time I would return to Baylor and serve as a guest lecturer in their economics courses. In addition, I've served as an adjunct professor of microeconomics



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 141 of 307

at Houston Baptist University.

Q. Could you describe generally to the jury your work experience that's relevant to the work that you did in this case?

A. Yeah. So right out of graduate school, just like I mentioned previously, I began doing financial and economic analysis for the Federal Reserve where I was for five years.

Q. What is the Federal Reserve Bank?

A. The Federal Reserve Bank is the central bank of the United States. So it controls basically the U.S. economy by adjusting the money supply and adjusting interest rates. When you hear about it in the news, it's frequently called The Fed.

Q. And what did you do when you were there at The Fed?

A. So the Federal Reserve will hire a lot of economists like myself to study and report on specific industries within the economy. And so that's what I did for them.

Q. After you left The Fed, what did you do next?

A. About 20 years ago, in about 2000, I left the Federal Reserve and I began serving as a financial -- or an economics consultant. So I've primarily focused on patent infringement matters like this one as well as assisting patent holders with their licensing efforts of their technology.

Q. Have you been retained in this case by CloudofChange to reach an expert opinion regarding reasonable royalty that would be due to the inventors in this case due to NCR's use of



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 142 of 307

the patents in suit?

A. Absolutely. That is what I have done.

Q. In the past have you worked on other cases, other patent cases similar to this one?

A. I have. Some examples are here on this slide. I've worked on cases involving hardware and software and web-based technologies. These cases have involved companies such as Costco and Expedia, GEICO, Qualcomm, ZTE and APCON.

Q. And what do you do for fun, Ms. Salters?

A. Well, for fun I work on patent infringement matters. For example, for the Microsoft Xbox gaming system, as well as a matter involving the Nintendo Wii, as well as patent infringement damages for the Steam gaming system platform. So that's what I do for fun.

Q. Well, my 16-year-old son would probably enjoy visiting with you about those cases.

Have you worked for both plaintiffs and defendants?

A. Yes. I have.

Q. And has all of the work that you've done, does it relate to litigation?

A. No. It doesn't. As I mentioned previously, I also assist patent holders in their licensing efforts of their patents and their patent portfolios.

And so an example of that is Nortel that's here on this slide. They had a patent portfolio that involved e-commerce



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 143 of 307

and some Internet patents, and I assisted them in their licensing efforts of those.

Q. And did you use the same types of considerations in your prior cases that you've used in this case?

A. Absolutely.

Q. And have you used the same types of methodologies in other patent cases that you've used in this case?

A. Yes. 100 percent.

MR. BARR: At this point, Your Honor, we would tender Ambreen Salters as an expert in economic damages.

MS. COLLINGS: No objection, Your Honor.

THE COURT: She'll be received as an expert.

Ladies and gentlemen of the jury, we're going to take our lunch recess. And we'll -- let's see what time it really is.

Again, why don't -- we'll plan on -- if you'll plan on being done by about 1:00, we'll get started relatively closely after 1:00 resuming trial.

Remembering my instructions not to discuss the case amongst yourselves, you are dismissed.

THE BAILIFF: All rise.

(Jury exited the courtroom at 11:49.)

THE COURT: You may be seated.

Mr. Barr, do you have anything else for me to take up?

MR. BARR: For this witness, I think there is an issue -- an objection they had. Other than that --



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 144 of 307

THE COURT: Why don't we go ahead and take that up now? And you may step down.

William, will you help her out?

MR. BARR: I'm sorry.

MS. COLLINGS: May it please the Court.

Your Honor, this is an objection that NCR is making with respect to plaintiff's demonstratives. Each evening, when we exchange our demonstratives for the next day, we lodge any objections, and we meet and confer. And we did that of course last evening.

The objection -- the one objection to Ms. Salters' demonstratives has to do with, for example, Slide 4, which is labeled "NCR Silver software direct profits."

These are supposed to pertain to NCR Silver software's direct profits. You have -- the third column is NCR's calculation. The fourth column, essentially, is Ms. Salters' calculation.

It's that second column, Your Honor, that we're objecting to. This is software as a service industry, and this same reference appears on Slides 4, 10, 12 and 21.

We object to any testimony from Ms. Salters and, specifically, reference in the demonstratives about software as a service companies having -- or what their gross profit margins are, Your Honor. We're not suggesting that any -- that this page should be removed, but we would like that column



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 145 of 307

deleted.

In Ms. Salters' report, her opinion is that NCR Silver realizes approximately 47 percent gross profit margin. That's in Paragraph 54 of her report and Exhibit 1.

Ms. Salters' report, however, does not provide any opinion that NCR Silver realizes a 70 to 95 percent gross profit margin, and nowhere in her report does Ms. Salters opine that NCR Silver has any margin above 47 percent.

Ms. Salters does not opine, in fact, on what the typical gross profit margin of a software as a service company is or should be.

She's not purported to be a qualified expert on SaaS industry profits, yet plaintiff responds, or did last evening, that they are not offering SaaS industry profits as Ms. Salters' profits. They're simply using it as a marker.

But, Your Honor, that bolsters her. By including a SaaS industry profit margin with these NCR Silver software direct profits, it's as if she's putting her -- a parameter on the information that's being included.

It's as if Ms. Salters is testifying that SaaS companies generate or realize a 70 percent to 90 percent gross profit margin, and that's not relevant to what NCR Silver's profit margin is. It's not in her report. She's not purporting to opine on SaaS industry profit margins, Your Honor.

And, therefore, we think it would be prejudicial to



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 146 of 307

include that in a demonstrative that's going to at least be shown in front of the jury, and it's confusing.

Thank you.

MR. BARR: Can I approach, Your Honor?

THE COURT: Sure.

MR. BARR: Your Honor, I've got here a copy of Ms. Salters' report, which I think will be helpful during her direct testimony.

We've highlighted for the Court everywhere in there that we had a question for her on in her report, and I've tabbed specifically the paragraph that I'm going to show you here.

I'm also going to hand the Court Exhibit 220, which is the SaaS survey that's being complained about here.

THE COURT: Okay.

MR. BARR: So as Ms. Collings mentioned, the parties had a procedure that we had agreed to on slides. And we did that where the parties would provide each other their slides the night before by a certain time, and then we would confer -- or provide objections and then confer about it.

This particular slide that Ms. Collings is talking about --

THE COURT: Mr. Barr, let me go a little quicker.

Ms. Collings, I'm looking at Paragraph 48 of Ms. Salters' report, Page 13. And it has a paragraph that has -- specifically has this SaaS information in it.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 147 of 307

MS. COLLINGS: Yes, Your Honor. It was background information. It was background information. It wasn't her opinion.

THE COURT: I'm overruling the objection.

Anything else?

MR. BARR: No, Your Honor. Do you want to keep the report in case we have any fights?

THE COURT: That'll probably make sense.

And one other thing that was raised about -- I'm terrible with names. The gentleman who was the expert.

MR. BARR: Greg Crouse.

THE COURT: Mr. Crouse. Again, here's the way I generally see the world. On direct, and you've already done it, I expect for lawyers to restrain themselves to what is in the expert report. I think that's fair.

However, on redirect after someone on cross has raised an issue with the expert, if that requires the other party on redirect to go outside of the report to allow the expert to explain something or answer something that was raised by the other lawyer, I'm going to let them do it. I'm not going to say, oh, it's not in his -- you did a very nice cross. I thought you did a very nice cross.

MR. PHIPPS: Thank you, Your Honor.

THE COURT: But that is why I allowed the witness who your cross may have given an impression that wasn't entirely



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 148 of 307

accurate -- I'm stumbling here, but I'm not going to allow someone to do a cross and then tell the other side, oh, no, the expert can't defend himself because he didn't think in advance to put that in the report.

Part of the beauty of doing a really good cross, in my opinion -- and, again, I thought you did a very nice cross -- is maybe coming up with some stuff that the expert hadn't thought of before and trying to tie him down to that. And that may require the other lawyer to have to go outside of the report to explain it to the jury.

So that is the reason why on redirect I allowed counsel to ask the expert about Claim 10 which might not have been in his report. But I thought it was necessary, given what was raised in the cross to allow the expert to explain to the jury why he had done what he had done. So I just wanted that on the -- I wanted the explanation.

Again, on direct I'm going to do the best I can to hold people to what is in their reports. But on redirect if someone has done a good cross and it's required to go outside of the absolute metes and bounds -- I'm not going to allow something in that's completely unfair or unexpected. But in a situation where someone raises something, I'm going to allow an expert to, you know, opine fully and explain to the jury why he gave an opinion.

So that -- and that'll be the way it is going forward. I



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 149 of 307

just didn't want you to not feel like I was allowing something in despite it not being in the report. I wanted you to understand why.

And of course you'll have -- this will all apply equally when the shoe is on the other foot.

MR. PHIPPS: Understood. Thank you.

THE BAILIFF: All rise.

(Recess taken from 11:58 to 1:06.)

THE BAILIFF: All rise.

THE COURT: You may be seated.

Are you ready to go?

MR. BARR: Yes.

THE COURT: I thought there was an issue we were supposed to --

MS. COLLINGS: Yes, Your Honor.

THE COURT: Hold on one second. Yes, ma'am.

MS. COLLINGS: Thank you, Your Honor. The purpose of this is to simply ask Your Honor how you would like me to approach it, because I don't -- I don't want to be disruptive. Or -- anyway, the issue is, we have a concern that Ms. Salters is off model in two respects.

First of all, we have concerns that she's -- they're going to elicit or attempt to elicit an entire market value, and that -- there's no evidence of that. And instead of waiting for the -- the testimony to proceed and then trying to backfill



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 150 of 307

what to do about an inappropriately -- potentially an inappropriately delivered entire market value opinion, I'm -- we just wanted to know from Your Honor, how do you want us to proceed at the time?

Would you want us to object and ask to take her on voir dire? Or I'm just asking for queues, Your Honor.

THE COURT: Well, I don't know how to advise you what to do. Typically, what I would recommend you do is just object if you think something is irrelevant and say it's irrelevant, and I'll hear the question. And if I think I need to hear, I'll hear -- ask Mr. Barr, and he'll say why it is relevant, and I'll make up my mind.

With regard to your taking anyone -- this is for everyone. Your decision on whether or not to take someone on voir dire is entirely up to you. However, if you take someone on voir dire and are unsuccessful, I probably will make it clear to the jury that I was unhappy about someone being taken up on voir dire and interrupting the other lawyer to do it.

So I would caution everyone -- not you, everyone who might choose to take someone on voir dire that you -- number one, it'll be against your time; but, number two, because you're interrupting what the other lawyer is doing, you had better be successful.

Let me give you an example. In a trial I had recently, there was a witness, a fact witness, on the witness stand to



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 151 of 307

testify about -- essentially, he was a corporate representative just testifying about what the corporation does.

And he started to move from one area of what the company did into another area and the lawyer for the other side said, I'd like to take him on voir dire.

And the questions were: Mr. Smith, you've worked for the company for a number of years?

Yes.

But you only worked in this division; is that right?

Yes.

You don't know anything about this other division you're about to talk about, do you? Never worked in it.

No.

So everything you know about this other division is what -- from what someone told you; is that fair?

Yes.

Objection, hearsay. Which I sustained, because it was hearsay.

So if that gives you any guidance about how I feel about it. However, I have some passing acquaintance with how damages law works in patent cases. And I feel comfortable that if you -- if Mr. Barr asks a question and you believe it is irrelevant for any reason and you make an objection and I hear his response, that I'll be able to rule on it as we go.

MR. BARR: Your Honor, if I could just address -- just one



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 152 of 307

point about this argument. Number one, I believe a little sandbagging is going on here, Your Honor. First of all, the parties filed Daubert motions in accordance with the Court's scheduling order. There was never any questioning of any entire market value rule of application by Ms. Salters which, in fact, is discussed in her report at Page 51 --

THE COURT: If it's in her report and it wasn't addressed during Daubert, then she's going to get to testify about it.

MR. BARR: Thank you, Your Honor. We have Bose versus JBL on this issue as well.

THE COURT: That's --

MR. BARR: Thank you.

THE COURT: I had a case at trial just a week ago where they had essentially the same argument about what someone was going to testify about, and I said, did you file a Daubert? And they said, no. And I said, well, then it's going to come in.

MR. BARR: Thank you, Your Honor.

THE COURT: So if it's in her report and it wasn't -- there was no action to strike it ahead of time, then I see it as something subject to cross-examination.

MR. BARR: Thank you.

THE COURT: Anything else we need to take up?

MR. BARR: Not from the plaintiff, Your Honor.

THE COURT: Counsel?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 153 of 307

MR. PHIPPS: No, Your Honor.
THE COURT: Okay.
THE BAILIFF: All rise.
(Recess taken from 1:11 to 1:15.)
THE BAILIFF: All rise.
THE COURT: Please remain standing for the jury.
(The jury entered the courtroom at 1:15.)
THE COURT: Thank you. You may be seated.
Mr. Barr, you may proceed.
MR. BARR: Thank you, Your Honor.
BY MR. BARR:
Q. Ms. Salters, we've spoken about your experience. Now I'd like to turn to the basis for your opinions in this case. So could you please describe the type of information that you've reviewed and considered in formulating your opinions?
A. Sure. Would you like to put the slide up on the screen?
MR. BARR: Oh, sorry. Would y'all publish the slides again?
(Off-the-record discussion.)
BY MR. BARR:
Q. There we go. Now, please describe the types of information that you considered in connection with your opinions in this case, Ms. Salters.
A. Well, we received a lot of documents in this case.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 154 of 307

We received thousands of pages of documents in the discovery process from NCR as well as from CloudofChange. I also reviewed the sworn testimony of NCR's witnesses as well as CloudofChange's witnesses. I also reviewed the legal filings that were produced in this case, including the expert reports of Dr. Ikizler, of Mr. Crouse and Dr. Chatterjee as well as some publicly available information that I did on my own, my own research. So that was interesting research as well.

Q. Could you speak a little closer to the microphone? I'm having a little hard time.

A. Yeah. Sorry about that.

Q. There you go.

A. How about now?

Q. That's perfect.

A. Okay.

Q. So let's talk for a minute about the accused products in this case. Are you generally familiar with the NCR products that are accused of infringement in this lawsuit?

A. Yes. I am. The products accused of infringement in this lawsuit are the NCR Silver products, the hardware as well as the software.

Q. Does NCR sell these products as one big system or under a single price or sell them on a per item basis?

A. Well, for the most part, the hardware, NCR sells its hardware on a per item basis.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 155 of 307

Q. Okay. And what about the software? Is it sold with the hardware, or how is it sold?

A. Well, the software's typically sold under a SaaS pricing model. So basically what that means is the merchant consumer pays a monthly subscription fee for a software license for access to the software.

Q. And are the hardwares -- is it your understanding that the hardware and software is used together?

A. Yes. That's my understanding based on the deposition testimony.

Q. Could you tell us what types of accused hardware products that you understand NCR sells?

A. NCR sells a variety of hardware products. Here on the screen are a few examples. Tablets, display screens, payment processors as well as cash drawers and some printers and scanners, and you see those there on the right-hand side of the screen.

Q. I think you may have already said this, but how does NCR sell its software?

A. It sells its software through a monthly subscription for the software license.

Q. What types of software does NCR sell?

A. The software primarily is two types. The first one is called Silver Essentials, and that seems to be the most basic package. The second one is Silver Pro, and that appears



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 156 of 307

to be more of an upgraded version that maybe is a little more restaurant-oriented.

Q. Now, we've heard this term in this trial, S-a-a-S, or SaaS. Could you explain what that means?

A. Right. So as you've heard, SaaS relates to software sold as a service.

Q. And what's your understanding of how the software and hardware work together in this case?

A. Well, the software is sold -- the hardware is sold along with the software. In addition, the hardware -- the software only works on either NCR hardware or Apple devices.

Q. Now, I'd like to talk a little bit about the rules of the road, the law that we believe the Court will instruct the jury at the end of this case. Could you tell us if you considered that?

A. Yes. So the rules of the road for the damages expert really to figure out patent infringement damages is based on the patent damages statute. And basically what that says is to adequately compensate for patent infringement, the patent owner should get no less than a reasonable royalty.

Q. And what does this statute tell us about patent damages?

A. Just that it is no less than a reasonable royalty. It could be more.

Q. Okay. And what is a reasonable royalty?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 157 of 307

A. Well, a reasonable royalty, as you can guess, is the most common form of patent infringement damages. It's considered similar to rent if you were to use someone else's property. It's compensation for the patent holder, in this case CloudofChange, for use of their patented technology by the infringer, which is alleged to be NCR in this case.

Q. How do you determine a reasonable royalty amount?

A. To determine a reasonable royalty amount for patent damages, you determine what would be a hypothetical license, or what sort of license would these two parties have entered into if they had a hypothetical negotiation, or sat down and tried to figure out what was reasonable for terms.

Q. Could you tell us in more detail about this hypothetical negotiation?

A. Well, in the hypothetical negotiation, damages experts like myself assume that both parties, so representatives from NCR and representatives from CloudofChange, sit down and they negotiate a license. A license giving NCR the rights to use CloudofChange's patents in exchange for compensation which is called the reasonable royalty.

Q. And when is this hypothetical negotiation supposed to have occurred?

A. Well, both parties agree that this would have occurred in July 2016, and that's based on the issuance of the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 158 of 307

'640 patent was in July 2016.

Q. Now, what factors do you take into account in determining this hypothetical negotiation?

A. Well, I've considered, and the Court will instruct the jury to consider, a list of factors that are commonly used when patent owners and companies are negotiating a patent license. And those are called the Georgia-Pacific factors. They're just called the Georgia-Pacific factors because there was a case a long time ago and one of the parties was Georgia-Pacific where this came up. So that's why they're called that.

Q. And what do you -- what have you put on this slide?

A. Well, the Georgia-Pacific factors are actually a 15-factor list. To make this a little bit more digestible, I've put these into buckets.

So the buckets that I've included are the technology factors, the financial and commercial considerations, licensing factors and other business sort of miscellaneous factors as well.

Q. Could you take us through the types of information that you have in each bucket of factors, please?

A. Right. So some of these factors, the technology factors, for example, you've heard quite a bit about already from Mr. Crouse.

They would be considered utility and advantages of the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 159 of 307

patented technology over prior art, the nature and benefits of the technology to those who use them.

In addition, licensing factors. You would consider what other royalties has CloudofChange earned for the patents-in-suit, what other licenses has NCR entered into for similar technology and then if there's a customary sort of royalty rate that should be considered.

Then financial and commercial factors, you would look at sales, whether the accused products have -- were commercially successful, what the profitability of those accused products were.

And, finally, other considerations or other business factors would include the commercial relationship between the parties. If these parties were competitors or if these parties were just inventor or patent holder and licensee, as well as the opinions of other experts.

And, ultimately, you come up with a commercially reasonable willing license -- or willing licensee, what would have been negotiated.

Q. Okay. Well, let's -- this looks like kind of a restatement of your prior slide; is that right?

A. It did. So based on the facts that I've seen in this case, in this slide, I just took all of those factor buckets and included what seemed to be the most relevant points from what I've seen in the case.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 160 of 307

So from technology considerations, you can see that the core functionality taught by the patents-in-suit drive demand for the NCR Silver software as well as the NCR Silver hardware. And you've heard that from Mr. Crouse already.

In addition, you've heard from him regarding the -- that there are no acceptable noninfringing alternatives or cost efficient ways to design around these patents.

Then looking at financial and commercial consideration. The NCR Silver products, they're commercially successful as well as profitable.

Licensing considerations, we've already talked about the SaaS licensing model where the customers pay a monthly per-unit fee.

And then finally, other considerations. CloudofChange and NCR are not competitors.

Q. Let's move on to the technology considerations.

I'd like you to talk to us a little bit about your understanding of what makes people buy this product and the core features.

A. Right. So the core features of the NCR Silver product are, one, transaction handling, then the inventory/item management program, the point-of-sale content management and then the point-of-sale infrastructure.

Q. And to be clear, you're not saying in this case that you're a technical expert yourself; is that right?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 161 of 307

A. I am not. You've already heard about this from Mr. Crouse earlier.

Q. All right. Your wheelhouse is damages and economic analysis; is that fair?

A. Absolutely.

Q. So you're relying on Mr. Crouse to tell you what the important technological considerations are; is that correct?

A. Yes, sir.

Q. Okay. Are the features that you've just looked at, the core features, are those taught by the patents-in-suit to your understanding?

A. Yes. That is correct.

Q. Now, let's talk about the -- each one of these one by one.

What's your understanding of transaction handling?

A. And I'm not going to be as eloquent as Mr. Crouse was in his description, but my understanding of transaction handling is related to the sales and the returns and the credits that come through the point-of-sale system.

And my understanding is the way that NCR does this function is taught by the patents-in-suit.

Q. So let's go to the next one, No. 2, inventory/item management.

What's your understanding of that from Mr. Crouse?

A. Right. So it really relates to inventory management



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 162 of 307

and what goes in and out in their available inventory. And again, my understanding is that the patents-in-suit teach the way that NCR does this function.

Q. Next is the point-of-sale content management.

What's your understanding of that driver of demand?

A. Well, that relates to, for example, the item depiction and the pricing that's put on the point-of-sale system. And again, the way that NCR does it is taught by the patents-in-suit.

Q. Last but not least, point-of-sale infrastructure. What's your understanding of that?

A. That -- that's the entire system. That's the hardware, that's the software as well as the network. And it --

Q. So if you take -- I'm sorry. I didn't mean to cut you off.

A. And, again, it is taught by the patents-in-suit.

Q. Okay. If we take all this together, what does it mean for the merchant who might be buying these systems?

A. Well, these four core functionalities of NCR Silver are taught by the patents-in-suit. But they're also drivers of demand for merchant customers purchasing the NCR Silver product.

Q. What other information did you get from Mr. Crouse that was relevant to your analysis in this case?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 163 of 307

A. Right. As we discussed previously, there are no commercially acceptable noninfringing alternatives that achieve the same benefits as the patents-in-suit. And there's no cost effective alternative way to design around the patents-in-suit and still provide those same benefits.

Q. Is technology considerations one of these Georgia-Pacific factors that you were talking about earlier?

A. Absolutely. And it's in one of those buckets from the earlier slide that we talked about.

Q. Which factors did you consider next?

A. Financial and commercial considerations.

Q. Okay. So if we take a step back from this, what are we seeing here? What does this slide of yours depict?

A. Well, this slide just generally shows the snapshot of the financial and commercial activity by NCR related to the NCR Silver product. So overall, if you see, the accused NCR Silver sales are over $100 million.

Q. And so what does the $100 million represent for NCR?

A. The NCR Silver product line, the hardware and the software.

Q. How did the NCR Silver product -- how does their growth compare to the overall cloud-based POS market?

A. Right. So the overall cloud-based POS market, it's a very sort of rosy picture of that industry. I believe I've seen it was $1.3 billion in 2018, and it's set to triple by



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 164 of 307

2023. So in that five-year period the amount of revenues earned by those companies is set to triple. So it has a very steep growth rate as well.

Q. And we heard that from Ms. Schoonover of NCR who was sitting there on the witness stand. And you had the opportunity to listen to her testimony on that issue, correct?

A. Correct. And the bar chart at the bottom of this screen really is showing the year-over-year sales by NCR of its NCR Silver product. And you can see it's increasing and then the annual growth rate, average growth rate's around 14 percent.

Q. In your opinion and based on what you've reviewed from NCR, do you have an opinion about whether or not NCR Silver is a commercially available product for NCR?

A. Commercially successful. Yes. I do.

Q. I misspoke. Yes. Commercially successful. Thank you.

Now, I'd like to move on to some of your other financial considerations. Could you discuss with us what we see on this slide here?

A. Yeah. So this relates to the pricing or the sales price of the NCR Silver software specifically.

Q. I think you mentioned earlier that NCR charges its customers on a monthly basis for the software as a service; is that correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 165 of 307

A. That is correct.

Q. And is there one price that NCR charges its customers for these monthly fees?

A. No. From the data that's been produced it really seems to be all over the place. We received a set of data which included every monthly subscription in there, and that was a large range. And the top end of that was around 200 a month. And then if we're looking at their website, for example, the range of per-month pricing is $108 to $178, depending on the version that they're purchasing.

And then finally there was a legal stipulation which was entered by NCR, and in there they listed what their pricing was. And so they talked about the $79 pricing for the Silver Essentials, and then for the Silver Pro it was 149.

So there was a lot of data points that we'd seen with respect to historical sales or that invoice level or subscription -- transaction-level data. I think there were probably 500 different price points, the highest one being the 200.

Q. So how does NCR advertise its pricing on its website?

A. Well, it does it in that 108 to 178.

Q. Okay. How do you know the minimum manufacturer suggested retail price of NCR's accused products?

A. Right. So that was in their legal stipulation of $79 to $149.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 166 of 307

Q. Did you see any evidence of NCR's willingness to share its revenue with other people?

A. As we discussed earlier -- or what we've heard earlier from Ms. Schoonover -- I believe it was yesterday when she discussed the revenue share agreements with their resellers. And those revenue share agreements for the NCR software is about 12 percent to 35 percent of that revenue.

Q. So from Ms. Schoonover's testimony you understand that NCR's willing to share its revenue, the money that it actually receives for its products, they're willing to give 12 to 35 percent of that revenue to the reseller?

A. Correct.

Q. So here we have some more of your financial and commercial considerations. Could you explain what these are, ma'am?

A. Right. First, the subscription transaction data, which we received, appears to be approximately 700,000 software subscriptions -- monthly software subscriptions sold, and that's from the beginning of the damages period, July 2016 through the end of 2020.

Q. And are these subscriptions, does this just represent United States sales?

A. Correct.

Q. Moving on to profits.

Can you explain what you've learned about NCR Silver



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 167 of 307

software direct profits?

A. Yeah. So I took a look at the NCR Silver profitability because I was interested in what sort of money that they earned from their sales.

Q. What is profitability?

A. Profitability, as I'm sure everybody knows, is really just the profits, deducting the costs -- or the revenues deducting the costs is how you get to profits.

Q. And what types of costs did you focus on?

A. Well, I focused on direct costs. So that's not necessarily an accounting term. That's more of an economic term. But direct costs really relate to sort of the day-to-day profitability that that product enjoys.

Q. Could you give us some examples of some things that are not considered to be direct costs?

A. So direct -- costs that are not direct costs are, for example, if you were to buy a building as well as -- that's a sunk cost from years ago or, for example, big research and development project, and that would be a sunk cost from years ago.

And ultimately, it really doesn't relate to the day-to-day profitability of a product.

Q. The box that's shaded green discusses the SaaS industry; is that correct?

A. Correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 168 of 307

Q. And how did you go about understanding SaaS profitability generally?

A. Well, that was based on my research of publicly available information. I saw some articles that discussed the SaaS profitability of SaaS companies and what their profits and expense structure generally look like.

I also saw some -- a survey related to that, that was a benchmark industry survey with like 1,200 respondents, that had a profit range in there as well. And that range ends up being 70 to 95 percent.

And that's not necessarily surprising, knowing what we know about software profitability generally, which is always high.

Q. So looking at this analysis, your slide here, is it telling us that other companies that sell software as a service, like NCR, have normally 21 percent costs? Is that right?

A. Yes. That's correct.

Q. And their profits -- the normal SaaS industry profits would be expected to be in the 70 to 95 percent range; is that correct?

A. Yes. That's absolutely correct.

Q. And if we compare that to NCR, we see that their costs are a lot higher, more than three times as high, 72 percent costs, right?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 169 of 307

A. Yes.
Q. But only 28 percent profits; is that correct?
A. That is correct.
Q. And do those high costs have anything to do with the profit margin that NCR claims that it is making on this product?
A. Right. And I think the next slide goes into the detailed information, which I think was also discussed with Ms. Schoonover.
Q. Okay. This is kind of hard for my 54-year-old eyes to read.
Can you tell us what we're looking at here?
A. Yes. This is my summary of the costs -- the revenues and the costs and the margins, profit margins, which were produced in this case by NCR.
Q. Can you walk us through what the highlighted lines are that you've got on your slide?
A. Sure. So let's start with the ones that are -- that are highlighted in gray.
And so I know that there was a big discussion in opening arguments related to the number of costs, which I did not include in my analysis.
Q. Well, let me just stop you there.
So that was the part where Mr. Baker said you just went through this list of costs and said, nope, nope, nope?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 170 of 307

A. It was the nope, nope, nope one. Yes.
Q. You may proceed.
A. And so taking a look here, to be fair, these costs and the descriptions of costs that are here are pretty vague. It's difficult to tell whether these really have to do with that software revenue product line that we're talking about.
So, for example, let's look at the gray ones to start with. You have fees, you have public affairs, you have travel, people, HR, you have something listed as hardware development, under software revenue category.
And then there's outside service spend. So these aren't the normal type of cost categories that companies produce related to their product line.
However, when you take a look across, all the way to the right, the ones that are grayed out, which I didn't include, are primarily zero, right? They don't have that much effect.
But for some reason, they seem to be listed here in this profit and loss statement which was produced.
Q. Are you aware of Ms. Schoonover's testimony when we went over this cost information?
A. Yes. I did. I was specifically focused on her testimony related to the yellow highlighted items, and those are four. And those yellow highlighted items are the ones that make up the lion's share of the costs that they're trying to claim.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 171 of 307

As we heard from Ms. Schoonover previously, out of those four she still wasn't able to clarify what was in the internal service charges from and internal service charges to. And I think that's consistent with her deposition testimony. So those two out of the four we just don't have any information on, what they actually are and how they could relate to the software.

Q. I think Ms. Collings asked Ms. Schoonover a lot about the technology go-to-market. Did you look at that one?

A. I did. I heard that as well. And my understanding of the technology go-to-market is based on Ms. Schoonover's testimony. And that has to do with the hosting services which you discussed with her this morning, so the 5 million out of the 25 million discussion. And it's related to Google hosting and perhaps some others as well.

Q. What about Ms. Schoonover's explanation of depreciation and amortization that she gave us this morning?

A. Right. So I heard her explanation of depreciation and amortization. And while I had included it as a deductible cost, after hearing her explanation this morning, I do have some concerns. Them being that these really were development costs, in her own words I think, that were incurred years earlier related to the software. So this wouldn't fit the definition necessarily of the direct costs, the day-to-day profitability considerations that a company like NCR would



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 172 of 307

evaluate their software on.

Q. So are you saying that it wouldn't be appropriate to incur costs, say, in 2012 or 2014 and then throw them into your balance sheet in 2019 or 2020?

A. Well, I think for tax purposes -- and I'm not a tax expert. So for tax purposes and some accounting purposes that is how it's treated. But from an economic point of view what you're really trying to get to is direct costs, kind of economic costs. And that wouldn't be an appropriate consideration.

Q. So where does this leave us regarding the profitability of the NCR Silver software product?

A. So I ultimately did deduct the depreciation and amortization and ended up with a profitability of about -- of a direct profitability of about 47 percent.

Q. Okay. And is that what we see on this slide?

A. Correct.

Q. So tell us what we see in the green box under the SaaS industry again.

A. Right. So this slide I was just showing the various data points, the first one being the SaaS industry information which we have seen. And that has profitability for companies that provide SaaS of 70 to 95 percent. Then I included the fully-loaded NCR profitability number which is 28 percent. And then finally my revised analysis of about 47, 50 percent.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 173 of 307

Q. So does your revised analysis of 47 percent, does that just take the costs that you believed were not appropriate and remove those questionable costs and recalculate profitability?

A. Yes. It was my recalculation and primarily focused on those four categories that we had discussed previously that were highlighted in yellow.

Q. And how does this 47 percent profit figure compare to the industry and to NCR's profit figures?

A. Right. So it's somewhere in the middle. If you're looking at the industry overall you can see companies that have software as a service, that's what they provide, their profits are 70 to 95. NCR's is on the other end of the spectrum of 28 percent. And then finally I've come up with something in the middle which I find to be reasonable.

Q. So you're not saying that NCR necessarily falls into this 95 percent profit category; is that right?

A. No. I'm not.

Q. But you're also saying that if you look at the costs correctly, they don't fall into the 28 percent category either; is that right?

A. That's right. Because what you're really looking for is those direct costs. It's not just everything that could potentially be related. It's an economic concept of a direct cost.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 174 of 307

Q. So your revised number falls about in the middle of the industry expected profit ratio versus the NCR, what they're telling us in this lawsuit, profit ratio; is that right?

A. Correct.

Q. What factors did you consider next?

A. Next I looked at the licensing considerations. And as we discussed before, there are no comparable licenses for the patents-in-suit from CloudofChange. NCR did not produce any patent licenses in this case. And then finally, as we discussed previously, a hypothetical license that would have been negotiated between these parties, it's reasonable to assume that that would have a royalty rate which is on a per-unit basis, just like their SaaS pricing modeling and how they get their monthly subscriptions.

Q. Now, has CloudofChange licensed the asserted patents to your knowledge?

A. They have not.

Q. If they had, would those licenses have been comparable to the hypothetical license that you're looking at here?

A. Well, it would be something that we would have to consider. I believe that they had some very limited licenses on a trial basis for some of their products previously, but that is not comparable and that's not necessarily something I would consider.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 175 of 307

Q. So we can agree, certainly, no considerable or significant licensing activity by CloudofChange, right?
A. No.
Q. How about NCR? Does NCR have any relevant licensing agreements?
A. Well, they didn't produce any patent license agreements.
Q. Is there anything with regard to licensing considerations that would be relevant to the hypothetical negotiation?
A. Right. Just related to the royalty rate structure that we talked about previously.
Q. How about other business considerations? Could you tell us about the other factors that you considered?
A. CloudofChange -- as we discussed previously, CloudofChange and NCR are not competitors here. One is not losing sales to another one. And from what I've seen, there's no customary royalty or profit-sharing for this type of technology.
Q. Did we miss any factors, Ms. Salters?
A. I think that covers it.
Q. So after considering all of the Georgia-Pacific factors, did you determine a reasonable royalty?
A. I did.
Q. Okay. Could you go through a recap of how you got



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 176 of 307

there?

A. Right. So just explaining and starting with the big picture and then talking about the revenue and how it got down to my royalty. And I know this is a lot of data points here on this slide, but I'll try to go through them quickly for you.

As we discussed previously, what's accused of infringement here is the hardware and the software. Ultimately, what I included for my royalty calculation was not both. It was just the software, because what I wanted to focus on really was those core functionality in the software that's covered by the patents-in-suit.

In addition, from that transaction subscription level information, which I received, as we saw earlier from that prior slide, there were over 700,000 subscriptions, which I saw in that data.

However, as I reviewed the detailed descriptions of those, those didn't seem to all have sort of the full functionality or the core features really of the patents-in-suit.

So instead, I did not include those which potentially had a limited functionality, and I only included those which seemed to have the full software product, Silver software product. And those ultimately were about 550,000 versus the over 700,000, which were all of those subscriptions.

And then, finally, as we heard, their pricing was all over the place. What we had really seen was $79 to $200, that was



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 177 of 307

the price range of their monthly subscriptions that they charged their merchants.

And so what I considered within my royalty base, to be conservative, really was just that $79 number, right?

And then, finally, even though we saw industry profits of over 75 to 90 percent industry profits, specific to NCR's level of sales, it was actually 79 percent. I only considered profits of that 28 percent, which NCR claims, to the 47 percent, which was my revised calculation to get to my reasonable royalty.

Q. So I'd just like to ask you. Going back to your first point, the first bullet there, hardware and software, you said you considered only software.

Does NCR also sell hardware along with the software in this case? Is that your understanding?

A. Correct.

Q. Okay. Did you consider what NCR makes from those hardware sales in connection with your royalty opinion?

A. I do know that it is around $21 million for the damages period.

Q. Did you put that $21 million number into your royalty consideration?

A. I didn't include it in my calculations. Certainly, as the parties sit down and negotiate, that $21 million would be relevant to their thought process.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 178 of 307

Q. So if we're thinking about a hypothetical negotiation, we have to picture in our minds NCR sitting down on one side of the table and CloudofChange sitting on the other side of the table. And in regard to this hardware part, you're telling us that NCR would be thinking, when they're going into the negotiation, that they're making $21 million on hardware and they're not going to have to pay anything for that; is that correct?

A. Correct.

Q. So that'd be a benefit to NCR in the hypothetical negotiation?

A. That's correct.

Q. So -- and the software -- okay. Let's see here.

Was there any other benefits that you considered about -- in the software for NCR?

A. Yes. We talked about the subscriptions that I didn't include because they didn't seem to have the full functionality of the patents-in-suit. So I had the 700,000, and I only included the 500,000.

And then, ultimately, my assumption of taking that lowest price of the software, the $79, versus all the other higher prices which we had seen.

Q. So NCR may sell this software for prices that range up to $200. You didn't just cherry pick the top dollar and use that in your negotiation?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 179 of 307

A. Correct.

Q. So let's bring this all together and tell us about what your conclusion was on the -- from the relevant damages point that you looked at and considered in this case.

A. Yeah. So here are the relevant data points that I considered. I looked at the number of software subscriptions which was the 547, that was the first cut that we made. Then we considered the basic software pricing, that $79. And then ultimately it had both those profit margins in, the one that NCR claims that they achieve which is the 28 percent, and the 47 percent that was based on my recalculation.

Q. So then what do we do with this information that we see here on the screen?

A. Well, you can multiply it. So you can take a calculator and multiply it down. I think the 28 percent ends up to be about $12 million, that column. And then the 47 percent, which is the other profitability number, ends up about $20 million. So you're given a range between 12 million and 20 million. Again, and ultimately it's for the jury to decide what they believe to be the appropriate profitability.

Q. Okay. And other than the vague financial data that you looked at, was there any other information that you would have liked to know more about in this case?

A. Yes. Absolutely. So what was -- what I was unable to reconcile in this case was the number of subscriptions



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 180 of 307

information that I was given. I used that 700,000 or the 547,000 ultimately that was provided in that subscription transaction-level data.

However, in that profit and loss statement which didn't have that information on it, there was another revenue number. So I believe it was maybe 38 million, which was all of the revenues on that subscription transaction-level data. And in their profit and loss statement which they're claiming for their profit and loss -- for their margins, it was closer to 52 million.

So it was difficult for me to reconcile what happened with that additional $14 million. Were we just not given that information? Why was there that discrepancy? Were there additional subscriptions that were not -- that we weren't provided that information for and were not able to include it in our units?

Q. Okay. Before I sit down, I'd like to do -- ask you one more thing if I can figure out how to work the document camera. So this is the slide we were just looking at; is that right, Ms. Salters?

A. Correct.

Q. So we have here on the first column the 28 percent, that's the NCR profit number, right?

A. Yes.

Q. And the 47 percent is the NCR revised number, right?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 181 of 307

MR. BARR: Sorry about that. Thank you.

THE COURT: See, I told you. We all need someone like him.

MR. BARR: I may be a technology lawyer, but that doesn't mean I understand technology.

BY MR. BARR:

Q. Okay. So -- and then if we wanted to draw a new box for the industry, the SaaS that you talked about, plug in these same numbers, we'd have the same 547,907 subscriptions that you used in your analysis and we'd have the same price of $79. And then we would put in the SaaS software subscription which we know our profitability which we heard was 70 to 95 percent. Let's just be more on the -- more middle of that and hit 80 percent.

And if we did that math, we'd have $12.1 million royalty under the NCR profit margin. And then under the NCR revised profit margin we'd have $20.3 million. And then under the SaaS profit margin we'd have $34.6 million; is that correct, ma'am?

A. Correct.

Q. Thank you.

MR. BARR: Pass the witness, Your Honor.

CROSS-EXAMINATION

BY MS. COLLINGS:

Q. Good afternoon, Ms. Salters.

A. Good afternoon.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 182 of 307

Q. You didn't talk to any NCR Silver customers in the preparation of your report, correct?
A. Correct.
Q. You did not conduct any type of market survey generally to ascertain what types of features users of point-of-sale solutions value any higher or lower than other sets of features, did you?
A. That's correct.
Q. Okay. And you didn't perform any tests or, again, conduct any type of market survey in order to determine what actually drives demand for NCR Silver customers, did you?
A. Correct.
Q. Okay. Ms. Salters, you don't actually have any experience working for any software as a service business, do you?
A. I do not.
Q. And you have no experience working for any point-of-sale company, correct?
A. Correct.
Q. You don't have any experience -- you've not worked as a consultant or in any capacity as an economist in calculating a reasonable royalty for a point-of-sale company?
A. Not a point-of-sale company.
Q. You're not a certified public accountant?
A. I'm not.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 183 of 307

Q. You're not any kind of accountant?
A. I'm an economist.
Q. You're not a bookkeeper?
A. Correct.
Q. You never worked as an accountant?
A. That's correct.
Q. Okay. You've never gained any study, you have no experience in identifying labels for cost categories that companies include on their balance sheets, do you?
A. I do.
Q. You do, or --
A. I do.
Q. Okay. You have not ascertained in this case specifically what is included in any of the cost categories that were found on the NCR Silver income statement, have you?
A. I was not able to get that information beyond everything we've discussed.
Q. And sitting here today, you do not know whether the costs that were included in NCR Silver's income statement are direct costs or not, do you?
A. Well, I've already given my explanation.
Q. But if you don't know what the costs are, how do you know if they're direct or not direct?
A. I've already given my explanation based on what Mrs. Schoonover's discussion was related to these costs here at



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 184 of 307

this trial.

Q. Well, you heard Ms. Schoonover testify, correct?

A. Correct.

Q. Both days?

A. I did. I listened online to the one day -- or yesterday. And then I was here in the courtroom for the one today.

Q. So you must have heard Ms. Schoonover testify that the costs appearing in Joint Exhibit 88-C, NCR Silver's income statement, that those, in fact, are direct costs?

A. I don't remember her exact words, but if she said that, her descriptions did not support it.

Q. So whether or not Ms. Schoonover testified that those are actually direct costs, you don't believe it?

A. Her descriptions did not support categorization as direct costs.

Q. You're not familiar with NCR Silver's accounting software, are you?

A. I'm not.

Q. You're not familiar with any NCR corporate finance policies about how they book costs, are you?

A. I'm not.

Q. Okay. But you do know that NCR -- as a publicly-traded company, you do know that NCR does follow GAAP?

A. Correct.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 185 of 307

Q. You've not personally calculated a gross profit margin for any software as a service company, have you?
A. Not personally.
Q. Or professionally?
A. Or professionally, beyond what we've discussed here.
Q. Now, you're aware that in the software as a service point-of-sale market, it's highly competitive, correct?
A. Yes.
Q. And you'd agree with me that there are -- there are a variety of merchants or customers that this very concentrated and competitive market is going after, correct?
A. I'm not sure -- if you could explain a little bit more --
Q. Potential merchants, they come in all kind of sizes. They might be big companies, like Starbucks, or they might be a mom and pop, like Darcy's Cakes.
So the potential merchant business that these competitors are going after, there's a lot of different types of merchants in the market?
A. Correct.
Q. Okay. So software as a service point-of-sale companies, those -- the companies that make up the competition in that market, they can vary by size, correct?
A. Yes.
Q. They can vary by the nature of the actual products or



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 186 of 307

services that they offer for sale, correct?

A. Yes.

Q. They can vary with respect to how long they've been in business, whether it's been 100 years or a day, correct?

A. Yes.

Q. Okay. And they can also vary with respect to whether they're publicly-traded or just a small start-up business, correct?

A. Yes.

Q. So costs among software as a service companies can be very different from one company to the next, correct?

A. I wouldn't necessarily agree with that.

Q. Well, if a software service company is offering cupcakes, for example, they're not going to be -- if a point-of-sale software as a service company is -- has that as a merchant, right, a retailer that is selling cupcakes, that company -- software as a service point-of-sale company is going to be different, let's say, than one who has as its customers residents, people like you and me, somebody like -- customers of Netflix, for example.

Costs that Netflix incurs as a software as a service point-of-sale company are going to be very different than costs that software as a service company, like NCR, incurs.

Would you agree with that?

A. Not necessarily.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 187 of 307

Q. So you say that the costs that Netflix incurs are going to be identical to National Cash Register; is that your opinion?

A. I'm happy to explain. My opinion is, it wouldn't be all that different.

Q. So the cost of National Cash Register would not be that different than, say, what Netflix costs -- Netflix's internal costs are?

A. If what you're really looking for is the software as a service, then it wouldn't be all that different. If you're looking at the company level, then yes. It might.

Q. So let me ask you this. When you assume that software as a service industry companies generate 70 to 95 percent gross profit margin, that's a generality, correct?

A. Correct. Based on survey.

Q. And that assumption may or may not apply to any particular company that is a software as a service company?

A. It may not.

Q. Okay. Because it's a generality?

A. It would be unusual for it to not, but yes. That's a general statement.

Q. But you don't have any experience in determining what is usual or not usual with respect to software as a service gross profit margins, do you?

A. I wouldn't agree with that.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 188 of 307

Q. Well, you just testified that you've not performed gross product -- you've not performed damage calculations for software as a service companies?

A. Correct.

Q. Okay. So you've not performed any type of accounting services for software as a service companies, have you?

A. No.

Q. Do you know of any accounting principle that provides standards or defines how a particular company labels its cost of goods?

A. Yes. So there's generally accepted accounting principles that reside over the way companies provide their financial information. And some of that related to -- relates to cost of goods sold.

Q. And under GAAP -- so you would say that GAAP would be some type of standard that would instruct how a company needs to label its cost of goods. Is that what you're saying?

A. It's guidance, that's correct, based on their financial information.

Q. You've not heard anything here at trial today that would cause -- you've not heard any evidence to suggest that NCR Silver's cost of goods sold that are included in its income statements are incorrect, have you?

A. Not incorrect, but not direct costs either.

Q. And you've not heard any evidence in this case that



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 189 of 307

they're not direct costs, have you?

A. I have.

Q. Ms. Schoonover -- Ms. Schoonover, I'm sorry, who is executive director of the product at NCR Silver, testified that those actually are direct costs and -- didn't she?

A. Yes.

Q. And she also explained how those costs that were in Joint Exhibit 88-C, those were cost of goods sold as contrasted with selling costs, correct?

A. I disagree with your statement.

Q. You don't believe that -- you disagree that Ms. Schoonover differentiated in her testimony between cost of goods sold and selling costs?

A. In her deposition there was a different discussion.

MS. COLLINGS: Your Honor, there's -- that wasn't my question. I object. Move to strike as nonresponsive.

THE COURT: I will sustain the objection.

MS. COLLINGS: If we could look at Slide 5 of the demonstrative.

Your Honor, may I have --

(Conference between counsel.)

BY MS. COLLINGS:

Q. And you see on the right side you have hardware?

A. Yes.

Q. You heard Ms. Schoonover testify that over 75 percent



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 190 of 307

of the subscriptions for NCR Silver run on an Apple tablet, not an Android™, correct?

A. Correct.

Q. And you agree with me that if a merchant can supply its own tablet, whether it's an Apple or an Android™, that merchant can supply its own tablet to run the NCR Silver point-of-sale system, correct?

A. Correct.

Q. Okay. So a merchant need not purchase any hardware from NCR Silver in order to use the point-of-sale solution, correct?

A. Correct.

Q. You agree that the only hardware necessary to use the point-of-sale solution is a tablet, correct?

A. Okay. Yes.

Q. Okay. So here on Slide 5 you have -- in the hardware, you have the tablet at the top. Display screen, that's not needed to run the NCR Silver point-of-sale system, correct?

A. I'm not sure.

Q. Okay. And so I assume, equally, you are not sure whether a payment processor is necessary to run a point-of-sale solution such as NCR Silver's?

A. I know -- I'm not sure. I know that's hardware that's sold.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 191 of 307

Q. Sure. As far as you know, none of the hardware that's listed in Slide 5 underneath tablets, none of that hardware is actually necessary to run NCR Silver's point-of-sale system, is it?

A. I'm not sure.

Q. And if it's not necessary to run the NCR Silver point-of-sale solution, then that's not hardware that's included in the accused product, is it?

A. I disagree.

Q. Well, the accused product is the NCR Silver point-of-sale solution, correct?

A. The system, that's correct.

Q. Okay. And if these other add-ons -- hardware items are not part of the system, then they're not part of the accused product, are they?

A. I disagree.

MS. COLLINGS: And if you turn to Slide 10, please.

BY MS. COLLINGS:

Q. On this relevant data point I just want to make sure I'm looking at this clearly. The plaintiff is asking -- well, under your relevant data points, if 28 percent profit margin was applied to the other relevant data points in awarding reasonable royalty, that would effectively be asking NCR Silver to pay 90 percent of its profits, correct?

A. Do you want to show me the math?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 192 of 307

Q. I'm just -- do you know, sitting there, 28 percent profit margin, that would represent 90 percent of NCR Silver's profits, correct?

A. If you want to show me the document, I'm happy to respond.

Q. You've not done that math before? You've not done that analysis? You don't know what profit margin, what percentage of NCR Corporation's profits that 28 percent gross profit calculation would represent?

A. So I know that NCR sold system -- Silver system revenue of $100 million. I understand that their profit margins, let's say, are 28 percent. Taking the 28 percent, that'd be $28 million. Using that 28 percent calculation on -- for $12 million, which is what it came out to, based on the math that we discussed previously, damages would be $12 million. So that would be less than half.

Q. Less than half?

A. Of the profits related to NCR Silver revenue.

Q. Related, is that --

MS. COLLINGS: If you look at Slide 13, please.

BY MS. COLLINGS:

Q. The drivers of demand that you're identifying here on Slide 13, you're basing -- this observation of the technology considerations for the drivers of demand, you're basing that completely and exclusively on Mr. Crouse's opinions, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 193 of 307

A. Correct. I'm relying on Mr. Crouse.
Q. You're not referencing any other evidence that the items listed here on Slide 13 are drivers of demand for NCR Silver?
A. So while I didn't reference them necessarily in my report --
MS. COLLINGS: Your Honor.
THE COURT: What do you want me to do, Counsel? You asked her a question, she's responding.
MS. COLLINGS: I asked it -- I would ask, then, that you --
THE COURT: Let her finish the answer.
MS. COLLINGS: Yes/no response, please.
THE COURT: I'll take care of that, ma'am. You asked her a question.
You can finish your answer.
BY MS. COLLINGS:
Q. My question --
THE COURT: Ma'am.
MS. COLLINGS: Oh, sorry.
THE COURT: I've told you three times. She's going to get a chance to answer the question that you just asked. I would like for you to stop talking until she does.
Can we do that?
You can finish the answer.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 194 of 307

BY THE WITNESS:

A. So while not necessarily listed in my report, I have seen evidence. And I believe it's been out here -- discussed previously in this trial as well, a report or a marketing document that relates to merchant demand, and I think it lists these features.

I know Mr. Crouse had talked about it in his testimony as well. So I'm aware of that document.

BY MS. COLLINGS:

Q. Isn't it a fact that the items listed on Slide 13, these are actually functions of all point-of-sale solutions?

A. I heard that testimony.

Q. And, now, can you identify for me specific features of NCR Silver that include the transaction handling point-of-sale solution functionality?

A. I'm sorry. I don't understand the question.

Q. You just agreed that the four components here on Slide 13, that these are base functionalities of all point-of-sale solutions.

And I'm asking you if you can identify a particular feature of NCR Silver that is transaction handling?

A. I think you asked the question a little differently this time. If you want to restate it, I didn't say base. I didn't agree with base functionality.

Q. These are the base -- I'm sorry -- basic



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 195 of 307

functionalities of point-of-sale systems, these four items on Slide 13.

Are you disagreeing that these are the core functionalities of point-of-sale solutions?

A. I -- that's my understanding generally based on what Mr. Crouse discussed.

Q. And I'm asking you for an example of a feature that's in NCR Silver, NCR Silver's point-of-sale solution, that is transaction handling.

A. So I really can't answer that question. It would be much better suited for Mr. Crouse.

Q. But the core functions here, on Page 13, it's your opinion that these are drivers of demand?

A. I relied on Mr. Crouse for that opinion.

Q. Okay. So it's not your opinion that -- the core functionalities listed on this Slide 13, it's not your opinion that these are drivers of demand?

A. I relied upon Mr. Crouse for that opinion.

Q. Is it -- quickly, if you look at Slide 16. I think you described this as your -- this is U.S. Silver sales, and it includes both the hardware and software; was that correct?

A. No. I don't believe so.

Q. Okay.

A. Oh, the $100 million does. I apologize. Yes.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 196 of 307

Q. Okay. So Slide 16, this includes both hardware and software sales of NCR Silver?
A. Correct.
Q. Okay. But you're aware that in 2020 NCR Silver's software sales, its subscriptions, actually declined?
A. I would have to go look back and see.
MS. COLLINGS: No further questions, Your Honor.
THE COURT: Mr. Barr?
MR. BARR: Nothing further, Your Honor.
THE COURT: May this witness be dismissed?
MR. BARR: Yes, Your Honor.
THE COURT: Could I have counsel -- just one counsel from each side up here?
(Off-the-record bench conference.)
THE COURT: Mr. Barr, who is the plaintiff's next witness?
MR. BARR: Your Honor, at this time, the plaintiff rests subject to our motions and any offers that we need to make.
THE COURT: Understood. Ladies and gentlemen of the jury, it is 2:30. We're going to take a 15-minute recess and then come back, and the defendant will begin putting on their case.
Remembering my instructions not to discuss the case amongst yourselves, you are dismissed until 2:45.
THE BAILIFF: All rise.
(Jury exited the courtroom at 2:28.)
THE COURT: You may be seated.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 197 of 307

For those of you who are -- were not privy to all I was doing at the bench, I was just trying to figure out if there were more witnesses.

I think what we've agreed to do -- Mr. Baker and Mr. Barr, tell me if I'm mistaken.

First I'll start and ask the defendant if they have any motions to make at this time?

MR. BAKER: Yes, Your Honor. We have one motion to take up.

THE COURT: If you'd come to the podium, please.

Yes, sir?

MR. BAKER: Your Honor, just to make it very quick, we're going to be filing later this evening an actual motion. I'm just going to summarize it.

THE COURT: Okay.

MR. BAKER: It's -- we believe NCR is entitled to a judgment not withstanding law on noninfringement, on damages and on willful infringement, Your Honor. We just believe that there's -- no reasonable jury could find that CloudofChange has met its burden of proof to prove direct infringement of both the '640 and the '012.

And then on damages, we believe that the damage theory, there's no apportionment, and as a matter of law, that that should not be given -- that damages should not go to the jury.

And then on the final point, on the willfulness, Your

Honor, there's no -- there's been -- all the evidence -- all we've seen is a letter go out. There's nothing -- and then that letter by itself was not sufficient to allow willfulness to go to the jury. There's been no evidence of willfulness, wanton disregard, maliciousness, bad faith, deliberate and consciousness of wrongdoing or anything on behalf of the defendant.

The letter was bare bones. It did not set out any strength of their case or address the issues of validity. There was no followup, no evidence of followup. There's substantial arguments we made during the pretrial and trial that would show that we had -- that we had validity and infringement in doubt. And we believe that the -- every right that these patents, even if they were -- excuse me -- the products were covered, that the patents were valid (sic). So there's just simply no evidence that it should go to the jury at this point on that point, Your Honor.

THE COURT: I'm going to overrule that.

And just for purposes of the record, Mr. Barr has intimated to me that they're -- that they may want to have the proffer of the evidence that I excluded at the pretrial conference.

Mr. Baker, are you okay with allowing them to decide by the end -- whether or not they're going to do it by the end of the day and leaving their case open only -- the jury's not



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 199 of 307

going to hear anything else, but leaving it open to let them decide till the end of the day? And if they want to put that witness on, we can do it at the end of the day -- end of the day, that way we don't have to hold the jury up?

MR. BAKER: Yes, Your Honor. That's fine.

THE COURT: Anything else?

MR. BAKER: No, Your Honor.

THE COURT: Any other issues to take up?

MR. BARR: No, Your Honor.

THE COURT: Okay.

THE BAILIFF: All rise.

(Recess taken from 2:32 to 2:49.)

THE BAILIFF: All rise.

THE COURT: Please remain standing for the jury.

(The jury entered the courtroom at 2:49.)

THE COURT: Thank you. You may be seated.

Mr. Phipps, you're the closest to me, so I'll ask you.

Who will be calling the first witness?

MR. PHIPPS: Yes, Your Honor. Defendant NCR Corporation calls to the stand Dr. Sandeep Chatterjee.

(The witness was sworn.)

DIRECT EXAMINATION

BY MR. PHIPPS:

Q. Dr. Chatterjee, good afternoon.

A. Good afternoon.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 200 of 307

Q. If you could introduce yourself to the jury and then begin by talking about your education and background.

A. Sure. Good afternoon. My name is Sandeep Chatterjee.

My background -- I think that we have a slide here.

So my background, I have a bachelor of science in electrical engineering and computer science from UC Berkeley. I have a masters of science in electrical engineering and computer science from MIT, and I have a Ph.D. in computer science from MIT.

Q. Thank you, Dr. Chatterjee.

Could you then describe some of your past work experience and some of your academic credentials?

A. Sure. So my Ph.D. work at MIT dealt with intelligent -- intelligent environments, when you're looking at intelligent homes, intelligent offices. And one of the key things that we worked on was intelligent televisions.

So you can imagine an intelligent TV that can learn your watching patterns, what TV programs you like to watch, when you like to watch them. And the intelligent devices, they would communicate with each other.

So if your children were playing with toys that would come over and make noise when you're watching TV, it would automatically raise the volume, or your -- it would control the toys to make them quieter so you can actually continue watching



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 201 of 307

TV.

And I was actually thinking that the issue that Your Honor had about technology, those would be solved by those intelligent devices as well, because the problems in computing, they would intelligently go out, get the software that's needed, download it, install it and continue working.

Q. Dr. Chatterjee, did your research in connection with your Ph.D. receive any distinction?

A. It did. I'm very proud that my Ph.D. was selected as one of the top inventions in computing. And the dissertation is preserved in a time capsule at the Museum of Science in Boston.

Q. And have you authored any textbooks?

A. I have. I've coauthored a book on web services.

Q. Okay. And how many patents do you yourself hold?

A. I have seven U.S. patents and seven international patents, foreign patents.

Q. Okay. And tell us about your recognition as a Bloomberg Innovator.

A. So I'm very proud of this. We had created -- I had created and then commercialized the technology on new point-of-sale technology, and we were featured on the Bloomberg TV program -- a news program called Bloomberg Innovators.

And here are some screenshots from the program. On the left-hand side you see the Bloomberg news hostess. In the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 202 of 307

middle there, it's a picture of the point-of-sale technology that we created. It's a mobile device. You see that there's a card stuck on the bottom of it. There's a credit card or debit card slot toward the top. And you see a receipt, and that's printing out automatically.

And so what we did with this technology was -- it was really groundbreaking. We were able to impact the lives of millions of people around the world with this new point-of-sale technology. The concept -- and there's a photo on the top right, and this was our deployment in India.

India, there are something like 300 million people that live below the poverty line. So they're living on less than a dollar per day. The entire family is living on less than a dollar per day.

And these women in this photograph, they work on the farm, so they're working 14, 15 hours a day on the farms, and then they have to go home and take care of their family, their children. They simply don't have the time to get onto a bus, go for half an hour, 45 minutes into the downtown, where the shops are, where the bank branches are, to perform their transactions.

So what we did, we built this new point-of-sale technology, the hardware, the software, everything, and it enabled the bank branches and the pharmacy stores, the grocery stores to send people out to the farms with this point-of-sale



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 203 of 307

device together with medicine, together with cash to allow these people to perform transactions in the middle of a farm.

So the transactions were all performed on this point-of-sale device. This has Internet built into it, so it's connecting over a wireless connection to a remote server and performing all of the transactions.

And like I mentioned, it was a game changer, because it allowed these women who's working on a farm to perform transactions without sitting on that bus, going into downtown, performing transactions and then having to come back.

Q. Okay.

A. And then we actually have on the next slide a picture from South America, in Nicaragua, if we go to the next slide. Here this is a picture on the left-hand side of a web-based point-of-sale technology that we had deployed. This is in Nicaragua. And the web-based point-of-sale allows the people to go to a bank branch, and they're simply interacting with a touchscreen device and pressing these things on the screen to perform their transactions.

On the right-hand side is an app-based point-of-sale. And this, you can see a receipt is printing out. This one is deployed at a cement factory, again, in Nicaragua. The cement factory's about two hours outside of downtown. There's nothing there.

And so by using this new point-of-sale technology, the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 204 of 307

bankers, the retail stores, the pharmacies, they're able to send people out there with the point-of-sale device and with merchandise and perform transactions in the field.

And this distinction, my background in developing both web-based and app-based, is very critical to the issues in this case. Because as we'll talk about, the patents in this case are directed to web-based point-of-sale technology. Whereas the NCR technology is an app-based point-of-sale technology. They're fundamentally different. And I'll talk about those issues as we go on.

Q. Thank you, Dr. Chatterjee.

MR. PHIPPS: In view of the witness' academic credentials, education and experience, we will tender him as an expert in this case, Your Honor.

MR. YATES: No objection, Your Honor.

THE COURT: He'll be received as an expert.

MR. PHIPPS: Thank you, Your Honor.

BY MR. PHIPPS:

Q. Dr. Chatterjee, let's talk about the activities that you performed to prepare to give your expert opinions in this case.

A. Well, I spent a lot of time from last year into this year. I've looked at and reviewed and analyzed lots and lots of documents and materials and information. I've prepared this slide that shows some of the documents and information that



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 205 of 307

I've reviewed. On the left top it shows of course I've reviewed the asserted patents and the prosecution history of those patents. I've reviewed a large number of prior art patents and publications, and we'll talk about some of those toward the end of my presentation today.

I've also spoken with a number of NCR employees, including Mr. McGill Quinn from NCR. But I've also spoken with software engineers, product marketing people at NCR as well, prior to speaking with Mr. Quinn.

I've reviewed a lot of NCR technical documentation. And I really find in doing my work as an independent expert that looking at the black-and-white documentation is critical, because that allows me to really gather the facts. What are -- what's really happening? How does this software really work? How does the technology really work? So I spend a lot of time looking at the documentation, that black-and-white information.

I also traveled to NCR headquarters in Atlanta to inspect the actual NCR Silver product. I've reviewed of course Mr. Crouse's reports. And I've reviewed lots of deposition transcript testimony as well, including those that are listed there.

Q. And, Dr. Chatterjee, one of the criticisms that we'll expect to hear from opposing counsel is how brief of amount of time you spent with Mr. McGill Quinn. But your purpose in this case is to provide an independent expert analysis, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 206 of 307

A. Yes.
Q. You weren't hired to come in and meet with all of the NCR employees and just repeat what they said, correct?
A. Exactly. And that's what I made the point about looking at the documentation, that the documentation is black and white and the documentation doesn't lie.
Q. Okay. And then how did you proceed after you did all of that independent review?
A. Well, after performing all of my review and analysis, I put together two very detailed expert reports. I believe they're about 200 pages total between the two reports. I prepared one expert report on noninfringement and then one expert report on invalidity. And then I sat for two depositions that lasted approximately 12 hours on the record where I further explained and provided additional like explanations to the opinions that are set forth in my two expert reports.
Q. Okay. So just for the benefit of organizing our continuing discussion here, we're going to talk about your expert report on noninfringement first, correct?
A. Yes.
Q. And then we'll get into the issue of invalidity, correct?
A. Yes. Yes.
Q. Okay. So with respect to your analysis of



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 207 of 307

noninfringement, you've compared NCR Silver, as accused by the plaintiff, to the asserted patents, the two patents in this case, correct?

A. Specifically to the asserted claims of the asserted patents.

Q. Correct.

A. Yes.

Q. And you understand that for an infringement analysis for an independent claim, they have to prove that NCR Silver has each and every one of those limitations in those independent claims, correct?

A. Yes.

Q. And if it is your opinion that certain of those independent -- those limitations in those independent claims are not met, then it's not possible to infringe the dependent claims, correct?

A. Exactly. And like we'll go into in my presentation in a little bit, what I found when I was doing my analysis is that there are at least four major things that are simply missing from the NCR software, and, therefore, it cannot infringe the independent claims.

And because it cannot infringe the independent claims, it cannot infringe the dependent claims, because the dependent claims depend on the independent claims.

You have to meet additional limitations of the dependent



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 208 of 307

claims in order to infringe those.

Q. Okay. And so the plaintiff's burden to prove infringement is by preponderance of the evidence, correct?

A. Yes.

Q. And then we have a higher burden to prove our defense of patent invalidity, correct?

A. Yes.

Q. Okay. And on our burden, we have to show that each and every limitation of the asserted claims is found in the prior art, correct?

A. Yes.

Q. And you believe that we've met that burden through your analysis, correct?

A. Yes. I believe it's very clear.

Q. And even though we have a higher evidentiary burden of clear and convincing evidence, correct?

A. Yes.

Q. You think we've met that burden, correct?

A. Yes. And as I go through my presentation, I believe it'll come out very clear as well that the elements are clearly in the prior art.

Q. And the two key prior art references that you, Dr. Chatterjee, rely upon for your opinion of invalidity, which shows each and every one of those limitations of the asserted claims, those two patents were not considered by the Patent

Office, were they?

A. No. They were not. They -- the Patent Office did not know about those prior art references.

Q. Okay. Now, let's talk about your analysis of the NCR Silver product itself, please.

A. Okay. So I think we've all heard a lot about the NCR Silver product. It's essentially an app that works on an iPad or Android™ device. So just like every other app that all of us have used on our iPhones or Android™ phones, it's an app that runs on these terminals. There's nothing different. It's just like a standard mobile app that you run on your tablet.

And, in fact, what I did as part of my review and analysis, I believe this was last year, I believe in October time frame, or September, I actually went to the Apple Store and I located the NCR Silver app and I downloaded it onto my iPad. So it works 100 percent the same way as you would download any app onto your phone or tablet.

And the NCR Silver product, it consists of -- it's essentially a point-of-sale product, like I'm saying here. As I've stated, you can run it on an Apple iPad, or you can run it on an Android™ tablet.

And the NCR Silver product also has what's called a Back Office suite of applications, and the Back Office allows the merchant to simply enter -- if you're selling pizzas, you're able to enter that I'm selling pizzas. If you have large



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 210 of 307

pizzas, medium-size pizzas, small-size pizzas, you're able to enter that information. You're simply entering data related to your business, your shop. If you're selling tacos, you would enter that you're selling tacos.

So the Back Office allows you to enter that kind of data about your business or about your shop. And like I mentioned, the actual NCR Silver POS is simply a standard application that runs on an iPad tablet or an Android™ tablet.

Q. Okay. Now, how does a merchant obtain NCR Silver?

A. So --

THE COURT: Mr. Phipps, I'm -- could you pull the microphone just a little closer?

MR. PHIPPS: Oh, yes. Sorry.

THE COURT: And could you ask your question again? I just couldn't hear it.

MR. PHIPPS: Absolutely.

BY MR. PHIPPS:

Q. Dr. Chatterjee, how would a merchant obtain NCR Silver?

A. So there are two ways of doing it. As I mentioned, you can put it onto an Apple iPad product or an Android™ product. I'll start with the Apple approach.

In order to have the NCR Silver product work on your iPad, you would first need to go to an Apple store or go to Apple and purchase one or more iPads.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 211 of 307

Once you do that, and consistent with what I explained to you, I took my own iPad and I simply went to the Apple Store, looked up the NCR Silver app and I downloaded it. And that's exactly what a merchant would do.

After they get that iPad, they simply go to the Apple Store, connect over the Internet to the Apple Store, locate the NCR Silver app and then download it.

And NCR is the one that puts that software, the NCR Silver -- the iOS version, the Apple iOS version of the NCR Silver software, NCR gives it to Apple to put onto the Apple Store. And that's it.

And then if there are updates -- so I think we've heard testimony from, I believe, Mr. Quinn that there are periodic updates that NCR does on its own. If there are updates, again, it's the same process. NCR gives it to the Apple Store. And as we've all used when we're using mobile apps on our tablets or phones, when there's an update, it tells you that there is an update or sometimes it'll automatically simply update the application on its own.

But it's all done through the Apple Store. Nothing different than what all of us use with our Android™ phones and tablets and iPhones and iPads.

Q. Okay. So we've talked about the iOS version of NCR Silver. Now let's talk about the Android™ version.

How do merchants obtain NCR Silver when they use it with



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 212 of 307

an Android™ product?

A. So this is very similar but slightly different. In order for a merchant to use the Android™ version of the NCR Silver product, they have to contact NCR. They call up NCR and say, well, we'd like to use the Android™ version. And what NCR does is that it purchases Android™ tablets from Samsung and others, and then NCR takes the Samsung tablet, loads the actual Android™ software onto the tablet and then ships it out to the merchant.

And then after that, as I mentioned, if there are updates that are released by NCR, it, again, comes into the tablet using the Google Play Store. Again, 100 percent the same way that all of us update our phones with either iPhone or an Android™ phone by connecting to the Apple App Store or connecting to the Google Play Store.

Q. Okay.

MR. PHIPPS: So next slide.

BY MR. PHIPPS:

Q. All right. Now we've talked about how NCR -- a merchant will get NCR Silver, but now let's talk about how a merchant will use NCR Silver.

A. Sure. So NCR Silver is simply a software product. And in order for a merchant to actually use the NCR Silver product, the merchant needs to first go and purchase other components.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 213 of 307

As I've already mentioned, if the merchant wants to use the Apple version, it has to go and purchase an iPad, one or more iPads. Then the merchant can also purchase PCs, for example, from Dell or other companies.

The merchant also needs to go and get Internet access. And I think we've heard some testimony earlier today as well as yesterday about that. The merchant has to get Internet from some company.

And then after the merchant has purchased those additional third-party components, then what happens is that on the bottom left the merchant, using that optional PC, would simply connect to the Back Office. And remember I mentioned if you're a pizza store, you're going to enter that you're selling pizzas. If you have small, medium, large-size pizzas, you're going to be entering that information through the Back Office. If you're a taco store, you're going to be entering similar information saying that you are selling tacos, putting those item information into the Back Office.

And that PC, you're running a browser and that's hitting a web server. And that web server simply takes that data. If you enter that you are selling pizzas and you have small, medium and large pizzas, that's simply data. And we'll talk more about that later today. But that data is simply sent to a web server, and that web server either puts it into a database or gives it to an app server, and the app server can do other



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 214 of 307

things with it.

And then after you've entered the information that you're selling pizzas or tacos or whatever else, that's it. It's simply now living -- that information, that data that you entered is simply living in the database on the far right-hand side.

Then imagine a customer comes into your taco store. When the customer comes into your taco store and actually orders two tacos, then you're going to use your iPad. And then as the customer places the order, you're going to ring up the customer by pressing whatever tacos that they ordered.

And I think on the next slide we have something like that. No. Maybe not. So I think we'll come back to that.

But if your customer's purchasing two tacos, you would simply press the taco button. If they got chicken tacos or beef tacos or vegetarian tacos, whatever, you would simply press the appropriate button. And then it would ring up on the left-hand side the price of each taco, add up the taxes, whatever else, and then the customer performs the credit card transaction or gives you cash.

Q. Thank you, Dr. Chatterjee.

So now we've talked about how a merchant gets NCR Silver, how a merchant uses it, and now let's get into your opinions in this case.

You have some opinions of noninfringement, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 215 of 307

A. Yes. I do.

Q. So let's go through those. Now, beginning analysis, we know that these two patents are related to each other in terms of the filing date. And so tell us about that and how that's relevant to your analysis.

A. Well, the two patents are very closely related. If you look at this slide, the titles of both patents are the same. The listed inventors of the two patents are the same. The owner of the two patents are the same.

Going on to the next page here, the abstracts which provide a summary of what the invention of the two patents are, they're 100 percent the same as well.

Going to the next slide, the two patents have the same exact five figures.

Going to the next slide, the specification wording -- the specification of a patent is the actual writing that discloses what the invention is. The wording of the specification for both patents is identical. And it has to be, because the '012 patent is what's known as a continuation.

Q. All right. All right. So now we have different claims that are asserted from the patents. And as the jury saw in a prior video, the claims define sort of the boundaries of what's asserted in these patents, correct?

A. Yes.

Q. Okay. And they're specific claims out of these



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 216 of 307

patents that are asserted. And the number of claims are listed here. And, again, only Claims 1 from each of the asserted patents are independent claims. And so we'll be focusing on those independent claims for your noninfringement analysis. So let's talk about the claims and how they compare.

A. So we touched on this a little bit maybe about five, ten minutes ago, that both Claims 1 from both patents are independent. And then all of the other claims -- all of the other asserted claims, they depend from Claim 1, which means that Claim 1 sets forth a number of limitations that have to be met. And then the dependent claims, they add limitations on top of the independent claims.

And that's how I've graphically depicted them here. Where you see that Claim 1 for both patents are at the top, they have the base limitations, and then you're adding additional limitations through the dependent claims.

And then Claims 12 and 13, they actually depend from Claim 11, which also depends from Claim 1.

So the bottom line is that every asserted claim is based on and depends on Claim 1 for both patents.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. Okay. And then what is your ultimate opinion in this case as to the issue of infringement as posed by the plaintiff?

A. So it says it right here that my opinion is that NCR



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 217 of 307

Silver does not and, in fact, it cannot. And that's what I'm going to explain to you in the next several slides.

It's simply not possible for NCR Silver to infringe the asserted claims of both the asserted patents.

Q. And that's true not only as it's used by the merchants, but it's also true that -- as sold by NCR, correct?

A. Yes. There are different reasons, and I will cover them all in my presentation. But it's true, both the merchants as used -- using the system, as well as by NCR, cannot infringe the asserted claims.

Q. Okay. So let's get into the details of your noninfringement analysis, Dr. Chatterjee.

A. So here I'm setting the stage. This is really important, because, as we've talked about, it's really the claims -- the wording of the claims is critically important. It's the claims that define the invention.

And so on the left-hand side, I've made a very basic analogy. On the left-hand side, if there's a patent for, say, a soccer ball, and the claims use the language that Claim 1 of this made-up patent that I have here of a soccer ball, if Claim 1 has four limitations and if those four limitations are that, number one, it's made of leather; number two, it's stitched together -- that actually rhymes; number three, it's filled with compressed air; and number four, it's round, we have to look for exactly those four limitations in the accused



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 218 of 307

product.

And here on the right-hand side, I'm saying, okay. Let's consider the accused product being a football. A football may be made of leather. Okay. We check the box for that.

A football may be stitched together. We check the box for that.

A football may be filled with compressed air, but a football is not round. A football is egg-shaped or oval or whatever it is.

So what I'm trying to show here is, number one, each of the claim limitations have to be met; and even more importantly, we have to look at the actual words in the claims. What do the words say? Not a subset, not just a couple of words here and there, but all of the words of the claims has to be looked at and analyzed.

Q. Okay. So let's take that understanding and apply it to the claims in this case.

A. Well, so remember, I said there are approximately four major things that are missing from the NCR Silver product that makes it crystal clear to me -- and hopefully I'll be able to show you as well -- that those four major things are missing from the NCR Silver product.

And because those four major things are missing, the NCR Silver product does not and, in fact, cannot infringe the claims.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 219 of 307

But here you can see the language on the left-hand side of Claim 1 for the '640, I don't want to go into every little word. I'm just going to show you these four huge missing things from the NCR product.

And before I do that, I want to show you that -- remember I told you that the '640 patent and the '012 patent, they're related? They share the same specification, same figures, same -- I forgot what else I said, the titles and things like that.

So I'm going to show you that Claim 1 of the '640 patent and Claim 1 of the '012 patent, they have these same limitations. There are three limitations that I'm going to show you are common between the two Claim 1s of the two patents, and there's one additional limitation in the '640 patent as well.

So before we go into the '012 patent, what I've done here is, on the left-hand side, I have Claim 1 for the '640 patent, and I've color-coded these limitations.

So the first one that I have is point-of-sale builder software. I've color-coded that on the left, so you're seeing that I'm taking the exact wording from the claim, "point-of-sale builder software," and I've made it my first bullet on the right.

So this is the first point that I'm going to show you is a major thing that's missing from the NCR Silver product.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 220 of 307

The second point that I've made in this peach-brownish color is that "the point-of-sale builder software that runs on said web server."

Remember I said that you have to look at the actual words of the claims? And this is really important, because it doesn't say that there is simply a web server. It says that "point-of-sale builder software runs on said web server."

So I've made that the second point, and I'll explain to you why that's another huge thing, the second of the four huge things that are missing from the NCR Silver product.

The third one, in this teal color, is a little bit further down in the claim. And again, I've written it exactly verbatim from the claim "web servers are provided as a vendor subscription service."

Then the fourth point, in this purple color, again, directly from the claim on the left, "POS terminals access and repeatedly interact with said web server software."

So I've put them side by side, the actual claim of the '640 patent, Claim 1 of the '640 patent, on the left-hand side, and I've pulled out the exact verbatim language from the claim language onto these four bullets on the right-hand side.

And if we go to the next slide, I'm going to show you through the rest of my presentation that these four things, these four huge limitations, that are required in Claim 1 of the '640 patent are simply not there in the NCR Silver product.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 221 of 307

Now, going to the '012 patent. Remember I told you that they're related? So these same limitations are in the '012 patent. And I've used the same color-coding to show that those same limitations are there.

So that first one, "POS builder software," remember in the '640 I highlighted that point-of-sale builder software in green? I've done that here as well.

In the '012 patent, I've highlighted in this light green color, it has an additional limitation, that the "POS terminals are generated by said POS builder software."

And then it goes on, that the "POS builder software for programatically creating or modifying said one or more POS terminals."

So not only does the '012 patent require that there is a POS builder software, it specifically states that it has to do what's stated in this light green requirement.

Now, before we go here, if we keep on the last slide, here I've -- again, in that same peach and brownish color there's that same corresponding limitation in the '012 patent that it's not simply a web server. The '012 patent, just like the '640 patent, it doesn't say that it's simply a web server somewhere there. Even the '012 patent is saying there's a web server, including POS builder software installed thereon.

So the claim language is crystal clear that the web server has to have POS builder software installed thereon. Just like



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 222 of 307

in the '640 patent it said that the web server runs the POS builder software.

And then in the purple color toward the bottom I have that the POS builder software is configured to interact with said one or more POS terminals.

So going to the next slide, I will show you through my analysis that these four limitations are also missing from the NCR Silver product.

Here what I've done is -- just to put both claims of both patents on a single page. So on the top left I have Claim 1 of the '640 patent. On the bottom left I have Claim 1 of the '012 patent. And I'm showing here through the color-coding that these four limitations, they're three common limitations that are in the green color, the brownish peach color and the purple color. You see that they're both in the '012 and the '640 patent. And the '640 patent has that additional teal-colored limitation as well.

So my point is I want to keep the analysis simple and not waste anyone's time, and that is why I've done this to show that there are common limitations across both claims of both patents.

And I'm going to show you that these four limitations that I've named, I've called this light -- the green limitation the builder limitation. And I'm going to show you that the builder limitation is missing from the NCR Silver product.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 223 of 307

I've called the peach-colored limitation the installed on/runs on a web server limitation. And I'm going to show you that, again, that limitation is missing from the NCR Silver product.

I've called the purple limitation the interaction limitation. And, again, I'm going to show you that limitation is also missing.

And the teal limitation I've called the subscription limitation which only applies to the '640 patent. I'll also explain that that limitation is missing.

Q. Okay. Thank you, Dr. Chatterjee.

Now that you've described how these limitations are contained in the asserted claims, in the independent claims, let's talk more about your analysis of how those have not been found in NCR Silver.

A. Okay. So I wanted to show here first through -- now that I've explained to you these big pieces of the claims, I wanted to first sort of ground our discussion by showing Figure 3 from both patents. Both of the asserted patents have this same figure.

And essentially what the patents are directed to is that a merchant -- you see on the bottom left the web browsers. So a merchant would use those web browsers and they would connect to a POS builder software that's installed on a web server. And, again, I've highlighted through the coloring on the right-hand



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 224 of 307

side of the figure, I've highlighted in the peach brownish color that there's a web server there with POS software installed on it. And the merchant, using the web browser and through that green arrow, is connecting to the web server with the POS builder software installed on it to build POS terminals.

Then after the merchant has built the POS terminals, then the POS terminals are then on the left-hand side, on the top left. And then the POS terminals continue to interact with the POS software that's on the web server. And that's what I'm showing with the purple arrows going back and forth.

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. So let's start with the builder limitation. And like I said, I wanted to simplify the analysis and show you that the builder limitation, which is in both Claim 1 of the '640 patent and Claim 1 of the '012 patent, is not in the NCR Silver product.

So the most important part of this analysis is the Court's construction of the term "point-of-sale builder software." And the Court construed this term. And "construed" means the Court defined the meaning of this term to be its plain and ordinary meaning, wherein plain and ordinary meaning means software that builds the POS terminals.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 225 of 307

And this is critical. This definition or construction of the term "point-of-sale builder software" is critical, because, as we go to the next slide and as I've already explained, you cannot build anything with the NCR Silver product.

Remember I told you that NCR takes the software and gives it to the Apple Store? And all you do with your iPad or your Android™ tablet is you're simply downloading it, just like any other app that you have on your phone or on your tablet. You cannot build anything with it.

It's simply -- the NCR Silver product is already built. You cannot build it when it's already built.

And if we go to the next slide, this is really important in that, you know, software technology is not magic. Software technology works by having software, which software consists of lines of program code and the computer simply goes line by line of the program, parses the program code, which are instructions, and simply executes the instructions that are in the program code.

And that's a really critical concept, because unless the program code already has all of the functionality in it, there can be no functionality in an app, right?

For example, whenever you're using an app, for example, if you use the Uber app or whatever app, all of the functionality that the Uber app can do or whatever app you're using is already there. It has to be already there, because computers



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 226 of 307

simply go line by line of that program code and execute whatever the program instruction says.

Like I said, it's not magic. The computer simply process the program instructions and do what it says.

So when you see a button -- when you have a button for tacos, because you're going to sell tacos, that functionality for that button, all of the capability that that button can do, it's already in the program code.

MR. YATES: Your Honor, can we have more question and answers rather than a monologue? Objection.

THE COURT: Overruled.

MR. PHIPPS: Next slide, Dr. Chatterjee.

BY MR. PHIPPS:

Q. Did you hear any testimony from any of the listed inventors concerning your understanding of what building is?

A. I did. So I was in the courtroom yesterday when Mr. Olson, an inventor of -- or I guess a coinventor of both of the patents, and he testified directly that data entry is not building. And as the coinventor of the patent, he was confirming exactly my analysis, that all of the functionality is already there.

If you're simply entering data, for example, that you're selling tacos, the button functionality, the capability, it's already there. You're simply entering data that says taco, or you're simply entering data that says medium-size pizza.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 227 of 307

That's all that's happening.

And Mr. Olson, the coinventor of the patent, confirmed that data entry is not building within the context of his patent.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. So here I'm just showing that I've explained to you why the builder limitation is simply not there in the NCR Silver product. Like I said, it's a prebuilt application. Whether you want to call it prebuilt or already built, all of the functionality is in that application. You cannot do something more with that application beyond what's already there.

And so that's the key point. You're not building anything. It's already there. You're simply entering data about taco or pizza. That's all you're doing.

BY MR. PHIPPS:

Q. Okay.

A. And so I just put an X next to it just to keep track that we're going to go through these four major limitations that are simply missing.

Q. Okay. Dr. Chatterjee, let's talk about this next limitation.

A. Sure. So this next limitation is "installed on or runs on a web server." And remember I talked to you about



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 228 of 307

this. That -- we've talked a lot about and heard a lot about web server in the testimony yesterday and also earlier this morning, but the claim language is crystal clear.

It doesn't just say web server, period. It says web server that has point-of-sale builder software either installed on it, for the '640 patent, or that's running on it, for the '012 patent.

And so if we go to the next slide, I've already explained to you that there is no POS builder software, because the Court construed -- said that the definition of POS builder software is something, and I explained to you that something is not in the NCR Silver product. It simply cannot, because it's an already-built application.

And so because there is no POS builder, obviously there cannot be a POS builder on a web server. If there's not a POS builder to begin with, it cannot be on a web server.

So then there's an additional reason why this limitation, the "installed on/runs on a web server" cannot be met and --

Q. And, Dr. Chatterjee, is there a Court construction that's relevant for this analysis?

A. Yes. And that's what I'm showing here, that the Court's construction of the term "web server" -- again, it's the Court's definition of the term "web server" -- is critical because it demonstrates very clearly that what plaintiff is pointing to cannot meet the construction of this limitation as



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 229 of 307

construed by the Court.

And so the Court's construction of a web server is "hardware and software that uses HTTP (hypertext transfer protocol) to serve data or files that form web pages."

And I've underlined that part because it's critical. The entire thing, this entire quotation is the Court's construction.

And what I've explained to you is that the NCR Silver product is an app. There's no web page. As we know from using an app versus going to a website, they're two different things. The NCR Silver product is an app. There's no website with it. There's no web pages with it.

And so if we go to the next slide, what I've explained is that plaintiff is pointing to NCR Silver's Back Office software as allegedly being the POS builder software.

I've explained to you already that it's simply not possible because the NCR Silver product is an app. All of the capability is already there. You cannot build something more with the NCR Silver app.

But before we go there, but even if you look at the NCR Silver Back Office application, it doesn't run on a web server. It runs on what's called an application server. And it's critical because an application server is very different than a web server.

And if we go to the next slide, I explain this. A web



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 230 of 307

server, on the left-hand side, in this -- I've put the actual Court's construction, "a web server is hardware and software that uses HTTP to serve data and files that form web pages."

And I've pointed to the web server in the diagram that I created based on the analysis of documentation and talking with the people at NCR.

And on the right-hand side I'm showing what an application server is. An application server is completely different than a web server. An application server simply performs computations. An application server does not form web pages. It doesn't do anything related to forming web pages, and, therefore, it cannot meet the Court's construction of web server.

Q. Okay. And, Dr. Chatterjee, so this is an important point. And looking on the right side here, where we see the cloud provided by Google, there's three separate types of servers there, correct?

A. Yes.

Q. Okay. And you've talked about the web server and the application server. And is there a reason why you have some gears next to the application server?

A. Yes.

Q. Okay. What is that?

A. Well, the gears are meant to graphically denote that the application server performs computations. It's like the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 231 of 307

gears are moving. Whereas a web server simply has static web pages in it that are sent out. An application server does computation, it performs actions, it runs an application.

Q. Okay. So the application server that is used in connection with NCR Silver is not a web server according to the Court's claim construction, correct?

A. Yes. Without a doubt.

Q. And it's your understanding that all of the relevant software that is used in the Back Office in connection with NCR Silver is on an application server and not on a web server, correct?

A. Yes.

Q. So even if the software that was there was a builder, which you've said it is not, it doesn't meet the location requirement of being installed on or running on a web server, does it?

A. That's precisely my point. The claim language is very clear that the web server has to have specific software installed on or running on it, and it doesn't.

Q. Okay. Thank you, Dr. Chatterjee.

Okay. So you've covered how these first limitations that are common between the two asserted independent claims are not present in NCR Silver. What about the third one?

A. So this is the interaction limitation. And remember the interaction limitation -- so on the left-hand side I've



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 232 of 307

summarized it. The claims for both patents, Claim 1 of both patents, the claims require that the POS builder software interacts with the POS terminal. And then as we just talked about for the installed on/runs on web server limitation, the claims also require that the POS builder software is installed on or runs on a web server.

But if you look at the diagram that I created based on all of my analysis of the technical material, technical documents that I've reviewed, and also confirmed by my discussions with NCR's engineers and Mr. Quinn and others, if you look at where the iPad is in my picture -- remember the NCR Silver app runs on the iPad -- whereas the iPad only communicates with what's called a POS API server. And an API server is another kind of server, again, fundamentally different from a web server.

And you can see --

Q. Dr. Chatterjee, let me just interrupt you there. So the POS API server also does not meet the Court's definition of a web server, correct?

A. Yes. It's fundamentally different.

Q. Thank you, Dr. Chatterjee.

A. And so you see this diagram. So on the iPad is where the NCR Silver app is running. And the web server is on the bottom there. There's no arrow, there's no connection between the iPad and the web server. Clearly, then, there is no interaction. The app running on the iPad, which is the NCR



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 233 of 307

Silver app, does not talk to the web server at all.

And therefore this is what I was explaining that it's not simply that the NCR Silver product does not meet the claim limitations. It's stronger than that. It's -- the NCR Silver product cannot meet the claim limitations.

And I think on the next slide I actually go into a little bit of detail about what is an API server and how that's different than a web server. So, again, on the left-hand side I've put the Court's construction or the definition of what a web server is.

And remember that last part of the Court's construction that says that form web pages? And then on the bottom I've cited to the Microsoft computer dictionary which confirms my understanding, as well as any person of skill in the art, that a web page uses HTML.

And so what I've shown in the diagram here is that the web server uses HTML on top of HTTP, whereas the API server, the POS API server, uses what's called JSON. It's a completely different technology. So that's another reason why the app, the NCR Silver app, running on the iPad simply cannot meet the interaction limitation, because it never interacts with, it never communicates with, it has no connection with the web server within the Back Office.

Q. Okay.

MR. PHIPPS: All right. Next slide.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 234 of 307

BY MR. PHIPPS:

Q. So you've talked about how the first three limitations are not present in the asserted independent claims, even though noninfringement can be found by the absence of merely one, as we saw with the soccer ball and football analogy. But yet there's another common limitation or another limitation from the '640 patent that's not present, correct?

A. Yes.

Q. And what is that?

A. Well, that's the -- what I call the subscription limitation. And so if we go to the next slide -- so remember the subscription limitation is only for the '640 patent, not for the '012 patent. And the claim requires that the web servers are provided as a vendor subscription service. That's really important, because it's the web server that has to be provided as a vendor subscription service.

But NCR provides only software. NCR does not provide the web server. And, in fact, we've heard testimony, I believe today and yesterday, that NCR uses Google. And so Google is the one actually providing a web server as part of what NCR uses in the cloud.

So NCR is only providing the software, and therefore NCR cannot meet this web server provided as a vendor subscription service.

Q. Okay. Thank you, Dr. Chatterjee.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 235 of 307

And is that confirmed by your review of the merchant agreement which governs the relationship between the merchants and NCR?

A. Yes.

Q. And how is that?

A. Well, the NCR Silver merchant agreement is another reason. So the first reason that I just gave you is based on the technology. Because the servers are provided by Google, NCR cannot be providing the servers as a vendor subscription service. From a technical perspective, it's very clear.

The merchant agreement adds another reason why this claim limitation cannot be met. If you look at this, I've blown up -- I believe this is Page 1 from the NCR Silver merchant agreement. It says at the top, where I've highlighted it, that "NCR Silver software as a service suite of applications," and then it has in parentheses "service." So it's saying that the service is the NCR Silver software as a service suite of applications.

And then further below it's expressly stating that what is provided as a subscription is that software. There's no hardware that's provided as a subscription.

And the Court has construed what a web server is. And like I said, the web servers, all of the servers here, that are used by NCR, are provided by Google.

So it's not possible for NCR to be providing a



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 236 of 307

subscription service to those hardware that are provided by Google.

Q. Okay. Thank you, Dr. Chatterjee.

And so that covers the analysis of those four limitations. And you've described your basis for how the plaintiff has not met their burden to show that those limitations are met in NCR Silver; is that correct?

A. Yes.

Q. Okay. Thank you, Dr. Chatterjee.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. Okay. What is this slide about? In other words, why are we talking about the word "system"?

A. So all of the asserted claims for both patents in this case are what's known as a system claim. They -- I'll show this to you in a moment, but they actually say the word "system" in the claim.

And so, again, returning to that made-up patent example that I ran through with you earlier of the soccer ball, imagine that there's a system patent for the soccer ball that not only talks about the soccer ball but also a goalie net with it.

And so in that system example of that soccer ball and goalie net system patent, the claims might be something like made of leather, stitched together, filled with compressed air, round, which were all of the limitations for the actual soccer



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 237 of 307

ball, and then the system might be "and a goalie net."

So that's a system. You have the soccer ball and you have the goalie net.

And then on the other side that -- remember we talked about the football, which is not round, and so the football cannot meet the limitation of the round -- the round requirement of the soccer ball.

But in addition, in this example, if the goalie net is not provided by that company that makes the football, that's another reason why that system claim cannot be met.

So if somebody goes and buys a football and gets a goalie net for another company and then puts it together themselves, then the person -- the company that made the football has not infringed.

Q. Thank you, Dr. Chatterjee.

So we've looked at how the merchant uses it and how they put it into service and obtain the benefit from it. But then we're just looking at it from a perspective of NCR. In other words, there's a system claim out there, and what is NCR's role in it?

So even if all of the limitations were met, so those were met, but we didn't provide the goalie net, we couldn't infringe that systems claim, correct?

A. Exactly.

Q. Okay. So let's go through that analysis, focusing on



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 238 of 307

how NCR is separate from how the merchant uses it as part of a system.

A. Okay. So here what I've shown -- again, I've reproduced Claim 1 from both the '640 patent and the '012 patent. And I've underlined and put into gray highlighting, you can see that both of them recite "a web-based point-of-sale builder system," right?

The Claim 1 of the '640 has that word "system" in it. Claim 1 of the '012 also has that word "system" in it.

And then both of them say "a system comprising," and then they enumerate a bunch of things that that system must comprise.

And I've used the yellow highlighting to call out for you that that system must comprise things like an Internet connection, that system must comprise things like one or more local or remote PC workstations.

And then in the '012 patent, that system must comprise communications network.

And as I talked about earlier, NCR does not provide Internet. NCR does not provide PCs. It's the merchant that has to go out and get Internet connection. It's the merchant that has to go out and get PCs.

And so if we go to the next slide, I've summarized this, that all of the asserted claims of the two patents are system claims.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 239 of 307

NCR only supplies part of that system, and that part of the system is the software. NCR does not provide any of the other components of that system.

And I've highlighted -- or enumerated there that everything else is provided by others. "Others" meaning third parties to NCR. So the cloud, so the servers and things like that are provided by Google. PCs are provided by others, for example, Lenovo or Dell or ASUS. Internet access is also provided by others, for example, AT&T or whoever else.

So as I explained with the soccer ball and the goalie system claim example, NCR only provides the software. But the claims are system claims, and they require all of these different components. So NCR cannot infringe the system claims.

Q. Okay. Thank you, Dr. Chatterjee.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. So what does this slide highlight for the jury?

A. So here I've just sort of -- I wanted to summarize that the '640 patent had all of these limitations. The '640 patent had these limitations that I've explained to you are simply missing from the NCR Silver product.

And so I've simply put these limitations on the left-hand side for the '640 patent, and I've shown you, based on what I've discussed with you thus far, how those limitations are



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 240 of 307

missing. And, therefore, it's simply not possible for NCR Silver to infringe the asserted claims of the '640 patent.

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. And do you provide the same analysis here for the '012 patent?

A. Yes. Exactly. The -- on the left-hand side, I have those limitations that are required of the claims of the '012 patent. And on the right-hand side I've shown you, based on what I've discussed with you thus far, why those limitations are missing and simply cannot be in the NCR product.

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. Okay. Now, we're going to go to sort of our side of the case, where we have the higher burden to show that the patents are invalid, and we have to do that by clear and convincing evidence.

And you have reviewed patents that the Patent Office didn't consider, and you have an opinion as to whether or not that standard is met in this case, don't you, Dr. Chatterjee?

A. I do.

Q. Okay. And what are those opinions?

A. Well, my opinion is that, based on prior art -- and



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 241 of 307

prior art means publications, patents that were out there before the asserted patents -- the prior art disclosed the same concepts, the same claimed invention are found in the prior art.

And so when I looked at it, it was very clear that the patents are invalid because older patents, prior art patents, disclose the same invention.

Q. And you prepared a separate report with a detailed analysis to support your opinions of invalidity, correct?

A. I did. Very detailed, not only a body of the report, but extensive tables and charts comparing the prior art together with the actual claim language of the asserted patents.

MR. PHIPPS: Okay. Next slide.

BY MR. PHIPPS:

Q. Okay. And so for the benefit of clarity, what is it that we're doing here with these soccer balls?

A. We have a lot of soccer balls on my slides.

So what I'm trying to explain here is that the concept of prior art is that if there's a prior art patent that disclosed a soccer ball -- and remember, a soccer ball we're saying is made of leather, stitched together, filled with compressed air and round. If there's prior art that was done before the asserted patents, the filing date of the asserted patents, then the asserted patents are invalid because they're not new. It



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 242 of 307

was already known, these concepts, these claimed invention was already known.

And so what I'm trying to show here is that if a prior art discloses the soccer ball and the asserted patents are about a soccer ball, the asserted patents which came after the prior art are necessarily invalid. Because for a patent it cannot be the same thing that the prior art already has.

Q. And the two main references that you rely on, those were not considered by the Patent Office, correct?

A. They were not. I rely on the Woycik reference and the Brown reference. And they were not considered by the patent examiner at the U.S. Patent Office when these asserted patents were being prosecuted and they were being reviewed.

Q. And those two prior art references predated the asserted patents, correct?

A. Yes.

Q. They came before?

A. Yes.

Q. Okay. And they're in the prior art?

A. Yes.

MR. PHIPPS: All right. Let's go to the next slide.

BY MR. PHIPPS:

Q. Okay. Let's look at the timeline here. And then you also have a reference that's Michaud which is -- was considered by the Patent Office, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 243 of 307

A. The Michaud reference was considered by the Patent Office, but not the way that I use it in my analysis. And we'll get into this a little bit later. I'm simply pointing to Michaud for a small little piece, and we'll talk about it later, whereas Michaud, when the patent examiner looked at it, they were looking -- the patent examiner looked at Michaud in a very different way than the way that I'm using Michaud.

Q. Okay.

MR. PHIPPS: And just to lay the foundation for our discussion, the Brown reference and the Woycik reference have already been admitted into evidence as Defendant's Exhibit 50 and 58. And I would like to move into evidence the Michaud reference which is Defendant's Trial Exhibit 133.

MR. YATES: No objection, Your Honor.

THE COURT: It'll be admitted.

MR. PHIPPS: Thank you, Your Honor.

BY MR. PHIPPS:

Q. Okay. What does this slide depict in terms of the timeline?

A. Well, the bottom line is, like I mentioned, the Woycik reference, the Brown reference and the Michaud reference, they all came before the filing of the asserted patents.

Q. Okay. And that's to delineate the vertical red line there?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 244 of 307

A. Yes. The red line I used to show February 5, 2008 which is the filing date of the '640 patent which is the first of the two patents. And then I've used a timeline to show that both Woycik and Brown came before that date as well as Michaud, which also came before that date.

Q. Okay.

MR. PHIPPS: All right. Next slide.

BY MR. PHIPPS:

Q. Okay. So you consider that Brown independently is a soccer ball, and Woycik independently is a soccer ball, correct?

A. Yes. Exactly.

Q. Okay. So put it into your language, Dr. Chatterjee.

A. So what I'm doing here with the soccer balls is essentially showing that all of the elements that are required by the claims, the asserted claims of the asserted patent, are found in the Woycik reference. Just looking at the Woycik reference on its own -- and I'll explain this to you over the next several minutes -- just looking at the Woycik reference on its own discloses every element of the asserted claims of the asserted patents.

And same thing with the Brown reference. The Brown reference on its own discloses each and every element of the claim. And that's why I put soccer balls next to them.

Q. Okay. Well, let's go through that analysis.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 245 of 307

MR. PHIPPS: Next slide.
BY MR. PHIPPS:
Q. Okay. What is this slide?
A. It's basically a picture of the Woycik reference. And I'm showing the screenshot that shows the actual filing date of the Woycik reference, and it shows that it's May 1, 2007. And that obviously predated the February 2008 filing date of the asserted patents.
Q. And Thomas Woycik is the first listed inventor there on that reference?
A. Yes.
Q. And that's why we call it the Woycik reference?
A. Yes.
Q. Okay.
MR. PHIPPS: Next slide.
BY MR. PHIPPS:
Q. And then with the Brown reference, is this also a depiction of the front page of the Brown reference?
A. Yes.
Q. Okay. And the listed inventor there is Michael James Brown, correct?
A. Yes.
Q. And we'll refer to that as the Brown reference?
A. Yes.
Q. And that was also in the prior art, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 246 of 307

A. Yes.
Q. Okay.
A. And I've highlighted the filing date of January 23rd, 2007, which, again, predates the February 2008 filing date of the first asserted patent.
Q. Okay.
MR. PHIPPS: Next slide.
BY MR. PHIPPS:
Q. And the Michaud patent. Again, the inventor is Gene Michaud -- we'll refer to that as the Michaud reference -- and that was filed in 2004, again, is in the prior art, correct, Dr. Chatterjee?
A. Yes.
Q. Okay.
MR. PHIPPS: Next slide.
BY MR. PHIPPS:
Q. Okay. Now, focusing on the Woycik patent, what is anticipation?
A. So anticipation means that this one reference discloses either explicitly, expressly or inherently each and every claim element. And that's what I explained to you earlier, that if the asserted patents are a soccer ball, Woycik is disclosing a soccer ball.
Q. Okay. So we have a figure from the Woycik prior art reference on the left, and that came before, or Figure 1.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 247 of 307

And then the Figure 3 from both patents, because, again, the asserted patents have the same figure. So Figure 3 from both patents, as referenced there, Joint Trial Exhibit 1 and Joint Trial Exhibit 2.

And so there's some color-coding here between Figure 3 of the asserted patents and the prior art figure.

So can you talk us through that, why you've highlighted those components?

A. Sure. So remember when we talked about Figure 3 before, I explained that Figure 3, from the asserted patents, it explains how the technology -- the claimed invention works.

So remember I explained that a merchant using the web browsers on the bottom, that I've highlighted in green, a merchant would use the web browser to connect to the POS builder software that's living on the web server. That's installed on or running on the web server that I've highlighted in that teal color.

And then you use that to build a POS terminal. And then after you've built that POS terminal, then they go on to the left-hand side that I've highlighted in the yellow color. And then the POS terminals are then able to interact with the POS builder software.

So what I've done -- just before we go into the details, I've taken, on the left-hand side, Figure 1 from the Woycik reference. Remember I said that Woycik is a soccer ball, just



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 248 of 307

like the asserted patents are a soccer ball?

So I'm explaining to you that those same components of the claimed invention appear in Woycik.

In the Woycik reference, I've used that same green color to highlight this PC No. 20. And the specification, the actual wording of the Woycik reference, explains very clearly that the merchant or a user would use that PC shown in No. 20, that I've highlighted in green, to connect to the central server that I've highlighted in that teal color.

And then that user would connect to that central server that has a builder running on it, and then they would build the point-of-sale terminals.

And then the point-of-sale terminals would then be running on the yellow color, 16, or the slightly darker brownish color, 16, on the right-hand side.

So what I'm trying to explain is that the concepts, the technology, the claimed invention from Figure 3 and from the asserted patents is exactly what is disclosed in the Woycik reference to one of ordinary skill in the art.

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. Okay. Now, you've compared visually, graphically, from figures from the prior art reference and then Figure 3 from the asserted patents, but you've also gone through the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 249 of 307

language, the disclosures, the specifications of the Woycik, Brown and Michaud references, correct?

A. Yes.

Q. And you've done the detailed analysis here, where you believe -- it's your opinion that it's clear that these prior art references anticipate the asserted claims.

And so we'd like you to walk us through which specific references -- which in those -- are citations in those references supports your opinion with respect to each of the limitations of the asserted claims.

A. So in my report, like I mentioned, I provided a very detailed analysis. Here I'm pointing to some exemplary portions of my analysis that I believe are very clear, that the Woycik reference anticipates the claims of the '640 patent.

Q. Okay. And so just for clarity, on the left is a paragraph out of the Woycik prior art reference, correct?

A. Yes.

Q. And the Bracket 72, that means it's Paragraph 72 out of that reference, correct?

A. Yes.

Q. So the Woycik reference had quite a few paragraphs in it, correct?

A. Yes.

Q. Okay. But you're highlighting the portion out of 72 -- Paragraph 72 of Woycik that you believe meets the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 250 of 307

limitation in the '640 Claim 1, correct?

A. Well, it's not that I believe the -- the analysis that I performed is undertaken from the perspective of one of ordinary skill in the art. So what I've done is, I've looked at it from that perspective. What would one of ordinary skill in the art, in reading the Woycik reference, understand that disclosure to mean? And I've pointed to that by highlighting the claim limitation on the right-hand side to the corresponding disclosure in the Woycik reference that would, to one of ordinary skill, meet that limitation.

Q. So, in other words, it's your expert opinion that it's clear to one of skill in the art that the prior art Woycik reference disclosed the limitation in Claim 1?

A. Yes.

Q. Okay. All right.

Please proceed, Dr. Chatterjee.

A. So for this first limitation which recites one or more point-of-sale terminals that display POS screens, I've pointed to this portion of the Woycik reference at Paragraph 72. And I'd explained this when I highlighted the relevant portions of the Woycik figure as well. So I'm pointing to Kiosk 16 in the Woycik reference that discloses the limitation of one or more point-of-sale terminals that display POS screens.

Q. Okay.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 251 of 307

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. So here this second limitation is an Internet connection from said one or more point-of-sale terminals to a web server. And I've highlighted in red -- or I'm sorry -- highlighted in yellow the corresponding disclosure from the Woycik reference that to one of ordinary skill would teach that. And I've also underlined in red the word "Internet," very clearly showing that Woycik is also disclosing an Internet connection from said one or more point-of-sale terminals to a web server.

BY MR. PHIPPS:

Q. And, Dr. Chatterjee, as you go through here, we're going to see green checkmarks on the right, showing that we've covered that?

A. Yes.

Q. Please proceed.

A. So the next one is one or more local or remote PC workstations. And so the limitation here is "one or more." So one would meet the limitation. And so what I've done is I've pointed to -- remember I said that PC 20 in that figure, so I'm pointing to that as meeting the one or more local or remote PC workstations.

Q. Okay.

MR. PHIPPS: Next slide.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 252 of 307

BY THE WITNESS:

A. The next limitation is "point-of-sale builder software that runs on said web server wherein said local or remote workstations are utilized to build or edit said POS terminals in realtime from anywhere in the world and over the worldwide web."

Here in the Woycik reference, there's disclosure of what's called the administration tool. And the administration tool allows the user in the Woycik reference to build point-of-sale terminals. And so the administration tool in the Woycik reference is the claimed point-of-sale builder software in this reference.

The wording does not need to be the same. They're calling it -- in Woycik they call it the administration tool. In the asserted patent, the '640, it's called the point-of-sale builder software. But the disclosure of what the administration tool application does in the Woycik reference is clearly understood by one of ordinary skill to be identical to the point-of-sale builder software.

BY MR. PHIPPS:

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. The next limitation is the "wherein said web servers are provided as a vendor subscription service wherein web

server software resides and is hosted on said vendor's remote servers."

So Woycik discloses this central server 22, which I had also highlighted when I showed that Woycik diagram for you and put some color-coding on it. And I believe it's very clear that when you have a server, or if you have a car, or if you have -- whatever you have, that you can monetize it in different ways. You can sell it. You can sell a car, you can lease a car. So just like that concept, I've been informed that under the law, under the patent law, a prior art article or a prior art item such as a remote server that can be sold is inherently capable of being leased or provided under a subscription.

And so that's what I'm pointing to here. The Woycik central server is inherently capable of being provided as a subscription -- vendor subscription service as required by this claim limitation.

BY MR. PHIPPS:

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. The second part of this limitation is "wherein subscriber company's POS terminals access and repeatedly interact with said web server software from said vendor's remote servers in order to perform the subscriber's desired



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 254 of 307

terminal function, over a network, wherein the network comprises the Internet."

And so here I'm pointing to the highlighted portion of Paragraph 30 of the Woycik reference, and this is clearly disclosing to one of ordinary skill that the point-of-sale terminal is accessing and repeatedly interacting with the web server software on the web server, as required by the claims.

BY MR. PHIPPS:

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. All right. So in addition to covering the independent claims for invalidity, we're going to go through the asserted dependent claims as well, correct?

A. Yes.

Q. Okay. And it's your opinion that one of skill in the art would also find Woycik to anticipate those dependent claims from the '640 patent, isn't it?

A. Yes.

Q. Okay. Please proceed, Dr. Chatterjee.

A. So here I'm looking at Claim 3. And Claim 3 -- remember I explained that dependent claims, they include all of the limitations of the independent claims and then they add some more?

So here I've -- I'm looking at Dependent Claim 3, and it

states, "The web-based point-of-sale builder system of Claim 1," so it's saying you have to meet everything in Claim 1 and then add this additional requirement, this additional wherein clause that says, "Wherein use of said builder requires no special training."

And if you look at the corresponding portion on the left-hand side that I've highlighted in yellow from the Woycik reference, and I've underlined it, it's very clear. Woycik also says, "The store owner or chain operator can carry out administration of the system using a simplified user interface that requires little, if any, training."

So the Woycik reference is clearly disclosing and teaching the same requirement of Dependent Claim 3.

And then below that, I have Dependent Claim 4. And the additional limitation in Dependent Claim 4 is "wherein the testing of said POS screens is done iteratively in real time while said POS terminals are simultaneously in use during store and business operation hours."

And I've pointed to, on the left-hand side, Paragraph 122 of the Woycik reference, and that disclosure is talking exactly about building the POS and then how you're able to deploy it and that one of ordinary skill would understand that you have to necessarily test them before you're deploying them.

And so on this slide I've put checkmarks on Claims 3 and 4, and I've put the corresponding citations, or at least

exemplary citations, from the Woycik reference that demonstrates that Woycik anticipates these claims.

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. So here I'm looking at Dependent Claim 5. And Dependent Claim 5 adds the additional limitation "wherein no specialized hardware or software is required to implement said POS builder, and wherein no on-site in-store server is required."

So on the left-hand side I've cited to Woycik at Paragraph 77 that says very clearly "most of the elements commonly found in a general purpose computer."

So Woycik is saying very clearly and in simple words that you're not using any specialized hardware. You're using general-purpose PC computer hardware to do the system -- or the disclosure of Woycik.

And then I've also pointed to Paragraph 72, because this limitation of Claim 5 is also saying that there is no on-site in-store server. And so at Paragraph 72, Woycik is saying, "Rather than using a dedicated 'back room' computer as the local server," Woycik is also saying the exact same thing.

You don't need to use a local server in the back room, and you're able to use this Kiosk 16 to connect to the Internet and connect to this remote server, which Woycik calls the central



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 257 of 307

server.
BY MR. PHIPPS:
Q. Okay. And so you've put a checkmark on 5.
Let's go to 6, Dependent Claim 6.
A. So here the claim -- the dependent claim requires the additional limitation "wherein said POS builder is usable to deliver POS application solutions using software as a subscription (SaaS)."
And here, too, based on the disclosure in Woycik, one of ordinary skill understands that the POS builder software, which is running on that central server of Woycik, and which Woycik says that a franchisor could use, one of ordinary skill would understand that Woycik is disclosing that using a software as a subscription basis for providing that central server, the software running on that central server.
Q. Okay. All right.
MR. PHIPPS: Next slide.
BY MR. PHIPPS:
Q. So we have Claim -- Dependent Claims 11 and 12.
A. Yes. So Dependent Claim 11 recites the additional requirement "wherein said POS builder adds items to be associated with said keys or buttons."
And on the left-hand side I've cited to Woycik at Paragraph 108, and I've highlighted the relevant portion of it. It's saying to then edit the individual buttons and associate

them with food items. So it's very clearly stating the same thing that is set forth in the Dependent Claim 11.

Dependent Claim 12, below that, recites the additional limitation "wherein said POS builder assigns attributes such as item name, price, cost, group, taxable and inventory status to said items." And again I'm pointing to Woycik at Paragraph 109, and I've highlighted the relevant portions of Woycik that -- to one of ordinary skill would disclose that teaching.

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. Here we're looking Dependent Claim 13. And Dependent Claim 13 has the additional limitation "wherein said attributes are stored, retrievable and changeable from a Back Office database stored on said web server."

And I've pointed to the corresponding disclosure and teaching from Woycik at 122 and that it's talking about how you're going to be able to connect to that central server, which is a remote server, and with -- based on your building your -- whatever you're building is then stored on a database.

BY MR. PHIPPS:

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 259 of 307

Q. Okay. Now we've gone through the anticipation analysis for the '640 patent. And now we're going to do that same analysis for the '012 patent, correct?

A. Yes.

Q. Okay.

A. And perhaps I can -- I'll try to move a little bit faster, given that they're highly related, as we talked about. The claim language between the '640 and the '012 are very closely related, so I'll try to move a little bit faster.

So is it okay if I don't read the entire limitation or --

Q. That's correct. You have highlighted it and compared it there. If you can just, you know, efficiently go through the slides, because we are talking about the asserted claims that you've indicated are similar, and we're talking about the same Woycik reference.

A. Yes. So the first limitation of Claim 1 of the '012 patent, which I've put a little label with an A next to it, I'm pointing to Woycik at Paragraph 75 and also the abstract and I've underlined the relevant portions as well.

Q. Okay.

A. The next limitation in Claim 1 of the '012 patent, Limitation 1(b), I'm pointing to Woycik at Paragraphs 71 and 72. And again I've highlighted in yellow the relevant portions from Woycik that would disclose to one of ordinary skill that limitation.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 260 of 307

Q. Okay.

A. Next slide, we're showing Claim 1(c) of the '012 patent. And again I'm pointing to Woycik at Paragraphs 73 and 75, and I've highlighted the relevant portions as well.

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. Going to the next slide, I'm looking at the first part of Limitation 1(d) and I have pointed to Woycik at Paragraph 122.

And then if we go to the next slide, this is the second portion of Limitation 1(d) of Claim 1 of the '012 patent. And I'm pointing to Woycik at Paragraph 30.

Next slide.

Limitation 1(e) I'm pointing to Woycik at Claim -- or Woycik at Paragraph 30, and I've highlighted the relevant portions in yellow.

Next slide is Paragraph -- or Limitation 1(f) of the '012 patent, and I'm pointing to Woycik at Paragraph 128. And again I've highlighted in yellow some of the relevant disclosure as well.

BY MR. PHIPPS:

Q. Okay. And you believe that all of those disclosures in Woycik are sufficient to anticipate Claim 1 of the '012 patent, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 261 of 307

A. Yes. To one of ordinary skill it's crystal clear that the Woycik reference anticipates the asserted claims in this matter.

Q. Okay. Thank you, Dr. Chatterjee.

And let's proceed also to go through the dependent claims of the '012 patent.

A. Okay. So I'll try to go through it faster again like I did for this one.

So here we're looking at Claim 2, and I'm pointing to Woycik at Paragraph 80. Again I've highlighted the relevant portions.

Claim 3 of the '012 patent, and I'm pointing to Paragraph 122. Again I've highlighted the relevant portions.

Q. Okay.

A. Here we have Claim 4 of the '012 patent, and I have -- I'm pointing to Woycik at Paragraph 77 and Paragraph 81. And again I've highlighted the relevant disclosure.

Now we're on to Claim 9 of the '012 patent. I'm pointing to Woycik at Paragraph 72, and I've highlighted the relevant portion as well.

Q. Okay. So, Dr. Chatterjee, is it your opinion that Woycik anticipates all of the asserted claims for the '012 patent?

A. Yes.

Q. Thank you.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 262 of 307

Now let's proceed to your next opinion. Now, this is the other soccer ball on the timeline, correct? Another soccer ball that the Patent Office didn't see?

A. Yes.

Q. Okay. And you've also written this up in a report. You've been examined under oath at a deposition about it. And you're here to testify today about how Brown anticipates in addition to Woycik, correct?

A. Yes.

Q. Okay. So please proceed.

A. So the Brown reference is very similar to the Woycik reference. Brown is disclosing a web-based point-of-sale terminal where a user can develop a website and then make that website into a point-of-sale terminal.

And so that's what I've sort of highlighted the key portions of it. So if you look on the right-hand side from Paragraph 73, Brown is talking about what's called a website builder and manager. And then further down in Paragraph 74 -- and, again, these are long references. I'm only pointing to some salient portions of it. But Brown explains that after you use the website builder, you can take that website and then make it into a POS terminal.

And that's precisely what Brown has disclosed, and that's -- those are the high-level components that I point to in Brown.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 263 of 307

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. So here too, again, just like I did for the Woycik reference, I've gone through limitation by limitation. And on the left-hand side I've pointed to which paragraph at Brown, and I've used highlighting to kind of call closer attention to the salient portions of the paragraph as well.

So with regards to the preamble for Claim 1, I'm pointing to Brown at Paragraph 9, which expressly states the system includes a point-of-sale system.

BY MR. PHIPPS:

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. Here this is Claim Limitation 1(a), and I'm pointing to Brown at 25. Brown -- like Brown states clearly in Paragraph 25 that Brown can set up a number of terminals. And then as we looked at on the previous slide, Brown is expressly teaching about point-of-sale terminals as well.

BY MR. PHIPPS:

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. Here, Limitation 1(b) of Claim 1 of the '640 -- I'm

pointing to Brown at 25 -- you can see the word "Internet" in there as well. And, again, there's a lot of disclosure in Brown. I've just hand-picked one portion of it for you.

BY MR. PHIPPS:

Q. And, Dr. Chatterjee, just to make this more efficient, we can see what's highlighted on the right and then highlighted on the left and where the citation is. So maybe you could just talk about the limitation and then the citation. And then we'll know it's from Brown and we'll know what paragraph it is, so we can just sort of track the substantive analysis.

A. Okay. So the next limitation is 1(c), and I've pointed to Brown at Paragraph 74.

Next limitation is 1(d), and I've pointed to Brown Paragraph 26 and Brown Paragraph 73.

Q. And yeah, if you could just also, you know, talk about the limitations. So let's go back a little bit. But just in terms of whether it's C or, you know, the citation, do say the paragraph for the record and the C for the record. But if we could just go a little bit more expeditiously.

A. Okay. So here -- so for Limitation 1(c) I -- like I said, I'm pointing to 74. And it's talking about how the point-of-sale system is accessible through a web browser, and one of ordinary skill would understand that would be on a PC.

Q. Okay. Thank you.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 265 of 307

A. Here the limitation for 1(d) is point-of-sale builder software that runs on a web server. As I explained earlier in Brown, Brown is teaching this website builder. And then the -- and that's what I'm showing here. And then Brown also teaches in that the website builder runs on this web server.

Q. Okay. And those are at Paragraphs 26 and 73 of Brown, correct?

A. Yes.

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. So here this is the first part of limitation 1(e). And Brown teaches, or actually discloses what he calls the UTOPA.com website. So Brown talks about this technology that Brown invented, and then Brown also talks about an implementation of that technology, which Brown calls it www.UTOPA.com.

And so based on the disclosure in Brown, one of ordinary skill would understand that UTOPA.com runs on a web server. And then as I explained earlier that I've been informed that under the patent laws, the applicable patent laws, if a prior art article can be -- is capable of being sold, it would inherently be capable of being leased.

And that's sort of like what I talked about earlier with regards to the car. You can sell a car, you can lease a car.

It's well understood that you can do different things with a prior art article.

BY MR. PHIPPS:

Q. Okay. And that's Brown Paragraphs 5 and 6, correct?

A. Yes.

Q. Okay.

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. So here this is the second part of Claim 1(e), and this is saying that the subscriber of POS terminals interact -- "repeatedly interact with said web server software."

Again, there's a lot of disclosure. I'm pointing to this paragraph, Brown at 74, that teaches to one of ordinary skill that the POS terminals in Brown repeatedly interact with the web server.

BY MR. PHIPPS:

Q. Okay. So it's your testimony that, under your opinion, the Brown reference anticipates Claim 1 of the '640 patent, correct?

A. Yes.

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. Now, we're talking about Brown anticipating Claim 1 of the '012 patent, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 267 of 307

A. Yes.

Q. Okay. And if you could walk us through your analysis of anticipation of the Claim 1 of the '012 patent based on the prior art Brown reference.

A. So again, I'll try to go through a little bit faster, because the '012 patent is very similar.

So the preamble here for Claim 1 of the '012 patent, I've pointed to Brown Paragraphs 9, 74 and 73. If you look at Paragraph 9, it's clearly talking about a point-of-sale system.

Next slide.

Limitation 1(a), I'm pointing to Brown at 25. And again, we -- like I mentioned, Brown talks about the UTOPA.com website. And the disclosure of Brown of that UTOPA.com website would be understood by one of ordinary skill to meet the limitation of a web server, including POS builder software installed thereon.

Next slide.

Limitation 1(b), I'm pointing to Brown at 6 and at 30, and I've highlighted it. This is the limitation where, in the '012 patent, the POS terminals are generated by the POS builder software. And because Brown is a website builder, one of ordinary skill would understand that the POS terminals in Brown are generated by that website builder.

Next slide.

Limitation 1(c), this is the POS builder interface

limitation, and Brown -- this is Figure 52. And again, Brown has a lot of disclosure. Brown has more than 52 figures in it, and I'm pointing to Figure 52 as showing the interface that one of ordinary skill would understand to meet the POS builder interface as recited by Claim 1(c).

Next slide is the first part of Limitation 1(d). And this limitation is simply building on that POS builder interface, and again, not only the Figure 52, but also the related specification in Brown would disclose this limitation to one of ordinary skill.

Q. And, Dr. Chatterjee, I just want to point out, do you see on the Figure 52 from the Brown prior art reference where it says there "add new item"?

A. Are you looking at the top?

Q. Yeah. Right there. It says, "add new item."

Do you see that?

A. Yes. I do see it.

Q. All right. Continue, Dr. Chatterjee.

A. Okay. Next slide.

This is the second part of Limitation (d), and I'm pointing to Paragraph 73 here. And so, again, this limitation is talking about the POS builder software. And again, I'm pointing to Brown's website builder, which Brown clearly explains that after you build the website, you can make it into a POS terminal.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 269 of 307

Next slide.

Limitation 1(e), this one, "wherein said POS transactions and corresponding transaction data from said one or more POS terminals are configured to be transmitted to said web server via the communications interface."

And I'm pointing to Brown Paragraph 30, and Brown is talking about how the POS system has a transaction engine. It creates transactions. And Brown also talks about providing those transactions to the server in Brown as well.

Limitation 1(f) is "wherein the POS transaction is correlated."

Brown talks about accessing -- if you look at Brown 28, he's talking about the customer could agree to buy a sofa through a website, and then it's talking about Brown discloses how you're able to access that transaction data related to purchasing that sofa. And so one of ordinary skill in reading Brown at 28, within the context of Brown, would understand Limitation 1(f) to be met.

Q. Okay. Thank you, Dr. Chatterjee.

Now, is it your opinion that Brown also discloses all the limitations in the dependent claims from the '640 patent and the '012?

A. Yes. Yes.

Q. All right.

MR. PHIPPS: Next slide.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 270 of 307

MR. YATES: Objection, Your Honor. That's a conclusory statement, and we've not gone through any of the dependent claims.

THE COURT: Overruled.

Ladies and gentlemen, we're going to take about a ten-minute break. Just a nature break, and then we'll come back in.

Remembering my instructions not to discuss the case amongst yourselves.

THE BAILIFF: All rise.

(Jury exited the courtroom at 4:35.)

(Recess taken from 4:35 to 4:48.)

THE BAILIFF: All rise.

THE COURT: Please remain standing for the jury.

(The jury entered the courtroom at 4:48.)

THE COURT: Thank you. You may be seated.

Counsel, you may resume with the witness.

MR. PHIPPS: Thank you, Your Honor.

Oh, Dr. Chatterjee.

BY MR. PHIPPS:

Q. So, Dr. Chatterjee, we only have ten more slides in your presentation. And we're going to talk about here the prior art reference Michaud, okay?

And what are the key disclosures in Michaud that are relevant to your opinions of invalidity of the asserted



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 271 of 307

patents?

A. So the key thing that I point to Michaud for is something very small. So Michaud talks about hosting point-of-sale software for access and use by subscribers. And so remember that limitation that we talked about, the web server is provided on a -- I forget the exact language, but the web server provided as a subscriber subscription. That's the only little tiny limitation that I point to Michaud for. And Michaud has express disclosure about this.

Michaud talks about hosting point-of-sale software for access and use by subscribers. And then Michaud talks about a fee based on using the server, and also a subscriber for use of the POS software.

So it's just that small little limitation that I talk about -- or that I combine for Michaud.

Q. Okay. And then the figure from Michaud on the right. Do you see that? It looks like lightning bolts going to -- what does that look like, a cloud?

A. Yes. So it's the cloud there. And then on the bottom are the different subscribers that are able to access that server from the cloud. And then Michaud talks about paying a fee for that server as well.

Q. Okay. So this cloud reference, Michaud, is in the prior art, correct?

A. Yes.

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. Okay. And here you are focusing on the teaching from Michaud as it relates to the web server subscription limitation from the '640 patent, correct?

A. Yes.

Q. Okay. And you're citing to Paragraph 12 of the Michaud reference. Which disclosure out of Paragraph 12 do you find particularly relevant?

A. Well, the portion that I've highlighted it's saying, said fee being based on point-of-sale transactions processed using the ASP server having point-of-sale software.

So the ASP software, ASP is an application service provider. ASP software is what is being charged to the subscriber, and so that's the portion of Paragraph 12 in Michaud that I'm pointing to.

Q. Okay. And you said ASP software, but it actually does say ASP server there, doesn't it?

A. Yes. I'm sorry. So it's -- ASP is application service provider. And the language here is APS server. So it's the server that is used to provide the software. Michaud is expressly explicitly stating that he charges for the server, and that's what I'm pointing to.

Q. Okay. All right.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 273 of 307

MR. PHIPPS: Next slide.

BY THE WITNESS:

A. So here this was another dependent claim from the '640 patent. And this dependent Claim No. 6 has the limitation "wherein said POS builder is usable to deliver POS application solutions using software as a subscription (SaaS)."

And here I'm pointing to the same paragraph in Michaud but a different part of that paragraph. And this portion of the paragraph is saying "providing an ASP server having point-of-sale software for access and use by the subscriber."

So this dependent claim is talking about how you can use software where software doesn't have to be owned by you to use it. You can actually -- I can be hosting it and you can use it. And so that's the exact disclosure that's in the Michaud reference as well, and therefore it teaches -- or it renders obvious Claim 6.

BY MR. PHIPPS:

Q. Okay. And specifically Paragraph 12 from Michaud referencing dependent Claim 6 from the '640 patent.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. Okay. So what is your opinion here as to obvious? We've talked about anticipation, and how is that different anticipation from -- how is anticipation different from obviousness, first?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 274 of 307

A. So anticipation, remember we talked about the soccer balls? Anticipation means that there's a soccer ball and the prior art is a soccer ball and the asserted patent is a soccer ball.

So the detailed analysis that I ran through with you before we took our break showed that there's express or inherent teachings in the prior art for each asserted claim and asserted claim limitation from the asserted patents.

Here I'm saying that on top of that, you can combine the teaching of Woycik. Woycik has all this teaching, and you can combine that teaching together with that small little portion of Michaud about the ASP server and how you can charge subscribers for it and how you can provide -- you can keep the software on a cloud and provide it to subscribers.

I'm saying you can take the Woycik teaching and then combine it with that small little teaching from Michaud and also render obvious the '640 patent.

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. And then what is this opinion of obviousness?

A. So this one is saying, you know, based on everything that I've told you about before our break, I showed you that the Woycik reference teaches everything in the asserted patents. I've told you that the Brown reference teaches

everything -- the asserted claims of the asserted patents.

Here I'm saying, if you take all of the teachings of Woycik, Brown and Michaud, there is so much material there that there is no doubt that the '640 patent is rendered invalid because it's obvious based on that totality of the teaching between Woycik, Brown and Michaud.

Q. Okay. And that no doubt sounds like it's well beyond the clear and convincing evidence standard, correct?

A. Yes.

Q. All right.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. All right. And this is a different combination. What is this combination?

A. So remember I'm pointing to the Michaud reference only for that subscription requirement, the web server subscription requirement. And that requirement is not in the '012 patent.

So for the same reason that I explained on the last slide why Woycik, Brown and Michaud, when you combine all of that teaching, there's so much material there that it's clearly rendered obvious.

Here, because the '012 patent doesn't have that subscription, the web server subscription requirement, there's no need to include Michaud.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 276 of 307

So here I'm saying, let's take the teachings of Woycik and the teachings of Brown, there's so much material there, it's clearly rendering obvious the '012 patent.

Q. Okay.

MR. PHIPPS: Next slide. All right. Let's go to the next slide.

BY MR. PHIPPS:

Q. Okay. What is this design-around opinion that you have, Dr. Chatterjee?

A. So I've already explained to you that because of at least these four huge missing pieces, these four huge limitations that are clearly not in the NCR Silver product, the NCR Silver product cannot infringe.

But on top of that, if you remember, each of the asserted claims have this requirement of a web server. I've explained to you that the requirement of the web server is very specific. You have to have a web server that has point-of-sale builder software running on top of it. You have to have the web server software interact repeatedly with the point-of-sale terminal. And I've showed you that that's not there.

But on top of that, just like take away any doubt whatsoever, a very simple way to eliminate any doubt is simply get rid of the web server from the NCR Silver product.

The NCR Silver product, like I explained to you, does not meet the web server limitations, but we can just very easily



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 277 of 307

remove the web server. And that's what I'm explaining here, that -- that the web server can be removed, and an application can be used from the NCR Silver product. And so there's no web server.

And, in fact, Mr. Crouse, plaintiff's expert, has stated that if you take away the web server, then there's no question that there's infringement. NCR cannot infringe, Mr. Crouse has also stated that, that NCR cannot infringe if there's no web server.

So my design-around opinion is that it's simple. Let's just get rid of the web server. It's very easy to do, and customers -- the merchants can simply use an application, an app running on their tablet or PC to simply enter information like they're selling tacos or enter information that they're selling pizzas.

And so that's the crux of my opinion here.

And if we go to the next slide, I can show you very quickly a before and after picture.

Here this is the picture of how merchants use NCR Silver today. And you see at the bottom, there's the web server.

As I explained to you, Mr. Crouse agrees that if you remove the web server, there's zero question of infringement. NCR cannot infringe if you remove the web server.

So if you go to the next slide, I've removed the web server. And that's it. And the -- on the left-hand side, the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 278 of 307

merchants are still able to do exactly the same thing. They're able to enter that they're selling tacos or pizza, they're able to, on top of that, actually use an app or an application, which most people find more convenient.

In fact, the customers, the merchants that are using NCR Silver, they obviously prefer an app. That's why they're going with NCR Silver.

MR. YATES: Objection, Your Honor. That last statement was not in his report. I'd like it struck.

MR. PHIPPS: Your Honor, I'll just show it -- the statement's in his report.

THE COURT: What page?

MR. PHIPPS: It is Page 48 of his report.

THE COURT: Mr. Yates, if you -- is there -- are there paragraphs?

MR. PHIPPS: Paragraph 161.

THE COURT: Mr. Yates, why don't you take a look at 161, see if you want to maintain your objection.

MR. PHIPPS: In the last phrase, "easy to use."

MR. YATES: I don't believe Paragraph 161 comports with his testimony, Your Honor.

THE COURT: Why don't you rephrase? Just rephrase the question and try it again.

MR. PHIPPS: Okay.

BY MR. PHIPPS:



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 279 of 307

Q. Dr. Chatterjee, in your detailed report, Page 48, Paragraph 161, do you indicate that this modification would be easy to use for users?

A. I --

Q. I can put that up here.

So we're talking about modifications to NCR Silver. Do you see that it says, "Simple and easy to use for users"?

A. I do.

Q. And then further on --

THE COURT: That's sufficient. If you want to ask your questions, that's fine.

MR. PHIPPS: I'm sorry, Your Honor?

THE COURT: You don't have to keep going back to the report. You can go back to the slide you were on.

MR. PHIPPS: Okay. Thank you, Your Honor.

Next slide. Okay.

BY MR. PHIPPS:

Q. Dr. Chatterjee, were you finished talking about your design-around opinion?

A. Yes. The only other thing here is that removing the web server is very simple. The web server doesn't do very much right now, and so the removing it is very simple. And based on my own experience in developing these kind of systems, maintaining them, modifying them, I came up with that it would take a couple of mid-level engineers, mid-level software



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 280 of 307

developers maximum of six months.

And of course I don't work at NCR, so what I did was I confirmed this estimate that I had, that it would take simply two or three mid-level engineers maximum of six months to remove the web server from the entire NCR product. And I spoke with Mr. Quinn, who you all heard from yesterday, and he also confirmed my estimate that it would take at most six months for two to three mid-level software engineers to make that change.

Q. Okay.

MR. PHIPPS: Next slide.

BY MR. PHIPPS:

Q. Okay. In terms of your report, there's certainly more that we could get into, but this is your invalidity report. And as you can see, there's -- it's a 68-page report. It talks about 102 and 103. And Section 102 is anticipation, correct?

A. Yes.

Q. Section 103 is obviousness?

A. Yes.

Q. Okay. So you've indicated your opinions of invalidity of all the asserted claims from both the patents. And in addition to this 68-page opinion with -- sorry -- with 228 paragraphs, you attached the appendices, correct?

MR. YATES: Objection, Your Honor. He's showing his expert report to bolster the witness.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 281 of 307

THE COURT: I don't know why you're even talking about the expert report.

MR. PHIPPS: Oh, sorry, Your Honor.

No further questions.

THE COURT: Mr. Yates?

CROSS-EXAMINATION

BY MR. YATES:

Q. Dr. Chatterjee, let's begin with the design-around you just spoke about. Did you conduct any survey to see whether there would be any market acceptance of your design-around?

A. I did not conduct a survey, no.

Q. Did you interview any users?

A. No.

Q. And at the time of your report, had you even talked to Ms. Schoonover?

A. No. I spoke with Mr. Quinn.

Q. And you didn't talk to a user at all about your design-around, correct?

A. No.

Q. So you have no understanding whether or not your design-around would be acceptable to the consumers; is that correct?

A. No. It's not correct.

Q. But you have no surveys, correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 282 of 307

A. Do you want me to explain why?
Q. No. I'd like you to answer the question.
Do you have any surveys?
A. No.
Q. Did you talk to the head of marketing for the product, head of design for the product?
A. I spoke with Mr. Quinn.
Q. You spoke with Mr. Quinn for 30 minutes?
A. Yes.
Q. After you had already written your report, the day before it was due, correct?
A. Well, I had spoken with other people prior to that. And like I mentioned for this design-around aspect, I simply wanted to ask him, do you agree that it will take maximum of six months for two to three middle-level engineers? It doesn't take very much time to get that. But yes, it was within a 30-minute time frame.
Q. And to your knowledge, has NCR implemented this design-around?
A. I don't know.
Q. So they've continued to behave just as before, even if they have a design-around that you pointed out to them, to your knowledge?
A. Like I said, I don't know what they're doing.
Q. Are you a University of Texas professor?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 283 of 307

A. No.
Q. Are you aware that counsel for NCR introduced you to this jury during voir dire as a University of Texas professor?
MR. PHIPPS: Objection, Your Honor, relevance.
THE COURT: Overruled.
BY MR. YATES:
Q. Are you aware of that? Were you here?
A. I was not here.
Q. Not here.
You have a 19-page resume that doesn't mention Texas once, correct?
A. It probably doesn't.
Q. And do either your masters thesis or Ph.D. thesis involve point-of-sale systems?
A. My Ph.D. certainly can be used with point-of-sale.
Q. Does your Ph.D. thesis even mention the word "point-of-sale"?
A. As far as I remember, no.
Q. Okay. And you're a professional testifier, correct?
A. I'm not sure what that means.
Q. You testify in patent cases for a living?
A. Well, I do a lot of things. I have a lot of jobs.
Q. How much are you being paid for your time today?
A. Well, I get paid hourly.
Q. How much do you get paid by the hour?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 284 of 307

A. 825.
Q. And how much have you billed NCR in this matter so far?
A. I think -- like I mentioned, I've spent considerable amount of time, several hundred hours.
Q. Several hundred hours?
A. Yes.
Q. At $825 an hour?
A. That's my rate.
Q. Several hundred thousand dollars. Is that the math?
A. I believe so, but there's been significant work in this case.
Q. Now, you contend that NCR doesn't infringe either patent because the software is static or prebuilt, correct?
A. Well, I explained exactly that software runs by running -- executing instructions. And so yes. Software only does what the instructions that are already there tell it to do.
Q. And so in that gigantic stack of manuals that you said you looked at for documentation, did any one of those use the term "prebuilt"?
A. Well, an application, by definition, is prebuilt. You don't need to say prebuilt. An application, like I mentioned, technology -- software technology is not magic. It simply does what the software already is programmed to do.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 285 of 307

Q. Can you answer the question, please?
A. What was the question?
Q. The question was, in any of that stack of manuals, did any of them use the term "prebuilt"?
A. I couldn't tell you, but I don't recall seeing it.
Q. Do any of them use the phrase "application server"?
A. I couldn't tell you. I don't remember.
Q. So you don't know whether any of the NCR documentation that you were paid $825 an hour to review uses any of your keywords as part of your noninfringement positions, correct?
A. Are you talking about the user guides or the technical documents?
Q. I'm talking about all the stack of paper you looked at and produced -- that was produced in this litigation.
A. The technical documents make it clear that it's run on an application server --
THE COURT: Doctor, you need to answer Mr. Yates' questions.
THE WITNESS: Okay.
BY THE WITNESS:
A. I don't remember seeing "application server".
BY MR. YATES:
Q. So prebuilt and application server, in terms of noninfringement positions, come from you; is that correct?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 286 of 307

A. They were confirmed by NCR.
Q. But not NCR's documentation, correct?
A. Again, I can't tell you everything that's in there, but these are -- that's the technical architecture of the NCR product.
Q. And you said when you downloaded from the App Store the NCR app, that it worked; is that correct?
A. I don't remember if I said it worked, but yes. You download from the Apple App Store the app onto an iPad.
Q. I think you were talking about works the same way as other apps.
And at that moment, if you've downloaded from the Apple Store, what can you do?
A. You can do everything that the application is programmed to allow you to do.
Q. So can you push a button and order a pizza?
A. Well, first, you need to be able to log into it.
Q. So when you say it works, there are other steps that have to take place before you could actually order a pizza as a merchant using NCR Silver, correct?
A. I think I'm not understanding. The merchant would be ordering a pizza?
Q. Well, a merchant could do something, a user could put something in on pizza.
In order to use NCR Silver, when you download the



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 287 of 307

application onto your iPad, it's a blank slate still, correct, sir?

A. The -- if you look at it, the buttons are already there. The labels on the buttons --

THE COURT: Are you able to answer his questions directly with a yes or no? If you can't, then say I can't. But I gave you two hours and allowed you to answer whatever questions you wanted from your counsel. This is cross, and I want you to answer his questions directly.

Do you understand?

THE WITNESS: Okay.

BY MR. YATES:

Q. If you download -- if a merchant downloads the app from the App Store and puts it on their iPad, they are not able to have a menu at that time, correct?

A. I haven't used it with a blank slate, so I couldn't tell you.

Q. So you don't know?

A. I don't know.

Q. Okay. But that's your definition of prebuilt, correct?

A. Which one? The application is prebuilt. Yes.

Q. But you don't know whether or not it works, correct?

A. The application works. I've used it.

Q. But you don't know what functions you can do in that



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 288 of 307

state, correct?

A. I'm not sure how to answer that question. I'm not understanding the question.

Q. I'm trying to understand what prebuilt means to you. There's no pizza button at that moment, correct?

A. Unless you enter that your store is selling pizzas, the pizza button will not show up. But all the buttons are there, simply the pizza button will not show up. Yes. I agree with you.

Q. Now, you didn't talk to Ms. Schoonover before forming your opinions; is that correct?

A. Yes. Before this week I'd never met her.

Q. And did you hear her yesterday testify about hidden or invisible buttons?

A. I don't remember if she testified to that or Mr. Quinn, but I remember that testimony.

Q. Was it your understanding that NCR Silver works that way, now that you've heard that testimony?

A. Well, I've known that even before hearing that yesterday.

Q. And yet your report contains no opinions on hidden or invisible buttons, correct?

A. I couldn't tell you if the word "hidden" appears there in my report.

Q. So you're not offering any opinions on hidden buttons



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 289 of 307

or invisible buttons, correct?

A. The buttons are already prebuilt. The capability of an application, as I explained earlier, is there already.

Q. But you're not offering any opinions about hidden or invisible buttons; is that correct?

A. I'm not sure how to answer that question. Like I explained, the application can do only what the application can do. The fact of the buttons -- the fact that you can say that you're selling pizza and then a pizza button shows up confirms without -- there's no doubt in my mind that the application already has that capability. Otherwise a pizza button could never show up.

Q. But you're not offering any opinions about hidden or invisible buttons in this case, are you, sir?

A. Again, I'm not sure how to answer that. Like I've told you, the application has the functionality that it has.

Q. That functionality requires customization by a merchant, yes?

A. The merchant will enter data to specify they're selling pizza or tacos or books or whatever. Yes.

Q. And the patents don't discuss entering data the way you define it, correct?

A. I'm not sure what you mean the way I define it. Entering data is simply entering data, typing in data.

Q. Can entering data ever be building?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 290 of 307

A. Well, even Mr. Olson, the inventor of the patent, has stated no, which I agree with him. He's the inventor of the patent. I agree.

Q. Can you answer that question, please, sir?

A. I thought I did. I agree that data entry is not building.

Q. And data entry can never be building in your opinion?

A. Are you asking within the context of the patents or outside of the context?

Q. I'm asking about the context of the patents. We're here talking about the patents. We're not talking about things not in the patents --

A. Yes.

Q. -- except for you.

A. Yes. So like I stated, data entry is not building, and Mr. Olson the inventor -- coinventor, confirmed that.

Q. And you agree that NCR Silver manual uses the word "build" in the context of building a schedule, correct?

A. I vaguely remember that during my deposition. You showed me something that says building a schedule.

Q. And so NCR uses the term "build" associated with the accused product, NCR Silver, when it's talking about building a schedule, correct?

MR. PHIPPS: Your Honor, I object. The scheduling feature is part of a different product that's not accused in this case.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 291 of 307

And Mr. Crouse does not have an opinion of infringement based on NCR Console, which is a scheduling app.

THE COURT: Counsel?

MR. YATES: We can pull up -- it's the manual for the accused product, and we're having a language fight over "build," Your Honor.

THE COURT: Overruled.

BY MR. YATES:

Q. And you understand that the scheduling functionality described is also prebuilt, correct?

A. I -- like I said, I vaguely remember you showed me a document during my deposition that says building a schedule.

Q. And so I can show you a document that shows building a schedule, but you can't show me a document that says prebuilt; is that correct?

A. Building a schedule is building a schedule. It's simply building a schedule. You can say building a schedule for anything.

Q. But your understanding NCR's documentation for this accused product used "build" in the context of a prebuilt system, correct? Build from the manual, prebuilt from your language, correct?

A. No. The NCR document that you showed me at my deposition says building a schedule. It's not building a POS terminal. It's not building buttons. It doesn't say any of



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 292 of 307

that. It just says building -- or build a schedule.
Q. And you agree that the training videos that have been shown show web servers?
A. No.
Q. So you don't agree that the training videos that were used with Mr. Crouse show evidence of a web server?
A. You asked me whether the training videos show a web server. They do not.
Q. Fair enough. So they show a web browser communicating through a web server using HTTP, and the web browser rendering a web page that's served from that web server; is that correct?
A. The training videos show a browser, yes, that communicates to a web server.
Q. Well, it shows that you're communicating to a web server; is that correct?
A. The web browser is communicating with the web server.
Q. And that web server houses or runs the Back Office software, correct?
A. No.
Q. Now, NCR Silver Back Office is installed on Google hardware and software; is that correct?
A. It's installed in the Google Cloud. Yes.
Q. Well, and that cloud's hardware and software, isn't it, sir?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 293 of 307

A. The Google -- depending on what you get from Google, yes. You can get hardware, you can get software, you can get both.

Q. Well, in NCR Silver case, it has both hardware and software, correct, sir?

A. Yes.

Q. So the NCR Silver Back Office software runs on Google hardware and software; is that correct?

A. The Back Office software. Yes.

Q. And the Google Back Office software on the Google hardware and software uses HTTP and HTTPS; is that correct?

A. Say that again. The Google hardware and software uses HTTPS. Is that what you --

Q. The Back Office NCR Silver software on the Google hardware and software uses HTTP and HTTPS, correct?

A. No.

Q. No?

A. No.

Q. So when the video shows connecting to the Back Office software and there's HTTPS, how is that not the Back Office software on the Google hardware and software?

A. The HTTPS will go to the web server software that's running on the Google Cloud. It's not the Back Office software.

Q. So when we show a screenshot, you're disagreeing that

that's the Back Office software from NCR Silver?
A. That's not the Back Office application.
Q. Okay. Does the NCR Silver Back Office software on the Google hardware and software use HTTP to serve data or files that end up forming web pages?
A. Did you ask does the Back Office software do that? Is that what you said?
Q. Yes, sir.
A. No.
MR. YATES: If we could pull up the drawing.
BY MR. YATES:
Q. Now, sir, this is the drawing from your expert report; is that correct?
A. It looks like it. Yes.
Q. And we've seen versions of this before, correct?
A. You mean on my testimony earlier today?
Q. Testimony earlier today, opening slides and other things.
A. Yes. Yes.
Q. Okay. Actually, I think this is the -- this -- so you agree that the Google Back Office software, which is part of the accused products, includes a web server, yes?
A. I didn't understand. You said the Google Back Office software?
Q. Sorry. Do you understand that the Back Office



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 295 of 307

software from NCR Silver that's part of the accused product that's running on the Google Cloud includes a web server?

A. The Back Office software does not include a web server.

Q. So if I'm communicating with the merchant across -- using HTML to that web server, I'm not communicating to the Back Office software supplied by NCR Silver?

A. I think you meant to say HTTP, not HTML.

But when you're using your browser to connect with the web server, as shown here, you're not communicating with the Back Office software. The Back Office software runs on the application server, as I've explained.

The web server simply has static web pages on it that allows the merchant to enter data.

Q. But that's all part of the NCR Silver Back Office, isn't it, sir?

A. I'm not sure how to answer that question. The Back Office software runs on the application server. The web server simply allows data entry to happen. So I'm not sure how to answer that question.

Q. Well, if you yank that web server, then, out directly -- you said you don't need it because none of the Back Office software's running there.

Is that what your testimony is?

A. Yes.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 296 of 307

Q. Okay. So this whole system doesn't operate unless you have the web server sitting there; is that correct?

A. The data entry -- as the system works right now, the data entry happens through the web server.

Q. So the building portion of NCR Silver requires that web server; is that correct?

A. There's no building in NCR Silver.

Q. And running reports and functionality, where I look at the transaction data, that also requires that web server, correct?

A. Running reports are done on the application server. The web server simply formats that on a web page and sends it back to you.

Q. So the Back Office software that's running on the Google hardware and software, in order to look at my reports of my transaction data, requires the web server you've put in your drawing here, yes, sir?

A. The web server makes it viewable on your browser. Yes.

Q. And would you agree that if devices are added through the Back Office software so that I'm updating a menu, that those changes propagate out to the POS terminals?

A. No.

Q. So if I make a change, that doesn't actually propagate out an update of POS terminal?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 297 of 307

A. Well, propagate means that you're using push technology, and that's not what NCR does.

Q. It uses both push and time syncs, doesn't it?

A. My understanding, based on looking at all the documentation, is that when the app is connected, so the app running on the tablet will pull the data through the API server.

Q. So the information that shows up on a transaction goes from this tablet across -- all the way up through the databases and back over to show up on the website of the merchant; is that correct?

A. No. That is not how the technology works.

Q. And you understand that the NCR merchant -- the NCR Silver merchant agreement requires the user to provide Internet access as part of its obligations under the contract, correct?

A. I don't remember if it uses the word "required," but yes. It says that you have to get Internet.

Q. And in order to deliver its obligations under the contract, NCR has to pay Google 5 something million dollars a year for the Back Office hardware and software; is that correct?

A. NCR pays Google, like every other company pays Google, for using that software. So it's not for the Back Office software.

Q. Well, is it for other NCR software?



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 298 of 307

A. Well, what I'm saying is that NCR pays Google for using the hardware that Google provides, not for the Back Office software. Anyone can pay Google. It's not -- Google is not providing the Back Office software.

Q. Moving on to some invalidity.

Woycik or "Woycik" identifies a local server in every of the embodiments within Woycik; is that correct?

A. No.

Q. Woycik has a server identified as 16 in every single embodiment, yes, sir?

A. The Woycik -- I'm sorry. I think we pronounce them differently.

But the Woycik reference states that the number 16 in the diagram is simply used to access the Internet to get to the central or remote server.

MR. YATES: Can we pull up DTX-58, which I believe is the Woycik reference?

And can we look at -- sorry -- Paragraph 71? It's on Page 4, after the figures.

BY MR. YATES:

Q. And about the fifth or sixth line in that paragraph, it says: "The system includes two store locations each having a plurality of kiosks arranged in a client-server configuration."

And then it continues to say, "In each store, the local

(on-site) server 16," correct?

A. Where are you reading from?

Q. I may have the wrong exhibit. I'm sorry.

MR. YATES: It's Exhibit 50. My apologies. DTX-50 is the Woycik reference. Again, looking at Paragraph 71. It's on Page 4.

BY MR. YATES:

Q. And again, if we look here on about the fifth line, beginning "in each store," so 16 is a local, on-site server; is that correct?

A. That's what it says, "The local (on-site) server 16."

Q. And so when you took 16 and put it color-coded on your diagram, all you were doing is putting a local on-site server in each store; is that correct?

A. No.

Q. But you were putting 16, the local on-site server, into the stores in your diagram, correct?

A. Based on the disclosure in the specification of Woycik, that 16 can be used to simply access the Internet to get to the remote server which Woycik calls a central server.

MR. YATES: And if we could go to DTX-58, the Miller reference -- sorry -- the Brown reference. And if we could look at Paragraph 14 on Page 2 after the figures.

BY MR. YATES:

Q. Now, is Brown disclosing a point-of-sale terminal or

an Internet website for selling goods?

A. Both.

Q. So in the Brown system, if we look here in the middle, if a customer selects an item to purchase, clicks the item, adds to the customer's shopping basket and does not have an account, the system will prompt the customer to log in. In order to log in, the customer must provide an e-mail address and password.

Is that your understanding of the disclosure in Brown?

A. Well, Brown explains that you can have a website, the UTOPA.com website. And it expressly states that you can take that website and make it into a point-of-sale. And that's exactly what I pointed to, and that's what I explained to the jury when I walked through the analysis for Brown.

Q. And your understanding is having to have an account and a password and putting items on hold is a point-of-sale, is understood by a person of skill in the art reading the '640 and the '012 patents?

A. But this is not the only part of Brown. I pointed to other parts of Brown. Brown has --

THE COURT: Doctor, I'm going to suggest to you again that I would -- late in the day. I would really prefer you answer Mr. Yates' questions.

BY MR. YATES:

Q. Now, Your Honor -- excuse me. Dr. Chatterjee, you're



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 301 of 307

not a legal expert, correct?
A. No.
Q. You're not an expert on burdens of proof?
A. No.
Q. You're not an expert on inherency?
A. No.
Q. You're not an expert on what it takes to infringe a system claim in the patent?
A. With regards to the law, no.
Q. And so -- you're also not informed by this Court's instructions on the law that are going to be provided to the jury later this week, are you?
A. No.
Q. You haven't done any legal research?
A. No.
Q. So you don't know whether or not your opinions are going to align with the legal instructions given from the Court in this case, do you?
A. No. There's no way for me to know that. It seems to be that that's going to happen later this week.
Q. And so your opinions on inherency and burden of proof and whether something's obvious or not is really not informed by the Court's instructions; is that correct?
A. It's informed by my understanding of the law as told to me by counsel.

Q. And that was counsel for NCR?
A. Yes.
Q. Is that the same counsel that thinks you're a UT professor?
A. I think it was a different counsel.
MR. YATES: Pass the witness.

REDIRECT EXAMINATION

BY MR. PHIPPS:

Q. Mr. Yates brought up employee scheduling, and that's not in the asserted patents, but it is in the Brown reference. Figure 21 of prior art, Brown reference. We can see that this Brown prior art reference that Dr. Chatterjee has testified to does talk about scheduling in Figure 21. Figure 20 -- no. That's just a bleed through. And Figure 23 talks about scheduling. Also talks about employee schedules in Paragraph 69 and scheduling in 62. So it's not as if scheduling hasn't been done in the prior art. And, again, that's not part of NCR Silver to your knowledge, is it?
A. Yes. I agree with you.
Q. Okay. And we apologize that Mr. Baker did misspeak about Dr. Chatterjee's credentials, but we've gone over them here today in great detail. I myself have been on the case since the beginning. Mr. Baker is relatively new to the case, so we apologize for that error during jury voir dire.
With that, Dr. Chatterjee, I have no further questions.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 303 of 307

MR. YATES: Nothing further, Your Honor.
THE COURT: May he be excused?
MR. PHIPPS: Yes, Your Honor.
THE COURT: Doctor, thanks for being here.
Could I have one counsel up here for a second?
(Off-the-record bench conference)
THE COURT: Ladies and gentlemen, I discussed with the lawyers and they insisted that I keep you here, but I said no.
(Laughter.)
THE COURT: I'm the judge. I'm kidding. They didn't say that. Just joking.
No. We're actually way ahead of schedule. The lawyers in this case have all done an exceptional job. You're very lucky to have lawyers of this quality and, actually, I think the witnesses too.
We're going to recess for the evening. If you all will be here by 8:45 tomorrow, we will resume at 9:00. You all were here earlier today. And if everyone gets here earlier, we'll start earlier. But I'm happy if you're here at least by 8:45, and we'll get started pretty shortly after that.
You can't talk about it at home. You can't do research at home. And you can't post about the trial at home or do anything else that might make me unhappy. But those are the three things that would most make me unhappy that have happened in the past.



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 304 of 307

And so have a good evening, and we'll see you all tomorrow morning.

Be careful. I think it's raining, so be careful out there.

THE BAILIFF: All rise.

(Jury exited the courtroom at 5:38.)

THE COURT: You may be seated.

Mr. Barr, do you still need to put on -- do you need to recall your witness and put on anything about what was excluded, any offer of proof?

MR. BARR: We do have two offers of proof that we're going to make, and just -- I just want to be clear with what I said at the bench I was thinking.

So on the rebuttal part, we obviously are -- we -- I understand Mr. Ikizler is going to be called by defendant's counsel. We do plan to put on our invalidity rebuttal case, and then I wanted to think about whether we wanted to put any additional on.

THE COURT: Understood. Again, let's just -- with y'all's permission, because it's late and I know y'all have to go -- y'all would rather go and get ready for tomorrow, I'll allow the plaintiff to put on their proffer tomorrow and -- because I'm assuming it's going to be short.

MR. BARR: Yes.

THE COURT: But I'd assume, Mr. Barr, when you're up here



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 305 of 307

that you're also going to be putting on rebuttal of the validity.

And so but it looks to me like we'll finish tomorrow sometime in the morning. I don't care when. Whenever that is, we'll do the jury charge, and we'll work that out.

And then, again, given that we're so far ahead, if you all want to go a little longer than 30 minutes on closing, that's fine. I can't stress to you how much better off you'd be if you didn't go over 30 minutes, but that's just from sitting up here watching.

And so here's another proposal: If you all will have for me when you come in the -- wherever the jury charge is at with the red and blue, while you are putting on the damages witness, I'll go through it and I'll -- on a lot of it I'll probably be able to just decide what I'm going to do.

Mr. Barr, is there anything we need to take up?

MR. BARR: No, Your Honor.

MR. PHIPPS: No, Your Honor.

THE COURT: Very good. Again, thank you all for your hard work today, and we will see you tomorrow morning.

THE BAILIFF: All rise.

(Hearing adjourned at 5:41 p.m.)



CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 306 of 307

UNITED STATES DISTRICT COURT )
WESTERN DISTRICT OF TEXAS )

I, Kristie M. Davis, Official Court Reporter for the United States District Court, Western District of Texas, do certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

I certify that the transcript fees and format comply with those prescribed by the Court and Judicial Conference of the United States.

Certified to by me 8th day of June 2021.

*/s/ Kristie M. Davis*

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CloudofChange 2010
Clover Network, LLC v. CloudofChange, LLC
IPR2023-00288
Page 307 of 307