1


1

CRENSHAW, WARE \& MARTIN, P.L.C.
By: W. RYAN SNOW, ESQUIRE
DONALD C. SCHULTZ, ESQUIRE and
DICKSTEIN SHAPIRO, LLP
By: JEFFREY K. SHERWOOD, ESQUIRE
FRANK C. CIMINO, JR., ESQUIRE
KENNETH W. BROTHERS, ESQUIRE
CHARLES J. MONTERIO, JR., ESQUIRE and
DAWN RUDENKO, ESQUIRE
Counsel for the Plaintiff

QUINN EMANUEL URQUHART OLIVER \& HEDGES LLP
By: DAVID A. PERLSON, ESQUIRE
DAVID L. BILSKER, ESQUIRE
DAVID NELSON, ESQUIRE
EMILY C. O'BRIEN, ESQUIRE
ROBERT A. WILSON, ESQUIRE and
KAUFMAN \& CANOLES
By: STEPHEN E. NOONA, ESQUIRE,
Counsel for the Defendants

1
2

```
                EXAMINATION INDEX 
```



```
            EXHIBIT INDEX
                MAR / ADM
    PLAINTIFF'S
    434 The TREC-4 Filtering Track Article 1849 1849
    447 S-1 Statement 17991799
```


and the Court has had an opportunity to consider those motions and the Court will take the following action with respect to those motions.

With respect to the plaintiff's motion for a Rule 50 ruling as a matter of law on the question of validity based on anticipation and obviousness, the Court will deny that motion at this juncture. The motion is denied.

With respect to their motion for judgment as a matter of law regarding the invalidity because of alleged inadequacy of written descriptions, that motion is granted and there's no question that the defendants were not going forward on that.

With respect to the motion for judgment as a matter of law on laches, the Court has had an opportunity to read the submission of the defendant regarding that and consider plaintiff's response to that motion, and the Court takes this view of that motion:

The course of defense of laches, as both parties
have well indicated, bars a plaintiff from winning any damages accrued before the filing of a suit, and in this case the Court has looked at the elements of laches. There are basically two elements of laches, one requiring the defendant to show that the plaintiff delayed filing the suit for an unreasonable period of time or an
inexcusable delay.
The other one is that the delay in some way affected prejudice or operated prejudice to the disadvantage of the defendant.

Of course, there arises a presumption of laches where the defendant can show that the plaintiff delayed suing for more than six years after the patentee knew or should have known of the alleged infringement in the case.

In this case suit was filed on September $15 t h$, 2011, in this case the claim was filed. The defendants allege that plaintiffs were on constructive notice of the infringement as early as July 2005 when Google put forth a blog that was entitled Google Inside AdWords, Exhibit 176 in this case, Plaintiff's Exhibit 176 , which in some way described Quality Score, described parts of the accused product in this case.

The plaintiffs, of course, contend that a one-sentence blog is inadequate to put them on any type of constructive notice of infringement. That's their basic response in this case.

The Court understands that $I / P$ Engine, of course, acquired these patents. Lycos in 2005 was certainly the owner of these patents, but the law provides that when a patent transfers ownership, the
transferee of the patent must accept the consequences of any dilatory conduct of immediate and remote transferors. I think this case was quoted as the Eastman Kodak case versus Goodyear Tire \& Rubber Company, at 114 F.3d 1547, a 1997 Fed Cir. case.

In this case the Court has to examine the question of whether the plaintiffs were on notice of the alleged infringement in this case. Beyond the blog, which plaintiffs object and finds short, the Court also found, in reading the testimony of Mr. Blais and Mr. Kosak and also in looking at the full record of this case, that in 2005, as early as 2003, 2004, Lycos was in a commercial relationship with Google.

During the course of that commercial relationship the record reflects that, in fact, Lycos was taking advantage of Google ads. They had a relationship with Google, and they were using the Google ads product. According to the testimony of Mark Blais, the general counsel for Lycos, in 2004 Lycos was using Google's products.

Certainly if Lycos was, in fact, using Google's products, AdWords, they were in a position to consider and scrutinize the product to determine whether their product was in some way infringing on their technology.

According to the testimony of Mr. Kosak, one of
the inventors of the patents, the asserted patents in this case, he had no reason to analyze the AdSense or look at these products because he was not receiving any revenue stream from the product, so he took no action to determine whether Google was, in fact, infringing on the product.

According to Mr. Blais, Lycos in 2005 had no policy regarding patent infringement or enforcement. They did not investigate in 2005 whether Google had infringed any of its products. In 2005, 2006 they had no policy on patent licensing. In 2005, 2006 Lycos did not negotiate regarding the licensing of its patents. In short, they did nothing regarding protecting their patents.

But it is also clear under the law that a patent owner is required to engage in some type of diligence or some type of effort to determine whether someone is infringing their technology.

I think one of the parties quoted the wanlass versus General Electric Company case, at 148 F.3d 1334, a 1998 Fed Cir. case, which says that ignorance will not insulate a patentee from constructive knowledge under certain circumstances regarding infringement of its case.

That particular case also had this line that is
important here: "A reasonable patentee must investigate
potentially infringing, pervasive, open and notorious activity, including sales, marketing, publication or public use of a product similar to or embodying technology similar to the patented invention or published description of the defendant's potential infringing activities."

What the Court is saying, in a nutshell, is that the plaintiff in this case, specifically Lycos, had some responsibility to be proactive in determining whether its patent was being infringed. Surely if the blog was sufficient to be alleged in paragraph 43 of the complaint, that same paragraph, the same blog should have given at least a spark of interest to Lycos to determine whether maybe Google was infringing its patent back in 2005 .

More over, in view of the fact that there was a close relationship between Google an Lycos, Lycos was, in fact, benefiting from Google ads or Google's use of their technology, again, should have placed them on notice that, perhaps, their patent was being infringed.

The Court finds, in view of these facts, that there arises a presumption of prejudice here to Google for what the Court finds to be an unreasonable delay or inexcusable time in bringing suit in this case. And that being the fact that there is a presumption of prejudice,
a presumption that arises, a presumption of laches, then the burden shifts to the plaintiffs in this case.

The Court finds in this case that plaintiff has not produced sufficient evidence to overcome the presumption of laches. The Court doesn't find anything in the record to adequately explain the delay in bringing this lawsuit. Nothing has been articulated, the Court finds, adequate to explain the delay.

In terms of whether Google has been prejudiced, one of the things that's often cited is memory loss or inability to recall. The Court would note for the record that Mr. Kosak, or is it Mr. Lang? One of the inventors had substantial difficulty remembering anything. The deposition is replete with $I$ don't recall, $I$ don't remember things pertinent to this invention that would be pertinent and relevant to the infringement.

So to the extent that the defendants cite that memory loss and the inability to find this, that or the other in the record as an example of prejudice, plaintiff certainly has not responded to it. So the Court finds in this situation that the defense of laches is appropriate and should apply and so, therefore, the court grants defendant's motion on the defense of laches.

That being said, in this case the plaintiff's damages must flow from the date of filing its complaint,
which was September 15th, 2011.
So I say this: When we look at the instruction on determining when damages should be calculated, the law talks about the damages flowing from the date of the alleged infringement and notice of the infringement. There was no evidence in this case that the plaintiff Lycos or $I / P$ Engine ever gave Google any notice of any infringement before filing of the complaint, at least the Court didn't hear that. I think the question was asked, and there was no evidence that happened.

In any event, if you did not run into a problem with laches, you probably would have had a problem when you got down to getting an instruction on calculation of damages, in any event. But the Court finds it's appropriate to grant the motion.

So that being the case, the Court recognizes granting its motion may, in fact, change the way you intend to question your next witness and will certainly impact on your closing argument in this case in terms of what goes up before the jury now on the issue of calculation of damages and so you may need some time to make some adjustments, I don't know. But that's the Court's ruling on that issue.

You know, $I$ will note any objections you have and you can take it up at some future point.


|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

between Lycos and Google started when Google was using the DumbAds system. It was not a system that was practicing the patents. So to impute knowledge to Lycos when Lycos and Google entered into that relationship and Google was not infringing, $I$ believe, is error.

THE COURT: Well, in 2005, you take the position
that Google was not infringing in 2005?
MR. BROTHERS: No, sir, and $I$ didn't mean to say. The Court referred to the relationship starting in 2003 running into 2000 --

THE COURT: And the Court went to 2004 and 2005, and the heart of the Court's ruling is based on that relationship in 2005.

MR. BROTHERS: Understood. But what I'm trying to do is put into context the relationship commenced when Google was using a system that was not infringing.

THE COURT: It doesn't matter where it started.
The question is how soon did they learn of the potential that there was infringing going on?

MR. BROTHERS: Yes. And the testimony that the Court heard from Mr. Alferness was that Google didn't want to reveal the details of the system, the technical information about how the system worked. It wanted to keep it a very high level the information it put out, so as a result, there was insufficient information to put a
party on notice with regard to the technical operation of the system until in years later all of the additional evidence came out that was cited in the complaint, and we cited a considerable amount of information that Google made public in 2007, 2008, 2009, 2010 and 2011 . That information is what put --

THE COURT: Well, I understand that's your
view. The Court takes the position that Google had sufficient information to put it on constructive notice to do some investigation and some inquiry about whether its patents were being violated.

MR. BROTHERS: I understand the Court's ruling. THE COURT: You have made your record, and I'm sure this won't be the end of it.

MR. BROTHERS: There's one other point that I would like to address with regard to the court said that Lycos did nothing with regard to protecting its patent.

In fact, we have tendered evidence as part of our opposition to motion for summary judgment that Lycos between 2007 and 2010 was engaged in litigation with other entities regarding this patent family, and the law does not require that Lycos sue everybody at the same time and that that is an excusable delay under Federal Circuit case law that if Lycos is enforcing the patent family against others, that that is appropriate and
sufficiently an excusable reason, and that is why laches should not apply.

THE COURT: Okay. Thank you.
The Court does recall that, and the Court did not cite that in its ruling a few minutes ago. The Court did rule that you were doing some other things regarding the patent in 2007 and 2008. The Court didn't mention that in its ruling just now. The Court didn't construe that as being something that totally barred you from raising the issue of infringement with Google.

And the Court is aware of the fact that you
litigating somewhere else is something the Court may consider. That doesn't mean that the Court is bound to consider that and to consider that as a total defense to the laches. You are right, you have indicated the Court does have discretion in its equitable defense. The Court doesn't have discretion in considering the facts in the case in ruling on laches.

MR. BROTHERS: Well, because I think that in addition to -- because $I$ think this might be an issue that would be appropriate on appeal, I would urge the Court that we proceed through verdict and then in a JMOL motion, assuming that there is a verdict for the plaintiff, that then once we have that full verdict, then the Court can so rule and then we can, if need be, go to
the Federal Circuit so we don't have to go through and redo this again.

THE COURT: Now, Mr. Brothers, what you said, the court understands that, and that may very well be a wise way to go, to avoid coming back and to reconsider it again, but let's put it this way: That is the Court's ruling on the issue of laches. But what the Court will do is the Court will defer this and let it simply go, but I want you to understand that when the verdict comes back in here for the plaintiff, the court is going to come back to the issue of laches and the question -- I think what you say is wise, to avoid us having to come back here again or to deal with this issue again. So I just want you to know that's what the court's ruling is.

So the Court, gentlemen, as a matter of caution,
the Court will defer and hold it; but if the verdict comes back in here for the plaintiff, the court is going to --

Yes, sir, Mr. Nelson.
MR. NELSON: I would just like to address that issue, your Honor. I appreciate the Court's ruling and understand what you are talking about, but there's a fundamental problem with doing it that way because most of their case, particularly on the damages side, is based on this use, use, use, use. They are trying to use that
argument to prejudice the jury with a big number.
Now, if the jury really is not to be considering
that big number because they don't have any right to claim it, they shouldn't be allowed to use that evidence to try to prejudice the verdict and to achieve some kind of compromise because the jury thinks, oh, there was a lot of use on the one side and, therefore, they should be able to get something out of it.

THE COURT: Let's put it this way, Mr. Nelson. If the jury finds infringement, okay, they are simply trying to calculate the damages. If they come in and they calculate damages to come in with some large number, the court is simply saying it's very easy for the court to grant its motion for laches and cut down the size of that verdict.

Now, I guess one problem may very well be --
MR. NELSON: Because, see, the problem we have, your Honor, with that --

Okay. You are thinking. Let me know when $I$ can talk.

THE COURT: Go on. I'm thinking about what you said.

MR. NELSON: Okay. So the problem we have with that is, remember, the only evidence that Dr. Becker put in goes back to 2005, right, mid-2005? So the jury has
the one number. He hasn't offered anything else about what would be the case as of a different date. So they are going to be arguing to the jury that they are entitled because of this use by Google, as they keep saying, that they are entitled to $\$ 493$ million in damages.

Now we know from your Honor's ruling that's not correct. So what happens if the jury comes back with a verdict of $\$ 50$ million? What are we to take from that, because they haven't been given the proper evidence in terms of what the damages claims are to consider, and then we don't know how to deal with that.

THE COURT: Okay. We are going backward and forwards.

Mr. Brothers, Mr. Nelson's point is simply this, and it reminds the court that the Court has an instruction in here -- the Court understands what you want to do and the Court doesn't want to be in a position it has to come back here again to try this case, depending upon what happens, but that may be a reality because there is an instruction in here that the court has to deal with to tell the jury from what date they are to commence calculating damages in this case, and the Court has to give them an appropriate date to commence calculating damages.

award and then damages as of September 15, 2011.
So we have that question being presented to the jury, we have the full record, and we have the answers to the questions, so we don't need to retry the case. And I believe that can be explained in instructions to the jury where the jury can then say this is the total amount that is sought; however, there is an issue or a question, however the Court wants to phrase it, with regard to damages prior to the filing of the lawsuit. The Court instructs you that you are also to determine the appropriate measure of damages as of the date of the filing of the lawsuit.

So we have those two pieces of information and we can tailor the summation accordingly. That, I believe, will have all of the evidence in the record.

THE COURT: All right. Mr. Nelson, the Court is going to have to decide this. The Court is trying to accommodate you and understand what you are saying, but --what else do you have to say?

MR. NELSON: So, your Honor, that's exactly the purpose of a Rule $50(a)$ motion. It's something that shouldn't go to the jury, and your Honor has ruled as a matter of law. So the fact of the matter is in the jury instructions we cannot go back to the jury and say, please calculate damages from some period of time when
your Honor has already ruled that they are not entitled to damages because, $I$ mean, set aside the confusion issue that we have already talked about, that's an advisory verdict, your Honor. I mean, that's an Article 3 problem right there.

I mean, $I$ understand what it is they are trying to do, but that is exactly the purpose of Rule 50 (a). It's something that shouldn't go to the jury.

THE COURT: Okay. Gentlemen, here's where we stand. The Court is going to stick with its ruling.

Mr. Brothers, the Court understands what your concern is and the court has some concern, but the court has accepted the inevitability that with respect to this case that is heavily litigated, it's heavily financed, so you have all the time in the world and all the lawyers in the world, that this case will go on, even after we are gone. So the Court has granted the motion and the Court will proceed to just let it take effect.

Gentlemen, you have an opportunity to again
renew your motions, depending upon the verdicts: Motions for a new trial, motions for appeal. You have all kinds of options out there, and I'm sure $I$ will be hearing about it.

Okay. That's it. Bring in the jury.
(Jury in.)

Dr. J. Carbonell - Direct

```
    THE COURT: You may have a seat.
    Let the record reflect all jurors are present in
the courtroom. Does counsel agree?
    MR. CIMINO: Agreed.
                            MR. NELSON: Agreed.
                            THE COURT: Ladies and gentlemen, now the
plaintiffs have the opportunity to call a rebuttal
witness.
    You may call your witness.
    MR. CIMINO: Your Honor, the plaintiff calls
Dr. Carbonell, an expert, who will provide an opinion on
the validity of the '420 and '664 patents.
    THE COURT: All right.
    DR. JAIME CARBONELL, called as a rebuttal
witness, having been first duly sworn, was examined and
testified as follows:
                                    DIRECT EXAMINATION
BY MR. CIMINO:
    Q. Good morning.
    A. Good morning.
    Q. Could you please introduce yourself to the jury?
    A. I am Jaime Carbonell.
    Q. Where do you live, Dr. Carbonell?
    A. I live in Pittsburgh, Pennsylvania.
    Q. And why are you here today?
```

A. I'm here to testify on behalf of the plaintiff on the validity of the asserted patents.
Q. Okay. So what's your current occupation?
A. I am a professor at Carnegie Mellon University, a chaired professor, and I'm also the director of the Language Technologies Institute, which is part of the university.
Q. You mentioned chaired professor. Can you explain to the jury what a chaired professor is?
A. Yes. I believe that we heard earlier three ranks of professor, assistant, associate and full, and chaired professor is one level above that in the university. Q. What percentage of professors in the university achieve the rank of chaired professor?
A. It's approximately five percent.
Q. Are there any ranks above chaired professor?
A. Not on the academic track. On the administrative track you have the Provost or president.
Q. And how long have you been a chaired professor, Dr. Carbonell?
A. At least 15 years.
Q. And as a chaired professor, have you focused on search and information retrieval and related technologies?
A. Yes, I have.

Dr. J. Carbonell - Direct
Q. Do you currently teach?
A. Yes, I do.
Q. What type of courses?
A. They are primarily graduate courses and graduate
studies.
Q. In what type of areas?
A. I teach in search, text mining, artificial
intelligent, machine learning.
Q. Now, you also mentioned that you are the director of
the Language Technologies Institute?
A. Yes.
Q. What's the Language Technologies Institute?
A. It's a research institute that conducts research in
all aspects of computer processing of language, spoken
language, speech recognition, textual language, machine
translation, search engines, information retrieval, text
mining, and so on.
Q. And you said that you are the director?
A. I am.
Q. What is the director position?
A. I have responsibility for the research agenda, the
educational programs and the administration of the
institute.
Q. And how long have you been the director?
A. Since it started in 1996.

Dr. J. Carbonell - Direct
Q. Did you have any involvement with starting the institute?
A. Yes. I essentially founded the institute.
Q. How many people make up the Language Technologies institute?
A. It's over 200 in total of which, I believe, 32 are faculty members, a number of staff members for post-doctoral fellows, Ph.D. and Master's students. Q. Does the institute conduct research?
A. It certainly does.
Q. Can you give the jury a couple of examples of the types of research that the institute does relating to search and information retrieval?
A. Yes. The institute does research in the areas I mentioned earlier. A couple of specific examples would include working with IBM on the Watson system. This is the Jeopardy Championship System. Two of the components were developed in the institute.

Another example is search engines. The institute has been responsible for two of the three most popular open source search engines. One is called Leamer, the other one is called Indri.
Q. Do you have any project teams you are responsible for that conduct research?
A. Me personally, you mean?

Dr. J. Carbonell - Direct
Q. Yes.
A. Yes, I do.
Q. Can you describe what types of research that project does?
A. I'm responsible for a project that conducts research with the U.S. Government, primarily DARPA. That is part of the Department of Defense. That research is in areas like text mining and machine learning for text mining, an especially large scale. Another group focuses on machine translation and text mining.
Q. Is in your view Carnegie Mellon University known for computer science?
A. Yes, it is. I would say it's among the top three with MIT and Stanford.
Q. How big is the College of Computer Science?
A. It's fairly large. There are over 200 faculty members in total. Those include the ones I mentioned, and over 800 students.
Q. And how long have you been there, Dr. Carbonell?
A. I have been there since 1979 .
Q. Can you describe how your career progressed at CMU?
A. Yes. I was hired as an assistant professor for the first five or six years there, then as an associate professor, then $I$ was awarded tenure, then as a full professor, and most recently as a chaired university

Dr. J. Carbonell - Direct
professor in the Language Technologies Institute. Q. Can you describe a description of your educational background for the jury?
A. My undergraduate education was at MIT, The Massachusetts Institute of Technology where I have degrees in mathematics and in physics. Then $I$ went to Yale University where $I$ received a Master's degree and a Ph.D, both in computer science.
Q. And when did you receive your Ph.D?
A. In 1979.
Q. Did you do a dissertation?
A. Yes, I did.
Q. What was your dissertation about for your Ph.D?
A. The dissertation was in the area of artificial
intelligence and text mining, and it received the highest honor.
Q. Have you done any design of search and retrieval systems? You mentioned the open source. Any others?
A. Yes, I have. I am the founder -- the founder of Lycos was my Ph.D. student, Michael Mouldin. I provided formal advice there. I was also the designer of another search engine system called Condor, a search engine used in Asia and, particularly, in Korea.
Q. Have you heard of a system called advise as a memorandum?

Dr. J. Carbonell - Direct
A. Yes. Vivisimo is a company, a spin-off of Carnegie Mellon University, which works in the area of search, in particular enterprise search. I was a scientific advisor to Vivisimo. Vivisimo was recently acquired by IBM and their search engine now becomes IBM's search engine.
Q. You mentioned Lycos and the founder Michael Mauldin, that you were an advisor. Were you a paid advisor? A. I was paid my salary at the university. I received nothing beyond that.
Q. When did advising Lycos and Michael Mauldin end?
A. Well, advising Michael Mauldin as a student ended in the early 90's when he graduated, then $I$ was an informal advisor to Lycos, the company, and that ended, I believe, in 1994 when it had its initial public offering.
Q. Did you know Ken Lang?
A. I knew of Ken Lang. He was a student at Carnegie Mellon. Not in the institute where I direct, but elsewhere.
Q. Did you do any advising for WiseWire?
A. No, I did not.
Q. Is it uncommon for your students to pursue careers in search engine technology?
A. No. On the contrary, it's quite common. Many of

Dr. J. Carbonell - Direct
them go and work in search engine technologies in various companies or in academia. We have more of our Ph.D. students now working in Google than anywhere else, including the five or six that $I$ had advised myself are Google employees. Others have gone to Microsoft and other search engine companies.
Q. Other than the students that you advised going to Google, does your language institute have any other connection to Google?
A. Well, there's an informal connection in the sense that $I$ was a colleague of Andrew Moore, who is the director of Google Pittsburgh. We taught courses together and so forth. Also, two of the faculty at the Language Technologies Institute have received grants from Google. I personally have not.
Q. How about awards or honors, have you received any awards or honors through your academic career?
A. I have received several such as the Simon Teaching award. Maybe the most relevant one is a Best Paper award for translating multilingual search engines. That was in 1997 awarded by the International Jones Conference on Artificial Intelligence.
Q. Dr. Carbonell, have you started any companies that are involved in search or information retrieval? A. Yes, I have.

Dr. J. Carbonell - Direct
Q. Do you know what the Carnegie Group is?
A. The Carnegie group was started in the 1980s. It was a company in artificial intelligence and text mining and, essentially, the precursor of modern search engines. That company had an IPO and was later acquired.
Q. And you had involvement with that company?
A. I was the founder of that company.
Q. How about Carnegie Speech, have you heard of Carnegie speech?
A. Yes, Carnegie Speech was founded about 12, 13 years ago. It's in the area of computer assistance to teach languages, to teach humans how to speak or write other languages. I'm a co-founder of that one as well. Q. How about Dynamix Corp., do you know what that company is?
A. Sure. I was also a co-founder of Dynamix. Dynamix is somewhat different. It does research and development for the U.S. Government for various agencies in different projects. It involves text mining, it involves large scale systems, it involves search, and it involves machine learning.
Q. And what's your connection to the company now?
A. My connection to the company now, I am the chief scientific advisor to the company.

Dr. J. Carbonell - Direct
Q. How about books, have you had any books published?
A. I've had five books published, three of which
essentially belongs to the current era of machine
learning. These were together with two of my
colleagues, Tom Mitchell and Ryszard Michalski, the late Ryszard Michalski.
Q. What do you mean by launched the era of machine learning?
A. Machine learning is a vibrant field now, but in the early 80s' it was just beginning and we, the three of us that I mentioned before, started the first conference, the first journal, and the first three books in the area. That was considered the genesis of that field. Q. So are you aware of any books on machine learning prior to yours?
A. Not in machine learning, per se, no. There were other books that pertained to it in a more indirect way. Q. How about publications, do you have any publications directed to search or information retrieval?
A. Yes. I have 300 scientific articles in total, some of which are pertaining to information retrieval and search engines.
Q. How about patents, are you the named inventor on any patents?
A. On four patents, on the four issued patents I'm the

Dr. J. Carbonell - Direct
named inventor in areas of text analysis, machine translation.
Q. Do you have any other inventions?
A. There's one which I believe is particularly relevant.
Q. Could you please describe it to the jury?
A. Yes. It's called maximum marginal relevance.

That's a big name to just simply say diversity in search engines. Search engines today, if you get diverse results, it will give you copies of the same web page for others that are almost identical because they include both a relevance and a diversity criteria. That's what maximum marginal relevance does. I did not patent that. I published it as a paper. It has over 1,000 scientific citations.
Q. What does it mean to have over a thousand scientific citations?
A. It means that a thousand others have based their work on the maximum marginal relevance result or method that $I$ described in that paper.
Q. Dr. Carbonell, all in all, how long have you been involved in the field of search and information retrieval?
A. For a long time, roughly 28, 30 years.

MR. CIMINO: Your Honor, we offer the testimony

Dr. J. Carbonell - Direct
of Dr. Jaime Carbonell as an expert in this case in the field of search and information retrieval.

THE COURT: Do you wish to voir dire him on his credentials?

MR. NELSON: No, sir, your Honor.
THE COURT: All right. Ladies and gentlemen, you may accept Professor Carbonell as an expert in the field of search and information retrieval.

BY MR. CIMINO:
Q. Dr. Carbonell, let's turn to your opinions in this case.

And, your Honor, Dr. Carbonell has a presentation that he would like to go through. The majority of it are demonstratives or exhibits that are already in evidence. There is one new exhibit that he has a little bit later in his presentation, and $I$ will stop and have him look at the binder before that slide goes up.

THE COURT: Okay.
BY MR. CIMINO:
Q. Dr. Carbonell, were you in the courtroom when

Dr. Ungar testified about validity?
A. Yes, I was.
Q. Do you agree with his conclusions that the ' 420 and
' 664 asserted claims are invalid?

Dr. J. Carbonell - Direct
A. I certainly do not disagree.
Q. Why not?
A. Because the asserted prior art fails to teach or disclose some of the essential claim elements of the asserted claims of claim 10 and 25 of the '420, and claim 1 and 26 of the '664. Those are the independent claims.
Q. So before we get into your detailed analysis there, Dr. Carbonell, I was wondering if you could walk the jury through a high-level explanation of why you believe the ' 420 and '664 asserted claims are valid.

Now, what is the prior art date for the ' 420 and 664 patents?
A. For both of them it is December 3rd of 1998.
Q. And what does that date mean?
A. That date means that in order to be qualifying prior art, it would have to have been published prior to that date.
Q. And what types of systems existed before that date?
A. Well, basically, there were two camps, two different sets of systems. One was a search-based system, which processed a query and retrieved the results. The other camp was a profile or collaborative camp that had long-term user needs or long-term user preferences, and these systems filtered new incoming data for relevance

Dr. J. Carbonell - Direct
to the filter and offered it to the person when it was available. So one served an immediate information need very quickly, that's a search, and the other one, a long-term need, slowly.
Q. Can you pull up Dr. Carbonell's demonstrative.

Dr. Carbonell, I understand you have a simple animation you wanted to walk the jury through to explain the search systems?
A. Yes. I'm sure the jury is familiar with having used search systems. Here we animate, essentially, how they work, which is that information is collected from external sources such as the web or it's already available in internal sources such as libraries, files, data bases. That information is aggregated in a database and then an index is built. That index is crucial to be able to search quickly.

That index is then made available to a query server, as you can see on your bottom right-hand part of the demonstrative, and then when the user issues a query or a set of queries, a rank set or rank list of results is offered back to the user, and that is based on the index.
Q. Dr. Carbonell, what criteria is used to pull
information back to the user in a search system?
A. It's usually a query versus item match. Items are
the things that are indexed. Terms are the words in the query. And it's usually serving the immediate need of the user as expressed in the query.
Q. And what do you mean by immediate need?
A. I mean the need that the user expressed at that moment by virtue of formulating the query.
Q. Okay. And I understand that you have a similar animation for profile systems?
A. Yes, I do.
Q. Before we get there, can you explain what you mean by profile?
A. A profile is a long-term, long-standing need of one user or of multiple users and uses shared profiles, or shared parts of profiles can be used in the profiling system to determine what to show to the first user.

## So if another user with very similar interests

 or needs has liked some books or some articles or some items to purchase, then these are offered as potentially relevant to the first user who is similar because of the profile similarity.Q. In a profile system, would I fill out a profile?

How would it be created?
A. It can be created in different ways. You can fill it out over time. It could be based on things that you have liked that the system has automatically extracted

Dr. J. Carbonell - Direct
those features and put it into a profile, it can be based on what other people have liked. If you liked the same things that they have liked, you would essentially borrow parts of their profile.
Q. Okay. Let's take a look at what you put together.
A. So the profile system in this demonstrative, instead of searching the library for a book that this lady might like, we match her to a collaborative profile, in other words, find other people who have similar likes. That goes to a persistent interest matching engine. That means long-term interests are similar to others, and you look at which other books the others have liked or which other books are similar to books that she has liked in the past. So she can be part of that group that you see to your right, and that results in a recommendation. It could be a single recommendation or it could be multiple recommendations over time.
Q. What do you mean by over time?
A. I mean that a profile system does not represent an immediate need. It represents a long-term standing need, and the system, as new books come in or new articles become available, it would be filtered through the profile and then offered to the user.
Q. Would the user here, Dr. Carbonell, ask for the books as new ones became available?
A. No. That's not the way profile systems work. They would establish a profile and they get recommendations over time. It could be that these recommendations accumulate, for example, the e-mail and the user chooses to read the e-mail at a particular time or chooses to read the recommendations once she is ready.
Q. Okay. So how would the prior art process result from both systems?
A. Well, the prior art was divided into one or another of these camps. It would either search their systems that processed the query and provided immediate results based on the immediate needs of a user, or they were profile systems. At best, some prior art suggested that the output of one could serve as the input to the other. So, if you animate this slide, please.
Q. Sure. Would you walk the jury through this.
A. This shows the user using a query. The query server producing a set of ranked results which are then, metaphorically speaking, tossed over the wall to a profile system, which then checks whether these results are of interest to the long-term needs or long-term likes of that user, producing some final results.

So in this case we see the output of the search system or the query-based system serving as the input to the profile system. Notice that in this case the query

Dr. J. Carbonell - Direct
or the search criteria are not available to the profile system in reading results.
Q. So is the query also passed over the wall to the profile system?
A. No. The query is not passed over the wall and even if it somehow were, the profile systems are not set up to process a query. That is a search functionality. Q. So what criteria would the profile system use on the right-hand side of this demonstrative to select the final results?
A. It would use the long-time profile, in other words, the long-term information desires or preferences of that user or those of other users which have very similar profiles. So it is not a question answering or a query serving process at all. It works very differently. Q. Now, Dr. Carbonell, why is Mr. Lang and Mr. Kosak's invention different from the prior art methods you describe here?
A. Yes. Mr. Lang and Mr. Kosak worked in WiseWire, which is a profile-based system or was at that time. They were acquired by Lycos. Lycos was a search system, and so now they had the combination of both approaches available to them inside the same roof in Lycos.

What they did was find a way to tightly couple, tightly integrate the two, collaborative analysis,

Dr. J. Carbonell - Direct
content-based analysis with respect to a query, In other words, to use the immediate information need, not just a long-term standing need, of the users, and then filter also with respect to the query, filter with respect to the immediate need, not just simply filter with respect to what they generally liked.
Q. Dr. Carbonell, in your review of the prior art, have you seen any profile systems that would return results with respect to relevance of the query?
A. No, I have not. This is unique.
Q. And, Dr. Carbonell, have you seen in prior art in search systems that used the combination that you showed here in yellow, collaborative and content data, to provide results with respect to relevance to the query? A. No, I have not seen that either. In particular, search engines of the day were more primitive, if that is an appropriate word, than the current ones and they were struggling just to do a good job finding items that were relevant to the query in the early days.
Q. In your opinion, Dr. Carbonell, would Mr. Lang and Mr. Kosak's invention in the ' 420 and ' 664 patents provide better results than the prior art systems you studied?
A. Oh, they absolutely would, for more than one reason.
Q. Can you please explain those reasons?
A. One is that you are now able to use multiple criteria for selecting the information. You are able to use criteria about the immediate need, as well as criteria about what they generally like, as well as criteria about what other people with similar likes or even similar immediate needs, even similar queries would have liked. That combination uses much more information in making the selection, in making the ranking, in making the filtering. That is the primary reason.

Another reason is that if you, quote, throw something over the wall, the search results, you throw them only by the criteria of search, not by the relevance to the query, not by the criteria of other things such as what they typically like, what their friends typically like, and so forth. So you miss some things. So after you filter them on a second pass, they are only filtering those things that are actually provided, not the ones that you missed that may have proved better by the combination of all the criteria. That's the results, surprising, in the sense they are better.
Q. I believe Dr. Ungar testified that it would have been easy to come up with what Ken Lang and Mr. Kosak came up with. Did you hear that testimony?
A. I heard the testimony, yes.

Dr. J. Carbonell - Direct
Q. Do you agree with that?
A. No, I definitely fundamentally disagree with that testimony.
Q. Can you explain why?
A. Well, first of all, the two camps were indeed separate. The camp that did the profile had no deep knowledge of how a search method worked, and the same was true the other way around. You needed somebody that was well steeped in both camps to be able to see how to do this tight integration and perform the profile and content analysis with respect to the query and the filtering also with respect to the query.

To attest to the difficulty, $I$ was working in the area at the time, the thought occurred to me that it would be a good idea to do this and I failed to come up with an effective method.
Q. Given the prior art you have reviewed in this case and the prior art presented by Dr. Ungar, do you think anyone else was successful prior to the December 3rd, 1998 coming up with the Lang and Kosak invention?
A. There's no evidence that anyone else was successful or even close at the time.
Q. Okay. Dr. Carbonell, can you please provide the jury with a summary of your opinions?
A. Yes. My opinions, in summary, are that all the

Dr. J. Carbonell - Direct
asserted claims of the ' 420 patent are valid. This would be claim 10 and 25 independent claims, and also the dependent claims based upon them. All the asserted claims of the '664 patent are valid. That would be claim 1 and 26. Those would be the independent claims, and all the dependent claims based on them.

In particular, no claim is anticipated by Bowman or Culliss. Those are the two references cited by Dr. Ungar as anticipating, and no claim is rendered obvious in any of the patents by Balabanovic Lashkari, Rose, Bowman and/or Culliss, or any combination thereof. Q. I'm going to refer to the Balabanovic as Fab, okay? A. Okay.
Q. Let's turn to your detailed analysis and start talking a little bit about the technology. Before we get there, though, can you please provide your understanding of what anticipation is?
A. Yes. Anticipation means that a single prior art must anticipate, in other words, must disclose and teach every single element in a patent claim in the manner described in that claim. So to turn that around, no anticipation means that a claim is not anticipated if even a single element of the claim is missing. In our case, if it's missing from Bowman or Culliss.
Q. So what does it mean if a patent claim is

Dr. J. Carbonell - Direct
anticipated?
A. Well, it means that every single one of the elements, each and every one, must be contained in that single prior art reference and, moreover, be used in a combined in the manner described in the claim.
Q. And you heard Dr. Ungar testify that he believes two references, Bowman and Culliss, anticipate and, therefore, invalidate the ' 664 and ' 420 patent claims?
A. Yes, I have heard him testify.
Q. So for anticipation we only need to look at two pieces of prior art?
A. Only the ones that he claimed anticipated.
Q. Okay. Let's look at the first one. Let's start with Bowman. To keep it simple, let's focus our analysis on claim 10 of the ' 420 patent. Is that okay? A. That's okay. That's one of the independent claims.
Q. Okay. And then we will come back and talk about some of the other asserted claims, okay?

In your opinion does Bowman anticipate claim 10
of the ' 420 patent?
A. Bowman certainly does not anticipate claim 10 .
Q. Can you explain to the jury which claim elements you believe are not shown in Bowman or disclosed by Bowman? A. I will do so first with a reminder of the color scheme that we are using, which is the same color scheme

Dr. J. Carbonell - Direct
that was provided by Dr. Frieder and then also a color code by Dr. Ungar. Yellow refers to search or query, blue refers to content of items, green refers to collaborative, and purple refers to filtering or filtering combining relevance to the query.

So now to answer your question, it would be the second and fourth claim, otherwise known as claim (b) and claim (d) that were circled in red here, are not anticipated.
Q. The ones settled in red you believe are missing from the disclosure of Bowman; is that right?
A. That's exactly correct.
Q. Okay. So let's start with your description of what Bowman actually teaches. How does the Bowman reference work?
A. Okay. If you would bear with me a minute, I am showing in this demonstrative a figure from Bowman. It's Fig. 4. It shows what he calls the item rating table or just the rating table.

The rating table contains number of clicks each time a word and item appear. In other words, when the user issued a query that contained the word "dynamics" and different items were shown to the user -- these items are by those long numbers here -- the column on the right is a number of times a user clicked on it.

Dr. J. Carbonell - Direct

So, if you would animate.
Q. Sure. What is shown here?
A. This is simply to illustrate that if a user typed the word "dynamics" as a query, the document that begins with 1883 was clicked on 23 times by other users. So it would have the highest score according to that query term in this example that he shows.
Q. Okay. Dr. Ungar believes that Bowman discloses the content analysis in the manner called for by the asserted claims; is that right?
A. He has stated as much. I disagree with him.
Q. Why do you disagree with him?
A. Well, as you saw on that item rating table, what Bowman is doing is he's matching a query term against an entry in the table. A query term against entry in the table, not against the content of the items. It does not look at the content of the items. He does not match against the content of the items. In fact --
Q. Dr. Carbonell, up on the screen is a part of Bowman DX-59, if you will read the passage in column 4:38 to 48. Can you explain whether that supports your opinion?
A. Yes. In fact, that very strongly supports my opinion. This passage comes from two different parts of Bowman, column 2 and column 4. It's clearly central to the way his facility operates, and he says that the

Dr. J. Carbonell - Direct
query results are produced in accordance with a collective and individual user behavior. Collective and individual user behavior. That is collaborative. That is what other users have done in the past.

And then it goes on to say, "rather than in accordance with the attributes of the items." Attributes are the content of the items. He's saying rather than. He's disallowing looking at the content. He's teaching explicitly the behavioral part and teaching away from the content part.
Q. So Dr. Carbonell, in your view what would this sentence here circled in red say to a person in the field in 1998 reading Bowman?
A. If a person of ordinary skill in the field was reading Bowman, he would, she would, interpret it to mean perform the search based on collaborative criteria and collaborative criteria only.
Q. Now, Dr. Ungar in his analysis mentioned something about matching in Bowman. Do you agree that discussion in Bowman about matching provides a content analysis? A. No, I disagree with that. Bowman does use the word "matching," but he means matching to the rating table. Q. Let's take a look here at $D X-59$, the Bowman patent Fig. 9. Does Fig. 9 of the Bowman patent support your view about what matching means?

Dr. J. Carbonell - Direct
A. Yes. Not just Fig. 9, but Fig. 9 is a good illustration. If we look at the second processing item, 901 that is called out in this figure, Bowman talks about identifying entries matching the term having the 3 highest rating scores. So by matching, he's matching the term, that is the word in the query, with the entry which is in the rating table. So nothing about content. He's looking at the rating scores. The rating scores are user ratings, number of clicks, purely collaborative, and Bowman is very clear on this. Q. Okay. Dr. Carbonell, I believe you have up here a demonstrative that was used by Dr. Ungar, DDX-3.59. Can you explain how your view is different from Dr. Ungar's? A. Yes. This demonstrative is one of Ungar's slides where he characterizes or mischaracterizes my position from a report that $I$ provided earlier. He says -- he cites to claim 29 of Bowman that uses the word
"matching," adjusting the ranking value for use in each item in the query results to reflect the number of terms specified by the query are matched. So he's just simply pointing to the use of the word "matching." And as we saw, the word "matching" is used to match the term in a rating table in order to look at the number of clicks, the number of times that people have liked -- the popularity of the item, as it were. So matching means

Dr. J. Carbonell - Direct
looking up the popularity. It does not mean looking at the content or doing anything else with the content. Q. Now, the color coding here is blue. What does blue stand for?
A. Blue stands for content, and I believe that he is wrong in that. So if we were to modify that coloring scheme to make it green, collaborative, then $I$ would agree with his statement of what that frame is actually disclosing.

By the way, the word "matching" must be used in a consistent way throughout the patent description and the patent claims.
Q. Yes. And Dr. Ungar has part of the patent specification on the same page below the claim 29 we just looked at. What does that passage say to a person of ordinary skill in the art?
A. This, I believe, is the same passage that $I$ have shown earlier that Dr. Ungar highlighted. It says that the individual user behavior rather than in accordance with attributes of the items.

This basically supports my opinion, rather than. The word could not be more clear that it says not to do it with respect to the attributes of the item. So it definitely does not look at content. Q. Does this passage help you to understand what was

Dr. J. Carbonell - Direct
meant by the word "matching" in Bowman?
A. This passage and the figure that we just saw and the rest of the mentions of matching within Bowman. So your answer is yes.
Q. In his direct testimony did Dr. Ungar take this passage into account in his interpretation of the word "matching"?
A. Insofar as $I$ can see, Dr. Ungar conveniently ignored this passage and many others that did not support his opinion.
Q. Okay. Thank you, Dr. Carbonell.

Let's talk about filtering. Dr. Ungar testified
that Bowman discloses filtering in the manner recited by the asserted claims. Do you agree with that opinion?
A. No, I disagree with that opinion.
Q. Why?
A. Well, because filtering is different from ranking and Bowman discloses ranking and does not disclose filtering.
Q. Okay. I believe that you have prepared a demonstrative to explain the difference between filtering and ranking. Can you provide your view of how the industry would understand filtering and ranking in 1998?
A. Yes, I would. First let me apologize for my lack of

Dr. J. Carbonell - Direct
artistic ability. Filtering operates by taking a set of items, as you see on that group of cloud to the left, and looks at one item at a time one by one and looks at the one or more attributes of that item and then decides whether to accept it or reject it, whether to keep it or to throw it away. So filtering is done with a fixed criterion, a criterion that does not depend on the other items, and it does the processing one at a time without comparing one item to another.
Q. And ranking?
A. And ranking in contrast takes the same input, a set of items, but then compares them with each other. It uses a ranking function or a ranking score, for example, popularity, as Bowman does, and then outputs a rank list, also known as a sorting list. Ranking and sorting are very similar concepts. So the outputs are very different. Instead of a region set and subset, it operates a rank list.

I also should mention that a filtering system could accept everything or could reject everything. It doesn't have to have members of both of those sets. Q. So why would a person of ordinary skill in the art in 1998 use filtering versus ranking?
A. They would use filtering if all they wanted to do was to select some items that were, for example, of very

Dr. J. Carbonell - Direct
high quality and they have none, in which case the accepts would have been empty, or it could have been many, in which case that set would dominate the rejects set.

To rank them would be putting them in order. Even the one at the top of the order could be low quality or the top of the order in many more could be of high quality. Ranking is just a different kind of operation. Search engines typically rank because you have to have some output. So, the best you can, whether it's good or not.
Q. Now, Dr. Carbonell, $\quad$ believe you have a witness binder in front of you?
A. Yes, I do.
Q. Hopefully it's pretty thin. Can you take a look at PX-434?
A. Yes, I have it here.
Q. Can you identify this document?
A. Yes. This document is an article written by David Lewis of AT\&T Research. It pertains to the so-called TREC evaluations. TREC is an evaluation conducted by the U.S. Department of Commerce through the National Institute of Standards and Technology. They are evaluations of different kinds of information retrieval and information processing systems.

Dr. J. Carbonell - Direct

```
MR. CIMINO: Your Honor, we would seek to admit
PX-434 into evidence.
    THE COURT: Any objection?
    MR. NELSON: Well, your Honor, it wasn't
discussed in his report, but it's in the materials
considered. So we can move it along, I am fine with
that.
    THE COURT: All right. It will be admitted.
        (Plaintiff's Exhibit 434 was admitted.)
    MR. CIMINO: I have to add an objection. I do
disagree that it was not discussed in his report, but we
can move on.
    So, your Honor, the next demonstrative pulls up
a passage from that. I would like to be able to have
that published for the jury.
    THE COURT: All right.
    MR. CIMINO: I believe the rest of the
presentation is all based on either demonstratives or
admitted exhibits, your Honor.
BY MR. CIMINO:
    Q. Dr. Carbonell, is your understanding of filtering
    consistent with how those in the field refer to the
    method?
    A. It is completely consistent, yes.
    Q. Can you explain how the TREC article you just
```

Dr. J. Carbonell - Direct
mentioned, PX-434, supports your opinion?
A. Yes. The U.S. Department of Commerce through the National Institute of Science and Technology -- I will abbreviate that as NIST -- wanted a way to evaluate the science or evaluate the technology, primarily the technology. It had a retrieval conference called TREC which had more than one TREC, more than one part of that conference.

One part of that conference focused on filtering, a different part focused on ad hoc retrieval, and so on. The abstract of this paper describing the TREC-4 conference -- this would be the fourth time the evaluations were done -- stated that the TREC-4 filtering track was an experiment in the evaluation of binary text classification systems, accept or reject -that's binary -- in contrast with ranking systems.

So the field was using classification or, in this case, filtering. Binary classification and filtering are the same thing. We were contrasting it with ranking systems with a separate evaluation for ranking systems for what they call the ad hoc retrieval track. That's the only point $I$ really wish to make here. The paper goes on in scientific detail as to how each evaluation was conducted.
Q. Do you know whether Dr. Ungar agrees that filtering

Dr. J. Carbonell - Direct
and ranking are different?
A. Well, originally Dr. Ungar disagreed, but he changed his opinion and by the time he testified, he stated that they are indeed different. So the witness for the defense and I have the same opinion.
Q. Now, in Bowman, does Bowman discuss presenting its results through filtering or ranking?
A. Through ranking.
Q. Dr. Ungar in attempting to show that Bowman discloses filtering mentioned a term called subsetting. Do you remember that?
A. Yes.
Q. Is there a difference between subsetting and filtering?
A. Yes, there is. If I may have the next slide.
Q. Can you please explain the difference?
A. Okay. The part on the left is filtering. I am not going to walk you through it a second time. The part on the right is a one additional step performed after ranking. So subsetting means that you first rank the items according to a score. That's the one at the top, for example, and so on down the list. And then you take that sorted list and you snip it, you say I'm going to keep the top 3 or the top 10. Search engines typically return the top 10 best results. That is a subset.

Dr. J. Carbonell - Direct

You could also subset with respect to a ranking value. For example, the median value and keep the top half of that list. Notice that subsetting is with respect to the rank list. It's not an item-by-item selection. It is not based on the specific properties of the item. Hence, it is quite different from filtering.
Q. Dr. Carbonell, does ranking occur first when you do a subsetting technique?
A. Ranking is a requisite step to do subsetting.
Q. Okay. Well, let's take a look at Bowman. Does Bowman's discussion of subsetting meet the filtering requirement of the asserted claims?
A. It does not. Bowman describes the subsetting process that $I$ have just described quite clearly. First he talks about ranking, generating ranking values for the items, and then he talks about ordering the items, that is, putting them in a rank list, and then he talks about subsetting the items, that is, keeping part of that rank list. He's very clear on his description. Q. Do you recall what Bowman describes as the criteria for subsetting?
A. Bowman describes two possible criteria for subsetting. One of them is keeping a fixed number of items, the top 3 or top 10 or top 20 . And the other one

Dr. J. Carbonell - Direct
is based on a ranking value, a particular value that was generated while the ranking was being done and he decided to keep all the ones above that value.
Q. Okay. So up on the screen $I$ believe you have another demonstrative that Dr. Ungar used, DDX-3.57.
A. That's correct.
Q. What is your take on Dr. Ungar's position that Bowman discloses filtering?
A. Well, Dr. Ungar merely states it discloses filtering. He does not argue why it discloses filtering, and he is wrong with respect to Bowman disclosing filtering. You see on the top left that's a recitation of claim element (b) of claim 10 of the '420 which requires content-based filtering. Of course, it is not content based, as we discussed before. It is also not filtering.

Ungar cites to Bowman in a different part than the one that $I$ cited, which says pretty much the same thing. In "Step 808 preferably involves sorting the items in a query result --" sorting, that's the same thing as ranking, "-- in decreasing order of their ranking values --" he's using ranking values in the exact same way $I$ described before, "-- and/or subsetting the items in the query to include only those items above a threshold ranking value." So he has to generate the

Dr. J. Carbonell - Direct

```
ranking values and pick one for the median or one that's
close to the top so you can only return the top results
and use that as the subsetting guide after he has the
rank list. So this is clearly subsetting as I described
it and not filtering.
```

Q. Okay. Dr. Carbonell, I believe here you have
DDX-3.68. This was Dr. Ungar's summary of all the
disclosures in Bowman that met the claim elements. Do
you agree with this?
A. No, I disagree with this.
Q. Where do you disagree?
A. I disagree with respect at least with respect to
claim element (b) and claim element (d). Bowman does
not disclose content-based anything and does not
disclose a filtering system, and those two claim
elements are not disclosed or taught by Bowman and,
hence, Bowman does not anticipate claim 10.
Q. And in your opinion is claim 10 of the ' 420 patent
valid over Bowman then?
A. Since it is not anticipated by Bowman, it is valid
over Bowman, yes.
Q. Okay. Thank you.
Let's move to the second prior art reference.
What is the second prior art reference that Dr. Ungar
asserts is anticipated?

Dr. J. Carbonell - Direct
A. Yes. That is a patent by Gary Culliss.
Q. And, Dr. Carbonell, like you did on Bowman, let's focus just on claim 10 of the 420 patent for now to try to keep this as simple as possible.

Do you believe that claim 10 of the ' 420 patent
is anticipated and, therefore, invalid over Culliss?
A. No, I do not believe that claim 10 is anticipated and so, therefore, claim 10 is valid over Culliss.
Q. Which claim elements do you believe are missing in Culliss?
A. It is the same ones that were missing under Bowman. That would be claim element (b) and claim element (d), the two that are circled in red.
Q. The two circled in red?
A. Yes.
Q. Okay. So like with Bowman, let's first start by having you describe to the jury how Culliss would actually work.
A. Yes, actually Culliss works in a way that is very similar to Bowman so maybe $I$ can make my description a little more rapid. Bowman discloses something he calls a rating index. That rating index is very similar to -excuse me, Culliss. I misspoke. Culliss describes a rating index that is very similar to Bowman's rating table. Culliss states that his invention monitors

Dr. J. Carbonell - Direct
searching activity, that is, selections and clicks by different users to organize articles in accordance with the searching activity of one or more users. Purely a collaborative process.
Q. How would it monitor searching activity?
A. It will take into account what queries were issued, what were the terms in those queries, and then what was clicked by the user of the different squares or summaries generated in the results page, whether they clicked on No. 1 or they clicked on No. 3, or clicked on both and not the others.
Q. Okay. I believe you just read from column 2:62-64. You also show here a part of the specification at column 4:57-64, an index at the bottom of this demonstrative. Can you explain for the jury what that index is and how it would work?
A. Yes. That index is what he calls his rating index.

Alpha and Beta are meant to stand for query terms like "human" or "dynamics" that we saw earlier. And then A1, A2 and A3, that represents articles -- that's why he calls them A -- or items. And the numbers represent the clicks. So, for example, if you look under Gamma, A2 -excuse me, A3 has two clicks under that index. So, again, this rating table is purely collaborative in the instruction.

Dr. J. Carbonell - Direct
Q. And how would Culliss then serve results in accordance with this index?
A. Culliss will look up in the index, it would match the query terms against the index entries and it would output the ones that have the highest number of clicks, the most popular ones, the ones that were most liked by other users or by the same user.
Q. Now, Dr. Carbonell, Dr. Ungar testified that Culliss discloses content analysis in the manner called for by the asserted claims. Do you remember hearing that testimony?
A. I remember hearing it.
Q. And do you agree with that?
A. No, I certainly disagree with that.
Q. Okay. Pull up part of DX-58, the Culliss patent. Here's the abstract.

Can you explain to the jury why you don't believe Culliss teaches the content elements as required by the asserted claims?
A. Because Culliss specifically teaches or discloses the collaborative or popularity-based aspect.

We see here as users enter search queries and select articles, the scores are altered. These are the scores in that rating index that $I$ just mentioned. The scores have been used in subsequent searches to organize

Dr. J. Carbonell - Direct
the articles that match a search query. So he used the scores, the number of clicks that users have done. If they liked article 3 and not liked article 1, article 3 will come up the next time. Culliss thinks that this is a good way for searching, a collaborative way.
Q. And that would not take into account the content of the article?
A. That process does not take into account the content of the article at all. It takes into account the search terms and it takes into account the popularity of the articles.
Q. Well, Dr. Ungar testified that Culliss's index, which we just saw, could be initialized with a content analysis. Do you recall that?
A. I recall that.
Q. So, first, what does it mean that the index could be initialized?
A. Okay. Let me explain initialization a little bit. Initialization means before you start, before the system starts to function you can have some initial values. They could all be blank, zero. They could all be set by a human. In fact, Culliss discloses both of those possibilities. Culliss also says that the initial value could be set by whether a term is contained in an article or the number of times that term is contained in

Dr. J. Carbonell - Direct
an article. That would be the initialization step. Q. Well, what role does initialization play in the index in serving results?
A. It plays virtually no role whatsoever. As you will see later in another example, Culliss itself ignores the initialization.

If we look at the highlighted region of the abstract, Culliss is talking about millions of people using the Internet typing in millions of queries. That was back in 1998. Today we are talking about billions of queries being served. So you would have billions of click-throughs having initialization value of 1 , regardless of how that was arrived at, becomes totally immaterial. Or even in this subsetting value of 3 , the word would occur 3 times.

So the initialization is immediately swamped by the use of the system in the Internet over time. So it doesn't matter how the initialization was done. The initial operation of the system is purely collaborative, pure profile, pure popularity-based system, and that's what governs.
Q. Okay. How many figures are there in the Culliss patent?
A. There's only one figure in Culliss's patent and that is the one that you see before you here.

Dr. J. Carbonell - Direct
Q. Does this figure describe the operation of the Culliss system?
A. Yes, it does. That's why Culliss put the figure in there in the first place.
Q. Does this figure describe content analysis?
A. The figure does not describe content analysis.
Q. What does the figure describe about the operation of the Culliss patent?
A. It describes the normal operation of the Culliss system. If we look at the top -- I'm sorry that my glasses are not great -- the first step he's talking about receiving a search query from the first user. The next step, Step 20 is presenting articles. The third step is allowing the first user to select one or more articles. That means to click on one or more articles. And then you alter the index according to the selections. In other words, you add one if the person liked it and don't do anything if the person did not click on it.

Then when you get a search query from another user, the user's popularity rating table. So he's describing the operation of it. He doesn't even bother to mention the initialization step in his figure because it is irrelevant for the normal running of the system.

The last step, by the way, when he presents the

Dr. J. Carbonell - Direct

```
article, he presents it in ranked order, so he's
disclosing ranking and not filtering, in addition to not
doing any content analysis.
Q. Okay. Thank you.
```

                    So just on the content analysis, do any of the
    boxes, $10,20,30,40,50$ or 60 that describe the
operation of Culliss, provide any information about a
content analysis for selecting the results?
A. No, they do not. They all refer to the
collaborative process. Not a single step refers to
content.
Q. All right. Let's move on to the other issue of
filtering. Dr. Ungar testified that Culliss discloses
filtering is embodied in the asserted claims. Do you
agree?
A. No, I disagree.
Q. And why is that?
A. Well, first of all, Culliss -- there's more than one
part to Culliss's patent. The main part is the main
facility, the one that we just described now, discloses
only ranking. I don't know whether the next slide
demonstrates that as well or not.
Q. Well, first of all, you mentioned facility. Can you
explain to the jury what you mean when you say the
Culliss facility?

Dr. J. Carbonell - Direct
A. Facility is the Culliss system. I'm using the word that Bowman used to describe his system. He called it a facility. So I'm using the same word both in Culliss and Bowman.
Q. Okay. Dr. Ungar, I believe, when he talked about Culliss teaching filtering referred to the rating index here in DX-50 in the Culliss patent at column 2, line 63 to column 3, line 2. Do you believe that the ratings index discloses filtering?
A. I believe that the -- first of all, let me explain. The main part of the Culliss patent is exactly what we described before. It's an add-on part where he's disclosing a rating system. You see that figure here in front of you from the Culliss patent describing the other part, and that other part purports to disclose filtering. First of all, it is not content-based filtering and, second, it's not even a workable filtering.
Q. What do you mean by it's not a workable filter?
A. So, you bear with me a bit, I will explain what Culliss has described.
Q. Yes, please do.
A. Okay. So Culliss described a method that he claims is useful for ratings. In this case he's talking about G-rated and $X$-rated for material. G-rated being

Dr. J. Carbonell - Direct
appropriate for everybody and X-rated being appropriate for only adults.

He gives an example of a table in which he has initialized, this is the early step, initialized A1 and A3 to be G-rated and A1, A2 and A3 to be X-rated.

First of all, that is initialization strikes me as somewhat absurd because A1 and A3 are rated as both G-rated and X-rated, but nonetheless, Culliss quickly dismisses the initialization step anyway, so it actually doesn't matter. This initialization, whether content-based or otherwise, plays no role.

This table shows after the system has been in use for a while or the facility has been in use for a while that G-rated people liked both A1 and A3 because they clicked on A3, 21 times after it was shown to them 22 times, and they clicked on A1 all 4 times it was shown to them. And the adults liked A3 a lot. They clicked on it 45 times out of 45, but they did not like A1 and A2 as much. They only clicked on it twice, even though it was shown more often.

From that Culliss concludes that A3 must be X-rated. I'm not sure how he concludes that. Both the G-rated and the $X$-rated people liked it. Maybe just because the adults liked it, he concludes that it must be $X$-rated.

Dr. J. Carbonell - Direct

Of course, adults can like all kinds of things that are not $X$-rated. Even if it was adult males, they could like football, they could like popcorn while they watched the football. They could like a number of things that are completely appropriate for G-rated. You would not want to deny the children their popcorn also because their fathers also liked the popcorn.

Moreover, even if it worked in the manner Culliss describes, it would require the G-rated crowd to view X-rated material, if $A 3$ is indeed X-rated material, 22 times prior to it being finally labeled X-rated.

So my conclusion is this so-called rating system is absurd. It does not work. It does not provide what Culliss wishes. Culliss is trying to come up with a way of rating based on collaborative feedback data. The way that he describes it, by his own example, just doesn't work.
Q. Okay. Thank you, Dr. Carbonell.

Up is one of Dr. Ungar's slides about claim
element $10(d)$, DDX-3.107. What is your take on Dr. Ungar's conclusion here?
A. Well, Dr. Ungar has two conclusions, both of which are wrong. The first conclusion is he claims that Culliss teaches a content profile, because of that initialization step that we have already discussed and
dismissed as irrelevant, that's the blue one at the top. Second, he claims that it discloses a filter system combining data because Culliss is talking about altering items in the index. For the life of me, I can't see how altering refers to combining or filtering. All it's doing is adding one to the collaborative score. He's clearly in a collaborative area. Even Dr. Ungar colors that part green, but altering a score means you add one to the score. The person clicked on it, he liked it, so, therefore, the score is now bigger. That is not combining; that is not filtering. So, therefore, I disagree with both parts of his slide here.
Q. I believe you have colored some more of $10(d)$ here to make your point?
A. Yes, I colored some more because Dr. Ungar failed to color the filtering part that is also required by this claim element, so I extended the color.
Q. Okay. Again, now, we have the summary of the
anticipation slide that Dr. Ungar used for Culliss. Do you agree that there should be a check in each of these boxes?
A. No, I disagree.
Q. Why?
A. Because Culliss does not teach claim element (b) and

Dr. J. Carbonell - Direct
he does not teach claim element (d). Therefore, Culliss's contention is incorrect, and the claim is not anticipated by Culliss.
Q. Thank you, Dr. Carbonell.

So we just went through claim 10 of the ' 420 patent for both Bowman and for Culliss. Let's talk about the other asserted claims.
A. Okay.

THE COURT: Before you start, let's just take a 15 -minute break before you start on the other asserted claims.

MR. CIMINO: Yes, your Honor.
THE COURT: All rise.
(Jury out.)
THE COURT: You may step down.
(A recess was taken at 11:40 a.m., after which court reconvened at 12:08 p.m.)

MR. BROTHERS: Your Honor, before you bring the jury back in, $I$ would like to raise one issue with the Court.

With respect to the ruling this morning, I want to alert the Court that we believe its procedurally improper because once the Court found that the burden had shifted after they presented their evidence in their case, in our rebuttal case we are permitted to respond to

Dr. J. Carbonell - Direct
their evidence of laches because they have the initial burden of going forward. So for the Court to have ruled prior to the receipt of our evidence, we believe is procedurally improper, that we should have had an opportunity to present evidence and we would propose calling Mr. Blais as a rebuttal witness -- it was disclosed in the pretrial order -- to explain with regard to what was going on at Lycos because he joined Lycos in 2005. But to do that, we need to get him down here immediately.

And we would also make proffers with regard to other evidence, but we can take that up later as long as your Honor is willing to receive this evidence.

THE COURT: Thank you.
Mr. Brothers, you can have a seat.
MR. BROTHERS: Thank you.
THE COURT: There's two things the Court didn't do that it usually does a few minutes ago. Indicate to counsel the Court reserves the right, and frequently does, in a written memorandum order to explain its ruling.

Second, you indicated, and the record will reflect, that you had one rebuttal witness that you were calling, and that was Dr. Carbonell on the question of validity. So the Court did not rule foreclosing you an

Dr. J. Carbonell - Direct
opportunity to put on rebuttal evidence on the issue of laches because you told the Court -- the Court was aware of it -- that you were calling one witness, and the Court ruled based upon what was then a complete record on this issue.

Secondly, in terms of you providing written submissions, the Court indicated it was ruling yesterday. You never indicated that, Judge, after you made your oral presentation, we want an opportunity to file a written response, though it might be short, and you didn't say it this morning when the Court commenced to rule on laches. You only said it after the Court made an adverse ruling, just as you are now bringing up the question about you have not had an opportunity to rebut after you told the Court that you only had one witness left, and this was the witness that's on the stand.

So at this juncture, the Court hears you. The Court is not granting that opportunity. The Court will keep in mind what you said, but I'm telling you, you had a full opportunity and you told the Court you were only bringing Dr. Carbonell. You expressed no interest in bringing anybody in here on the question of laches.

Bring in the jury.
(Jury in.)
THE COURT: You may be seated.

Dr. J. Carbonell - Direct

```
    Let the record reflect all jurors are present in
the courtroom. Does counsel agree?
    MR. NELSON: Yes, your Honor.
    MR. CIMINO: Agreed.
    THE COURT: Okay. You may continue.
    MR. CIMINO: Thank you, your Honor.
BY MR. CIMINO:
    Q. Dr. Carbonell, before we broke, you were going to
    talk about the other asserted claims in your opinions
    about validity. Do you remember that?
    A. Yes.
    Q. We have already done claim 10 of the '420 patent and
you provided your opinions on Bowman and Culliss with
    respect to that claim, right?
    A. Correct. I provided the opinion that Bowman and
    Culliss did not anticipate that claim.
    Q. Okay. So let's look at the other claims. First,
    does Bowman anticipate claim 25 of the other independent
    claim of the '420 patent?
    A. No. Bowman does not anticipate claim 25 of the
    '420. It's a method claim otherwise equivalent to claim
    10.
    Q. And why doesn't it anticipate?
    A. For exactly the same reasons that claim 10 is not
anticipated.
```

Dr. J. Carbonell - Direct
Q. Okay. Up on the screen, on the right side of the screen is Dr. Ungar's chart for claim 1 of the '664 patent. Does Bowman anticipate claim 1 of the '664 patent?
A. No, Bowman does not anticipate claim 1 of the '664 patent.
Q. Can you explain why not?
A. Because it does not meet claim element (c) which requires content-based filtering with respect to the query.
Q. Is your analysis in any way different from your analysis for the ' 420 patent?
A. No, it's the same analysis.
Q. Okay. How about claim 26, the other independent claim of the '664 patent, what does that claim require and do you believe that it's anticipated by Bowman?
A. Claim 26 of the ' 664 patent is a method claim corresponding to claim 1 and it is also not anticipated, and it's not anticipated for the same reasons that claim 1 of the '664 is not anticipated.
Q. Okay. Let's talk about Culliss. Again, you have provided an opinion about claim 10 of the ' 420 patent, correct?
A. That's correct.
Q. How about claim 25 of the ' 420 patent, do you

Dr. J. Carbonell - Direct
believe that claim 25 of the ' 420 is anticipated by Culliss?
A. Claim 25 of the ' 420 patent, as I mentioned before, is a method version of claim 10 of the ' 420 and it is not anticipated by Culliss because he fails to disclose claim element (b) or (d) of the that claim and, hence, is not anticipated for the same reasons that claim 10 is not anticipated.
Q. How about claim 1 of the '664 patent, does Culliss anticipate claim 1 of the ' 664 patent?
A. Culliss does not anticipate claim 1 of the ' 664 patent. It does not disclose the third claim element, element (d).
Q. You show that down here in the bottom right-hand corner?
A. Yes.
Q. And how about claim 26 of the ' 664 patent, in your opinion does Culliss anticipate claim 26?
A. No. Once again, claim 26 is a method claim corresponding to claim 1 of the ' 664 and Culliss does not anticipate that claim for the same reasons that Culliss does not anticipate the claim 1 for the' 664 . Q. Okay. And there are some dependent claims that are asserted in this case. Are any of the dependent claims asserted by Bowman or Culliss?

Dr. J. Carbonell - Direct
A. Without going into each one of these dependent claims, they are all dependent upon one of these four independent claims and they are not anticipated, at least because the independent claims on which they depend are themselves not anticipated.
Q. So, Dr. Carbonell, in your opinion is there any asserted claim anticipated by Bowman or Culliss?
A. No, none of the asserted claims are anticipated by either Bowman or Culliss.
Q. Does that complete your anticipation analysis?
A. Yes, it does.
Q. Okay. Let's move on to obviousness. Can you provide a brief overview of your obviousness conclusions?
A. Yes. My conclusions are that the asserted claims of the ' 420 and '664 are not rendered obvious by the cited prior art, namely the Lashkari, Fab and Rose by themselves or in combination with Culliss are not. Q. Lashkari, Fab and Rose, are those the three pieces of prior art that Dr. Ungar identified for the purposes of obviousness?
A. Those are exactly the three that he identified, yes.
Q. Now, did you hear Dr. Ungar testify that all elements of the asserted claims are shown in the prior art?

Dr. J. Carbonell - Direct
A. He has indeed testified to that.
Q. Do you agree with that?
A. No, I disagree. I believe that there are claims that are entirely missing -- claim elements, excuse me, that are entirely missing from the cited prior art. Q. Can you explain that opinion to the jury, please? A. Yes. It is not possible to render obvious by combining claim elements if some of the claim elements are not disclosed or taught by any of the cited prior art. In particular, four claim elements are missing from all of the cited prior art.

As we can see in this demonstrative here, claim (d) of the '420 -- excuse me, element (d), claim 10 of the ' 420, element (d) of claim 25 of the ' 420 , element (c) of claim 1 of the ' 664 and element (c) and (d) of claim 26 of the '664.
Q. And what is the consequence of obviousness if there are elements missing from all cited prior art?
A. It means that it is not possible for the cited prior art to render the asserted claims obvious. You cannot combine that what you don't have.
Q. Now, earlier you talked about having two camps of prior art. Do Rose, Lashkari and Fab fall into either of those two camps?
A. Yes, they do. As you can see, this is the
non-animated version of my earlier demonstrative. All three, Lashkari, Fab and Rose, fall into the profile system side, in other words the right side of this wall. Q. So they should be shown on the right side?
A. That's right.
Q. Do Rose, Lashkari or Fab, the filtering aspect in ranking, do either of them have access or use of the query?
A. Yes. First, Rose does not teach filtering. It mentions it, but does not teach us how to do it, and none of the three describe how to perform any of their operations with respect to the query. In fact, none of them use the query, none of them access the query, none of them process the query, none of them filter with respect to the query, none of them perform the content or collaborative analysis with respect to the query. Q. So, Dr. Carbonell, over here on the right side where it says profile system, you have Rose, Lashkari and Fab, what criteria do they use to select the final results for the user?
A. Well, they do not use the query. Instead they use the longstanding profile, the set of things that each person or each user is interested in, and the set of things which other users have a longstanding interest in if their first user's interests match theirs.

Dr. J. Carbonell - Direct
Q. Now, you heard the testimony of Dr. Ungar in court? A. Yes, I have.
Q. Does he agree that profile systems and search systems are different?
A. He agrees that they are indeed different, as you can see from his quote here. He says that they are different, they being the profile systems are different from the demand search systems. So the answer is yes. Q. Okay. Dr. Carbonell, so what is the difference between the profile systems of Rose, Lashkari and Fab and the Lang and Kosak invention?
A. Well, Lang and Kosak disclose a tight integration among all of the different parts. As you can see here from element (d) of claim 10 of the ' 420 and element (c) of claim 1 of the 664 , they require all of the components, the filtering, the combining, the pertaining feedback data, the content profile and the relevance to the query to be tightly or closely integrated. In fact, they perform all of those operations, the filtering, the combining with the feedback with respect to the query. That is something that all of the cited prior art fails to do.
Q. In your opinion is it better to do it this way than the Lang and Kosak tightly integrated way, rather than the over-the-wall method that you explained earlier

Dr. J. Carbonell - Direct
about how the prior art would take the output of one system and use it as an input of another system?
A. It is indeed better to do the Lashkari integration.

I think I have alluded to this before. If you perform a multi-factor analysis, you combine the content, you combine the profile, you combine the collaborative and, most importantly, you combine the immediate information need as represented in the query in order to find the best possible items that satisfy a combination of all of these ingredients. That yields better results. That's why this reflects the current practice.
Q. Okay. Dr. Carbonell, let's take a closer look at the three pieces of prior art Dr. Ungar identified for obviousness, and let's start with Rose.

So, can you tell the jury which elements you believe are missing from the Rose patent? And, again, let's start with claim 10 of the '420 patent so we have got a consistent base by which to have you explain your opinions.
A. Okay. Let's do that. It's claim element (a), (b) and (d). Those are the three circled in red are missing from Rose. Rose does not scan a network and find items relative to a query. Content-based analysis is not relevance to the query, and Rose does not teach filtering or combining with relevance to the query.

Dr. J. Carbonell - Direct
Q. Let's scroll down a little bit. Does Rose teach filtering in the manner required by the asserted claims?
A. Actually, Rose does not teach filtering in that manner. Rose teaches ranking. It mentions ranking throughout, as you can see from this passage which I will save time by not reading.

Rose does mention filtering, but doesn't mention out how to do the filtering or how to combine it. Instead, it mentions and teaches that one should rank. Q. Okay. Dr. Carbonell, does Rose teach relevance to the query in a manner required by the asserted claims? A. No, Rose does not teach relevance to the query. In fact, Rose doesn't have a query, doesn't have access to a query. Instead, Rose has a basic profile system focusing on long-term likes, long-term needs, long-term interests of users.

This is an example of Fig. 7 from Rose in which it is updating and making recommendations about movies to a particular user. You can see on the right that it says movie recommendations and it's an had ordered list, a rank list. It's ranking, that is disclosing, and ranking with respect to filtering. Excuse me, I said it wrong. Ranking with respect to the items that it is recommending in this case with respect to profile is what I meant to say.

Dr. J. Carbonell - Direct
Q. Would the recommendations here be developed over a long-term need or an immediate need?
A. It will be developed over a long-term need. The movie recommendations are based on what movies they liked and it would be updated if they liked other movies, and it would be updated with other people with similar tastes who have seen other movies, and so on. It's a long-term profile, long-term needs.
Q. So in your opinion, Dr. Carbonell, does Rose make claim 10 of the '420 patent obvious?
A. No, it does not, for the reasons cited, lack of teaching filtering and, particularly, lack of teaching filtering with respect to the query. It fails to meet three of the claim elements.
Q. What about the other asserted claims?
A. It doesn't render obvious claim 25 of the '420, for example, for the same reasons, that is it's a method version of claim 10.

It also does not render obvious the '664 claims, claim 1 and claim 26, because it does not perform any of the operations with respect to the query.
Q. Okay. Thank you.

Let's move on to Lashkari. Let's put up claim 10 of the ' 420 patent.

Do you believe there are elements missing in

Dr. J. Carbonell - Direct

Lashkari that are in claim 10 of the ' 420 patent?
A. Yes, I do. The missing elements are, once again, (a), (b) and (d), the same missing elements as for Rose, because Lashkari does not teach to do anything with respect to the query. It does not process the user's immediate information need.
Q. Okay. Let's take a look at that.

Does Lashkari teach relevance to the query in the manner required by the asserted claims?
A. Lashkari does not. As evidence of that, we take Lashkari's own summary of his method, the ACF algorithms. Those are the ones Lashkari disclosed. Take the following steps. He then elaborates on the steps, but you can see here in summary, he constructs a profile of a user, a profile, not a query, long-term need, long-term interest.

It compares the profile to the profile of other users, collaborative. Profile again.

It constructs a set of nearest neighbors for this user. That just simply means other users with similar preferences.

And then it uses that set to make recommendations. So it doesn't provide answers or results in the query sense. It makes recommendations over time. Nowhere does he mention search, nowhere does

Dr. J. Carbonell - Direct
he mention query, nowhere does he mention information need.
Q. So, Dr. Carbonell, Dr. Ungar cited section 7.2, Filtering Search Engine Query Results, as evidence it disclosed search and query. What's your opinion about this section 7.2?
A. So, first of all, to put it in context, section 7.2 is part of Chapter 7 of Lashkari, which is conclusions and future work. Lashkari discloses that one possible future work is to perform one of these over-the-wall operations where a search engine such as Lycos produces results. These results are then thrown over the wall to the Lashkari system who then uses them as input to do its profile systems. So what Lashkari is disclosing is that it could be one of these over-the-wall systems.

The query itself is not even accessed by
Lashkari's method. It is certainly not processed or integrated.
Q. Does the Lashkari filter, then -- let me ask it differently, Dr. Carbonell.

What criteria does the Lashkari filter use, then, to select the final results for presentation to the user?
A. It uses the user's profile and the similarity of that profile to the items or the similarity of that
profile to other profiles of other users to see what they had liked. It is the typical profile-based system.
Q. So in your opinion, Dr. Carbonell, does Lashkari
render claim 10 of the ' 420 patent obvious?
A. Lashkari does not by itself or in combination and it also does not render the other claims, claim 25, obvious, which is the same or equivalent to claim 10 , or the '664, claim 1 or claim 26, does not render them obvious either for the same reasons.
Q. Okay. Let's move on to the final reference,

Dr. Ungar asserted which we are calling the Fab reference. Does Fab render the asserted claims obvious?
A. Fab does not render the asserted claims obvious either.
Q. Let's take a look at part of Fab PX-50 at G-IPE-0217927.

Can you explain the Fab system with respect to this drawing?
A. Yes. First of all, the cited references at the position paper, it describes more of a desire of what. It does not describe a method or a how, other than by presenting this figure. So this figure comes closest to describing a method, which is why $I$ have selected it here.

This is an overview of the Fab architecture.

Dr. J. Carbonell - Direct

It's, essentially, a recommendation system. It is recommending pages to a user. The user is clicking -you see his finger there -- as to whether he likes him -- it looks more like a he, I suppose. Whether he likes them or he doesn't like them. Nowhere here do you see search, nowhere here do you see query, nowhere do you see relevance to the query. So it is also a profile system very similar to the ones we have just finished discussing.
Q. Can you summarize for the jury which elements of the asserted claims, then, are not disclosed by the Fab reference?
A. Yes. To save time we don't have to look at it again. It's, again, claim elements (a), (b) and (d) of the claim 10 of the 420 and the corresponding claim elements for claim 25 of the '420, and it's, in fact, all of the elements from claim 1 and claim 26 of the '664 patent. None of those are disclosed; therefore, it does not render obvious.
Q. Okay. Dr. Carbonell, I'm switching gears a little bit. What is your view of the person of ordinary skill in the art in 1998?
A. A person of ordinary skill in the art would have a bachelors degree in computer science or a related field, computer engineering, for example, and would have two or

Dr. J. Carbonell - Direct
three years of experience in an area roughly called information systems. That would include databases, programming, algorithms, and so on.

This is very similar to what Dr. Ungar
described, the exception being is that he said it had to be experienced in information retrieval and search engines. In 1998, these were just becoming popular. There were precious few people with experience in that area, so I think a somewhat broader experience, rather than narrowing this area, would be appropriate for somebody of ordinary skill in the art.
Q. Dr. Carbonell, you testified earlier that you believed there are some claim elements in the '420 and '664 asserted claims that are not present in the prior art at all; is that right?
A. That is correct. So some claim elements, claim
element (d), claim 10 of the ' 420 and claim 25, claim
element (c) of claim 1 of the '664, and claim elements (c) and (d) of claim 26 of the ' 664 are missing from all of the cited prior art.
Q. In your view would it have been obvious for a person of ordinary skill in the art, as you have defined or as Dr. Ungar has defined, to supply those missing elements to the prior art to arrive at the claimed invention?
A. I think it would have been very far from obvious and

Dr. J. Carbonell - Direct
would not have been obvious for somebody of ordinary skill in the art, even under Dr. Ungar's narrower definition or narrower assertion, to have created those missing claim elements. That would have required deep skill in both camps, in the search camp and in the profile camp. That did not happen until some event such as the acquisition of WiseWire by Lycos.
Q. Similarly, would you believe that a person of ordinary skill in the art in 1998, as you defined or Dr. Ungar has defined, would have appreciated the advantage provided in the ' 420 patents and 664 patents?
A. No, I do not believe that they would have
appreciated those advantages, the advantages of tight integration, the advantages of this multi-pictorial taking all of the different factors into account, especially the immediate information needed relevance to the query.

As evidence of that is the cited prior art. It does not suggest any kind of tight integration, it does not suggest serving the immediate information need, it does not suggest performing the collaborative or the content-based analysis or the filtering with respect to the query. Not only does it not teach how, it doesn't even suggest doing so.
Q. Would the results obtained by the ' 420 and '664

Dr. J. Carbonell - Direct
patents have been predictable to the person of ordinary skill in the art as you have defined here or as Dr. Ungar has defined in 1998?
A. No, it definitely would not have been predictable. They did not know how to do it and they did not know what the outcome of doing it would have been, the higher quality search results from modern search engines that can be achieved by this kind of tight integration.
Q. Do you believe it would have been difficult for those of skill in the art under your definition or Dr. Ungar's definition to have achieved the invention of the ' 420 and ' 664 patent in 1998?
A. It would have been extremely difficult.
Q. And why do you say so?
A. It required a skill that was not present by somebody of ordinary skill in the art. They may have had present a skill of some of the components at best. They certainly did not have the skill in all of the different art that would have been required to perform that combination and to have invented the missing elements in the claims. So, therefore, it would not be rendered obvious in the sense that somebody of ordinary skill in the art would not have been able to perform the requisite combination and the requisite invention of the patents.

Dr. J. Carbonell - Direct
Q. Thank you.

Let's talk about secondary considerations of non-obviousness. Can you first explain to the jury what secondary considerations of non-obviousness are?
A. Yes. These are additional considerations that would provide further evidence as to whether an invention is obvious or is not obvious by combining elements from prior art.
Q. And have you formed an opinion as to whether there are any secondary considerations of non-obviousness that are relevant to your analysis of the '420 and '664 patent claims?
A. Yes. I formed that opinion with regard to three secondary considerations.
Q. Okay. Let's start with the first one. Can you describe for the jury the first bullet point Commercial Success, how it might impact your analysis of obviousness?
A. Yes. Commercial success means that if something succeeded commercially, there would have been a reason to do it, there would have been people trying very hard to do it. And if they tried hard to do it and it was still not done, that would provide strong evidence that it was not obvious. And, in fact, the commercial success of modern search engines, Google included, that

Dr. J. Carbonell - Direct
use the teachings of these patent claims is strong evidence that the commercial success criterion is met and yet nobody else had come up with that invention at that time.
Q. How about the second one, Long-Felt but Unmet Needs. How does that affect your opinion of non-obviousness?
A. That, again, if there were long-felt needs but nobody figured out how to meet those needs, it means that it must not have been obvious to replicate or create the equivalent of the claims taught by the patent. In fact, the long-felt needs were recognized even in the cited prior art. They talked about possible combining, but they came up with the over-the-wall method, the output of one becomes the input of the other. So, therefore, those needs were there, but they were not met.
Q. If the patent claims here were obvious, do you believe that would have been disclosed, the tight integration that you talk about would have been disclosed in Rose, Lashkari and Fab?
A. It certainly would have been disclosed in those three and elsewhere because then this would have enabled them to gain the upper ground or the upper hand to come up with the invention that is effective.

Dr. J. Carbonell - Direct
Q. And the final one is Failure of others. Can you explain what you mean here by failure of others?
A. Yes. If others have tried to achieve the same invention or the same effect, what it means is this would have shown it could be done. The failure, having tried and failed, indicates that it's not obvious. Had it been obvious, they would have succeeded. So others have tried, the prior art has tried, as $I$ mentioned in passing, I myself tried and did not succeed in arriving at this kind of tight integration in performing all these operations with respect to the query, with respect to the immediate information need and the tight integration.
Q. Okay. Dr. Carbonell, can you provide the conclusions of your validity study to the jury, please. A. Yes. These are my overall conclusions. The first conclusion $I$ said, No asserted claim is anticipated by the cited prior art, that is, by Bowman and Culliss; no asserted claim is rendered obvious by the cited prior art or by any combination of the cited prior art for the reasons stated, including the secondary considerations; that Dr. Ungar's anticipation and obviousness theories are in incorrect and unfounded; and that all asserted claims are, therefore, valid.

MR. CIMINO: Thank you, Dr. Carbonell.

Dr. J. Carbonell - Cross

```
Your Honor, I pass the witness.
    THE COURT: Cross-examination?
    MR. NELSON: Yes, your Honor. May I proceed?
    THE COURT: You may.
                                    CROSS-EXAMINATION
BY MR. NELSON:
    Q. Good afternoon, Dr. Carbonell?
    A. Good afternoon.
    Q. Nice to see you again. I'm Dave Nelson, in case you
    don't remember me.
    A. Yes, I remember you.
    Q. I have a few questions for you. Well, maybe more
    than a few.
```

    Something you said there at the end when you
    were talking about commercial success. You referenced
the commercial success of search engines generally like
Google, do you remember?
A. Yes.
Q. You understand that search engine is not accused in
this case, right?
A. I understand that the ads functionality is what's
being accused. I do not know the details because I'm
not part of the infringement.
Q. Oh, so you didn't ever get to see Dr. Carbonell's --
excuse me, you are Dr. Carbonell -- Dr. Frieder's

Dr. J. Carbonell - Cross
reports or anything like that?
A. No, I did not.
Q. And you didn't see his testimony here on the
infringement case?
A. No, I did not.
Q. So you are not aware of what he's saying infringes
these patents?
A. Only with respect to very generally what counsel has
reported.
Q. Okay. Let me talk about the Lashkari patent, first
of all. So, I think what $I$ heard you say is that --
A. That's incorrect. Lashkari is not a patent.
Q. Can we call it a WebHound. That's easier for me to
remember.
A. Whatever is easiest.
Q. That's the WebHound reference; is that okay?
A. Yes.
Q. I think $I$ heard you say you didn't think that the
WebHound reference disclosed filtering with relevance to
the query, right?
A. That's correct.
Q. Okay. But you agree that it discloses a combination
of content-based and collaborative filtering, right?
A. Yes.
Q. Okay. And you agree that at least in the page 78,

Dr. J. Carbonell - Cross
which I think you cited, it talks about combining that filtering, the content and collaborative, with search engine functionality, right?
A. That's not what $I$ said. I said that it can use as input the output of a search engine.
Q. Okay. So I think I heard you say that you didn't believe that modern -- excuse me, not modern, going back to 1998 and before, search engines did any filtering; is that right?
A. No, I did not say that either. I said that search engines typically performed ranking.
Q. But you are aware that search engines out there did filtering for relevance to the query themselves prior to 1998, aren't you?
A. I did not offer an opinion on that.
Q. Well, I understand. I'm asking you whether you are aware of that?
A. The cited prior art performed ranking instead of performing filtering? I would have to go back and analyze at that time period to see whether they performed filtering in order to be able to answer your question with confidence.
Q. Okay. So you have reviewed the '420 patent, haven't you?
A. Yes, I have.

Dr. J. Carbonell - Cross
Q. And that includes the background section of the patent; is that right?
A. Yes, it does.
Q. Before I go further, did I give you the binders, your Honor?

THE COURT: Yes.
BY MR. NELSON:
Q. So, can we look at DDX-6.7?

THE COURT: 6 what?
MR. NELSON: It's one of the demonstratives, your Honor.

THE COURT: What number was it?
MR. NELSON: It's slide 7, 6.7.
THE WITNESS: Can you point to me where I'm supposed to look?

BY MR. NELSON:
Q. Yeah. Well, you can look on the screen, or this is the ' 420 patent.
A. Okay. I will look on the screen.
Q. So here on the ' 420 patent you are aware that in column 1 and 2 it talks about the background of the invention, right?
A. Yes.
Q. Okay. And your understanding of the discussion of the background of the invention, those are the things

Dr. J. Carbonell - Cross
that are in the prior art?
A. That's generally what it is, yes.
Q. Okay. Well, what $I$ want to draw your attention here to, this is an excerpt we have from column 2. This is lines 4 through 20. You see picking up at about -well, it's probably about line 10 there's a sentence that says, "Thus, the integrated information filter system performs continued long-term searching, i.e., it compares -- you don't need to worry about that. Let me start over again.

Picking up at about line 12 , you see it says, "Thus, the integrated information filter system performs continued long-term searching, i.e., it compares network informons to multiple users' queries to find matching informons for various users' wires over the course of time." So let me stop there. Is that what you are describing as these various profile systems?
A. So this is incomplete for me to be sure, but with respect to long-term searching comparing informons to multiple users' queries over time and use of wires, wires represented profiles under the Lang work in general. So the answer appears to be yes.
Q. Okay. So then let me pick up the second part of that. See where it says, "Whereas, conventional search engines initiate a search in response to an individual

Dr. J. Carbonell - Cross
user's query and use content-based filtering to compare the query to accessed network informons typically to find matching informons during a limited, short-term search time period." Do you see that?
A. Yes.
Q. Okay. So your understanding is that this is a description of prior art search engines, correct?
A. Yes.
Q. So, in fact, according to the patent, prior art search engines did, in fact, compare content-based filtering for relevance to the query, correct?
A. According to this description, that's what it says. I'm not sure. I would have to read more context to know whether they were using the word "filtering" precisely or loosely, but, yes.
Q. So at least, then, with respect to certain search engines out there, there was content-based filtering for relevance to the query, right?
A. That is according to the background section of the patent description, yes.
Q. So now let's go back to DDX-6.6.

So this is the excerpt from the WebHound reference at page 78 that you looked at, correct?
A. That is correct.
Q. So here what you said is a description of -- $\quad$ think

Dr. J. Carbonell - Cross you called it an over-the-wall technique?
A. Yes.
Q. Providing the search results to the filtering engine; is that right?
A. That's correct.
Q. Okay. Now, with respect to the WebHound reference, you said that there's no disclosure whatsoever about filtering for relevance to the query, correct?
A. That's right.
Q. In fact, that's the only thing that you said was absent from the WebHound reference, correct?
A. No. I said that it did not meet claim elements (a), (b) and (d), so it does not search and it does not do the combination with respect to the query and it does not do the filtering with respect to the query.
Q. Okay. So the last two are with respect -- those are both based upon your notion that it doesn't disclose filtering with respect to relevance to the query, right? A. It doesn't combination and filtering with respect to the query.
Q. Now you say it doesn't disclose search?
A. It doesn't perform search.
Q. Well, doesn't it say right here to combine it with a search engine query such as Lycos, WebCrawler and Yahoo?
A. Well, it says right here that the two are

Dr. J. Carbonell - Cross
complimentary. In other words, what Lashkari did or WebHound did is different from what search engines did, and it's talking about putting one in front of the other for WebHound to then do its filtering on the output of a search engine. It does not say anywhere that that filtering is done with respect to the query or that any type of combination that WebHound does internally, WebHound combines content and filtering not with respect to a query.
Q. But you agree that WebHound discloses combining content-based and collaborative filtering, right?
A. Yes. Not with respect to the query, but it does disclose as you just stated.
Q. Okay. Now, let's look at this. This is on page 78 of $D X-49 . \quad$ That's the exhibit number.

Right below the highlighted part it says, "as a concrete example, let's say a user is looking for documents on Indian Cooking. He types the keywords Indian Cooking into the Lycos search form. The number of documents matching both keywords numbers in the hundreds," and continues on. Do you see that?
A. I see that.
Q. So that's not a disclosure of search?
A. That is a disclosure that the user can use a search engine. That is not a disclosure that search is

Dr. J. Carbonell - Cross
integrated with the $--I$ don't know whether to call it system or facility that is taught by Lashkari. In other words, WebHound does not use a query. WebHound uses the results of a search engine as its input.
Q. Right, but we've established that there are search engines out there in the prior art that did filter with respect to relevance to the query, right?

MR. CIMINO: Objection, misleading. That wasn't his testimony.

THE COURT: Well, I'm going to overrule it and permit the doctor to correct it if that's the case.

THE WITNESS: What $I$ said was that filtering
with respect to the query is -- filtering and combining with respect to the query are not disclosed by WebHound or by any of the other prior art.

BY MR. NELSON:
Q. So let's talk a little bit about the inventors here.

Now, at least as of the time of your expert
report, wasn't it your understanding that neither
Mr. Kosak nor Mr. Lang worked on search technologies until they joined Lycos?
A. I was not aware that they had worked on it.
Q. Right. So you are not aware of any information to indicate that Mr. Lang or Mr. Kosak ever had experience with search technology before joining Lycos, right?

Dr. J. Carbonell - Cross
A. I do not know one way or the other.

Okay. Well, let me see if $I$ can refresh your recollection on that. This is from paragraph 140 of your expert report. We have it on a slide DDX-6.11. So you prepared an expert report in this case, right?
A. Yes, I prepared an expert report.
Q. And you disclosed in that all of your opinions and the bases for your opinions, right?
A. That's correct.
Q. So here from paragraph 140 of your report you say, "For example, as $I$ understand it, Mr. Kosak and Mr. Lang themselves worked on filtering techniques and did not become involved with search technologies until they joined Lycos." Do you see that?
A. That's correct.
Q. So does that refresh your recollection that your understanding is they did not have any experience with search technologies before joining Lycos?
A. It means that $I$ do not know if they had any such experience. I believe they did not, but I cannot say for sure. After they joined Lycos, of course, that changes.
Q. Now let's talk about the timing of that. So the patent, you said, was filed December 3rd, 1998, right? A. Yes.

Dr. J. Carbonell - Cross
Q. Okay. And the purchase of Lycos or Lycos's purchase of WiseWire -- WiseWire, you understand, was Mr. Lang's and Kosak's prior company?
A. Yes.
Q. That occurred sometime in mid-1998; is that right?
A. I do not recall the date. I recall that there was a extensive period of negotiation and discussion prior to the actual finalization of the purchase.
Q. Right. You were at Lycos still, or as a consultant, you said, up through 1998, right?
A. No. I was actually -- through the IPO I was by that time no longer affiliated with Lycos.
Q. So then do you know how long it was that Mr. Kosak and Mr. Lang were at Lycos before they filed this patent on December 3rd, 1998?

MR. CIMINO: Objection, beyond scope. THE COURT: Objection sustained.

MR. NELSON: Well, your Honor --
THE COURT: The objection is sustained. MR. NELSON: All right.

BY MR. NELSON:
Q. Now, you have never discussed with Mr. Lang or

Mr. Kosak their patents; is that correct?
A. That's correct.
Q. Okay. So you don't know whether they encountered

Dr. J. Carbonell - Cross
any technical hurdles when they combined their filter technology with the search technology at Lycos?
A. That's right, because at that time $I$ no longer was affiliated with Lycos so I did not have privy or $I$ don't have an inside track.
Q. So we are going to talk about some other things here in your report. You have talked a lot about tight integration, would you agree?
A. Yes.
Q. Now, the words "tight integration" don't appear anywhere in the claims of this patent, right?
A. Those exact words do not. The concept does.
Q. Right. And the words "tight integration" don't appear in the patent itself, right?
A. If you say so. I would have to check.
Q. I'm just asking whether you know?
A. Okay. The concept of tight integration appears, not the words, insofar as $I$ know.
Q. Okay. So now $I$ want to look here, if we can look at DDX-6.9, and this begins on page 44 of your report and continues on to page 45. The highlighted sentence that says," The combination of query, content and collaborative feedback to filter in a single engine can yield results superior to applying less than all of them or applying them in sequence." Do you see that?

Dr. J. Carbonell - Cross
A. Can you pull it up some more?
Q. Sure, absolutely.
A. Okay. Now $I$ can read it. Thank you.
Q. Do you see that? So is it your understanding that the ' 420 and the ' 664 patent require all of the elements of the claim to be in a single search engine?
A. What my understanding is that they are all required to be inside the same system. Whether the system is -whether you use search engine expansively to refer to the combination or not is less important.
Q. So is that where your understanding of tight integration comes from?
A. My understanding of tight integration comes from my experience over 30 years. I know what tight integration means. As it applies to this work, it is the fact that all of the elements -- excuse me, all of those ingredients are combined in the same claim elements, and it's also consistent with the patent description and with the figures that we did not analyze here that shows how all of the items -- teaches how all of the items are tightly integrated.
Q. Okay. Well, let's put up claim 10, for example, of the ' 420 patent.

THE COURT: Mr. Nelson, the Court hates to interrupt, but $I$ don't know how much longer you have for

Dr. J. Carbonell - Cross
this witness, but we are simply going to go on and take a lunch break and come back in and continue with the cross-examination after lunch.

MR. NELSON: Okay.
THE COURT: Ladies and gentlemen, please rise.
I want the jury to come back prepared to go forward at 2:30, please.
(Jury out.)
THE COURT: You may step down, Doctor.
For planning purposes, do you know approximately
how long your cross of this witness will take?
MR. NELSON: I think maybe another 30 or 45
minutes, your Honor.
THE COURT: All right. The Court will be in recess until 2:30.
(A luncheon recess was taken at 12:58 p.m.,
after which court reconvened at 2:34 p.m.)
AFTERNOON SESSION
THE COURT: Bring the jury in.
(Jury in.)
THE COURT: You may be seated.
Let the record reflect all jurors are present.
Does counsel agree?
MR. CIMINO: Yes, your Honor.
MR. NELSON: Agreed, your Honor.

Dr. J. Carbonell - Cross

```
    THE COURT: All right. You may resume your
cross-examination.
    MR. NELSON: Thank you, your Honor.
BY MR. NELSON:
    Q. Good afternoon.
    A. Good afternoon.
    Q. So let's put DDX-6.9 back on the screen. This is
    the demonstrative we were looking at before lunch.
            So I want to explore a little bit more of this
statement you have in your report about the combination
of query and content and collaborative feedback to filter
in a single engine, okay?
    A. Okay.
    Q. So let's put up claim 10 of the '420 patent.
            Now, you see the first element of claim 10 says
a system for scanning a network. Do you see that?
    A. Yes.
    Q. And then the next one says a content-based filter
    system. Do you see that?
    A. Yes.
    Q. And the third says a feedback system. Do you see
    that?
    A. Yes.
    Q. So do you believe that all three of those systems
    have to be in a single search engine system?
```

Dr. J. Carbonell - Cross
A. I believe that all three have to be integrated, all the elements in those three have to be combined. One way to do it is a search engine system, but that's not the only way.
Q. Okay. So the claim, you agree, talks about separate systems, right, the elements of the claim?
A. No. They are separate elements of the claim.
Q. Right, but the first one says a system for scanning a network, right?
A. Correct.
Q. And then, I don't need to go through it again, but they are all each introduced as a system, correct?
A. They are all introduced as a system.
Q. Right. So they are separate systems?
A. No, sir. They are combined, as it says so on the third element in which the feedback system for receiving collaborative feedback data from systems used relevant to informons considered by other users, and then it goes on the filtering system combining and so forth. The combining is an integral part of the claim, in my review of it.
Q. Okay. Let's go back to DDX-6.9.

So what does that have to do with being a single search engine?
A. It has to be an integrated system. As I said a

Dr. J. Carbonell - Cross
moment ago, a search engine is one way to integrate it.
It's not the only way. It can be combined without it
being a single search engine. It could be integrated.
Q. So, in other words, you could take, as you say,
separate systems and they can still be integrated,
correct?
A. I did not say separate systems. Those are your word, not mine, sir.

THE COURT: I think this has been asked and answered. He said they are elements.

MR. NELSON: Right.
BY MR. NELSON:
Q. So you are not saying the elements all need to be combined in one system, correct?
A. I'm saying the elements only need to be tightly integrated.
Q. Okay. Now, let's talk a little bit about Rose. Did I understand you to say that you don't believe that Rose disclosed a search?
A. Rose does not -- the Rose facility is not a search facility. Rose mentions search externally to the Rose facility and it can be connected in terms of Rose operating on the output of a search system as input to Rose, in the same manner as Lashkari.
Q. Okay. So let's talk about that a little bit. Let's

Dr. J. Carbonell - Cross
put up DDX-6.2, this is an excerpt from the Rose patent. And, by the way, you have that in your binder if you wish to look at the binder.
A. I have got several binders. I'm not sure which is which.
Q. It would be the white one.

MR. CIMINO: He has three white ones.
BY MR. NELSON:
Q. Oh, you have three white ones?
A. Okay. I found it.
Q. Okay. So what I'm showing here is an excerpt from the Rose patent. This comes at column 1, lines 33 to
40. Do you see that?
A. I see that.
Q. So I have something highlighted here from the Rose patent. It says, "Using a text searching tool, individual users can locate documents matching a specific topical query." Do you see that?
A. Yes.
Q. So now let's take a look at another part of the Rose patent at column 2, line 51-57, which would be in DDX-6.13.

You see it says, "The relevance predicting technique of the present invention is applicable to all different types of information access systems. For

Dr. J. Carbonell - Cross
example, it can be employed to filter messages provided to a user in an electronic mail system and search results obtained through an on-line text retrieval service." Do you see that?
A. Yes.
Q. So you agree that Rose says that the relevance predicting technique in the present invention can be used with an on-line text retrieval service, right?
A. It says there explicitly that it can be applied to the output, in other words, the results is Rose's words, obtained from an on-line text retrieval system or an electronic mail system.
Q. And that could include a query-based search system, right?
A. It could apply to the output of -- yes, it could be applied to the output of different kinds of information retrieval systems, presumably a search system as well.
Q. A query-based search system, right?
A. Yes.
Q. Now, here in this same passage that $I$ have up now -we don't need to go to a new one -- you see where it says, "For example, it can be employed to filter messages provided to a user in an electronic mail system." You see that?
A. Yes.

Dr. J. Carbonell - Cross
Q. Okay. So the Rose patent actually says it does filtering, right?
A. The Rose patent in the summary mentions filtering, that is correct. It does not teach how to do filtering. The internal description describes ranking. Q. Okay. So then what you are saying is that in order to figure out whether something meets the claims of these patents, you need to look at how it actually operates and not just some high-level words, right?
A. I'm saying exactly what $I$ said, that it mentions
that filtering can be employed, and it actually
describes how to do it with a ranking system.
Q. Now, let's move on and talk about your opinions with respect to the Bowman patent a little bit.

The Bowman patent is Tab 7 in your binder. It's DX-59, for the record.

So I heard you say two things about Bowman, why
you thought it didn't anticipate. The first one, you
didn't think that it shows filtering, right?
A. Correct.
Q. And the second thing is you didn't think it showed a content-based analysis; is that right?
A. That's also correct.
Q. Okay. So let's take that first one. Let's focus on the filtering. So, can we show DDX-6.15. And let's

Dr. J. Carbonell - Cross
blow up that bottom part. This is from column 9 and this excerpt is from lines 53-65 of the patent, if you want to take a look at that, and $I$ will give you a moment. When you are there, let me know.
A. I'm there.
Q. Okay. So it says, "Step 808 preferably involves sorting the items in the query result in decreasing order of their ranking values, and/or subsetting the items in the query result to include only those items above a threshold ranking value, or only a predetermined number of items having the highest ranking values." Do you see that?
A. Yes.
Q. Do you believe that this is an accurate description of the Bowman system?
A. I wouldn't see any reason to dispute that.
Q. Okay. So let me focus in on this a little bit. You see where it says and/or?
A. And/or subsetting, yes.
Q. Right. So, in other words, you understand that to mean that the subsetting, or that part of the sentence that comes after the and/or can be used by itself without the ranking referred to in the first part of the sentence, right?
A. No, that's not right. The system will rank and may

Dr. J. Carbonell - Cross
or may not also do the subsetting, the step that follows.
Q. Well, let's talk about that. So you see it says, "Step 808 preferably involves," preferably, right? You see that word?
A. I see that word.
Q. So that means it doesn't necessarily involve sorting the items, correct?
A. Yes. The rest of the sentence is in the context of that same preferably involving sorting the items.
Q. Okay. So let's just pick it up, Step 808 preferably involves sorting the items in the query result in
decreasing order of their ranking values, and/or subsetting the items in the query result to include only those items above a threshold ranking value."

Let's stop there. So you agree that one of the things the Bowman patent teaches is that you could subset the items in the query result to include only those items above a threshold ranking value, correct?
A. Yes, that is correct. In order to do the subsetting, it must do the ranking to be able to subset.
Q. Well, that's not what the sentence structure says, though, is it?
A. The sentence says, "involves sorting the items in

Dr. J. Carbonell - Cross
order of the ranking values," and then it may or may not
do the subsetting.
Q. Well, let's go a little bit farther up in this same
column 9 and let's just see what it talks about.
So if we can go to DDX-6.16, and we will have to
blow these up individually, but this is from column 9.
This goes from about line 28 to line 65 of the patent, if
you have it in front of you.
So you see first it says, "The facility uses
rating tables that it has generated to generate ranking
values for items in new query results." Do you see that?
A. Yes, I see that. It was right on my ranking table
on direct.
Q. Right, understood. And an example of that you gave
was in Fig. 4, right?
A. Correct.
Q. But there's also an example in Fig. 6 of the Bowman
patent; isn't there?
So let's show Fig. 6 of the Bowman patent.
A. Yes, that's also an example.
Q. Okay. So you agree that this is an example of a
ranking table or what you called a rating table, I
guess, right?
A. I'm using Bowman's words. He calls it a rating
table, so I'm calling it the same thing.

Dr. J. Carbonell - Cross
Q. Okay. So let's go back to DDX-6.16, and let's blow up the middle highlighting there.

You see here it says, "In Step 806, the facility combines the scores for the current item to generate a ranking value for the item." Do you agree that's an accurate description of what's going on?
A. Yes.
Q. "As an example, with reference to Fig. 6--"

Is there any way we can get Fig. 6 up at the same time maybe?

Okay. Then let's pull up that middle part again.

Okay. Can you see that? Let me begin again. "As an example, with reference to Fig. 6, in processing datum having item identifier '1883823064' --" That would be in the middle column. That would be the identifier, right?
A. Correct. This is the same I illustrated in Fig. 4.
Q. Okay. So I think he's highlighted there the item that corresponds to the term, the key term "dynamics," right?
A. Yes, sir.
Q. Then if we look below, there's another reference to item 1883823064; is that correct?
A. That is correct.

Dr. J. Carbonell - Cross
Q. And that's with respect to a key term "human"; is that correct?
A. That is also correct.
Q. So picking up at the description of this says, "the facility combines the score '116' extracted from the entry 602 for this item and the term "dynamics" and the score ' 211 ' extracted from the entry 605 for this item and the term "human"." Do you see that?
A. Yes, I do.
Q. So then what's taught there is you would take the 116 corresponding to the term "dynamics" which is the rating score for that, correct?
A. Yes, it is a rating score in the middle of this. Q. Right. And then you would take 211, which is the score for the term "human" with respect to that item, correct?
A. That's correct. That would be the number of times that item was clicked when the term "human" was in the query.
Q. So you add them together and you get 317, right?
A. No, you get 327 .
Q. 327. Actually, I got that right at the deposition and got it wrong today, didn't I?
A. Right. I was impressed.
Q. Yes. So, 327?

Dr. J. Carbonell - Cross
A. Yes.
Q. So what we just walked through, 327 would be the ranking value for item 1883823064 in this example, right?
A. If the query was human dynamics, that is correct.
Q. So then if we go further down to what we were looking at before on the previous slide -- let's go back to 6.15.

So I just want to take that last piece or after
the or. "Subsetting the items in the query result to include only those items above a threshold ranking value." Do you see that?
A. I see that.
Q. Okay. So in this example, the ranking value for the item we just walked through would be 327 , correct?
A. Yes.
Q. And what this section that $I$ just read says that you can subset based upon whether that ranking value is above a certain threshold value, correct?
A. That is correct. That threshold value would typically be derived from the rank, as you illustrated. Q. So, for example, if the threshold value was 300 , then with respect to the item we just walked through, it would be displayed in Bowman, correct?
A. That is correct.

Dr. J. Carbonell - Cross
Q. And if the threshold value is 350 , it would not be displayed, correct?
A. That is also correct.
Q. So you don't think that determining whether a score is above or below a threshold level is filtering for the purposes of this patent?
A. No, I did not say that. In this case the ranking value is derived -- would normally be derived from the rank list. So, for example, as more and more items are ranked, if the number is poor, you get fewer items ranked. If you had a ranking of 300 , everything would be excluded. Over time more clicks happen, hundreds, thousands, maybe millions of clicks happen, the ranking value has to be adjusted to be selected from the actual set of values that are generated in the rank list. Typically you would select -- I'm sorry.
Q. But that would still be a threshold value.

THE COURT: Excuse me, Doctor, if you would please raise your voice. There's some problem hearing you.

THE WITNESS: Should I repeat the answer?
THE COURT: Repeat the answer.
THE WITNESS: Okay. My answer was that the threshold value is a ranking value and would be derived from the other ranking values in the rank list. So, for

Dr. J. Carbonell - Cross
example, 300 is a potentially reasonable one in Fig. 6 . It would be unreasonable in Fig. 4 because that would exclude everything and the search engine would return nothing. That's not a good search engine. Or after a while there would be thousands, maybe millions of user clicks, and at that time a rank of 300 would allow everything to come through. So the normal operation would be setting the ranking value -- selecting a ranking value as a threshold based upon the other ranking values on the rank list.

BY MR. NELSON:
Q. So what you are saying is the threshold value could change over time, right?
A. It can change over time and over query.
Q. Right, but it's, nonetheless, a threshold value, correct?
A. It is a threshold value derived from the ranking.
Q. So let's talk about the second part where you say Bowman doesn't engage in content analysis.
A. Okay.
Q. Okay? So let's take a look at -- and you have it as

Tab 7 still, if you are still on the Bowman patent.
A. Yes, I am.
Q. Look at column 1, lines 29 to 45 .
A. Could you repeat the line numbers, please?

Dr. J. Carbonell - Cross

```
Q. Excuse me?
A. Could you please repeat the line numbers?
Q. Sure, absolutely. Column 1, lines 29 to 45. They
have it on a slide. We can put it up, 6.17.
    So I'm not going to read all of this, but some
of the relevant parts. It starts, "In order to perform a
search, a user submits a query containing one or more
query terms." Do you see that?
A. Yes.
Q. Do you agree that's an accurate description of
Bowman?
A. No, that's an accurate description of the prior art
as disclosed by Bowman.
Q. Okay. You agree that in Bowman there is a search
performed where user submits query terms as well,
correct?
```

A. Bowman discloses that that's what the prior art
does, yes, that is correct.
Q. All right. So let's talk about this. Now, we have,
"A query server program processes the query to identify
within the domain items matching the terms of the
query." Do you see that?
A. I see that.
Q. Now we go on and skip a sentence, it says, "In the
example, a query result is a list of books whose titles

Dr. J. Carbonell - Cross

```
contain some or all of the query terms." Do you see
```

that?
A. Yes.
Q. Okay. So what Bowman is saying there with respect to the prior art is matching the terms in the query to the list of books involves looking at what words appear in a title, correct?
A. Yes. Bowman is describing how a search engine prior to Bowman's invention or Bowman's patent functioned. Q. Okay. And then finally if we look at the last sentence $I$ have highlighted it says, "As another example, the list may be ordered based on the extent to which each identified item matches the terms of the query." Do you see that?
A. Yes.
Q. Okay. So with respect to the prior art you would agree that when Bowman is a talking about matching here, it's referring to comparing terms of the query to words that are in the article or, in this case, the book, right?
A. In this case a title, not the list, yes.
Q. Right. So that's a content-based analysis, right?
A. Bowman is disclosing that the prior art is based on content-based analysis, correct.
Q. Right. So now if we go to what we looked at

Dr. J. Carbonell - Cross

```
earlier, and I believe we looked at this in your
direct -- if we could go to 6.16. It's in column 9 of
the Bowman patent again, very close to what we were
looking at before, about line 43.
    So here it says, ""in particular, scores may be
adjusted to more directly reflect the number of query
terms that are matched by the item, so that items that
match more query terms than others are favorable in the
ranking." Do you see that?
A. I see that.
Q. So it's the same terminology that we looked at with
respect to the prior art, correct?
A. It's the same terminology with respect to the prior
art but different than Bowman himself had disclosed
prior to this passage. He had defined matching in a
different way to be the number of clicks.
Q. Okay. So then your opinion that Bowman doesn't
disclose content analysis -- well, first of all, you
agree it discloses content analysis in the prior art,
correct?
A. Yes.
Q. Your opinion that Bowman doesn't disclose content
analysis is based on the fact the term "matching" is
used differently in column 9 than it is in column 1,
correct?
```

Dr. J. Carbonell - Cross
A. Correct. It's not just in column 9, but throughout the description of his facility.
Q. Right. So let's pull up claim 28 and 29 of the Bowman patent.

So you talked about these on direct, right?
A. Yes, I did.
Q. So focusing on claim 29 for a moment, claim 29 says, "The computer-readable medium of claim 28." First of all, that means 29 depends from 28, correct?
A. Right.
Q. So you agree whatever is covered by claim 29 has to be included in claim 28, right?
A. Yes. That's the definition of a dependent claim. Q. Right. So here it says, "Wherein the contents of the computer-readable medium further cause the computer system to perform the step of adjusting the ranking value produced for each item identified in the query result to reflect the number of terms specified by the query that are matched by the item." You see that?
A. I see that.
Q. So your opinion that claim 29 is going to talk about content analysis is, again, based on the fact that the term "matched" as used in claim 29 means something different than when it's used in column 1, correct?
A. The word "matched" is used when Bowman describes the

Dr. J. Carbonell - Cross
last piece of his facility, which is in the vast majority of the patent specification, and so the word "matched" must be interpreted in a manner consistent with what Bowman disclosed as to how his facility worked.
Q. Okay. So let's go back to 6.16. And let's blow up that middle step.

So we walked through this example with respect to Fig. 6 and we established that the ranking value, the score in Bowman is going to result from determining which key terms are matched by the item, correct?
A. Yes, that's correct.
Q. So in this example it would be 327 , correct?
A. If the combination function is an addition, which typically would be, yes, I agree.
Q. Right. So, in other words, in order to get that ranking value that we walked through with respect to Fig. 6, we already took the query terms and matched them to items that were in the table, correct?
A. That's right.
Q. So now just below that it says, "In particular, scores may be adjusted to more directly reflect the number of query terms that are matched by the item, so that items that match more query terms than others are favored in the ranking." Do you see that?
A. I see that.
Q. Okay. So just above that, in order to get the ranking value we have already determined which query terms are matched by the items, correct?
A. Which query terms are matched by the ranking table.
Q. Exactly.
A. Which references the items, yes.
Q. Okay. And immediately below that it says we are going to adjust the score based upon the number of query terms that are matched by the item, correct?
A. That is correct.
Q. Okay. So if we already got the score by determining which query terms are present in the ranking table, you still think that we would be adjusting that score by determining which query terms matched terms in the ranking table?
A. Yes, sir, because you could have -- first of all, you can match an item in the ranking table even if that term is not contained in the item. All we need is somebody to have clicked on that particular item. So if I say my query is automobile insurance and the item mentions vehicle policies and people click on it, then that one will rank high, will start to rank high as more people click on it, even though it contains neither of my query terms, according to the Bowman facility.

Dr. J. Carbonell - Cross

To address your specific question here, if a query has, let's say, four terms and one item has a score for all four of the terms and another item only has scores for two of the terms, then this is saying that you will get a bonus -- it doesn't say how to do a bonus, but it's saying you will get a bonus if it has scores for all four terms because it matches, essentially, all four terms. So Bowman is favoring one that has some user clicks or user relevance to as many terms, or in this case, all of the terms in the query. It's a sensible thing to do.
Q. I'm sorry, I didn't know you weren't finished.
A. I'm done.
Q. Okay. But you agree that -- it's okay?

THE COURT: Go on.
MR. NELSON: All right. Just checking.
BY MR. NELSON:
Q. The original ranking value is going to come from how many terms in the table match words in the query, right?
A. Not how many, the sum of the scores as in your example.
Q. Right.
A. So you could have five of them with low scores versus two terms that are matched with high scores. The two terms with high scores with high clicks would

Dr. J. Carbonell - Cross
dominate the five. This one is sort of curing that to some extent by giving a bonus score if all of the terms in the query are contained in the rating table, or have scores in the rating table.
Q. Okay. So let's talk about your opinions concerning the Culliss reference now.
A. Okay. This is going to be at Tab 8 in your binder. It's DX-58.

Now, on your direct examination $I$ think you said that you thought Culliss didn't disclose filtering and didn't disclose content-based analysis; is that right? A. That's right.
Q. So you agree that Culliss includes the collaborative feedback elements of the asserted claims, correct?

MR. CIMINO: Objection, beyond the scope. He talked about two things that were missing and he didn't talk about anything else in the reference.

THE COURT: No, the objection overruled.
THE WITNESS: I did not offer an opinion as to whether it disclosed the collaborative part. By Dr. Ungar's definition of collaborative filtering, it will actually not be disclosed; however, my understanding of collaborative filtering is different from that of Dr. Ungar's.

BY MR. NELSON:

Dr. J. Carbonell - Cross
Q. Okay. How about if you use Dr. Frieder's definition?
A. I was not here for Dr. Frieder's testimony.
Q. So you don't know what Dr. Frieder's definition of collaborative filtering is?
A. I know what Dr. Ungar's is. I know what mine is.
Q. All right. So let's talk about this content-based first, and we are going to need to walk through the patent a little bit. So let's put up DDX-6.18. This comes from column 3 at about line 42.

You see at the bottom it says "This data may comprise articles, databases, data collections, web sites, web pages, graphics, encryption, audio, video or any other type of information collectively referred to as articles and designated herein by the generic labels A1, A2, A3, etc."
A. Yes, I believe these are references of performance.
Q. Okay. So when we see A1, A2, and A3 in the Culliss reference, it would include, among other things, articles, correct?
A. Yes.
Q. So let's just stick with articles because we don't want to recite this litany each time we talk about it, okay? Does that work?
A. It works for me.
Q. All right. Now, if we look a little bit further down, and this is in DDX-6.19. It begins at about line 62. It says, "The articles are each associated with one or more of these key terms by any conceivable method of association, such as through indexing all words or through meta-tag headers containing keywords selected by the author or editor." Do you see that?
A. That's correct, yes.
Q. So you agree that Culliss teaches that the key terms can be selected by indexing actual words that are in the articles, correct?
A. Yes. This is the initialization step. One of the ways of doing it is by presence in the article. Another is through a human editor assigning it to a meta-tag and so on.
Q. Okay. So let's stick to the example in Culliss where the key terms come from indexing actual words, content that appears in the article, okay?
A. Okay.
Q. So now let's put go to 6.20, and this is from shortly after we just read. It's from column 4, beginning at line 1 and 9. I think you actually showed this table in your direct, didn't you?
A. I believe I showed the table at the bottom of that column.

Dr. J. Carbonell - Cross
Q. Okay. So this table, then, you agree that this table is representative of an initialization of the index settings in the Culliss reference, right?
A. That would be correct. That would be before Culliss begins to operate.
Q. Okay. So let's just talk about this a little bit, and let's take, first, article Al. Do you see article

A1 there?
A. Yes.
Q. So what this table is telling us that article A1 contains the word alpha, for example, right?
A. And Beta and Gamma.
Q. Yeah, I was going to go through them one at a time.
A. I'm trying to save you some time, sir.
Q. Okay. Thank you. Fair enough. So you do agree, then, this table shows that article A1 contains the words Alpha, Beta, Gamma and Epsilon, right?
A. Right. Under that particular embodiment, yes.
Q. And, similarly, you would agree that this table shows that article A2 contains the words alpha and Delta, correct?
A. Yeah. Actually, article Al does not contain the word Delta.
Q. I skipped Delta.
A. Oh, I did not hear it. You are correct.

Dr. J. Carbonell - Cross
Q. And then you would, similarly, agree this table shows that article A3 would contain the words Alpha, Gamma, delta and Epsilon, correct?
A. Yes.
Q. So you agree that's what's shown here in this table would be a content-based initialization, right?
A. If the ones come from whether or not the article contains it, yes, and that is one of the possibilities. Q. So that's a content-based association, right?
A. Yes.
Q. So now let's go to DDX-6.21. This is in column 4 of the patent, and it says, "The invention will accept a search query from a user and a search engine will identify key terms which match the search query." Do you see that?
A. Yes.
Q. And you agree that's an accurate description of Culliss?
A. That's an incomplete description, yeah.
Q. Right, but just focus on this sentence. You don't quibble with that?
A. No.
Q. So then what this is saying is that the query will be content-based in the sense of matching the index key terms in a query, correct?

Dr. J. Carbonell - Cross
A. No, it doesn't say one way or the other here. It will accept a search query from the user and will identify the key terms which match the search query. The key terms are those entries in the table.
Q. Right, and those key terms come from words in the article in our example, right?
A. In the initialization step only.
Q. Okay. So let's talk about that a little bit. So you agree in the initialization step that Culliss discloses a content-based analysis, correct?
A. A content-based initialization.
Q. Right. So the key terms are associated with content in the article, correct?
A. Yeah. We have been over this before. Yes. There are other ways of doing it as well. This is one of the ways.
Q. Okay. Understood, this is one of the ways, so let's just stick with this example.

So but what you are saying is that what Culliss describes is the feedback, in other words, how many times users actually clicked on the various articles will increase the initialization score, correct?
A. Yes, that's correct.
Q. Okay. So for that reason you don't believe that Culliss shows a content-based analysis, correct?
A. The short answer is yes. To elaborate a little, over time, and usually over very little time, the users will click and click and click some more. There are millions of queries or billions of queries everyday, and the number of clicks will totally overwhelm the initialization, whether it be one, as in this example, or whether it be some other small number from another example. So during the operational phase it will be purely collaborative. During the initialization step, which is not the operational step, it will be content-based, as you described.
Q. Okay. So you don't think, then, that doing an operation where $I$ match the query terms to key terms and use that to access a feedback score meets the content-based filter limitation of this patent?
A. That's right.
Q. Okay. So let's talk a little bit more about this content-based initialization and what Culliss teaches. So if we go to 6.23, and this comes from column 14. If you have that in front of you, you can turn to that and let me know when you are there.
A. I got here already.
Q. So here it says, "Initially, the key terms, category key terms and rating key terms may be associated with words or other information in the article, or may be

Dr. J. Carbonell - Cross
arbitrarily associated with the article in any manner." Do you see that?
A. Yes.
Q. So this is another description of initializing the key terms to content in the articles, correct?
A. Only one of the alternatives is with context in the article to the article. Associated with words or other information in the article, that is content for initialization, sir, but it also says may be arbitrarily associated with the article in any manner. So there's more than one possible way.
Q. And if we look to 6.24, it's a little bit farther down in column 14, it says "Although the scores in the index are initially shown at 1 , they can be initially set to any desired score. For example, the scores can be initially set to correspond with the frequency of the term occurrence in the article." Do you see that?
A. That's correct.
Q. So you could provide a content score of anything other than 1, right?
A. If the word occurred 3 times, you could initial lies it at 3, for example.
Q. Right. Or you could initialize it at 3,000 if you wanted to, correct?
A. It would be arbitrary. I guess it's permitted, yes.

Dr. J. Carbonell - Cross
Q. Okay. So you agree, then, that the initialization to the frequency of the words in the article is the content-based initialization, correct?

MR. CIMINO: Objection, asked and answered.
THE COURT: Sustained. This is about the third
time, I think, Mr. Nelson.
MR. NELSON: Well, this is just going to the
frequency, your Honor, but that's fine. I will go quickly through this.

BY MR. NELSON:
Q. So you agree that that content-based initialization never goes away, correct?
A. No. Content-based initialization is completely swamped. It doesn't matter whether it's there or not. If you have a million clicks does it matter the real score should have been a million and one? The facility will work in the same way whether or not the initialization is there or initialization is not there. So from an engineering perspective, the content goes away.
Q. So what you are saying is if the content piece is a very small part of the score, then that's not content-based filtering, correct?
A. I'm saying that it doesn't have any effect. So for all practical purposes, it is not content-based

Dr. J. Carbonell - Cross
filtering.
Q. Now, you have been in, I think you said, in the search industry for a long time, right?
A. That's correct.
Q. And we heard about your background. You have been in it for 30 years, probably?
A. Yes.
Q. Okay. So you are not aware, at least as of the time of your report, of any praise of this claimed invention by anybody in the industry, correct?
A. This claimed invention refers to --
Q. In the ' 420 and ' 664 patent.
A. Okay. You aren't talking about Culliss?
Q. Correct. I'm sorry.
A. I was wondering if you were asking about praise for Culliss. No, I do not know of any praise that those inventions received. I don't know of any for Culliss either.
Q. Okay. Just so we are clear, as to the ' 420 and '664 patents, you are not aware of any praise those inventions ever received?
A. No, I have not.

MR. NELSON: That's all the questions I have, your Honor. I pass the witness.

THE COURT: Any redirect?

did not move. The defendants were responding to our motion when they tendered the proffer, and it's clear. I just went back and reread the transcript at pages 1771. It was my motion that $I$ made saying that the defendants had not satisfied their burden with regard to laches and made the argument to the Court. And in response to plaintiff's motion, defense counsel explained that they believed that they had, but the defendants did not have a pending motion with regard to laches.

THE COURT: So now your argument is that the Court ruled on a laches motion without their being a motion for laches?

MR. BROTHERS: It granted -- it precluded through the Court's ruling this morning damages prior to the day of suit without their having been a pending motion, that's correct.

And we had no -- plaintiff had no opportunity, no notice to be heard, as required under Rule 50 (b) on that motion and because that motion was not made, and we had no opportunity to present rebuttal evidence.

The Federal Circuit has ruled in the Wanlass case that once the presumption of laches is applied, which is what your Honor implied this morning, a prima facie defense of laches is made with the presumption the facts of unreasonable and inexcusable delay has produced
or inferred absent rebuttal evidence. Once the presumption is established, the patentee may introduce evidence sufficient to support a finding of the nonexistence of presumed facts.

That is what plaintiff proposes to do, and $I$ can
tender a copy of this court decision to your Honor.
THE COURT: The Court is familiar with the
decision. The Court quoted from that case this morning when the Court ruled.

MR. BROTHERS: Yes, and I wanted to point out the specific language of the Federal Circuit stating that once the presumption was found, again, without a motion having been made, we, plaintiff, has the opportunity to respond by providing in rebuttal that evidence.

We also understood pursuant to the discussion at
the pretrial conference that laches was going to be heard, for the most part, outside the jury.

Your Honor indicated if there was specific witnesses, maybe we could ask a few questions.

THE COURT: I wanted to let you go on, but, Mr. Brothers, $I$ think you are redefining some things here. You had an opportunity to present evidence on laches if you wanted to do it. Now you are Johnny come lately with this argument because you found that the Court has held against you, but you had no intentions and
expressed no intentions of calling any witness in here on laches.

Now, no matter what the Court does, that's what the record reflects. Now, you can reinvent history, but you did not intend to call a single witness in here after this witness, and you told the Court that more than one time. And to tell the Court now that somehow or another you haven't been given a chance to do what you were not going to do, the Court finds that disingenuous. You can go on and tell anything else you want to say about what you are in the process of presenting to the court.

MR. BROTHERS: To clarify, your Honor, we never believed we needed to call witnesses for the jury with regard to laches. We had understood from the conference, from the pretrial conference, that the Court would take up laches after the close of evidence to the jury.

THE COURT: Mr. Brothers, you never indicated to
this Court anything about calling any more witnesses on this issue. Now, when they presented that transcript yesterday, the Court indicated yesterday that it would consider that transcript and rule on that issue this morning, you never said a word, and you have got enough lawyers over there if you forgot it, for somebody to say something about it. You never said a word.

MR. BROTHERS: I'm sorry, your Honor. I won't
interrupt.
THE COURT: You know something, the Court finds it troubling that you would now come in here and raise an issue you never had a chance to really raise, to put forth evidence.

Let me hear from your opponent just in case the Court missed something here on this issue.

Have a seat.
Yes, sir.
MR. NELSON: We did move on laches. I mean, actually we've talked about it in chambers many times. We submitted the evidence and we filed a written JMOL on this issue.

Yesterday after the argument on the issue, which was an argument on the laches issue consistent with the summary judgment briefing, as your Honor referenced earlier this morning that we had filed previously, Mr. Brothers actually said, your Honor, it's okay if we don't file anything? He didn't want to file anything else. They went through -- he specifically said we have no more witnesses to call. This is the only witness that we have. They never intended to offer any additional evidence, never did they ask the Court, never did they apprise us that they wanted to offer any additional evidence on laches.

```
We made the submission. They specifically asked
if they could not file anything with your Honor.
Therefore, they could have done the same thing. If they believed that they had some evidence and wanted to make a proffer, as we did to your Honor, then they could have done that, but they chose not to do that. And now what they are doing is exactly what your Honor has said. Now they got an adverse ruling. What we have here is a situation where they just didn't take the defense seriously. They didn't think they needed to put on evidence. They didn't think that they needed to do anything. It was a serious defense. It's been a serious defense from the beginning, and with all due respect to them, they have been on notice of this since the beginning of the case. If they chose not to come in and offer your Honor any more evidence on that, well, that's too bad. That would be just like I rested my case yesterday. Now I'm supposed to come back and say, oh, your Honor, \(I\) thought of one more thing and \(I\) didn't have an opportunity to be heard. That's not the way trials work.
THE COURT: Well, I just want to be clear the Court wasn't imagining that's what the Court heard yesterday afternoon --
I'm not ready to hear from you again,
```

Mr. Brothers.
Before the Court indicated that it would rule on
this matter and read those transcripts last night, the Court's reasonable expectation would have been that you would have said then, once he tendered those transcripts for the Court to read, that, Judge, there's something else $I$ want you to consider on this motion before you make any determination on this issue based on reading those transcripts. That's what the Court would have expected to be done. It never happened.

You also indicated to the Court that there were not going to be any more witnesses because the Court's concern in not addressing the motion for summary judgment in the first place was that the Court wanted to make sure it knew what was in the record on this issue before it did anything.

The Court clearly recalls, $I$ think you, Mr. Brothers, responding to one of the Court's questions about what were you doing? And the response was, Judge, this goes to laches.

So you knew you had to put on some evidence. You made reference to putting on evidence in the case, in your case in chief when the court questioned you. So you have had more than ample opportunity to address this issue, and so the court absolutely rejects any suggestion
that you have been foreclosed with going forward with any evidence in this case on the issue of laches. I think this is a procedural issue and the Court is not prepared to go back and run a trial this way. It's just not the Court's experience as soon as the Court rules against a party, then we start all over again with a new record.

The record on appeal is based on what the Court considered before it ruled, not what you introduce after the Court rules. If you wanted me to know something more, you should have introduced it before the Court ruled. And you knew $I$ was going to rule because I gave you overnight to do it. And if you didn't think about it yesterday, you had an opportunity to think about it this morning when the Court sat down and started to rule. You still had an opportunity to stand up and say something about it. You did not. You waited, and that's not the way we are going to operate in here. A trial will never end if a party can come in wanting to present new evidence after you get an adverse ruling. And so, no, the Court has ruled on that matter.

So, now what is it that you now intend to offer so I will know exactly what the court is rejecting?

MR. BROTHERS: I would simply point out to your Honor that last night with regard to the transcript I noted that the defendants had renewed their Rule 50
motion last week which the Court had denied, and I said this morning, in reading from the transcript, "This morning we --" I'm sorry. This is at page 1792, "This morning they filed essentially the same thing. Do you require a written response?"

And the Court said, "I don't require written response. I think we recall where you went."

And on that issue we understood that the court was not going to accept a further written response.

THE COURT: No. You asked me did the Court require an additional response? The Court indicated no. That's not the same as you saying, Judge, I want to supplement the record with what I have presented. That's a different question. You didn't say, Judge, I want, as a party, to supplement the record with what $I$ have presented. That's what you are called upon to do as a lawyer. So, now, let's not misinterpret what happened here.

MR. BROTHERS: Well, I understand the Court's comments. The context as $I$ understood, our having made the JMOL, we were the moving party, and very clearly in the record after $I$ made that motion, a response was made to our JMOL on laches.

THE COURT: And then they made a motion, a JMOL on laches, and you stood up and you responded to it
yesterday afternoon.
MR. BROTHERS: Your Honor, the record indicates
that Mr. Sohn in his response was responding to our motion on laches. This is at page 1785 and 1786 of the transcript. I can proffer it to your Honor, but to be clear, this was a response to plaintiff's motion.

THE COURT: Well, let me ask you something.
What do you call yourself doing yesterday when he stood up and argued on laches and then you responded? What was that?

MR. BROTHERS: I'm sorry, that was his response to plaintiff's motion, and the Court said it would take and it would review the materials that had been proffered with regard to whether the Court was going to grant or deny the plaintiff's motion.

THE COURT: The Court also addressed the matter of the JMOL, so now you are standing here and telling the Court that you didn't understand the Court was going out and coming back and ruling on laches. Is that your argument?

MR. BROTHERS: No, your Honor. I'm sorry if I'm being unclear. It was plaintiff's motion on Rule 50 that the defendants had not met their burden of proof on laches. That was the pending motion. And we understood that the Court was going to consider the materials
proffered by the defendants to determine whether it was going to grant or deny the plaintiff's motion for JMOL on laches.

THE COURT: So, in other words, you are saying to the Court you didn't expect the court in any way to address whether the defendant's motion for laches should be granted?

MR. BROTHERS: That's entirely correct, because no motion was made. It's not here in the transcript and we had understood, quite frankly, from the pretrial conference and the Court's comments that laches would be determined by the court outside the presence of the jury.

THE COURT: And it did.
MR. BROTHERS: I'm sorry?

THE COURT: And it did. I tell you what, if the Court has made an error, I'm sure the Federal Circuit will correct me.

MR. BROTHERS: Will the Court permit us to make our written proffer with regard to our proposed rebuttal evidence regarding laches? Can we make that written submission?

THE COURT: Well, the Court has ruled, number one, you presented your evidence and you told the court that you had no further evidence to present. Now you are coming back through the door suggesting you have
something.
Well, $I$ can tell you what, just as a matter of policy, the Court will permit you to give it to me, but it's rejected, just for the record, but I'm not confident
that any Court of Appeals will let you attempt to game the trial court this way, Mr. Brothers.

MR. BROTHERS: Your Honor, I respectfully
disagree that that's what we were trying to do.
THE COURT: That's not what you were trying to do, that's what you are trying to do now.

Call the witness. Call him. Who are you going to call, Mr. Blais?

MR. BROTHERS: We are prepared to proffer a declaration from Mr. Blais, but you have already told us you wouldn't hear that testimony.

THE COURT: Well, you can give a declaration of Mr. Blais. I will let you proffer it for the record, purely for the purposes of appeal.

MR. BROTHERS: And we expect to make a written submission, your Honor, with regard to the other evidence that we think that the Court disregarded in its determination.

THE COURT: Well, $I$ can tell you, you can appeal it. You can file whatever motions you want. The Court also -- you may want to wait until the Court issues a
memorandum order on its ruling, which the Court has the authority to do. I mean, since you are now saying you are going to issue -- you wait until the record is ripe if you want to do any such a thing. Otherwise, that will, likewise, be out of order and upside down as you are on this motion here.

Okay. This declaration of Mark Blais, when did you prepare this?

MR. BROTHERS: When we received your Honor's - -
THE COURT: Ruling?
MR. BROTHERS: -- ruling. This is a proffer of declaration. $I^{\prime} m$ sorry, let me hand it to opposing counsel also. So I left the courtroom and $I$ had a conference call with Mr. Blais today, and so we tender this information to the Court.

THE COURT: The Court will note, just even glancing at it, this seems to be add odds with part of his deposition testimony. But anyway, mark it as an exhibit. The Court, basically, refuses the declaration. It's submitted after the fact and with the benefit of the Court's ruling, made after the Court had articulated its ruling on the issue.

All right. Anything else?
MR. BROTHERS: We need to discuss, your Honor, how we are going forward now in light of the Court's
ruling with regard to the evidence.
THE COURT: Okay. Let's do this. Let's bring
the jury back in and let them go home.
MR. BROTHERS: Thank you, your Honor.
THE COURT: Hold on, Mr. Taylor.
Let's be clear. Are there any more witnesses?
MR. BROTHERS: There are no more witnesses for
the jury's consideration, your Honor. The only witnesses that we would proffer, which we understand the Court will not hear, relates to the equitable defense of laches based on the Court's ruling.

THE COURT: What witnesses? You told me you had
a declaration from Mr. Blais.
MR. BROTHERS: Well, we proffered Mr. Blais this
morning and asked if we could call him. You said no, don't bring him down.

In addition, we would proffer for the Court -again, this is not for the jury. This is for the Court because it goes solely to laches -- Mr. Kosak on the issue of laches.

THE COURT: You have had Mr. Kosak in here as a witness in this case. You had him in here as a witness in the case. You are now asking the court to put it in the record after the fact. I mean, you had an opportunity to do that, Mr. Brothers, so, no, the Court
is not going to call Mr. Kosak as a witness. If you want to make an oral proffer of what he would say, you are welcome to do that, but the Court is not going to put him back on the stand.

MR. BROTHERS: We will submit a written proffer or $I$ can make an oral proffer, but $I$ believe we can let the jury go home before we do that.

THE COURT: Well, you know, I'm prepared for you
to make your proffer right now. How long are you going to be? You know what he's going to say. You are pressing me to call him, so you obviously know what he's going to say. You can make the proffer now.

MR. BROTHERS: Okay.
MR. NELSON: Judge --
THE COURT: Just a minute, Mr. Nelson.
MR. NELSON: May I say something, your Honor?
Just so you know and so the record is clear on
this, Mr. Kosak is not only sitting in here again
listening to all the testimony, he's been sitting here listening to all the arguments. Your Honor ruled on this issue yesterday on the 615 and now they want to call him back up again after they chose not to heed your Honor's ruling.

THE COURT: I tell you what, Mr. Brothers. You can make a written proffer and you can put that in the
record along with Mr. Kosak, but the record will reflect that the Court has already excluded him once before and dealt with this issue. So you can, likewise, give me a written proffer tomorrow morning and we will put it in there as refused purely for appellate purposes.

MR. BROTHERS: We will do that, your Honor.
Thank you.
THE COURT: Bring the jury in.
(Jury in.)
THE COURT: You may be seated.
Let the record reflect all jurors are present in
the courtroom. Does counsel agree?
MR. CIMINO: Yes, your Honor.
MR. NELSON: Agreed, your Honor.
THE COURT: All right. Ladies and gentlemen, all of the evidence is in in this case and the parties have concluded, but what the Court has to do now is meet with counsel to review the final instructions that you will be given, and that's a lengthy process. So what the Court is going to do is the Court is going to excuse you to come back tomorrow morning at 9:30 a.m. We will start with the -- no, no, hold on. 10:30, 10:30 a.m. so that we can start with the closing arguments, and you should get this case tomorrow for your deliberation.

Although the evidence is all in, the precautions
that the Court gave you in the beginning of this case certainly apply. It's not time to conduct any research, or to make up your mind, or do anything. Just wait until tomorrow afternoon when you have an opportunity to get in and deliberate.

Thank you for your attention. The Court will see you in the morning at 10:30.

All rise.
(Jury out.)
THE COURT: You may be seated.
Yes, sir.
MR. NELSON: So at this point, your Honor, we have a Rule $50(a)$ motion with respect to invalidity. We also renew our prior Rule $50(a)$ motions.

I don't know how much argument you want on this, your Honor, but with respect to the invalidity case, I think on the anticipation first, with respect to the Bowman reference you have just heard not only the testimony of $D r$. Ungar establishing that all the elements are, in fact, present, but in addition you heard the admissions of Dr. Carbonell here today that indicate that, in fact, he says it doesn't disclose content-based analysis. He says it doesn't disclose filtering, but as to the filtering he admitted that there is a threshold value and that things above the threshold will be
maintained, things below the threshold will be tossed out, which is exactly what Dr. Frieder has accused of infringement in the case.

Furthermore, with respect to the content-based analysis in the Bowman reference, what Dr. Carbonell's opinion is based solely upon the notion that words have different meanings throughout the patent. He
acknowledges that the term "matching" in the first instance in the patent refers to a content-based analysis and content matching, but then contends when exactly the same terminology appears later in the patent, that that does not refer to a content-based matching.

With respect to the culliss reference, your Honor, he has indicated -- or there are two elements that are challenged by the plaintiff's counsel. With respect to the content-based analysis, similar to what we just saw with Bowman, Dr. Carbonell just admitted that, in fact, there is content-based analysis. He says that that is overwhelmed eventually, but the initialization is content-based and the claims themselves don't require a particular amount. Therefore, based upon his own admissions, that element is, in fact, present.

Additionally, he's just admitted on the stand that -- well, actually that's a noninfringement argument, your Honor. Never mind.

given the disclosure in the prior art.
So that's the invalidity JMOL, your Honor. And, of course, the obviousness goes to all the references that we had submitted, the Fab article, the WebHound, the Rose patent, as well as Bowman and Culliss, which Dr. Ungar testified to the various combinations.

In addition, on the $50(a)$ I don't know if you want any more argument on the previous $50(a)$ motions, whether there are any more of those your Honor would be interested in hearing further about. If there are, I'm happy to address those, but I would leave that to your Honor.

Now, as to damages, based upon your Honor's ruling here, we have an additional issue because we have a complete failure of evidence to support any damages claim post-September 15th, 2011.

What Dr. Becker testified to, the only
evidence -- remember, his theory is royalty base times the royalty rate equals a royalty. The only evidence that he chose to put in the record was a cumulative apportionment of royalties for the entire period, which he put in at a big number. I'm not going to mention the number here, your Honor. But he did not write that down by quarters. There's no evidence of what the revenues are by quarter, whether it be post-September 15th, 2011
or pre-September 15 th, 2011.
That was plaintiff's choice. They wanted to
have Dr. Becker state a big number to the jury and they chose not to break his apportionment down by quarters, so they have a complete failure of proof.

Now, in response to some of the discussion and your Honor's ruling this morning, there were several references made to a chart that Dr. Becker had shown to the jury that showed bars by quarter. That's a demonstrative, first of all, so that's not evidence. He never provided any testimony as to what the individual amounts of the royalties would be on a per quarter basis. There's no testimony in the record whatsoever to support whether it be a royalty base to apply his royalty to or a final royalty amount post-September 15th, 2011.

Now, this is plaintiff's choice. They knew --
THE COURT: Suppose the jury decides that, you
know, they find infringement? Suppose they find infringement and the patent is still being used and they assume that Dr. Becker's calculation of a 3.5 percent royalty rate is appropriate? What's stopping the jury from using the 3.5 percent running royalty figure from the date -- whatever date the Court gives them?

MR. NELSON: Well, the problem is, your Honor, they don't have anything to apply it to. There's no
evidence in the record to apply that to a revenue base. They chose not to break that down on a post-September 15th, 2011 base despite the fact that they knew this motion was out there and despite the fact that there were other issues concerning infringement regarding their source code, when certain templates were identified. So this is something that plaintiff has been on notice of and this was a trial strategy decision by them to try to offer only a lump revenue in order to make that number bigger. So, there is nothing for the jury to apply the 3.5 percent to, even if they would choose that the 3.5 percent is the appropriate amount.

THE COURT: Suppose they decided a lump sum would be appropriate?

MR. NELSON: Well, then, your Honor, the only evidence in the record is what Dr. Ugone testified to, which would be the $\$ 3$ to $\$ 5$ million figure.

THE COURT: That's something.
MR. NELSON: No, I understand that that's something.

THE COURT: Your argument was there was nothing in the record.

MR. NELSON: Well, with respect to the running royalty.

THE COURT: Okay.

|  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| invalidity? |  |  |  |  |  |  |  |  |  |
| If it please the court. I prefer to do it in writing, if that's okay, but $I$ could summarize the testimony that was just given, if the Court would like. <br> THE COURT: Let's put it this way: You could address it in writing. The simple truth is by the schedule we are operating on, we would end up ruling on it in the morning, and the Court intends to take up the jury instructions with counsel. So you can give me your |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

oral statements now, but that's the Court's view. I think that you, hopefully, should be able to address it now.

MR. CIMINO: Sure. So, Mr. Nelson didn't mention the burden of proof. The burden of proof for invalidity is high. It's clear and convincing evidence. That's what we are allowed by the patent office. So everything is in the context of clear and convincing evidence, and they have not met their burden of clear and convincing evidence of invalidity.

On Bowman, the first point he mentioned was
filtering. There was clear testimony by Dr. Carbonell, an established and well-respected expert in the field, that it is not filtering according to the '420, '664 patent. It is a relative analysis by taking a ranking threshold, not a clear threshold, or not an absolute threshold in doing a one-by-one analysis.

In the Google product they filter first, then
rank. In the Bowman patent there was testimony by Dr. Carbonell that what happens first is they rank all of them and then they use a ranking, relative ranking threshold to remove some. That is the difference between the two products.

He also addressed the content analysis that Dr. Carbonell says is missing. He says Dr. Carbonell is
reading words in the patent two different ways. Words in the patent should be interpreted in accordance with the contextual use in the patent. Dr. Carbonell was very clear every time counsel pointed him to the word "matched," whether it was in the background or whether it was in the actual description of the Bowman facility.

In the background Bowman says that prior art ways of doing it would match content of the article. Then if you remember, your Honor, there was a statement in Bowman that says, What I'm going to do is to look at collaborative information rather than the attributes of the item. I'm going to look solely at collaborative rather than content. And then when he describes his facility, he uses the word "matched" with different prepositions. And when he uses the word "matched" later, Dr. Carbonell has testified he's talking about the keyword. So Dr. Carbonell did not take an inconsistent position. The patent has to be put in context. He was talking about the prior art, how it did it.

The part that Mr. Nelson left out of his cross-examination was the transition. I don't want to do it that way anymore. I'm going to do it the new way just based on collaborative information and when he used matched throughout the patent later, it was always with respect to collaborative information. So matching,

Dr. Carbonell interpreted in context the way a person of ordinary skill in the art would do in 1998 in view of the entire reference.

He mentioned Culliss. Dr. Carbonell was very clear that initialization is different, in his view, from what happens when the Culliss facility is actually processing articles. There is nothing in Culliss similar to the Fig. 6 to the patent where you take content and collaborative and combine them for a score. You set up an initial index. It can be done in many different ways. One of them could be content, but then as the facility is running, it's purely collaborative.

Mr. Nelson mentioned filtering. Filtering was not connected to the embodiment that was discussed about how Culliss works. There is a separate embodiment that talks about these ratings for $X$-rated and $G$-rated content. The $X$-rated and G-rated labels are selected by human judgment or by default. It's not content-based. And Dr. Carbonell clearly indicated that that was a separate rating from the actual discussion of how Culliss is going to work and also indicated the problems in the patent about how the filtering would be accomplished, even if it was filtering.

He mentioned obviousness. Dr. Carbonell went through the three references, said that Dr. Carbonell
didn't discuss the Graham factors. He didn't use the term "Graham factors", but he went through the scope of the prior art in detail. He showed profile systems, how they worked; he showed search systems, how they worked both in 1998; he showed the over-the-wall system, how they worked; and then went into a detailed discussion of how the claims are different, that the claims require analysis of content data, collaborative data combined together and then filtered with respect to relevance to the query. While the query was on one side, it wasn't on the other, and here's where the filtering was being done.

He also said that Dr. Carbonell did not do a KSR
analysis. That's untrue. He didn't use the case name, but the issue in $K S R$ is whether combination is predictable. I clearly asked him whether he thought they would be predictable to a person of ordinary skill in the art to take the prior art methods and come up with the claimed invention, and Dr. Carbonell went through several different reasons, both academic and based on his personal experience as to why that wouldn't be done.

Dr. Ungar had never taken the prior art and stated how it would be combined to meet all of the elements. He just said all of the elements were there. So since it is defendant's burden to prove invalidity, Dr. Carbonell did not have to build a strong combination
to then say that it didn't meet all of the elements. So he didn't do that. But what he did say is there are four elements, an element in every claim, that's totally absent in the prior art, and I specifically asked him whether a person of ordinary skill in the art in 1998 would be able to find that missing element and then combine it to come up with the claimed invention. So the testimony from Dr. Carbonell on both the two anticipation and on all the prior art refutes JMOL of invalidity.

THE COURT: Thank you.
All right. The Court heard the defendant's motion for judgment as a matter of law on the question of invalidity. That motion is denied on all grounds.

The Court also denies your Rule 50 motion for judgment as a matter of law on the issue of noninfringement.

With respect to the issue of invalidity based on obviousness, $I$ think the simple fact is the question of obviousness is a legal determination for the Court, not for the jury. But the jury is responsible for making certain underlying factual determinations, so the Court in the verdict will submit certain interrogatories to the jury on the issue of obviousness, and the court will make the ultimate determination on the issue of obviousness based on using those factual findings in an advisory

```
capacity. That's what the case law provides and that's
what the Court will do.
    With respect to some guidance on the issue of --
```

Let's see. What else did I miss here? Damages.
MR. BROTHERS: Your Honor, we have not yet
responded on the issue of damages.
THE COURT: Oh, yes. I think that's something
that you need to do.
MR. BROTHERS: Okay. On the issue of damages,
your Honor, the plaintiff concedes that Dr. Becker did
not provide a number for the amount of damages from
September 15, 2011 forward. What the jury did see was
this graphic with regard to the reasonable royalties by
quarter, and so starting effective the fourth quarter of
2011 this information was presented to the jury and so
that information is at least sufficient for, we believe,
the jury to have accepted and make a determination if the
Court instructs that damages need to be calculated solely
from September 15 th forward.
THE COURT: Was that document introduced? What
exhibit number is this?

MR. BROTHERS: This is PDX-083. This was a demonstrative exhibit.

THE COURT: So it was never even introduced?
MR. BROTHERS: As a demonstrative exhibit. It
was never marked and admitted into evidence.
THE COURT: They received the information. They got the date of it and never got the physical exhibit regarding the --

MR. BROTHERS: Well, this is not an exhibit they will take back to the jury room, but the information on this the jury was shown.

THE COURT: All right.
MR. BROTHERS: But you are correct, your Honor, in that this exhibit itself was not marked as an admitted exhibit.

So I think with regard to where we are left -- I
think the premise that there is an absence of proof to support the plaintiff's case with regard to Dr. Becker's testimony, $I$ believe the evidence is in the record, although $I$ concede the specific number as of September 15, 2011 is not in there, and I believe we will require guidance from the Court on how we present that to the jury in our summations.

THE COURT: Well, you certainly cannot go back to the jury and present information on a running royalty as Dr. Becker calculated. The question for the Court was whether there was sufficient information in the record from which the jury could reasonably fashion a lump sum royalty or a lump sum figure if they found infringement
based on infringement from the llth of September forward and the Court's view, based on what it's heard here, there is sufficient information there for the jury to do so.

Now, I know defendants would like to suggest that, well, there's nothing there, so we are caught between a choice of, $I$ was going to say, a devil in a dark blue suit, but $I$ don't think so. I think there's sufficient evidence in the record for the jury to make a reasonable estimate damages, notwithstanding the fact that Dr. Becker didn't give them a specific figure for the period September 11 th through the current date and time. That's just the Court's view.

Now, where you find it in the record is something counsel, I think, would probably be more adept than the Court, but the Court believes it's there.

Mr. Nelson.
MR. NELSON: Your Honor, might $I$ show you on the
Elmo, if $I$ can, there were two questions and answers regarding $P D X-83$, which is what he just showed you.

There we go.
So here we go. This is right after the question you can see up at line 6 where he talks about this overall number.

He goes down to PDX-83. "This is PDX 83?


```
THE COURT: This says that the quarterly payments are somewhere between 5 million and 10 million. That was in 2005. So now you are in 2012 trying to estimate what would the approximate amount be. They do know that.
MR. NELSON: But they don't have any information
to that, your Honor. It's just pure speculation. If
they want to argue for the lump sum that Dr. Ugone submitted, that's their prerogative. That's evidence in the record. But to argue for running royalty based upon no evidence of what the revenues are or what the royalty amount is would just lead the jury to pure speculation at this point, your Honor, and that's their failure. They had to opportunity to offer the proof and they didn't do it.
```

THE COURT: Thank you.
MR. BROTHERS: Your Honor, I would note, first of all, PX-64, which is the Google bar chart, has revenue information which is a reference point for the jury.

I would also note that with regard to total revenues, as the Court recalls, there was considerable discussion during the course of trial whether the total revenues would be admitted, and your Honor, I believe where we eventually ended up was the total revenues of 67 billion would not be presented to the jury, rather what
got to the 14 billion, which was the allocated number, that was something Dr. Becker would be permitted to speak to but that the defendants were not going to be separately attacking the revenue numbers for that, and that was our understanding on which the evidence was proffered.

Now we have a change of position in which the defendants are saying there's an absence of proof with regard to the revenue numbers because of your Honor's concern with regard to the total amount of revenues and limiting how the allocative revenues were going to be provided to the jury. So based on the Court's prior rulings, we had proceeded one way and now the defendants are saying that there's a failure of proof because of the evidence as it came in.

THE COURT: I don't think the Court's prior ruling with respect to the $\$ 67$ billion or having Dr. Becker focus on the 14 million in any way restrained the capacity of the plaintiff to put in evidence about what the revenue figures were.

You had the bar chart. He could have just easily put in dollar figures as measuring -- by using a ruler to measure it. That didn't restrain you from putting in the actual dollar figures. The Court didn't do that.


for a suggestion from counsel on exactly where they want to go, understanding what the restrictions are.

MR. NELSON: Okay.

THE COURT: You cannot argue for a running royalty from 2004 to 2011. In fact, it's going to come up on the jury instructions. I was trying to remember who proposed asking the jury if they found infringement, whether they were going to base any award on the running royalty or a lump sum, and the Court when it initially drafted these jury instructions had, in fact, included that. That was before the court ruled on the laches motion.

But the Court has to evaluate and counsel need to evaluate whether it's appropriate under those circumstances to pose that question to the jury.

MR. BROTHERS: Your Honor, I believe that putting an interrogatory to the jury with regard to if the jury believes that a running royalty is appropriate, the running royalty rate is appropriate. There is considerable evidence --

THE COURT: Yes, if you put the question up there on the running royalty, the second question the Court certainly would include would be what do you believe the running royalty rate should be?

MR. BROTHERS: Yes, and there's considerable
evidence with regard to the rate.
THE COURT: Okay. What we want to be sure of is
the whole question of whether you should pose the question of a running royalty rate, and the Court has suggested it might be a short running, but it's possible based on the evidence.

The Court has to fashion a charge that takes reasonable account of the testimony and the evidence in the case. Now, the Court doesn't believe at this juncture, unless someone wants to persuade the Court, that all potential evidence for running royalty has been excluded from the case. It's short, but that's the Court's view on that.

It was the Court's original intent to try to meet with counsel to go over this charge this afternoon, but it's clear that the Court has to go back and rework the verdict sheet. The verdict sheet needs to be substantially reworked to include some interrogatories on the Graham factors, and neither party proposed any interrogatories on the question of obviousness. The Court didn't see it. I looked at your verdict sheets and it's not on your verdict sheets. I have been living with those verdict sheets and it's not on the verdict sheets, the list of questions. So the Court has to go back and rework that.

1


1
transcript from the record of proceedings in the
above-entitled matter.

X $\qquad$ Sharon B. Borden, RMR, FCRR X October 31, 2012 X Date

