IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

IP INNOVATION, L.L.C.   )
and TECHNOLOGY LICENSING)
CORP.,   )
)
Plaintiffs   )
) Civil Docket No.
VS.   ) 2:07-CV-447-RRR
) April 28, 2010
RED HAT, INC. and   )
NOVELL, INC.   )
)
Defendants   ) 8:00 A.M.

TRANSCRIPT OF JURY TRIAL
BEFORE THE HONORABLE RANDALL R. RADER
UNITED STATES CIRCUIT JUDGE

APPEARANCES:
FOR THE PLAINTIFF: MR. JOSEPH A. CULIG
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(Proceedings recorded by mechanical stenography,
transcript produced on CAT system.)

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10   * * * * * *
11   P R O C E E D I N G S
12   THE COURT: Mr. Krevitt or Mr. Gasey, what
13 do we have this morning?
14   MR. KREVITT: We have a couple issues. I
15 don't know if the Plaintiffs have any issues.
16   Mr. Reiter wanted to address an issue with
17 respect to the damages issues about which Your Honor
18 conducted some proceedings yesterday.
19   THE COURT: I did.
20   Yes, Mr. Reiter.
21   MR. REITER: Thank you, Your Honor. With
22 respect to the Apple license, Your Honor -- oh,
23 Mr. Vickrey is not here.
24   MR. GASEY: He is en route, Your Honor.
25   THE COURT: Let's do something else. We

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1 can come back to that when Mr. Vickrey is here.
2   MR. KREVITT: Another issue is the timing
3 of the trial, the allocation of time between the
4 parties. As Your Honor knows, when we met in Washington
5 for the pretrial conference, we set this trial for four
6 days, Monday through Thursday, and I think ambitiously
7 chopped up the time and how much time we were going to
8 use during the day.
9   We have also on the defense side planned
10 for a four-day trial to end on Thursday and, as a
11 consequence, made judgments along the way, how long to
12 cross-examine witnesses, for example. And we just --
13 given that the time has gotten less in terms of actual
14 talk time, I want to make sure that that is going to be
15 fairly allocated over the four-day period for the
16 parties.
17   And so I want to just discuss that with
18 Your Honor and figure out a way to make sure the parties
19 in that four-day period will have the same amount of
20 time.
21   THE COURT: Well, I think Mr. Gasey is
22 winding up today.
23   MR. GASEY: That's right, Your Honor.
24   THE COURT: Last witness.
25   MR. GASEY: Right. I think your clerk has

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1 kept an accurate running clock by our count, so they've
2 got roughly, I think, ten hours.
3   MR. KREVITT: That's just it, Your Honor.
4 The point I'm making is a slightly different one, which
5 is -- and I'm not in any way suggesting the Plaintiffs
6 want to short us any time. It's that when Your Honor
7 said 12 hours, 12.5 hours, whatever it was, we were
8 assuming that we would get more done each day. And in
9 the two days we've had, I think Your Honor's count
10 yesterday was six and change and two and change, so if
11 you add that up, roughly nine hours.
12   So there's been nine hours. The parties
13 had 12.5 each; that's 25. That would leave 16 hours.
14 We're not going to get that done in the next two days.
15 That's what I'm talking about. It requires some
16 reallocation of the total for each party.
17   MR. GASEY: Your Honor, I think we've got
18 to keep in mind that most of Monday morning was not
19 involved with running anybody's time. Your know, the
20 clock is what it is. Your Honor told the jury they
21 might have to be here for a full week. If it ends up
22 ending on Friday, it ends up ending on Friday.
23   I still don't think it will because I
24 don't think we're going to come anywhere near our time
25 limit. And I haven't the foggiest what the Defendants

1 right; you can't not use one part and then use the whole
2 part and say it's not reliable?
3   A. I didn't say it's not reliable. I said it's
4 understated, and I think I indicated what my --
5   Q. No, we're talking about geography. We're not
6 talking about the total numbers. We're talking about --
7 you're saying that the numbers counting where the IP
8 address is, that number is not reliable; is that right?
9   A. That's correct.
10   Q. But when you add that number, whatever it is,
11 plus what's outside the United States to get the total,
12 that number is reliable?
13   A. Based on my understanding of the documents, in
14 terms of calculating a damage amount.
15   Q. But with Novell, with Novell, sir, they
16 separated out, they told you the percentage that was in
17 the United States and what was outside the United
18 States, right?
19   A. It had a percentage of use in the United
20 States.
21   Q. And you used that number; you relied on that?
22   A. It was a lower number than Novell's worldwide
23 sale percentage.
24   Q. But you used the geographic information that
25 Novell provided?

1   A. Yes.
2   Q. And we talked about this. Dr. Putnam
3 provided -- Red Hat provided to you a specific
4 identification of the geography for the Red Hat numbers,
5 didn't it?
6   A. As I said, I don't know what that document
7 indicated.
8   Q. You didn't use that document, did you?
9   A. That's correct.
10   MR. REITER: Thank you, Your Honor.
11   THE COURT: Mr. Reiter?
12   MR. VICKREY: Nothing further, Your Honor.
13   MR. KREVITT: Your Honor, I'd like to
14 renew the objection that I raised at the outset. In the
15 presence of the jury, I won't explain further. But I
16 think the testimony of Mr. Gemini confirmed the concern
17 that I had, and I want to renew my objection.
18   THE COURT: The objection -- the Court
19 overruled the objection and allowed Mr. Gemini to
20 testify.
21   MR. GASEY: Thank you, Your Honor.
22   MR. VICKREY: Your Honor --
23   MR. GASEY: Your Honor, the Plaintiffs
24 rest.
25   THE COURT: That's what I was waiting for.

1   MR. VICKREY: Subject to the admission of
2 the exhibits.
3   MR. GASEY: We'll do the exhibits at the
4 end of the day.
5   THE COURT: We all understand how that
6 happens, yes.
7   Who am I looking to?
8   MR. REITER: Your Honor, if we can do --
9   (Bench conference.)
10   MR. HILL: Mr. Reiter and I in past trials
11 have stipulated at this point that both sides agree that
12 any Rule 50 motions were timely made, preserved. To
13 make maximum use of the jury's time, we go on into the
14 Defendants's case.
15   MR. REITER: We'll make a motion at the
16 break.
17   THE COURT: Good idea. And it's on the
18 record that we all understand the motion.
19   MR. REITER: Everything is preserved.
20   THE COURT: It's deemed made, and we'll
21 actually make it later.
22   MR. REITER: On all issues?
23   THE COURT: On all issues.
24   You know, I have to say sometimes the
25 attorneys actually help. The lawyers help us a little

1 bit. They move things along quicker.
2   MR. KREVITT: Would you like the
3 Defendants to proceed at this time, Your Honor?
4   THE COURT: I would indeed.
5   (Witness sworn.)
6   THE COURT: Let's take one second to stand
7 up and stretch a minute.
8   (Pause in the proceedings.)
9   THE COURT: Let's proceed.
10   MR. KREVITT: May I address the jury to
11 explain?
12   THE COURT: Yes, you may.
13   MR. KREVITT: Ladies and Gentlemen,
14 Michael Tiemann will be our first witness on behalf of
15 the Defendants. The Plaintiffs have rested. It's our
16 turn.
17   Mr. Tiemann is the Vice President of Open
18 Source Affairs at Red Hat, senior executive. He's been
19 here all week, as you've seen. He's also the corporate
20 representative and will be testifying about the business
21 of Red Hat, their products, open source generally, and
22 also some of the issues about which you all just heard
23 regarding usage of the products, downloads, abilities to
24 count, those kinds of issues.
25   Thank you, Your Honor.

1   THE COURT: You may proceed.
2   MR. KREVITT: Ready?
3   THE WITNESS: I am.
4 MICHAEL TIEMANN, DEFENDANTS' WITNESS, PREVIOUSLY SWORN
5   DIRECT EXAMINATION
6 BY MR. KREVITT:
7   Q. Can you state your name for the record, please.
8   A. I'm Michael Tiemann.
9   Q. And where are you currently employed?
10   A. I'm currently employed at Red Hat,
11 Incorporated.
12   Q. And what is your position, Mr. Tiemann?
13   A. My position is Vice President of Open Source
14 Affairs.
15   Q. I was afraid you were going to contradict me,
16 and we were going to have a problem right at the outset.
17   What do you do in that position?
18   A. In that position, I travel around the world and
19 I talk with executives from the public and private
20 sectors about open source technology, strategy, and
21 policy.
22   Q. Where is Red Hat located?
23   A. Red Hat's corporate headquarters are in
24 Raleigh, North Carolina, on the campus of North Carolina
25 State University, but we have offices worldwide.

1   Q. Why is Red Hat located on the campus of a
2 college?
3   A. Well, there's a lot of great students, a lot of
4 the young minds, a lot of new ideas. And the interplay
5 between business and education, I think, benefits both
6 of us.
7   Q. How long have you been at Red Hat?
8   A. Since January of 2000, a little over ten years.
9   Q. How long has Red Hat been in business; do you
10 know?
11   A. Red Hat has been in business since 1993.
12   Q. How many employees does Red Hat have?
13   A. We have about 3,200 employees worldwide.
14   Q. Is Red Hat a growing company?
15   A. Yes, we are growing. In the last fiscal year,
16 we added, I think, over 600 jobs during one of the worst
17 economic times I can remember.
18   Q. And when you started working at Red Hat, right
19 before that, what had you been doing?
20   A. I was working at a company called Cygnus
21 Solutions.
22   Q. What was Cygnus?
23   A. Cygnus was a company which I founded in 1989,
24 and we actually provided commercial support for open
25 source software.

1   Q. You founded the company, Cygnus?
2   A. I did found the company in 1989. It was
3 actually the world's first company to provide commercial
4 support for open-source software.
5   Q. How old were you in 1989?
6   A. I was 25 years old.
7   Q. And you said you were the first company in the
8 world to provide support for open source; is that right?
9   A. That's correct. It was a very new idea at the
10 time.
11   Q. Was it considered a widely accepted idea at the
12 time?
13   A. A lot of people told me I was crazy, and I
14 sometimes thought so myself, but over the years, I
15 believed that this was the right thing to do. And I
16 think history has proved that that was a great model for
17 promoting technology and software.
18   Q. Tell us a little bit more about that for a
19 moment, if you would, Mr. Tiemann. Explain to the jury
20 why it is that in 1989, when everyone else in the world
21 thinks you're nuts, you think it's a good idea to be in
22 the open-source space?
23   A. Well, it's based on experiences that I had
24 working on open-source software. I first encountered
25 open source in 1987 working at microelectronics in

1 Austin, Texas.
2   Q. Go on.
3   A. And that company was actually a group of
4 companies that got together to try to develop new models
5 of innovation as a way of creating new technologies.
6 And, in fact, Congress passed a law to help them
7 establish those new models of innovation, and that's
8 where I worked in 1987.
9   Q. Why did Congress pass a law encouraging
10 companies to work together to develop new innovations?
11   A. Well, in 1984, we were also having economic
12 difficulties. The U.S. was falling behind competitively
13 with the Japanese and other semiconductor manufacturers,
14 and it was believed at the time that some of the U.S.
15 laws were making it difficult for American companies to
16 successfully compete in the global marketplace.
17   And MCC got what they wanted, which was
18 the ability for companies to collaborate on research and
19 development and try and develop new ideas and bring them
20 to market.
21   Q. What do you mean falling behind?
22   A. Well, where do I begin?
23   The Japanese manufacturing in the 1970s
24 and '80s took a lot of our manufacturing jobs away.
25 They were also doing that to us in semiconductors. In

1 1984, the Japanese had passed American ability to make
2 competitive DRAM chips, which is vital to both the
3 computer industry and also our national security
4 interests.
5   Q. So am I correct, then, that the law that
6 Congress passed was designed to help the United States
7 companies work together to face that competitive threat?
8   A. That is correct.
9   Q. And is that the area in which you participated?
10   A. Right. I was working at a project which was to
11 develop some new technologies, and in that project, we
12 needed to use very special software which was only
13 developed by small companies. They charged millions of
14 dollars for that technology.
15   And it also took -- when you made a
16 contract with such a company, they couldn't deliver the
17 software right away. They had to adapt it to the new
18 machines, and that would take years. It was at that
19 time, when I downloaded some software from the internet,
20 and started making changes.
21   And within two weeks time, I had done the
22 job that would have cost millions of dollars to do, and
23 it saved our company a lot of money, and it accelerated
24 our schedule. And that experience and many, many others
25 like it taught me that this concept of downloading

1   A. Well, part of the golden rule was you couldn't
2 stop other people from benefiting the same way that you
3 benefited.
4   So I wouldn't characterize it as
5 protection. I would just say that there's -- there's a
6 line that just popped into my head that I can't get out.
7   Q. Okay.
8   A. But it's a line from Matthew, which says:
9 Freely you are given, so freely you should share.
10   Q. So that's the concept you're saying that when
11 given open-source software, whatever improvements you
12 make, those also are shared freely?
13   A. That is correct.
14   Q. So we've been talking a lot about open source.
15 It's talking about -- I think you've given some sense of
16 it, but maybe let's just put some boundaries about it.
17   What does open source mean to you?
18 Because throughout this trial, that's a term the jury
19 has heard an awful lot about.
20   A. Right. So I'll back up to the beginning.
21   Software, as I think you've all been told,
22 are the programs that control how a computer operates.
23 And the way a program comes into existence is that a
24 programmer writes text in something that we call source
25 code.

1 software, making improvements, sharing it with others,
2 and receiving the benefits of other people's
3 contribution was like a business model ready to be
4 exploited. And I think that's actually what happened.
5   Q. And that was open-source software?
6   A. That was. The license on that software that I
7 downloaded said you are free to remodify and
8 redistribute this software with only one restriction.
9 You cannot stop other people from doing the same thing.
10   Q. And when you say the same thing, what do you
11 mean by that?
12   A. That they could also read, modify, and
13 redistribute the software. It was kind of a golden
14 rule. You can -- if you treat others the way you've
15 been treated, then you have all the rights that other
16 people have.
17   Q. So if you're working on open-source software --
18 and let's take you, a smart kid of 20-something.
19   A. 23 at that time.
20   Q. Okay. I'm feeling worse and worse by the
21 minute thinking what I was doing at 23.
22   But when you were 23 and you came up with
23 a great idea and a new terrific idea, if you used
24 open-source software, part of this golden rule is you
25 couldn't protect that?

1   And what open source refers to is the kind
2 of source code that permits people -- not just the
3 person who wrote the code, but permits other people to
4 access the code, read it, modify it, and distribute it.
5 So open source plus software is what we call open-source
6 software.
7   Q. So I think when we met I had some trouble quite
8 catching that.
9   Did you prepare a demonstrative that
10 helped explain that?
11   A. Yes, I did.
12   If we could see what an example of actual
13 computer open source code looks like.
14   MR. KREVITT: Can we put that up?
15   A. I brought an example here. It's a computer
16 game.
17   Q. (By Mr. Krevitt) Simple example, right?
18   A. It is a simple example. And what this computer
19 does, it challenges the user to guess a number. And it
20 gives the user as many guesses as the user wants. And
21 when the user finally guesses the number, it tells the
22 user how many guesses it took.
23   And obviously, the objective is to guess
24 the number in the smallest number of trials.
25   And so what this source code does is it

1   plays this game. I will say that I actually started
2   programming when I was 11, and a program like this in a
3   language called Basic is one of the very first programs
4   I ever encountered. And when I did this programming, I
5   would have fun with the game for about ten minutes, then
6   I wanted to change it.
7   And so if we can change to the next slide,
8   what you see is that that says, let's guess the number
9   from 1 to 1,000. That's the kind of change that a
10 programmer would make.
11   And in the world of open source, anybody
12 can change the game any way they want. And that is what
13 begins this participation in open source.
14   Q. So source code -- because I can read this --
15   A. You almost can. It's a human-legible -- it's
16 intended to be understood, yes.
17   Q. Is there some kind of computer code that is not
18 human-readable?
19   A. Well, there are two different kinds. But
20 there's binary code, which is what the actual computer
21 executes.
22   But proprietary software, typically, is
23 hidden from view. It's developed by programmers inside
24 a company and they don't share the source code. They
25 only have the product which is after it's been

1   translated into actual computer code.
2   Q. Okay. So let's take that in parts to make sure
3   that that's clear.
4   First, this is source code (indicates)?
5   A. That is correct.
6   Q. So source code is human-readable. I mean,
7   someone that doesn't read source code can't sit down and
8   read it like a novel, but it's human-readable?
9   A. That is the goal.
10   Q. And so when we've been talking in this trial
11 about source code, because I've been sitting through for
12 a long time -- I just want to make sure we're all clear
13 that that's source code.
14   A. That is source code.
15   Q. Okay. And so -- and I think you said it's like
16 a recipe, and that's because this tells a programmer --
17   A. Right. Going back to what is the function of
18 software, the goal of the software is to basically give
19 instruction to the computer what the computer should be
20 doing. And it is like a recipe. A recipe will tell you
21 here are the ingredients; here are the ways that you
22 combine these ingredients to get something.
23   And depending on how much flour, how much
24 sugar, or how much egg you put in, you might get a cake
25 or you might get a cookie or you might get a biscuit.

1   And so a computer software program is
2   saying take this data, combine it these ways, and out
3   comes your result. So that is how software is like a
4   recipe for a computer.
5   And open source is like a recipe that you
6   can share with your friends, and they can say, you know,
7   I know how to make this better. Let's use butter
8   instead of oil, and now we have a new kind of biscuit.
9   Q. And an analogy that was used earlier -- I don't
10 remember by whom -- what we all think of when we think
11 of something secretive is the formula to Coke.
12   And so is the idea that we can all drink a
13 Coke and enjoy a Coke and we can buy a Coke, but we
14 don't know how a Coke is made.
15   A. No, no. And that's the example of proprietary
16 software. People who write proprietary software will
17 often say you don't need to see the source; you don't
18 need this; all you need is the product.
19   But those of us in the open-source
20 community believe that we can make a better product
21 every day by always having the freedom to make
22 improvements and get ideas from our neighbors or share
23 ideas with our neighbors.
24   Q. So just continuing, and I know it's very, very
25 simplified, but just with the Coke analogy, just to make

1   sure we're all on the same page with the nomenclature,
2   the proprietary company is like Coca-Cola that has a
3   product you can buy, but you don't know the recipe; you
4   can't reproduce it; and you can't take it -- take apart
5   the various ingredients and add a little bit more of
6   this or a little bit more of that and come up with a
7   better Coke?
8   A. Right. We call those proprietary software
9   companies. Microsoft Windows is an example of a
10 proprietary software company. They don't give you
11 permission to look at the source.
12   Q. I want to hear that. For me, it's helpful if I
13 make sure I can do the other side of the coin.
14   And so in open source, not only do you
15 sell the Coke, but you also distribute with it the
16 recipe to Coke?
17   A. That is right.
18   Q. And so everyone around the world now with the
19 recipe to Coke can suggest improvements and make better
20 and some will be good, some will be not good?
21   A. Absolutely. And so what we believe is that the
22 value of the software is being able to use it. And
23 sometimes in order to use it, you have to modify it.
24 And instead of making one single company the limiting
25 factor of who will get what they want and who will not

1 get what they want, anybody who can make a change can
2 get what they want. And that's a big value to a lot of
3 people.
4   Q. Okay. So to close the loop, you said there's
5 proprietary software and there's open-source software?
6   A. Yes.
7   Q. Okay. And so just very quickly, what are the
8 differences, then, outside the Coke world, in the
9 software world between proprietary software and
10 open-source software?
11   You can start with whichever one you want.
12   A. Right. So I want to try and talk about the two
13 main differences. There are two ways of seeing the
14 difference for each one.
15   Q. Okay.
16   A. One way of seeing it is, you know, as a user,
17 when you acquire open-source software, either by
18 downloading it or by having it come as a product, you
19 get the freedoms to read it, modify it, redistribute it.
20 And that's what open source looks like to a user.
21   It looks like a car you can go and buy
22 which comes with a service manual, and you have the
23 freedom to take it apart in your garage, if you want to.
24   And in the case of proprietary software,
25 what you see is a product, which is defined by a single

1 company and they decided what features it has. They
2 decide what -- they decide when to ship new versions.
3 And they also decide when to take it out of production
4 and force you to buy a new version.
5   So from the user perspective, that's the
6 difference. But there's another difference.
7   Q. And what is that difference?
8   A. And that difference is from the developer's
9 perspective, a developer who -- in the case of
10 proprietary software, it's typically developed by a
11 small number of people working in secret on the program.
12 And they -- the total number of people who are working
13 on that is necessarily limited by the total number of
14 people within that company.
15   By contrast, in the world of open source,
16 the entire world, or at least all those who are
17 connected to the internet, can potentially be
18 developers. And that was one of the things that really
19 sparked my imagination about open source.
20   I've been teased by my counsel about being
21 a smart kid, but in 1987, I knew immediately I was not
22 the smartest kid in the whole world. And so one of the
23 exciting things about open source was I always had a
24 chance to work with people smarter than me. And when I
25 talk with open-source developers, every single one of

1 them has the experience that there is somebody smarter
2 than them teaching them something.
3   So we have a motto in the world of open
4 source, which is nobody is as smart as everybody.
5 That's been my experience, and that's been the
6 experience of all the people I've worked with in open
7 source.
8   Q. Thank you, Mr. Tiemann?
9   So now let's talk about Red Hat's
10 products, because we've heard a lot of testimony about
11 Red Hat's open-source products, and now let's be real
12 clear about what those products are.
13   So tell me, sir, what are Red Hat's
14 products?
15   A. Our principal product is Red Hat Enterprise
16 Linux, and it comes in two main varieties.
17   Q. If we could just slow down just for a minute.
18   A. I'm sorry, yes.
19   Q. Because I want to make sure that we hear what
20 you said.
21   A. Okay.
22   Q. It was Red Hat Enterprise Linux?
23   A. Yes.
24   Q. You went through that quickly, and that's a
25 term that I'm not sure the jury's heard. They've heard

1 RHEL a lot, but I'm not sure --
2   A. I understand.
3   Q. So the name of the product is?
4   A. Red Hat Enterprise Linux. And it's often
5 abbreviated RHEL, and it's often pronounced, to the
6 consternation of our brand people, rel.
7   Q. So let's walk through the letters.
8   A. Yes.
9   Q. The R and the H are Red Hat?
10   A. Right.
11   Q. Okay. And the E?
12   A. The E stands for Enterprise, and in our
13 industry, the term enterprise really refers to large
14 companies who have complex business operations and are
15 typically using computers as a way of managing those
16 complex business operations.
17   Q. How -- oh, I'm sorry.
18   A. I was just going to say that it's common to
19 hear people talk about enterprise software as being the
20 kind of software that such large companies use. And we
21 distinguish our product by naming it Red Hat Enterprise
22 Linux to tell the world we are providing solutions to
23 large companies with complex business operations.
24   Q. Well, I want to come back to that in a second
25 and why that matters, but we only got up to E.

1   A. Yes.
2   Q. So what --
3   A. And then L, L stands for Linux. And Linux,
4 both, names an operating system the way that Windows
5 names a Microsoft product, Microsoft Windows. But Linux
6 also names a distribution that contains thousands of
7 software packages.
8   You could think of a software package as
9 being an application or an add-on. And so with the Red
10 Hat Enterprise Linux distribution, there is not just an
11 operating system. There's also a web browser. There's
12 an e-mail client. There are web servers and other
13 packages, thousands of packages.
14   Q. Sir, let's talk -- turn now -- you were
15 describing what -- why it matters that Red Hat
16 Enterprise Linux product is an enterprise product.
17   A. That's right.
18   Q. By the way, you're familiar with Novell's
19 products?
20   A. Yes.
21   Q. And do they have an E in their products, also?
22   A. Yes, they do.
23   Q. Is that's the same E, enterprise?
24   A. That's the same E, because we're competing for
25 the same customer.

1   Q. And those customers are generally what?
2   A. Large companies who need massive amounts of
3 computer power to run complex business operations.
4   Q. So drill down on that, if you would, for me,
5 sir, a little bit more.
6   What do you mean when you say they're big
7 companies with massive amounts -- how do they use your
8 software? In what context do they use your software?
9   A. The context that they're typically using the
10 software is running computer servers, which are special
11 kinds of computers that have been designed to store and
12 process large amounts of information.
13   Servers can be hooked together to make
14 them more and more powerful, and, typically, when you
15 start hooking together these servers, they start to take
16 up a lot of space since you need large rooms to hold
17 them. Because of the massive amount of power that they
18 draw, those rooms have to be specially air-conditioned.
19 They need special amounts of power. And so we call
20 those warehouses for computers, server farms or data
21 centers.
22   Q. And I think you prepared a demonstrative --
23   A. I did, yes. There's a picture --
24   Q. -- maybe we could see that just gives a --
25   A. -- that gives you an example of a data center.

1   This data center is in Texas. It's Dell
2 Hardware. And I believe it's running in Houston. It's
3 the largest private hosting service in the country.
4   Q. Now, a couple quick questions about servers,
5 and you can use this demonstrative or not as
6 appropriate.
7   A. Sure.
8   Q. First, do servers use displays?
9   A. Well, let me show you, actually, because we
10 have a laser pointer here. Let me sort of show you the
11 boundaries of where a server is.
12   Do you see these -- you can see a bunch of
13 repeated horizontal lines that look like it's a bunch of
14 items all stacked up and all the same. So you see a red
15 wire and a blue wire and then another red wire and a
16 blue wire.
17   Each one of those elements that looks the
18 same probably is the same. It's a server, and you can
19 see that they're packed tightly together, and there's
20 absolutely no room for a display.
21   A display would simply use up space and
22 heat, and people typically don't even go into a server
23 room, except to replace a bad computer. And so these
24 servers are in racks; these racks are in rows; these
25 rows are in data centers.

1   Q. And how big is a data center? What are we
2 talking about?
3   A. Data centers can get quite large. The New York
4 Stock Exchange, for example, is now building a data
5 center that is seven football fields in size.
6   Q. It would be seven football fields of this?
7   A. That's right.
8   Q. And that's just for the New York Stock
9 Exchange?
10   A. That's just for the New York Stock Exchange.
11   I personally visited a customer data
12 center that's 16 acres of air-conditioned space. And I
13 understand that the largest data center in the country
14 is in Chicago, and it's almost 30 acres.
15   Q. Is the New York Stock Exchange a customer of
16 Red Hat's?
17   A. Yes, they are.
18   Q. I wanted to make sure your client got that
19 plug.
20   And how -- well, why don't we talk about
21 the New York Stock Exchange. How do they use your
22 software?
23   A. Well, as you can imagine, the New York Stock
24 Exchange is processing billions of transactions a day,
25 and it's very important that their computer systems do

1 not crash.
2 And so the New York Stock Exchange relies
3 on our operating systems to provide secure, reliable
4 function for their enterprise applications, and that is
5 the -- basically, the service that we provide is the
6 assurance and the technical support that keeps those
7 systems running and keeps the New York Stock Exchange
8 trading stocks every day.
9 Q. By the way, if -- I know you testified that
10 typically servers wouldn't have a display; is that
11 right?
12 A. Yes.
13 Q. If a server did have a display, would it -- and
14 the servers were running your software, would the
15 display be running your software?
16 A. Well, if the server -- if the server did have a
17 display, you know, these servers are personal computers.
18 They just have strange properties. They're extra strong
19 and extra beefy and extra powerful.
20 But some of these you might be able to put
21 in the cards necessary for there to be a display, in
22 which case that one server could have a display.
23 Q. My question -- I must not have asked a good
24 question. I am sorry.
25 I'm just simply asking that if we know --

1 we've been talking about Microsoft.
2 A. Yeah.
3 Q. Is it possible to have a server running Red Hat
4 Enterprise Linux software and it be hooked up to a
5 display that's running Microsoft Windows?
6 A. That's -- I would not characterize it that way.
7 There are customers who are using Microsoft Windows as a
8 kind of administrative -- like a gate agent at an
9 airport. Somebody might want to schedule the
10 installation of a software, or they may want to change
11 the location of an application, just like a gate agent
12 needs to change the gate of a flight or, you know, get
13 luggage to the right place.
14 The Windows computer can communicate with
15 the server, but I would not consider that that Microsoft
16 Windows computer functioned as a display for the server.
17 It would just be like -- it's no different in that case
18 as a user who is buying a book from Amazon. And the
19 instructions you give on your computer at home is not
20 what I would consider to be a display for the Amazon
21 servers that are sitting in Portland, Oregon.
22 Q. But -- and that makes sense to me. But even if
23 it were considered a display for the server, are you
24 saying that it still could be running software that is
25 not Red Hat software?

1 A. Oh, absolutely. As I said before, there are a
2 lot of people who are using Microsoft software because
3 some of the administrative applications only run on
4 Microsoft.
5 And so you need to have a Microsoft PC to
6 control these powerful servers, even though you have a
7 lot more faith in our system than Microsoft for running
8 your servers.
9 Q. So the New York Stock Exchange, that was a
10 customer that you mentioned?
11 A. That's one.
12 Q. Any other customers?
13 A. We have many others. Saber Holdings, for
14 example, manages tickets and flight schedules for a lot
15 of different airlines, including American Airlines.
16 They're a customer. I've seen their server farm; it's
17 big.
18 We have customers like Orbitz and -- let's
19 see -- priceline.com. We have customers like
20 amazon.com, Ticket Master, VeriSign that secures
21 internet transactions. We have a lot of enterprise
22 customers all around the world.
23 Q. Are these customers using the Red Hat
24 Enterprise Linux server product?
25 A. That's the fundamental relationship. The

1 business we do with these customers, the main value that
2 they're paying for is reliable, secure operation of
3 their servers running our operating systems, and the
4 associated stuff that comes with those operating
5 systems.
6 Q. So you've said a few times that in the
7 overwhelming majority -- I don't remember your exact
8 words --
9 A. Yeah.
10 Q. -- your customers use your software on servers.
11 A. Yeah.
12 Q. Can you put a finer point on that? Is it a
13 percent?
14 A. I can tell you -- first of all, I can't tell
15 you exactly how many machines we support as servers
16 versus desktop. But from a revenue perspective, 90
17 percent of our revenue is based on the server
18 relationship; 10 percent of our revenue is based on
19 people who are using a desktop configuration.
20 Q. So revenue -- you just mentioned revenue, but I
21 also heard you say that all of your products are free;
22 is that right? Or did I hear somebody else say that?
23 Have you not said that yet?
24 A. I've heard that a lot.
25 The source code to all of our products is

1 free, and you can download it from the internet whether
2 you are a customer or not a customer. That is open
3 source.
4   Q. So let me just make sure that I understand
5 that.
6   Are there any products that -- of any of
7 the Red Hat Enterprise Linux products that are at issue
8 in this case, any ever, that Red Hat charges a dime for?
9   A. There's no source code that we charge money
10 for. We sell subscriptions. The only thing we charge
11 money for is subscriptions.
12   Q. So -- and we'll get to subscriptions.
13   A. Actually -- I'm sorry -- we do charge money for
14 training and consulting, but as to the software, which I
15 think was the meat of your question.
16   When it comes to how do we make money on
17 software.
18   Q. That's my question.
19   A. It's subscriptions.
20   Q. Okay. So before we get to subscriptions, I
21 want to make sure what we don't do, and then we'll talk
22 about what we do do.
23   A. Okay.
24   Q. So as to the software that you provide that's
25 accused of infringement in this case --

1   A. Right.
2   Q. -- does Red Hat ever charge a dime?
3   A. No.
4   Q. Okay. Now, subscriptions. Let's talk about
5 that.
6   What are subscriptions and --
7   A. Sure. So a subscription is basically an
8 agreement that for a period of time, a customer will pay
9 Red Hat for services that include unlimited technical
10 support, bug fixes, security updates, new versions of
11 our technology. And in addition to subscriptions,
12 customers can pay for training and consulting.
13   Q. Now, maybe this isn't necessary, but we talked
14 about what servers are.
15   What is a desktop as you are using that
16 term?
17   A. Well, as I use that term, a desktop is the kind
18 of computer you would have at your home, or it's got a
19 display; it's typically something you would have on a
20 desk.
21   Q. Judge Rader is --
22   A. There's a perfect example.
23   Q. -- assisting your testimony?
24   A. Yes. I bet it doesn't run our operating
25 system.

1   Q. One day.
2   A. One day we'll get there.
3   Q. And so when you said revenues and 90 percent of
4 your revenues are attributable to servers, 10 percent to
5 desktops, you mean revenues from the subscriptions?
6   A. That's correct. Server subscriptions versus
7 desktop subscriptions.
8   Q. So with all of the available software in the
9 open-source world, you have a limited amount in your
10 products; is that right?
11   A. That's correct.
12   Q. And how do you go from -- how does Red Hat go
13 about determining from all the various open source out
14 there what it's going to be in its products, the Red Hat
15 Enterprise Linux products?
16   A. So the world of open source, since I started
17 it, has really grown to a really, really large
18 community. It is estimated that there are millions of
19 open-source developers around the world, more
20 open-source developers than any single company employs.
21 There are hundreds of thousands of packages, and any one
22 of those could represent some valuable function that a
23 customer might want in the future.
24   We have something called the Fedora
25 Project, which is a way of bringing together ideas from

1 that larger community with the participation of the
2 community. And then in that experimental lab
3 environment seeing, you know, what ideas work and what
4 ideas don't work.
5   Q. So let's take that in steps. You just said
6 that laboratory environment.
7   A. Yeah.
8   Q. So explain what the Fedora Project is a little
9 bit more specifically and how it functions as a
10 laboratory project for your products.
11   A. Right. So after we launched the Red Hat
12 Enterprise Linux product line, we -- we realized that we
13 needed to have more visibility in what was happening in
14 the open-source community than just what our small
15 company could do.
16   So Red Hat sponsored a project called the
17 Fedora Project, which invited members of the community
18 to work with us as equals and to build a distribution
19 that included experimental technologies and features.
20   Q. And how do you then go from the Fedora Project
21 to your products?
22   A. Right. So some of these experimental features
23 blow up in the lab. We don't put those in our
24 commercial products. Some of those experimental
25 features are really, really great, but they need more

1 work.
2   So we let the open-source community
3 continue to refine them, and we contribute our own best
4 ideas to those projects. But once a technology in that
5 experimental environment proves itself to be a suitable
6 candidate, then we will nominate that for a future
7 version of our product.
8   And Red Hat alone will do the kind of
9 engineering needed to give us the confidence, if this
10 technology is running at the New York Stock Exchange,
11 that we're not going to be the reason that it goes down.
12   THE COURT: Let's take a five-minute
13 break.
14   MR. KREVITT: Certainly.
15   THE COURT: Just five minutes. You can
16 leave.
17   (Recess.)
18   (Jury in.)
19   THE COURT: Mr. Krevitt, you were
20 inquiring.
21   MR. KREVITT: Thank you, Your Honor.
22   Q. (By Mr. Krevitt) So before the break, we were
23 talking about Fedora, and we were talking about how you
24 go from all of the ideas out there, some good, some
25 crazy, and how you wind up with the ideas in your

1   A. That's correct.
2   Q. And is that where the Fedora Project comes in?
3   A. Exactly.
4   Q. So taking -- because you know this so well, I
5 want to make sure the jury understands this clearly, and
6 so things that maybe you just take for granted, the jury
7 and I don't. So take it slowly.
8   How do you go from hundreds of thousands
9 of potential software packages, some great ideas, some
10 less great, to the 2900 software packages you wind up
11 with in your products? Take that in baby steps.
12   A. So in baby steps, the first thing we want to
13 do, to know it's going to be suitable in our product, we
14 want to have something which is like a Linux
15 distribution.
16   So the Fedora Project creates something
17 that is a Linux distribution. It's just aimed at a
18 different group of people than our commercial product.
19 So, number one, it starts like a Linux distribution --
20 or it is a Linux distribution.
21   Q. Okay. But just, again, so we're clear, the Red
22 Hat Enterprise Linux products are your products?
23   A. That's correct.
24   Q. Okay. Is Fedora a product?
25   A. No, it's a project.

1 product; is that right?
2   A. Yes, that's correct.
3   Q. Okay.
4   A. I remember.
5   Q. Okay. Good. So just a few more questions
6 on -- on that.
7   How does that process -- let's do it this
8 way maybe. Let's start -- we can either start at the
9 high or at the low, so why don't we start at the
10 product.
11   How many software packages are in Red Hat
12 Enterprise Linux, different software packages?
13   A. We certify and ship about 2900 packages.
14   Q. So less than 3,000?
15   A. Just less than 3,000.
16   Q. Okay. Why don't we call it 2900.
17   A. Give or take.
18   Q. All right. And how many are -- software
19 packages are there, roughly, out there in the open
20 source available?
21   A. It's unknown, but it's hundreds of thousands of
22 possible packages.
23   Q. Okay. So you have hundreds of thousands of
24 possible packages, and you need to wind up with 2900 in
25 your product?

1   Q. Okay. And we'll get into that distinction, I
2 think, but just as you're explaining it, I want to make
3 sure we understand the difference between your products
4 and the mechanism to get to your products.
5   A. Okay.
6   Q. So you start with the hundreds of thousands of
7 possible ideas.
8   A. Right. You start -- there's a big universe out
9 there, and there are a whole bunch of smart people who
10 think this is a good idea or that's a bad idea,
11 etcetera. And we invite these people to join with us to
12 assess that universe of possibilities. And so we invite
13 the whole world, but not the whole World shows up.
14 About a few thousand people show up and they say we want
15 to help raise this bar.
16   Q. Okay. And -- and what -- what happens next?
17 So you have the few thousand or how many thousands?
18   A. So what happens is that these people nominate
19 the software projects that they think are a good idea to
20 put in -- onto the proving ground.
21   So if the software does not belong on the
22 proving ground, possibly because it doesn't have an
23 open-source license so it cannot be used with our
24 product or possibly because it's so remotely different
25 from what we're trying to do that it could never

1   possibly be in step, we reject obvious misfits.
2   And these people bring to us a set of
3   technologies or a set of candidates that look like a
4   good idea to sort of bring it all together, and it's a
5   little bit like the minor leagues where you bring in a
6   bunch of people who you think might be good players in
7   the future, and you put them on a team and see how they
8   play.
9   Q. It's a little like the minor leagues in
10   baseball?
11   A. Any minor league.
12   Q. Okay. And is -- because that -- I think about
13   it that way sometimes --
14   A. Yeah.
15   Q. -- I just want to make sure that's what you're
16   explaining to the jury.
17   A. Right.
18   Q. So explain what you mean by that, that it's
19   like a training ground.
20   A. Yes. So, basically, you don't want to put a
21   new technology on the floor of the New York Stock
22   Exchange or in some server at the bottom of the Pentagon
23   and say -- you know, something you're not familiar with,
24   so you need to get familiar with it.
25   So Fedora is an opportunity to sort of see

1   server farm in the desert?
2   Is it suitable for, you know, calculating
3   how to fix the financial crisis?
4   We get back all this feedback, and the
5   things, which get highly rated by that process, inform
6   our marketing guys and our engineers we ought to look at
7   taking this best software and graduating it to RHEL.
8   Q. So based on the way the software functions or
9   operates or is reacted to in the Fedora Project, you
10   make judgments about what to put in your products?
11   A. That's right. That's right.
12   And it's like picking from a bunch of
13   maybe promising athletes which ones are going to be
14   long-term franchise players on the team. Because our
15   enterprise customers, once you -- once you put an
16   application into production in some remote data center
17   that could be buried underground, you don't want to be
18   constantly going out to that remote location and trying
19   to figure out what's wrong.
20   So you need reliability, and that comes
21   from familiarity, stress-testing, lots of different
22   eyeballs making sure it's right.
23   Q. So just using your sports analogy and I'll keep
24   the sports analogies limited, I promise.
25   A. I understand.

1   how it works, see that it works well with a whole bunch
2   of other things, and know that there's a lot of people
3   who understand the function of that software and that it
4   can be relied on.
5   Q. So you take the Fedora product -- the
6   project -- excuse me -- takes those candidates and it
7   puts them together?
8   A. It puts them together in something we call a
9   Fedora distribution, and we make a new distribution
10   every six months. So we throw away old distributions
11   and say, well, that was interesting information from the
12   past, but we're only focused on right now.
13   Q. And then you distribute the Fedora
14   distribution?
15   A. Yeah. We make it available to anybody so that
16   we're not the only ones.
17   Q. How does that process take us -- how does that
18   distributing the candidates take us from there to our
19   product?
20   A. Right. So what happens is, lots of people all
21   over the world take this Fedora Project distribution,
22   and they use it in strange ways. And those different
23   ways tell us, is it suitable for putting it onto a Navy
24   destroyer?
25   Is it suitable for putting it into a

1   Q. But is it like you want to field the baseball
2   team, and so you go into a training camp with 20
3   pitchers and 10 catchers and 30 outfielders, do the
4   training camp, see who works well together?
5   A. Exactly.
6   Q. And then field your team?
7   A. That's right. If you've got a great first-base
8   player who cannot play with the second-base player, you
9   don't want them together on your professional team.
10   Q. And then the professional team is your product?
11   A. That's right.
12   Q. Now, I have to follow up with a couple things
13   you said just now, because they always remind me of
14   things that I think will be interesting to the jury, so
15   let's pick through a couple.
16   You said Navy destroyer. Is Red Hat
17   software used on a Navy destroyer?
18   A. It's used on Navy ships. It's also used on --
19   it's -- both on ships and onshore for the Navy.
20   Q. Can you give an example of a ship in the Navy
21   that uses Red Hat software?
22   A. One is the USS Nimitz. It's a nuclear aircraft
23   carrier. We're very, very proud to be on that ship.
24   Q. And that uses Red Hat software?
25   A. Yes, it does.

1   Q.   On the deck?
2   A.   Yes, it does.
3   Q.   And then you also said the bottom of the
4 Pentagon; you'd want to make sure that the software
5 that's at the bottom of the Pentagon, I wrote down, is
6 reliable.
7   Does the Department of Defense use
8 open-source software?
9   A.   The Department of Defense not only uses
10 open-source software, but they have increasingly
11 understood the method of open-source production leads to
12 more reliable systems. And they are actively
13 encouraging all branches of service to consider
14 open-source software when making acquisition decisions.
15   Q.   In fact, I showed a demonstrative.
16   MR. KREVITT: Why don't we pull up the
17 demonstrative from the Department of Defense from
18 October of last year, I think.
19   Q.   (By Mr. Krevitt) And I'll ask you, sir, if
20 you've seen this document before.
21   A.   I have seen this document. I think I saw it
22 the day it came out. It made me incredibly proud.
23   Q.   Yes, I can imagine.
24   And if you can just read the first
25 sentence.

1   A.   Okay. To -- the first sentence reads: To
2 effectively achieve its missions, the Department of
3 Defense must develop and update its software-based
4 capabilities faster than ever, to anticipate new threats
5 and respond to continuously changing requirements.
6   Q.   And then it continues?
7   A.   The use of open-source software (OSS) can
8 provide advantages in this regard.
9   Q.   And the Department of Defense is not the only
10 branch of the federal government that uses open-source
11 software; is that right?
12   A.   No, no.
13   Q.   How about the Department of --
14   A.   In fact, the executive branch, the White House
15 uses open-source software to run their website to
16 communicate with the American public.
17   Q.   How about the Justice Department? Now that
18 we're in their courtroom, how about the Justice
19 Department?
20   A.   There are parts of the U.S. court system that
21 use our servers for collecting and storing and accessing
22 data for proceedings.
23   Q.   So let's look at the White House document so
24 the jury can see that again. You can read as much as
25 you'd like. We highlight those two sentences.

1   Why don't you focus on those, but I hope
2 that's big enough for the jury to see.
3   A.   I'll read them. The first sentence says: This
4 code is available for anyone to review, use, or modify.
5 We are excited to see how developers across the world
6 put our work to good use in their own applications.
7   Next sentence: By releasing some of our
8 code, we get the benefit of more people reviewing and
9 improving it.
10   Q.   Does the -- and this came out April 21, which I
11 think was --
12   A.   That was last week.
13   Q.   A week ago yesterday.
14   Does the White House, the U.S. White
15 House, accurately describe open source, in your view?
16   A.   They do a fantastic job. I couldn't have
17 taught it better myself.
18   Q.   And you said that it made you proud when you
19 saw the Department of Defense press release to the Joint
20 Chiefs of Staff, the secretaries to the military
21 branches, but you said that made you proud; is that
22 right?
23   A.   Actually, a lot of what Red Hat does makes me
24 proud, because this idea that started out really as an
25 oddball idea has connected with what I feel are some of

1 the greatest values and privileges of being an American:
2 The freedom to start a business, to make a living doing
3 what you love, and then, most importantly, helping other
4 people do what they want to do, whether it's what the
5 DOD does, which is protecting America, or what the White
6 House does, which is serving America.
7   So that's all I can say. It's great.
8   Q.   And it made you proud when you sold the White
9 House -- did you feel like maybe you finally made it?
10   A.   I'm getting there.
11   Q.   The idea is not so crazy? Well, maybe the
12 inclusion by the White House doesn't necessarily prove
13 it's not crazy.
14   A.   There are many, many cases in the years I've
15 been involved with it that have made me incredibly proud
16 of what's happened and how it's gone.
17   Q.   So back to Fedora, just to finish on that.
18   How much does Red Hat charge for those
19 distributions of the R&D project, Fedora?
20   A.   Red Hat charges nothing for Fedora. As an R&D
21 project, it's just made available to the world to
22 download, participate, improve.
23   Q.   How much does Red Hat charge for subscriptions
24 to Fedora?
25   A.   We don't sell any subscriptions at all. We

1   don't consider Fedora suitable for commercial use.
2   Q. Why is that?
3   A. It's R&D project. Some may blow up in the lab,
4   and some projects, you know, may be wonderful. But we
5   can't stand behind Fedora as a product. We stand with
6   Fedora developers to experiment and discover what's
7   possible.
8   Q. So there's not a dime in any form, fashion at
9   all that Red Hat makes from Fedora?
10   A. No. It's not its purpose. Fedora is about
11   generating ideas.
12   Q. Does everyone who downloads Fedora download the
13   same version of it?
14   A. There are many versions of Fedora, and they
15   could be different by their version number. They could
16   be different by what kind of processor architecture you
17   install them on.
18   Anybody is free to make custom versions of
19   Fedora as well. And they are named, you know, for
20   whatever universe they're supposed to go into. In Latin
21   America, people make Fedora in Portuguese.
22   Q. And if I download Fedora and my partner,
23   Mr. Reiter, downloads Fedora, are we necessarily,
24   though, going to have the same packages? His may be in
25   Portuguese, but are we going to have the same packages?

1   A. If you go to the same server and you ask for
2   the same software, then you'll get a bucket of bits that
3   contains the same thing. But a download is totally
4   different than an installation.
5   Q. How so?
6   A. Well, when you take that software to install it
7   on your computer, you get asked a series of questions.
8   One of those questions is English or Portuguese. One of
9   those questions is what kind of keyboard do you have.
10   One of those questions is do you want GNOME or KDE or no
11   desktop at all.
12   And so there's a variety of installation
13   parameters. Once you finally say go, then it may
14   install all of the packages, or it may install very few
15   of the packages. It depends on what you ask for.
16   Q. So let me follow up on just the example you
17   gave, because you gave an example and that way we can
18   contextualize for the jury.
19   You said you can choose to download KDE.
20   You could choose to download GNOME, or you could choose
21   to have no desktop at all.
22   Did I get that right?
23   A. I explained that it's at install time.
24   Q. At install time.
25   A. So when you say I'm ready to install, it says,

1   great, what would you like to install? Here's a bunch
2   of things you can do.
3   It's like ordering food at a restaurant.
4   You don't buy everything on the menu. You get what you
5   want for dinner.
6   Q. When you -- when you go to -- to take the
7   restaurant analogy, I'm laughing, because I joke with
8   Mr. Vincent that he does order everything on the menu.
9   So I want it to be clear that that's why I looked over
10   at him.
11   When you -- when you -- just to take the
12   restaurant analogy, is downloading Fedora like walking
13   into the restaurant?
14   A. Right. It's walking into the restaurant and
15   getting a big menu in front of you with a lot of
16   choices.
17   Q. I see. And then one of the choices is desktop
18   environment?
19   A. Yes.
20   Q. And you say you could choose none or KDE or
21   GNOME?
22   A. Right.
23   Q. So it's sort of appetizers.
24   A. Right.
25   Q. You could either have one or not, or you can

1   make a choice?
2   A. Right. And when you do that -- in fact, one of
3   the questions that it asks you is, would you like to do
4   this install on a graphical user interface, because you
5   have a fancy display; or would you like to do it in
6   text, because you like the old green screen and you're
7   never going to change.
8   Q. I want to change our focus for just a minute
9   now and talk about counting of Red Hat products.
10   Do you remember Mr. Vickrey asked
11   Mr. Gemini a series of questions on that?
12   A. I did hear that.
13   Q. And Mr. Reiter asked Mr. Gemini a series of
14   questions?
15   A. I did hear that.
16   Q. And then Mr. Vickrey asked another series, and
17   there was a lot of testimony about whether you can count
18   and what you can count and -- do you remember that?
19   A. I heard all of it.
20   Q. I want to ask you a series of questions about
21   that.
22   First, how did you feel as you were
23   sitting there as an executive at Red Hat, who knows what
24   can be counted and what cannot be counted, listening to
25   Mr. Gemini testify regarding Red Hat in that regard?

1   A. I felt very uncomfortable about what he was
2   saying, because it didn't sound at all right. But I
3   also felt confident that having an opportunity to speak
4   in court, it would be possible for the jury to
5   understand the facts.
6   Q. Good. I'd like to do that now.
7   How many people use Red Hat's RHEL and
8   Fedora software?
9   A. We don't count users of either RHEL or Fedora,
10 so we don't know.
11   Q. This might be a little bit more intrusive, and
12 I want to hear everything you have to say. I want the
13 jury to hear everything you have to say.
14   There are certain things that Mr. Gemini
15 said, though, and I want to make sure we address them
16 directly.
17   A. Okay.
18   Q. So I may ask questions that are -- that would
19 be good to just have a simple answer, and then you can
20 explain the answer, but I don't want there to be any
21 confusion on those points.
22   A. Got it.
23   Q. Okay. Thank you.
24   So let's take RHEL first. Does Red Hat
25 count the number of RHEL users?

1   A. No.
2   Q. Ever?
3   A. No.
4   Q. Does Red Hat count the number of Fedora users?
5   A. No.
6   Q. Ever?
7   A. No.
8   Q. Does Red Hat have any information at all
9   regarding the number of users of the Fedora Project?
10   A. No.
11   Q. Does Red Hat have any information at all
12 regarding the number of users of the RHEL products?
13   A. No.
14   Q. Okay. Now, was there anything you wanted to
15 say, because I know I told you how I wanted to do it.
16 Then I have a series of questions, but I felt maybe I
17 was cutting you off.
18   A. No.
19   Q. Because we did not -- did we talk about
20 Mr. Gemini's testimony?
21   A. We did.
22   Q. And did I tell you what to say in response to
23 Mr. Gemini's testimony?
24   A. No.
25   Q. Did I tell you how to answer the questions at

1   all?
2   A. You told me to speak the truth.
3   Q. Okay. Can Red Hat determine the number of
4   users of Fedora?
5   A. I don't believe so.
6   Q. Okay. Is that information that Red Hat has,
7   the number of users of Fedora?
8   A. It is not information that Red Hat has.
9   Q. Did you hear Mr. Gemini tell the jury that Red
10 Hat does know the number of users of Fedora?
11   A. I did hear that.
12   Q. Did you hear Mr. Gemini tell the jury that Red
13 Hat knows the number of users of the RHEL products?
14   A. I did hear that.
15   Q. Were either of those answers accurate?
16   A. No. They were wrong.
17   Q. So let's get into that a little bit.
18   Why can't Red Hat determine the number of
19 users of Fedora?
20   A. To determine the number of users, we would have
21 to collect information about users, which we don't do.
22   Q. Let's be clear. What does that mean, we, Red
23 Hat, do not collect information about users?
24   A. We don't collect information -- we don't
25 collect any personal identifying information. You know,

1   we're not part of the U.S. Census. We do not collect
2   any user information when people download Fedora.
3   Q. So I download Fedora today, let's say. Do I
4   have to tell Red Hat who I am?
5   A. No, you do not.
6   Q. Do I have to give any information about myself?
7   A. No.
8   Q. If I download 20 copies, do I have to say?
9   A. No.
10   Q. If I give 20 copies to my friends, do I have to
11 say?
12   A. No.
13   Q. If I download one copy and don't use it, do I
14 have to say?
15   A. No.
16   Q. If I download 30 copies and don't use any of
17 them, do I have to say?
18   A. No.
19   Q. No information at all, just to be clear, on
20 number of users of the Fedora Project?
21   A. That is correct.
22   Q. And just so the jury is clear, are you saying
23 that Red Hat doesn't keep track of that information, or
24 are you saying Red Hat can't keep track of that
25 information?

1   A. It's both. We cannot and we do not.
2   Q. So let's look at what -- and talk about for the
3 jury then, how did Mr. Gemini suggest that maybe you can
4 keep track of users?
5   And what he talked about was IP addresses.
6 Do you remember that?
7   A. I do remember that.
8   Q. Okay. And he said that there were millions of
9 IP addresses.
10   A. Yes, he did.
11   Q. And then from the IP addresses, these millions
12 of IP addresses, he told the jury that there are
13 millions of users.
14   Do you remember that?
15   A. I do remember that.
16   Q. And, in fact, he said there may be many, many
17 more than the millions you saw, because the numbers may
18 be understated.
19   A. I heard that.
20   Q. Okay. Any of that right?
21   A. No.
22   Q. Okay. So let's talk about IP addresses.
23   What are IP addresses?
24   A. An IP address is a number that your computer
25 has to have to basically get onto the internet. And

1 sometimes that -- for most people who connect to the
2 internet like I do from my home, that IP address is
3 dynamically allocated.
4   Q. Does Judge Rader's computer have an IP address,
5 assuming that he has internet access?
6   A. If he's on the internet, he does. If he's not
7 on the internet, he probably won't have.
8   Q. And when Judge Rader may go on vacation to
9 California with the same computer, does it have the same
10 IP address?
11   A. It will most likely have a different IP
12 address.
13   Q. If Judge Rader went down the road to Tyler and
14 got on the internet there --
15   A. Right.
16   Q. -- would he have the same IP address with his
17 computer?
18   A. He might have a different IP address every hour
19 depending on how the internet service provider hands out
20 these IP addresses.
21   Q. So the same guy --
22   MR. KREVITT: No offense, Your Honor.
23   Q. (By Mr. Krevitt) -- with the same computer, you
24 just testified has many, many IP addresses?
25   A. That is correct.

1   Q. Okay. So if Judge Rader's computer has many IP
2 addresses and we add up all those many IP addresses and
3 we get a number and that number is more than one, does
4 that number tell us how many users there are?
5   A. Not at all.
6   Q. So if the IP addresses don't tell you the
7 number of users, why does Red Hat keep track of them at
8 all?
9   A. We keep track of them in part so that we know
10 where in the world Fedora is being used.
11   Q. So explain that. You keep track of the IP
12 addresses so you get geographic information.
13   Is that what you mean by where in the
14 world?
15   A. That's one of the reasons for keeping track of
16 that, yes.
17   Q. Explain that to me.
18   A. So an IP address does not tell you anything
19 about the user or the computer itself. The IP address,
20 however, does tell you the geographic location. And
21 this is very important for companies that do internet
22 commerce, because, for example, if you use a credit card
23 to buy something, if your credit card billing address
24 says that you live in Marshall, Texas, but the IP
25 address says it's coming from Nigeria, you know, the

1 company processing the credit card transaction may say I
2 don't believe that this is a legitimate transaction.
3   So the IP address is something that can be
4 relied on to provide information about where in the
5 world that computer is setting.
6   Q. So at any given time, a computer connected to
7 the internet has an IP address?
8   A. That is correct.
9   Q. And when the user -- excuse me -- the computer
10 moves around to different locations and connects to the
11 internet, that same computer owned by the same person
12 has a different IP address?
13   A. Yes.
14   Q. Okay. So as often as one moves around, that's
15 how often the same person has an IP -- different IP
16 address?
17   A. They may have even more IP addresses, because
18 they may be getting refreshed every hour.
19   Q. So let's talk about that. First, I wanted to
20 make sure I understood what you were saying when you
21 travel. And, again, when I say I want to make sure at
22 least my question is clear for the jury. I don't mean
23 travel from here to Asia. I mean travel from here to
24 Longview, you'll have a different IP address.
25   A. That's correct.

1   Q. Okay. And then you said a moment ago that, in
2 fact, there's other reasons why the same guy with the
3 same computer will have many IP addresses.
4   A. That's correct.
5   Q. So can you explain that to the jury, please?
6   A. Yeah. There's something called a dynamic IP
7 address. And a dynamic IP address is simply -- is one
8 way that internet service providers basically allocate
9 IP addresses to people who are using the system.
10   And one of the reasons that they have
11 these dynamic IP addresses is, if some computer has gone
12 off the internet, they want to know that nobody is using
13 this slot anymore, so let's kick it off. So a dynamic
14 IP address is given to a computer which can then put the
15 new one in, and it can basically say I'm still here, you
16 know, keep my connection alive.
17   Q. So the same computer in the same place --
18   A. That's right.
19   Q. -- will continually get new IP addresses?
20   A. In fact, I believe I've had that experience
21 here in Marshall, Texas, where I have a virtual private
22 network for talking back to my company so I can do my
23 business. And about every hour the connection gets
24 dropped because the IP address changes and I have to
25 type in a new code to say let me back in.

1   Q. Sitting in the exact same place, your computer
2 on the exact same table?
3   A. Yes.
4   Q. IP address is changing all the time?
5   A. Yes.
6   Q. You're the same user?
7   A. I am.
8   Q. Now, you said that IP addresses tell you
9 information about geographic location.
10   A. That is correct.
11   Q. And is that because when you're in Marshall,
12 Texas, although you're getting many IP addresses, each
13 one indicates where you are?
14   A. That's correct.
15   Q. How does that work?
16   A. I don't know the specific technical details of
17 exactly how that works, but an analogy is that there's a
18 lot of different license plates in Texas, but they're
19 all Texas plates. There's a lot of different license
20 plates in North Carolina, but they're all Carolina
21 plates.
22   So when you're in Texas, you get Texas IP
23 addresses. When you're in North Carolina, you get North
24 Carolina IP addresses.
25   Q. And how certain is that information? Is it a

1 rough guess that maybe my IP address will say I'm in
2 Texas, but I'm really in Maine?
3   A. So I have looked into this, and on a
4 country-by-country basis, that number is certain enough
5 to do financial transactions, you know, day in and day
6 out, hundreds of millions of financial transactions with
7 certainty.
8   Q. Let me make sure I understand, because, again,
9 I want to unpack your answer for the jury a little bit.
10   A. Okay.
11   Q. I asked you if the IP address can determine
12 with certainty the geographic location.
13   A. Yes.
14   Q. And I think you said that at least on a
15 country-by-country basis, it can with certainty; is that
16 correct?
17   A. Yes; that is correct.
18   Q. And just so we're clear, when you
19 say certainty, are you talking 88 percent, 95 percent?
20 What are we talking about?
21   A. I'm talking about that's how the internet was
22 designed to work. It's designed around -- the IP stands
23 for internet protocol. And so when you want to put a
24 system onto the internet, there's another -- there's an
25 organization called ICANN. The Internet -- I think it's

1 the Internet Committee for Address, Names, and Numbers.
2   And ICANN is basically like the agency
3 that hands out these license plates. ICANN is the one
4 that tells the ISPs, here are the IP addresses you can
5 give to your customers. And those ranges are set based
6 on country.
7   And so the U.S. has been given a certain
8 range of IP addresses. And even in the news today,
9 people are worried about we're going to run out of IP
10 addresses.
11   Q. That's sort of like when a community gets
12 really crowded and they have to come up with a new area
13 code for the community?
14   A. Exactly, right.
15   Q. But you know when you hear that area code
16 exactly where it is?
17   A. That's right. So we've got that exact
18 situation. The U.S. has a range, and we can keep adding
19 new area codes until we run out of area codes.
20   And then what do we do? But that day
21 hasn't come. Today, those numbers tell you which
22 country they belong to. Just like a country code, an
23 area code, and a phone number tells you where that
24 telephone is located.
25   Q. And so just to tie the loop for the jury, you

1 can tell with certainty where an IP address comes from
2 on a country-by-country basis; is that right?
3   A. It's -- it's as certain as anything I know.
4   Q. And as certain --
5   A. Yes, yes.
6   Q. -- as day will follow night?
7   A. Day will follow night.
8   Q. And so you can tell -- putting aside whether IP
9 addresses tell you the number of users or they don't
10 tell you the number of users, whatever IP addresses tell
11 you, we know that of all the IP addresses, we can tell
12 with absolute certainty which ones are from the United
13 States?
14   A. That is correct.
15   Q. Okay. So now, Mr. Tiemann, have you ever done
16 an analysis to determine where certain IP addresses are
17 from in connection with the Fedora Project?
18   A. In fact, I have.
19   Q. Okay. What analysis did you do?
20   A. I did an analysis of the geographic locations
21 for every IP address of machines connecting to the
22 Fedora servers during the period of October 2007 to
23 December of 2008.
24   Q. Okay. So let's -- let me make sure the jury
25 understands that.

1   First, you said you looked at all the IP
2 addresses that hit Red Hat?
3   A. That hit Fedora.
4   Q. Hit Fedora. Excuse me.
5   A. Hit the Fedora Project.
6   Q. Right. Because that's what Mr. Gemini talked
7 about. All of the IP addresses that hit the Fedora
8 Project for the time period October 2007 to December
9 2008; is that right?
10   A. That's the full months. We didn't go halfway
11 into either month. It's the full time.
12   Q. Okay. So all of October of '07 to the end of
13 December 2008?
14   A. That is correct.
15   Q. And you -- you pulled all of those IP addresses
16 and looked at them?
17   A. Actually, I asked a person at Red Hat to write
18 a script to pull all those IP addresses and count them
19 according to whether they were inside the U.S. or not
20 inside the U.S.
21   Q. Let me ask you to clarify one thing, and that
22 is script.
23   A. I'm sorry.
24   Q. My gut tells me that's a computer term?
25   A. Yes. Back to a program. I asked that a

1 program be written which would collect all of this
2 information and sort and count how many things were --
3 how many IP addresses, how many unique IP addresses came
4 from the U.S. versus not from the U. S.
5   I reviewed that script; I understood that
6 script; and I supervised that script being run on the
7 Fedora servers in order to produce a report to summarize
8 the unique IP addresses that hit Fedora from the U.S.
9 versus the unique IP addresses that came from outside
10 the U.S.
11   Would you -- okay.
12   Q. Why don't we just put them up and make sure
13 that we're all on the same page for the jury.
14   A. Let's do that.
15   Q. I think the first one we should look at is
16 DX904.
17   MR. KREVITT: And that's not going to be
18 very clear for the jury.
19   Q. (By Mr. Krevitt) Just tell us what it is.
20   A. If we could just -- let's just go down to --
21 let's look at this first line here just to show you.
22   This is a monthly total. 10 is the month
23 of October. 2007 is the year. And what we've done is
24 we collect all the unique IP addresses into a file. And
25 it's -- the number on the left is the total number

1 inside the U.S., and the number on the right is the
2 number outside the U.S.
3   So for that particular month, we see
4 162,000 unique IP addresses inside the U.S. and outside,
5 654,000.
6   Q. So why don't we keep that up, and maybe, again,
7 it's just easy for the jury and for others using an
8 example.
9   A. Okay.
10   Q. So the 162,000 number is unique IP addresses
11 that hits Fedora in October '07?
12   A. That's correct.
13   Q. And the 654,000 is the number of unique IP
14 addresses that hit Fedora in October of '07?
15   A. From outside the U.S.
16   Q. From outside?
17   A. That's correct.
18   Q. And so if you were to add those two --
19   A. If you were to add those two, every single,
20 unique IP address would be counted.
21   Q. So leaving that up, let's just talk about what
22 we know and what we don't know, okay?
23   A. Yeah.
24   Q. I'm going to ask a question. You don't have
25 to -- so here's my question: Can we tell how many users

1 of Fedora there were from this number?
2   A. No, we cannot.
3   Q. Is that possible?
4   A. I know of no way to do it.
5   Q. Could it be more than that number for the
6 number of users? Could it conceivably be more?
7   A. It could conceivably be more.
8   Q. Could it be fewer?
9   A. It could be fewer.
10   Q. Could it be way fewer?
11   A. It could be way fewer.
12   Q. And it could be much more?
13   A. It could be much more.
14   Q. Okay. So we don't know that. We don't know
15 that. We don't know the number of users. We've gotten
16 that established.
17   Okay. Then can we tell the number of
18 unique IP addresses with certainty? Not saying whether
19 those are users or not?
20   A. Yes. We can know the number of unique IP
21 addresses, because that is what the script counts.
22   Q. So those numbers are not guesses or estimates
23 or speculation. Those are actual, precise numbers of
24 unique IP addresses?
25   A. Yes. In fact, I'm so confident of our

1 methodology that I published some source code.
2   Q. Well, we'll come back to that.
3   And then the final thing I want to ask you
4 is, so you said that we know for sure that if you add
5 that up, that's the total number of unique IP addresses?
6   A. That's right.
7   Q. If you were to add those two numbers up, you'd
8 wind up --
9   A. An exact number.
10   Q. -- with 8 and change?
11   A. An exact number.
12   Q. An exact number. Okay. Good.
13   Now, you have them broken down, obviously.
14 To the left is unique IP addresses from the United
15 States?
16   A. That's correct.
17   Q. And to the right is unique IP addresses outside
18 the United States?
19   A. Yes.
20   Q. Do we know whether that breakdown is accurate?
21   A. Yes.
22   Q. Do we know that with certainty?
23   A. Yes.
24   Q. And that is the breakdown?
25   A. That is the breakdown for the month of October

1 2007.
2   Q. And let me just show quickly DX912, then we'll
3 do 913, then 914.
4   MR. KREVITT: Actually -- I'm sorry -- why
5 don't we go back. I'm sorry. And why don't we pull up
6 the last line.
7   This. I should have done that. I
8 apologize.
9   Q. (By Mr. Krevitt) So, Mr. Tiemann, will you just
10 tell us what that is? I think the jury understands how
11 we got to these things, but what is that that's now on
12 the screen?
13   A. So what that is, is that is the sum total of
14 all of the unique IP addresses during the period from
15 the beginning of October 2007 to the end of December
16 2008, distinguished on the left by those unique IP
17 addresses that originated in the United States. And the
18 number on the right is the number of unique IP addresses
19 for that period coming from outside the United States.
20   Q. So if you add these two numbers up, you would
21 have the total number of unique IP addresses that hit
22 Fedora during the 14-month period October '07 to
23 December '08?
24   A. That's correct. If you add those two numbers,
25 it rounds up to 9.8 million total.

1   Q. Which was about what Mr. Gemini was talking
2 about for total number of IP addresses?
3   A. Which is probably no surprise there.
4   Q. Right. So we know that with certainty, those
5 totals?
6   A. Yes.
7   Q. And then this is the number of unique IP
8 addresses that hit Fedora during the damages period in
9 this case from the United States?
10   A. That is correct. Approximately 1.5 million
11 unique IP addresses hit Fedora from inside the United
12 States.
13   Q. And we know that with certainty?
14   A. Right. We know the whole number. I gave you a
15 human approximation, but we know with certainty it was
16 1,537,441.
17   Q. Number of unique IP addresses that hit Fedora
18 during the damages period in this case?
19   A. Right.
20   Q. Now, that number may not reflect the number of
21 actual users?
22   A. That is correct.
23   Q. The number of actual users might be lower?
24   A. It might be lower; it might be higher; it might
25 be much lower; it might be much higher.

1   Q. Okay. And did you determine, just as a
2   percent, what -- what the total number of unique IP
3   addresses in the United States constituted of the total
4   number of unique IP addresses?
5   A. Yes, I did.
6   Q. What is that percent?
7   A. The math says that if you take 1.5 million out
8   of a total of 9.8 million, the number adds up to a
9   little bit less than 16 percent in the U.S. versus the
10 whole world.
11   Q. So just as a matter of math then, am I correct,
12 that we know with certainty --
13   A. Right.
14   Q. -- that the number of unique IP addresses from
15 the United States during the damages period was just
16 less than 16 percent?
17   A. That is correct.
18   Q. Does that number surprise you? I mean, would
19 you have expected it to be higher than 16, lower than
20 16?
21   A. It actually doesn't surprise me at all, because
22 if you look at the total number of people in the world
23 that can access the internet, it's almost 2 billion
24 people.
25   And if you look at the total number of

1   people in the United States who have an internet
2   connection, it's another number that's escaped my mind.
3   But when you do the math, approximately 14 percent of
4   all the internet users in the world are based in the
5   U.S.
6   So it's no surprise to me at all that
7   if -- there's 14 percent of all internet users are from
8   the U.S., it's no surprise at all that approximately
9   15-some percent of Fedora users are in the U.S. and the
10 numbers bear that out.
11   Q. Thank you. Let's do the documents I had asked
12 for.
13   THE COURT: Mr. Krevitt, do you want to
14 check the clock at any point?
15   MR. KREVITT: I'm at the jury and the
16 Court's preference. I don't -- maybe it makes sense to
17 stop now.
18   THE COURT: Okay. You know best.
19   Let's take our hour break.
20   MR. KREVITT: Thank you.
21   (Lunch recess.)
22
23
24
25

1   CERTIFICATION
2
3
4   I HEREBY CERTIFY that the foregoing is a
5   true and correct transcript from the stenographic notes
6   of the proceedings in the above-entitled matter to the
7   best of my ability.
8
9
10
11 _____   _____
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    Expiration Date: 12/31/10
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