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Paper 66
Entered: April 23, 2013

RECORD OF ORAL HEARING

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAP AMERICA, INC.
Petitioner,

v.

VERSATA DEVELOPMENT GROUP, INC.
Patent Owner.

Case CBM2012-00001 (MPT)
Patent 6,553,350

Before SALLY C. MEDLEY, MICHAEL P. TIERNEY, and RAMA G. ELLURU, Administrative Patent Judges.

APPEARANCES:

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The above-entitled matter came on for hearing on Wednesday, April 17, 2013, commencing at 2:05 p.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

P R O C E E D I N G S

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JUDGE TIERNEY: Welcome, everyone, for the hearing for Covered Business Method, CBM2012-00001. Today, the issue -- the parties have requested a hearing. The issue they've requested a hearing on is 35 U.S.C. 101, on the patentability of Versata claims and related issues. Based on consultation with the parties, the Board is giving one hour to each party. Each party may reserve time for rebuttal. There will be one hour total time today.

The Petitioner bears the ultimate burden of proof for today's hearing, and we will have the Petitioner go first.

Petitioner, if you could introduce yourself and the accompanying representatives.

MS. ARNER: Yes, it's Erika Arner for Petitioner SAP. I'm here with backup counsel Steve Baughman, and co-counsel, Joe Palys.

JUDGE TIERNEY: Thank you. Patent Owner, if you could introduce yourself and your accompanying representatives.

MR. ZOLTICK: Yes, I'm Marty Zoltick for Versata Development Group, Patent Owner. With me is Nancy Linck and Derek Dahlgren and Brian Rosenbloom.

JUDGE TIERNEY: Welcome. So, Petitioner, when you're ready, please begin.

MS. ARNER: I'd like to reserve 30 minutes for rebuttal, please.

May it please the Board, this post-grant review proceeding involves Covered Business Method Patent Number 6553350. The 350 Patent describes a way to determine a price for a product using customer and product hierarchies.

The Patent explains that the inventor did not invent the idea of pricing based on customer and product data. Instead, the Patent includes Figures 1 and 2, labeled prior art, that lists customers under the column heading who, and products under the row what, along with price data. In Figure 1, the Patent explains we have product prices. In Figure 2, we have volume discounts.

Likewise, the inventor did not invent computer pricing systems. Instead the Patent describes prior art pricing systems by Oracle and SAP. And the Patent Owner has recently explained that the use of hierarchical organizations for customers and products was "ubiquitous" at the time of the invention.

JUDGE TIERNEY: Ms. Arner, if you could identify the demonstrative you're looking at for the purpose of the record.

MS. ARNER: Yes. So, turning to slide 3, the inventor also did not -- the Patent also does not describe any advance in computer technology. Instead, the Patent repeatedly explains that the invention may be implemented on any conventional or general purpose computer system. The Patent includes a Figure 3, which is a computer system diagram, but the specification explains that the computer system is described for purposes of example only, and that the present invention may be implemented in any type of computer system or programming or processing environment.

The claims recite the words data source, but the specification explains that the invention can be implemented using any data source, that may be different even from a conventional database.

In the related litigation, the Patent Owner has again affirmed that the claims do not require extant data structures, but rather cover the capability of executing a pricing procedure using hierarchical arrangements of customer and product data. The fact that databases are not covered is confirmed by the fact that the claims do not recite the words database, nor do they recite database tables or queries, runtime, execution flow, computer screens for the invention, or a number of database tables or queries. None of these terms appear in the challenged claims.

JUDGE TIERNEY: Why don't we stop there and tell us what do the claims encompass.

MS. ARNER: So, turning to the claims, they describe two ideas. The idea of arranging customers and products into hierarchies. And the Patent specification explains it's a who/what paradigm. And Figure 5 of the Patent shows these customer and product hierarchies where the customers and products that were listed in the prior art figures 1 and 2 are reorganized here into hierarchies of customers or purchasing organizations under the label who, and into product hierarchies under the label what. And the Patent explains that these groupings into customer and product hierarchies are entirely arbitrary and determined by a user.

The other idea that the claims cover is the idea of pricing a calculation to price products using pricing information or price adjustments, they're called here on slide 8, to refer to the hierarchical arrangements of customers and products.

So, turning now to the claim language itself on slide 9, the claim 17 is a method claim, and it recites these two ideas. The ideas of arranging a hierarchy of customers and products, and then the calculation of a product price using pricing information that is associated with the customer or organizational groups and product groups.

The other two independent claims under review, likewise, describe the use of customer and product hierarchies, and the process of calculating a price that is determined using

pricing information associated with the customer and product hierarchies.

JUDGE TIERNEY: If we could stop there. We're on demonstrative slide 10 for the Petitioner. Can you identify what is exactly the abstract idea.

MS. ARNER: Yes. So, highlighted in blue on demonstrative slide 10 is the abstract idea of the customer and product hierarchies. And, similarly, if you look on slide 9, the idea of arranging hierarchies of customers and products is highlighted there in blue. The second abstract idea highlighted in green on slides 9 and 10 is the process for calculating a price using pricing information associated with organizational or customer groups and the product groups.

JUDGE TIERNEY: But the Patent Owner has alleged that you have not reviewed the claim as a whole for purposes of 101. Could you please walk us through the claims and say how, they do -- allegedly, according to -- they do not have significant meaningful steps beyond the abstract idea.

MS. ARNER: Sure. So, I believe you're referring to the framework set forth in the *Mayo* case by the Supreme Court, which was when a claim recites an abstract idea, law of nature, or natural phenomena -- and the parties agree here that abstract idea exception to patentability is at issue. That when a claim includes abstract ideas, the question becomes what else is in the claim before us. And the Court in *Mayo* said it's not enough to

simply recite abstract ideas and say apply them. And their claims must recite enough elements or a combination of elements to ensure that the claims cover more than the abstract ideas.

And, so, looking at claim 17, the two abstract ideas of organizing customers and products into hierarchies and calculating a product price using pricing information associated with those hierarchies are the abstract ideas. And as a whole, that's all there is in claim 17. There is nothing else to fulfill the requirements of the *Mayo* case. And I think on that case alone, in addition to some of the other Court's precedents, claim 17 fails.

If you look, for example, at the Supreme Court case of *Gottschalk v. Benson*, this is also a method claim similar to claim 17, in that -- and this is on slide 13 -- this method claim recited the calculation of converting binary coded decimal numbers into binary. And it involved a process that included many steps. But the Supreme Court found, nonetheless, that this process was unpatentable because it described only abstract ideas. And the Court noted that this seven-step process could be performed manually using a table done -- printed in the patent.

Likewise, on slide 14, the case of *Parker v. Flook*, and the Supreme Court, again, considered a method claim that included multiple steps for calculating a number. In this case, the steps were for calculating an alarm limit that was used during a catalytic conversion process. And here the Court said this

method for calculating alarm limit values is claimed in this process, which can be performed by pencil and paper, and, therefore, it's unpatentable.

And, so, if you look at those two cases, and claim 17, really, they're very similar in that they -- the result is a number, the price for a product. And claim 17 recites nothing else.

JUDGE TIERNEY: The Patent Owners indicated that the limitations of storing, retrieving, sorting and eliminating are significant meaningful limitations. What do you have to say on that issue?

MS. ARNER: Well, they're part of the abstract idea of calculating a product price. And if you look at the other -- the Supreme Court cases, for example, that we just looked at. The process in *Benson* required seven different steps, including steps exactly like that, storing and shifting, which it's doing some of the math using shift registers, adding, and all of this process is laid out. It may be a very specific way to do math here in the claim, but the Court said it's still unpatentable. And one of the reasons was because it could be done mentally with pencil and paper.

Similar to the claim in *Flook*, where, also, the claim involved multiple steps, very specific math, and yet the Court found it to be unpatentable.

And if you look at some of the Federal Circuit cases that have recently considered similar method claims, for

example, in slide 18, the *Bancorp* claim is a very lengthy claim. It has lots of steps that might have been argued and were argued to be particular steps. But describing an abstract idea in lots of steps is not, according to the Federal Circuit, a way to make it not an abstract idea.

If we turn to the other claims on review, claim 27 is another independent claim under the other method claim on review. And it's similar to claim 17 in that it recites the ideas of organizing customers and products into hierarchies and calculating a product price based on those hierarchies. Here claim 27 adds the words computer implemented in the preamble. And if looking at both Supreme Court and Federal Circuit precedent, that is not sufficient in order to make the claims patentable.

In a very similar case, the Federal Circuit looked at claims that said computer-aided. On slide 20 you'll see computer-aided method of, again, a very lengthy process claim, but it was found to be an unpatentable abstract idea. And the Court said there, "Simply adding "computer-aided" limitation to a claim covering an abstract concept, without more, is insufficient to render the claim patent-eligible." So, under this case -- yes, sir?

JUDGE TIERNEY: How do you reconcile *Dealertrack* with *Alappat* and the specialized computer?

MS. ARNER: So, if you look at the *Alappat* case, really what they were talking -- the Federal Circuit was talking about in that case is the, what, at the time was applied, it's called the mathematical algorithm exception, where the Board had said it was unpatentable because there was a mathematical algorithm involved. And the Court in *Alappat* looked to *Benson* and *Flook* and the Supreme Court precedent and said, no, the Court hasn't -- the Supreme Court hasn't said math makes a claim automatically unpatentable. And that was really the -- the claims in *Alappat* were drafted in a means plus function language and they were construed to cover specific electronic circuitry.

In fact, in *Alappat*, the way that the Court described the claims there was as "interrelated elements which combine to form a machine for converting discrete wave form data samples into anti-alias pixel illumination intensity data to be displayed on a display means." And, so, the patent at issue in *Alappat* was very different. And the software innovation or the computer innovation in *Alappat* was quite different from claims like this *Dealertrack* where it's a business method with a few computer words added it.

That distinction was actually discussed in the *Bancorp* case as well, where the Court considered method claims that had quite a lengthy method. In that case, there were similar claims that recited computer-readable medium for performing the step set out in the method claims, and also a system claims in

Bancorp. And the Federal Circuit struggled with the type of question you're asking, which is *Alappat*, and the other Federal Circuit precedent finding computer technology innovations to be patentable.

And in *Bancorp*, the Federal Circuit explained that here it wasn't an advancing computer technology. Instead, it was the advance was really in the way, in this case, to manage stable value insurance policies, like in the Patent Owner's claims it's an advanced way to calculate a price for a product perhaps. But the Court found that even under the existing Federal Circuit precedent, in cases like this, where you have unpatentable method claim with abstract ideas, and then some mirror claims that have computer-readable medium or system or components, that that is not enough to transform the claims into patent-eligible inventions.

And if you look -- that's very similar to the claims here. If you look, for example, at claims 26 and 28, they recite a computer-readable storage media comprising computer instructions to implement the method of their underlying independent claims 17 and 27. Again, sort of taking the abstract ideas and putting them on a computer-readable storage media.

And in both *Bancorp* and *CyberSource*, the Court looked at very similar claims and found those to be ineligible. In particular, I think, *CyberSource* is really controlling here where a method claim was found to be unpatentable for being an

abstract idea that could be performed mentally. And the Court said there is another claim, claim 2, that recites nothing more than a computer-readable medium containing program instructions for executing the method of claim 3. And those were found unpatentable, too. And the Court wrote there, "merely claiming a software implementation of a purely mental process that could otherwise be performed without the use of a computer does not satisfy section 101."

JUDGE TIERNEY: Under *Bancorp,* though, doesn't it say if the computer is integral to the claimed invention that it could be subject matter eligible?

MS. ARNER: So, the way that *Bancorp* explains the use of a computer, and in particular when the Court in *Bancorp* is discussing -- they had similar arguments here, actually, to what the Board is facing, which was arguments about the *RCT* case -- *Research Corporation* case, and *SiRF Technologies* where inventions of computer innovations were found patentable. And in *Bancorp*, the Court looked at those arguments and rejected them because of the nature of the inventions in both the *RCT* and the *SiRF Technologies*.

In *RCT*, the process claimed there was -- it was a process for digitally -- or for processing digital images to display them on a printer or other display device that has a limited capability. And, so, the pixel-by-pixel comparison recited in those claims -- and the Court actually looked at several of the

other claims in that case as additional evidence, high-contrast film, film printers, printer and display devices, and memories, the Court found there that the claims required a computer, and actually ended up with a result on a computer.

And in *SiRF Technologies*, the Court said that here it would be impossible to perform the claim without the GPS receiver, without the device, and that made it a particular machine according to the Federal Circuit. But they said it's not the case which we have here, which is where a computer might function solely as an obvious mechanism for permitting a solution to be achieved more quickly. So, adding efficiency to perform a process that could be performed mentally, just to add a computer to make it more efficient, in *SiRF Technologies*, also in *Bancorp*, the Federal Circuit has said that's not enough. There has to be a computer science innovation.

And the claim -- the invention described in claim 17, as much as there is one, the customer and product hierarchies, the calculating of product price, can be performed. This is on claim 9, again, going back to the language of the claims, which we must, and we must look at the entirety of the claims under *Diamond v. Diehr* and other cases. So, what we have is these ideas of arranging customers and products into hierarchies and calculating a product price. And this process can be performed entirely manually using pencil and paper, as was demonstrated during the cross examination of the Patent Owner's witness, Mr.

Liebich. He, together with SAP's counsel, walked through every step of claim 17.

I'm turning now to slide 21. They were able to walk through every step of claim 17 using nothing more than a pencil and paper and their minds, they discussed the performance of the entire claim. Here in slide 21 we have a hierarchy of organizational groups. This has two levels in the hierarchy, which Mr. Liebich acknowledged, organizational group one, which is above organizational group two in the hierarchy. And the seller is able to assign price discounts. Here 10 percent discount for organization one, and a 20 percent discount for organization two. And this meets the first element of claim 17, arranging a hierarchy of organizational groups.

The claim also requires arranging products into a hierarchy of product groups, and this diagram on slide 22 shows just that. A product hierarchy with P1 product, a product group of CPUs and some subproducts on the second level of the hierarchy. P2 is labeled as a 486 processor; P3 is some other type of processor. And, again, price information discounts a seller can -- can set these as they want as the patent says. The arrangement of the hierarchies is completely arbitrary. And here, in the example, walked through with Patent Owner's witness 10 percent discount for P1, 15 percent for P2, 5 percent for P3. So, the arranging of the customer and product

hierarchies can be done completely on paper and pencil, so can the calculating of the prices.

So, the storing step requires storing pricing information in a data source that is associated with a pricing type, organizational groups, and product groups. And on slide 23 we have a table that was developed during the deposition where we have pricing information in the first column. Those numbers we talked about 10 percent, 20 percent, 10 percent. Mr. Liebich explained that pricing type might be a discount, and, so, the pricing types are associated in column two in this table. Likewise, the claim discusses associating the pricing type with organizational groups and product groups. And if you recall in our organizational hierarchy, organization one got a 10 percent discount, organization two got a 20 percent discount.

Those organizational groups are reflected here in the data source in table -- on slide 23. A 10 percent discount for organization one, 20 percent discount for organization two, and so on through the product hierarchy with those discounts on slide 22 put into the data source here on slide 23.

To calculate the price, the next thing is to retrieve applicable pricing information corresponding to lots of things, product purchasing organization. Essentially, what it means, Mr. Liebich explained here and in his direct testimony, is for a customer and a product you retrieve the pricing information for

that customer and product and also for the groups above them in the hierarchy.

So, in the example that was walked through in his deposition, and is in the transcript, the choice was of customer 02, organizational group 02, purchasing a 486 processor. So, in order to determine what to retrieve, we look back at the hierarchy. And here customer 02, we would retrieve the 20 percent for that customer and also the price adjustments for the customer above, 10 percent for 01; 01 being above in the hierarchy on slide 21. And, so, if you look at the retrieval here, we have the 20 percent discount for 02 and the 10 percent discount for 01.

Similarly, the product is a 486. So, looking at the product hierarchy, that's P2, so retrieve 15 percent, and we retrieve, according to the claim, the price adjustments above it, so, 10 percent. We would not retrieve the 5 percent because that product is not above the chosen product. So, we take the 10 percent and 15 percent, and those show up in the retrieval as well. Ten percent discount for product P2 -- or 15 percent for P2 and 10 percent for P1. And Mr. Liebich confirmed that this was the information that would be retrieved by performing that step of claim 17, shown on slide 24.

The pricing information is sorted according to the claims. And Mr. Liebich explained that one way to sort might be lowest to highest. And, so, the arrows were drawn on this

diagram during the deposition to show sort lowest to highest, as you'll see on slide 25. And the arrows there go from low to high to show that sorting.

Eliminating is another step in claim 17. It's eliminating pricing information that is less restrictive. And Mr. Liebich explained that less restrictive might mean higher in the hierarchy. So, to determine what to eliminate for the organizational groups, we look at 02, or organizational group two, which is the buyer here. And if you remember the product hierarchy, organization one is above it, and, so, the blue line there on slide 26 shows the eliminating of that. And, likewise, with the products were chosen the P2 or the 486, and, so, the less restricted pricing information is for that node above it, the P1 node, and, so, the blue line eliminates that data.

And, finally, the product price is determined using the calculations that are drawn here on slide 27, determining the product price using the sorted pricing information. And the calculations here show, as was discussed in the transcript of his deposition, if the product price begins as a $100, the remaining -- after the eliminating -- the remaining 20 percent and 15 percent discounts are applied, and we arrive at a final price of $65. And, so, as shown during his deposition and also in his direct testimony -- he walked through the whole example, similarly using a product hierarchy -- I can walk through it if you like, but I'll just refer to the demonstratives starting on slide 28. He used

a similar hierarchy and explained how that would be done, again, all pencil and paper, mental steps.

JUDGE TIERNEY: Let's take a moment here, since we're referring to his declaration. At paragraph 62 of his declaration, Mr. Liebich referred to those steps we just walked through as not being routine, conventional or well known at the time of the invention. Is that a correct statement?

MS. ARNER: Yes, I'll believe Your Honor. I don't have his declaration right in front of me.

JUDGE TIERNEY: But are these not routine, not conventional, and they were not well known at the time of the invention.

MS. ARNER: So what he's referring to is the steps that we just walked through on paper. In particular, the storing, retrieving, the five steps highlighted in green here on slide 9, for example. And those steps, his point I think you're saying was, these are -- this was a non-conventional way to calculate prices. This was not routine.

The question, though, if you look at the *Mayo* decision, is not is the abstract idea routine; it's when the claims include an abstract idea, what else is there in the claims before us. And, so, the Court is instructing us in *Mayo* to look at the abstract ideas, which are highlighted in blue and green, and look at what else is there. What are the other things added to the claims. You have to add more than routine conventional subject

matter in order to make the claims patentable in addition to the abstract idea.

So, whether or not Mr. Liebich was talking about the abstract idea as being something new or something non-conventional, that's not the question under the Supreme Court's framework for 101.

JUDGE TIERNEY: Well, he's testifying that the storing, retrieving, sorting, eliminating and determining steps they're not routine, conventional or well known at the time of the invention when used with this idea of creating the hierarchies.

MS. ARNER: And be that as it may, the Supreme Court has not said the question is whether the abstract idea is new, whether the math formula is new in those cases. But rather what else is added to the claims when you have abstract ideas.

JUDGE TIERNEY: But what he's saying is added are significant meaningful limitations that were not conventional, not routine. So, if he has added -- if he is correct in that to have added significant additional steps, this is not mere post-solution activity then.

MS. ARNER: Well, Mr. Liebich's view of what is conventional at the time, I think, is incomplete. He admitted that really he based his opinion only on his knowledge of SAP's own system, and talked at length about SAP's system. But he had not investigated the state of the art beyond that. For example, the patent itself describes a prior art pricing system by Oracle. And

he said he had not looked into whether that covered -- whether that had these purportedly non-routine and non-conventional things. So, he wasn't really -- wasn't really testifying against the state of the art at the time. At least it was an incomplete view of the state of the art.

And, moreover, Dr. Siegel, in his testimony, explained that actually -- and I know 102 is not in the case anymore -- but in his -- in his declaration, he explained how each one of these steps was actually in R3. And, so, as far as they are arguing that these are routine and non-conventional, there is testimony in the record that shows that, in fact, all of these things were available in prior art R3.

JUDGE TIERNEY: Well, Mr. Liebich, in paragraph 14 of his declaration, did state that he had reviewed the R3, 2.2 online documentation, which is the documentation I think you're referring to that Dr. Siegel had testified as to. So, there seems to be a difference of opinion between the two experts.

MS. ARNER: But the question -- although 102 -- I mean, 102 is not in the case. But the question the Supreme Court poses is not really related to spot on novelty over a single document or a single prior art reference. The Supreme Court said in *Diehr*, 102 is a separate inquiry from 101. And, so, what the experts might be able to help you do in a 101 case is characterize what was conventional at the time and what was not, and that's broader than a single piece of prior art. In *Mayo*, the

Court said, we are not importing the 102 analysis into 101. We're looking instead at what is added to the abstract ideas. Is there anything added to the abstract ideas?

And here what is added to the abstract ideas is nothing in claim 17. And in the other claims, especially claim 29 here on slide 10, it's basically saying take the abstract ideas and put them on a computer. And in light of the Federal Circuit's recent case law, that's not sufficient to render those abstract ideas patentable.

Thank you.

JUDGE TIERNEY: Thank you. Patent Owner, when you're ready. Would you like to reserve some time for rebuttal?

MR. ZOLTICK: Yes. I'd like to reserve 15 minutes for rebuttal please.

I'm not going to be using the projector, so, if we could maybe move the -- and I also -- have some copies of the demonstrative exhibits -- I mentioned it before the hearing started -- just in a booklet so that you might be able to refer to it.

JUDGE TIERNEY: These copies are already of record?

MR. ZOLTICK: Yes. May I approach and bring --

JUDGE TIERNEY: Yes, please. And does the Petitioner have a copy of that, and the court reporter?

MR. ZOLTICK: May it please the Board. On behalf of the Patent Owner, Versata Development Group, I appreciate

the opportunity to address the remaining issue in the case, the patent eligibility of claims 17, and 26 to 29 under section 101. I'm going to be referring to the demonstrative exhibits that are up in the booklet. And then we have a board, claim 17, and I'm going to focus on the specific claim language as I go through.

The subject matter of claims 17 and 26 to 29 is not abstract. It's not abstract because the limitations included in the claims are meaningful, and the limitations ensure that the claims are to more than just the abstract idea. I'm going to focus on, as I said, the specific claim language. I'm going to use claim 17 as an example. I'm going to walk through the different claim elements. And I'm also going to walk through the evidence that shows why these claim limitations are meaningful.

There is evidence that the claims recite a specific, practical and advantageous way to determine a product price using the product and the customer hierarchies and groups. There is evidence that the subject matter of the claims was not conventional, not routine, and not well known as of the time of the invention. And there is evidence that the claimed invention constituted a significant improvement to the prior computerized pricing systems and software that was available at the time.

Also, I'm going to address the fact that these claims, 17 and 26 to 29, do not preempt these alleged abstract ideas. And, again, I'm going to focus on the claim language to show that, and also the evidence that there is no preemption here.

I'm also going to address the fact that these claims do, as the Board found, required the use of a computer. A computer that is programmed to execute the steps, the functions, the elements of the claim, and also a computer database that's loaded with the specific pricing information that's referred to in the storing step. I'm going to go through the evidence that shows that a computer and a computer database are integral to performing this process, not simply incidental.

And, finally, I want to, if there is time, just mention a Federal Circuit case that wasn't addressed, that's the *Research Corp. Technology* case, which we believe is closer to the situation here than the cases that you heard addressed.

And then, lastly, the drawings that Ms. Arner went through from Mr. Liebich. I want to just briefly touch on that.

If you can look at slide number or Demonstrative Exhibit Number 1. That lists the Board's statement of the alleged abstract idea, the concept of arranging customer and product data into hierarchies. And then SAP's version of that, and Dr. Siegel's, the arrangement of prior pricing into completely arbitrary hierarchies and the calculation of product prices using abstracted numbers.

Now, Versata doesn't agree that there are abstract ideas in these claims, but even assuming that there are, the claims include additional, meaningful limitations beyond those

alleged abstract ideas, such that these claims are not directed solely to these alleged abstract ideas.

JUDGE TIERNEY: Why don't we stop here. The assumption by the Petitioner today was that we were using the broadest reasonable interpretation, and we had an interpretation that was set forth in our decision to institute. Are we going -- are you adopting that claim construction that we put in our decision to institute, or are you saying that there are other terms that we may -- or terms that we may have construed in a way that should have been construed differently?

MR. ZOLTICK: Well, we addressed the disagreement regarding the order of the retrieving and sorting steps in our brief. But beyond that, we didn't request any other terms be interpreted. I think there were a number of terms in the claim, like, for example, data source, that really were not interpreted by the Board in the institution decision. We have evidence in the record about that term data source and what we think the broadest -- what we think the broadest reasonable interpretation would be.

We think it's unreasonable to interpret data source to be anything other than some type of electronic database for storing the information, and the reason is because of what it says in the specification. And I think if we go back to -- and I've included some demonstrative exhibits that might be helpful here. If you turn to Demonstrative Exhibit Number 8, I think what

we've been missing here from the discussion is what is the problem that this invention was intending to solve and how did it solve it? What was the solution for doing that?

And the problem is called out specifically in this section from the specification, exhibit 1001, column 2, lines 56 to 63. And it refers to the prior art R3 system, and it refers to the Oracle system, and it talks about the problem with that software, what that system is. It required separate tables, a large number of tables, and, therefore, a large number of queries to get the information that it needed, and that created performance issues.

And, so, from the start, this invention was about improving computer technology. It was about improving a computerized pricing system in software, and how to make it work better. It wasn't about doing something on a piece of paper, and it wasn't about doing something mentally in your head. It was about improvement to computer technology. And you can look at the specification and the claims from front to back, there is nothing about doing something in your head, and there is nothing about doing something on pen and paper. It's about improving computer technology.

When you --

JUDGE TIERNEY: Let's stop here. And I just want to note in the *Bancorp* case it was very clear that it's ordinarily desirable and often necessary to resolve claim constructed

disputes prior to 101 analysis. Your claims as identified, as we noted in decision to institute, does not refer to the word computer.

MR. ZOLTICK: Right.

JUDGE TIERNEY: And that's why I noticed in your BRI before us, the Patent Owner response, you had identified that we should be adopting a district court claim construction. Is it appropriate today? Are you saying that you would like to adopt the BRI? We go forward on BRI? Or are you saying that you still have a dispute as to whether we use BRI or district court?

MR. ZOLTICK: We've raised the dispute and our position on that in the paper we filed. We understand that the Board is using BRI for purposes of this case. And we've argued the position on section 101 based on broadest reasonable interpretation.

JUDGE TIERNEY: So then are you waiving the argument as to the district court construction?

MR. ZOLTICK: No, we're not. We're not waiving it. We're standing on the papers. If you would like to address, as I mentioned in the beginning, Ms. Linck would address the issue regarding the standard and broadest reasonable interpretation. But for purposes of the argument we've made as to why these claims are patent eligible under section 101, we have used the Board's BRI interpretation.

JUDGE TIERNEY: Well, the reason I was asking is because to claim 17, I'm not clear right now where it cites the use of computer. Maybe you can point that out.

MR. ZOLTICK: Well, the claim specifically recites that the -- that the pricing information, storing pricing information in a data source. And that's what we've relied on to say based on the broadest reasonable interpretation of that data source is a computer, some type of electronic database, computer database to store the information.

JUDGE TIERNEY: Would you like to amend your claim to recite computer database? I mean, the claim right now just says data source --

MR. ZOLTICK: Yes, and --

JUDGE TIERNEY: -- which could be a record --

MR. ZOLTICK: -- and a data source interpreted in its broadest reasonable way, in light of the specification, is some type of electronic form for storing the data, not a piece a paper, and not in your head. That's just not a reasonable -- our view, as we've expressed it, is that's just not a reasonable interpretation in light of the specification.

And then Mr. Liebich testified that based on data source, which is expressly recited in the claim, being some type of electronic form for storing the data, that claim requires the use of a computer because you can't work with a computer

database or an electronic form of data unless you've got a computer to perform the steps.

And, again, I also point out that the other claims, 26, 27, 28 and 29, specifically refer to the computer or program instructions, computer readable storage media and so on. So, that's our position.

And, again, I don't think you can ignore what it says in the specification about this invention. In that this invention was not taking a manual process, something that was done mentally or with pen and paper, and automating it on a computer. This was already on the computer. This was already a piece of software. It was already a computerized pricing system, and Mr. Carter figured out how to change the process and add some new functionality so that it would work better. And he could reduce the number of tables, and reduce the number of queries, and that enabled this performance process.

So, this process here that is specifically recited in claim 17, these steps that are in claim 17 and the other claims are what enabled this improvement. And this is not just something that is set forth in the patent specification. This is also something that SAP recognized. And it goes to the issue of routine, conventional and well known. And it goes to the issue of why this is -- why these steps are meaningful. Why they are not just "abstract" ideas. Why they really constituted some practical application of an abstract idea.

And if you go to in the Demonstrative Exhibit Number 15, we just set forth the evidence there regarding these SAP documents that show that the claimed invention constitutes a concrete improvement to technologies that were in the marketplace and, again, involves activities that were not routine, conventional or well known. Those documents are Versata Exhibits 2079, 2080, 2082, 83, 84, and 89. And Mr. Liebich went into detail about those documents in his testimony, and was not cross examined, word one, about those documents.

JUDGE TIERNEY: Let's stop there, and walk through the first two limitations of the arranging into hierarchy. I believe it was said to the Federal Circuit that these were ubiquitous. Is that correct --

MR. ZOLTICK: Well --

JUDGE TIERNEY: -- that arranging into hierarchy is ubiquitous in the art?

MR. ZOLTICK: We don't agree that arranging product and customer data in this particular way in hierarchies is abstract. But it really is not an issue for this proceeding because, while we've considered the claim as a whole, we're looking for additional meaningful steps that show a practical application of the abstract idea. So, arranging -- arranging the first two steps, we say, okay, that -- the position is that that corresponds to this abstract idea. Okay?

JUDGE TIERNEY: Okay. Next we take -- so, we take the idea and you say a computer must be used. Okay. Let's say we'll assume that for now. You're storing the price unit information in a data source. Don't computers typically store information in a data source?

MR. ZOLTICK: Computers can store information in a database. And if this just said storing the pricing information in a database, maybe we wouldn't be arguing it. But it says -- it's very specific in terms of what it says. It's not just storing pricing information in a data source. It's storing specific pricing information wherein the pricing information is associated with pricing type, the organizational groups, and the product groups. So, it's sort of tying into the prior steps.

JUDGE TIERNEY: But isn't it just saying take the abstract idea and store it into a data source?

MR. ZOLTICK: It's specifically applying. It's a meaningful step that takes data, which is arranged in these hierarchies, and decides, first, what pricing information is it going to store, okay, and it stores it. Then the next step is retrieving it. And if it just said retrieving pricing information, then I would say, okay, it's not a practical application of this abstract idea. It's not meaningful. It's just retrieving, and computers retrieve. But it doesn't say that.

It says retrieving applicable pricing information corresponding to the product, the purchasing organization, each

product group above the product group, and each branch of the hierarchy of product groups in which the product group is a member, and each organizational group above the purchasing organization, and each branch of the hierarchy of organizational groups in which the purchasing organization is a member. So, it's very specific in terms of the process that it's going through to retrieve whatever the applicable information is.

JUDGE TIERNEY: But haven't we just stored the abstract idea and then retrieved the abstract idea in a way that makes sense for a price calculation.

MR. ZOLTICK: There are a number of different ways, and there is testimony in the record from Mr. Liebich and also from Dr. Siegel, regarding how you could practice the abstract idea of using these product and customer hierarchies to determine a price. They are not what is required in these steps, the storing, the retrieving, and then the sorting step as well. Sorting the pricing information according to the pricing types, the product, the purchasing organization, the hierarchy of product groups, and the hierarchy of organizational groups.

Again, a very specific sorting process was not conventional, routine or well known, and --

JUDGE TIERNEY: Well, let's take a moment there. You're saying the sorting step is not conventional. What about the exclusive step using the R3 process in the prior art, setting the exclusivity flag? Wasn't that --

MR. ZOLTICK: The exclusive indicator flag?

JUDGE TIERNEY: Yes.

MR. ZOLTICK: That was not -- testimony on that is that that's not sorting. That's just basically telling the computer to pick the first price adjustment it hits and then stop. And the reason they were doing that was because they were -- the way that system worked, because it didn't have sorting, it was going through a number of price adjustment tables -- it had separate condition tables for each price adjustment. It suffered from exactly the problem that Mr. Carter identified in the specification and did not have the solution.

And that's why I pointed out in the document, if you look at Demonstrative Exhibit 16, that's right from SAP's training manual, pre-litigation, before the lawsuit with Versata, before this proceeding began. And they're saying, okay, here is what we had before. And you can see what they had before was a number of different, they're called levels of information. It said they had to have one condition table for each character's combination. And it specifically says in their document, "Without hierarchy accesses, you would need to create a condition table for each combination and assign all the accesses to these tables in an access sequence. This requires a lot of maintenance, reduces system performance," and so on. And then the last point says, "This is particularly disadvantageous for

hierarchy data such as product or customer hierarchies." This is exactly the problem that Mr. Carter was addressing.

Then if you look at the next exhibit, Exhibit 17, this is their solution. And their solution says we can have a single condition table with one access. And how did they get to that? Well, look at the claim, and then look at what they say in the bullet points. If you look at the one, two, three, fourth one down that I highlighted, "During pricing, the system sorts the records found with this access according to the priority and displays the record with the highest priority." So, basically, this is evidence that this process here, first of all, it wasn't routine, conventional, and well known. Because if it was, it would have been implemented to solve the problem before this invention. And, secondly, it's meaningful. It means something. It enabled the reduction in tables, it enabled the reduction in queries, and ended up improving the performance.

JUDGE TIERNEY: But aren't those just specific to a large database process? I mean, a small database, does it really reduce the number of queries?

MR. ZOLTICK: It depends on the size of the database. I mean, I --

JUDGE TIERNEY: Let's back up. Let's put this in simple terms here. If I have a menu, I go to a restaurant and have a menu, there is -- let's say a pizza restaurant. Everyone can understand that. You have large, small, and medium pizzas.

You then have thin/thick crust. You then have your ingredients. I want to arrange my product information in a hierarchy, so I start off at the top level the size of pizza, next level type of crust, next level premium ingredient, regular ingredient. I store that in a computer or based on that say we stored it in a menu, a data source. I store the pricing type. We know we have to have a price associated with each of those elements. There is a product group in each one.

We then retrieve it, and retrieve all the information. We sort it out, and then eliminate the least restrictive ones. So, if it's a three-topping pizza, you eliminate the first topping, second topping --

MR. ZOLTICK: Right.

JUDGE TIERNEY: -- and setting up a third. How is this different than such a process?

MR. ZOLTICK: Ordering the pizza analogy given?

JUDGE TIERNEY: Yes.

MR. ZOLTICK: Because this improvement which is claimed here has to do with an improvement in computer software and computerized technology.

JUDGE TIERNEY: So, we take a menu and we just computerize it is what you're saying. And that computerization transforms it to a patent-eligible subject matter?

MR. ZOLTICK: Well, if you had a computerized menu that you were using, and you said, boy, we have so many

toppings that this is creating a problem for us, or we have a lot of different kinds of customers. We have the customers that are, you know, the ones that are companies, and we have individuals, and we have different discounts for them and so on, so we have this different information. And it's so slow that lunch time is over before we can get the order done, and you try to figure out how to fix that. And you made a change to that process by changing the steps that you went through, and enabling, in this particular case, the specific arranging the hierarchy and then the storing, retrieving, sorting and eliminating step, then you've got meaningful steps beyond some alleged abstract idea that really do constitute not an abstract idea but a meaningful claim providing an invention that is patent eligible.

It's a different scenario here because what the improvement was -- I think the misconception here is somehow that the improvement was that they were doing this with, you know, graph paper and trying to figure out prices, you know, mentally or manually with pen and paper, and then this invention enabled them to do it on a computer. But that's not what this is about, it's not what the patent specification says it's about, and it's not what the claim says it's about.

JUDGE TIERNEY: So, can you walk us through the significant meaningful limitations. Because we've already, at least from my point of view, it seems like we're at least agreeing that the first two steps may be abstract.

MR. ZOLTICK: We're agreeing that SAP is taking the position that the first two steps are abstract, just so I can preserve my record.

But, you know, it really is not significant because you have meaningful steps that follow that make -- that ensure that this claim is not just claiming the abstract idea. The meaningful steps are storing the pricing information in a data source, wherein the pricing information is associated with a pricing type, organizational groups, and the product groups. Okay? It doesn't just say storing pricing information and stop there. It's very specific.

And then the next step, the retrieving step, it doesn't just say retrieving the pricing information. It says retrieve -- I'm not going to read it again because it's long, but retrieving the applicable pricing information corresponding to all of these criteria that build on what happened before to figure out exactly what to retrieve from this data.

And then the sorting step, basically, then, goes through and sorts the pricing information. And it doesn't just say sort the pricing information. It says, "Sort the pricing information according to the pricing type, the product, the purchasing organization, and the hierarchy of product groups, and the hierarchy of organizational groups." So, it's very specific. If you want to say there is an alleged abstract idea that has to do with using hierarchies, it has to do with arranging data

in hierarchies, which is what the Board said and what they contend. This is a meaningful, specific, practical application that uses this arrangement of data in hierarchies, this arrangement of product and customer data in hierarchies.

And then if I can respond to the -- we heard in the reply brief for the first time that calculating a product price is an abstract idea that corresponds to all the other stuff in the claim that is arranging in the hierarchy. And if there is any position that you want to take that calculating a product price is an abstract idea, at best determining the product price using the sorted pricing information. If you want to point to that, point to that. But you still have storing, retrieving, sorting and eliminating that are meaningful limitations to the claim, meaningful steps that ensure that this claim is not simply to the abstract idea itself.

JUDGE TIERNEY: Well, how did it go beyond the abstract idea? I'm still trying to figure that out right now.

MR. ZOLTICK: Well, what goes beyond these alleged abstract ideas, I guess I don't know how else I can go through it, but is the storing, retrieving, sorting and eliminating steps, and the specific functionality performance that is going on in those steps. I mean, how can it not be a practical application?

If you want to say, for purposes of this, that there are abstract ideas of arranging data, product, and customer data in hierarchies, how can those steps not be a practical application?

And we can't forget about the evidence in the case. The evidence in the case, we have testimony, of course, about it being a practical meaningful application. But we also have testimony that this sequence of steps in combination was not routine, conventional and well known.

JUDGE TIERNEY: Can you explain how this is patentable in light of *Parker v. Flook*?

MR. ZOLTICK: Sure. Well, first of all, *Parker v. Flook* was dealing with, according to the Court, a mathematical algorithm. And the claim was found unpatentable because of no -- "no inventive application of the mathematical algorithm." Okay. And here we have -- we've already discussed some of the evidence -- practical and advantageous application of the abstract idea.

So, unlike in *Parker v. Flook*, here we have evidence that this idea -- this acclaimed process, which allegedly includes abstract ideas, has practical application through these steps in combination claim as a whole. And we have evidence -- I showed you some of the evidence from SAP's own documents. Mr. Liebich testified about the improvement that this invention brought. So, practical and advantageous application of these alleged abstract ideas.

JUDGE TIERNEY: But isn't the alarm limit in *Parker v. Flook* practical application?

MR. ZOLTICK: Well, in that particular case, the setting of the alarm limit based on this formula was not meaningful. In other words, it wasn't bounded in such a way in the claim. It would have preempted anyone from practicing that mathematical formula. Here there is no preemption of someone practicing arranging product and customer data into hierarchies. And we have testimony on that from Dr. Siegel agreeing to that. We have testimony from Mr. Liebich as well on that point.

So, the problem that the Supreme Court and the Federal Circuit has in a number of these cases where if the claim stands, you're preempting the use of an abstract idea. Mathematical doesn't apply here because these claims are specific in terms of how this arrangement of product and customer data in hierarchies is actually being applied.

If you look at the Demonstrative Exhibit, which is Number 33, that sets forth just the evidence associated with no preemption. As I said, Mr. Liebich testified in Exhibit 2091 at paragraphs 63 to 66, 89 and 108, that there are many ways to practice the concept of arranging customer and product data into hierarchies that fall outside the scope of the claims. And then Dr. Siegel acknowledged that there are different ways to perform the alleged abstract idea of rearranging pricing data into hierarchies than the specific steps or the claim elements that are in claim 17 and the other claims.

I also want to briefly address, if I can, the idea that Mr. Liebich was able to do these steps with pen and paper. The testimony, if you look at -- I'm just going to use an example SAP's page 23 of their Demonstrative Exhibits, that was the storing step. First, for the record, the drawings were not made by Mr. Liebich. The drawings were made by SAP's counsel. So, just -- that, I think, is the first important point. And most of the testimony about the drawings was by counsel, not by the witness.

And this is a good example. If you -- I'll just, I guess, cite to it. Basically, what we had is 10, 20, 30, 40, 50 lines of SAP's counsel testifying and then a short question at the end, where the witness was answering the short question at the end. And, so, as an example, this is SAP Exhibit 1033, and this is page 121 at line 5. "I'll call that a product hierarchy. Okay. So, we are now storing the pricing information in the data source." There is a number of other lines. And then at the end it says, "Would a discount be a type of pricing?" And the answer is, "As an example, yes." And then the next question goes on for almost a page and a half, and at the end of that it says, "Do you see that? It's the third row in my little table?" And the answer was, "Yes."

So, that's the kind of questioning, and I just want the Board to be aware that this does not show -- there is no testimony from Mr. Liebich this can be done on pen and paper. And, in fact, in his declaration, he testified the exact opposite,

that this actually couldn't be done on pen and paper. That is Exhibit 2091, and that's in paragraph 70 where he says, "In my opinion, the method of claim 17 cannot be performed using pencil and paper or mentally without the use of a computer as suggested by SAP," and so on. So --

JUDGE TIERNEY: When you say computer, is this a -- are you using a general purpose computer or has it become a specialized purpose computer?

MR. ZOLTICK: Well, the -- first of all, there is nowhere in the specification that talks about using anything other than a computer to practice this process. Secondly, in the specification it says that you can basically use a conventional computer to practice the process.

If you look at the cases like *CyberSource* and *Alappat*, in that scenario, what the Court is talking about is if you have an abstract idea with no meaningful limitations in the claim, merely putting it on a computer is not going to be enough to get you past the course filter of section 101.

JUDGE TIERNEY: So, Bilski's claim on computer would not have been patentable.

MR. ZOLTICK: What's that?

JUDGE TIERNEY: Bilski's method of hedging on a computer would not have been patentable.

MR. ZOLTICK: Well, hopefully it wasn't found. Right.

So, here, though, we, as we went through, we have a practical application. We have meaningful limitations of these alleged abstract ideas. And one, if you start from that premise, and then you look at the data source, and you look at how this process is done using a computer, then you sort of fall into *Alappat*, and you've got a computer which has got to be programmed to perform these steps, and thus becomes an integral to the process, and then you've got a database, or an electronic data source, which is loaded with this specific information.

So, what I'm saying is I think the predicate, when you look at this and say just doing it on a computer if it's -- there is no meaningful limitations, yeah, okay. But here we have to consider the fact that there are meaningful limitations here. And the computer, just like in I think it was *Research Corp.*, *Research Tech Corp.* case, where they had the method claim, and then they looked at dependent claims that talked about a printer and a computer and a memory, which are just conventional, but they said this confirms that this process is on a computer.

JUDGE TIERNEY: Well, *Bancorp* says, "To salvage an otherwise patent-ineligible process, a computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations or computations could not." How under that case law is this patent eligible? Can you address?

MR. ZOLTICK: Well, we don't believe that this can be done, this process can be done, you know, mentally in somebody's head or on pen and paper. We don't believe there is any evidence of it in this case.

JUDGE TIERNEY: And why could it not be done on pen and paper? Just because the use of a data source?

MR. ZOLTICK: Well, one point is because of the data source, yes. That's correct.

JUDGE TIERNEY: So, beyond the data source, what could not be conducted by pen and paper?

MR. ZOLTICK: The specification is very clear about what this is. And we have to look at the claim specification and the evidence in the case. And the only evidence in the case, allegedly, about this process being done on pen and paper, is the testimony from Mr. Liebich, which we've gone through, and that doesn't cut it. So, we don't think there is any evidence that shows that this process could be done on pen and paper.

And, again, the claim -- the other claims include computer elements, program instructions, and so on. This claim we pointed to the data source. We have to interpret it in light of the specification.

JUDGE TIERNEY: If we were to interpret the data source as encompassing a lab notebook or recordkeeping book, would this process then be able to be done via pen and paper?

MR. ZOLTICK: Yeah, that's really not something that -- there is no evidence on that. And that's not, you know, something that we've even contemplated, honestly, of whether it could or couldn't be. I mean, there is no -- there is no -- the only thing I look at is the evidence that's in the record. What the specification -- how the specification teaches me about these claim steps, and the discussion from start to finish is we had a computerized pricing system with software. We changed the functionality somewhat to improve it. We made an improvement to computer software. There is no -- there is no discussion about doing this on pen and paper, or mentally, or anything like that.

So, I guess what I'm saying is, I can't answer your -- I can't specifically answer your question because I don't have any data point to go on as to whether this thing could or could not be done that way. All I know is what the claim says and what the specification says about this invention.

And in terms of the -- some of the specific evidence to support that, and I'm not going to have time to go into it all, but if you look at on the Demonstrative Exhibits we go through the claims in the specification. This is 34 to 40 where we deal with the different claim steps, the citations to the specification, and the testimony that support that this cannot be done mentally or with pen and paper.

Just give me one moment. I think I've addressed the points that I had intended to. I'll reserve the rest of my time for rebuttal, unless the Board has anything further.

JUDGE TIERNEY: I believe the declaration by Michael Siegel pointed out that it could be done by pencil. Is that just saying --

MR. ZOLTICK: Well, he did, and then I cross examined him on it. And he couldn't point to anything that supported his testimony. In fact, he said, oh, it was in the specification of the 350 patent. And then when we had a little discussion about that, he couldn't locate it for me, and that was the end of it. So --

JUDGE TIERNEY: So, what you're saying is there is evidence in record, but it's not credible evidence of record.

MR. ZOLTICK: Right. Well, we've said that we don't think his testimony should be given any weight because he didn't explain it. Anyone can just say -- say that without having some kind of facts or analysis to back it up. And when I asked him about it, he said, I think it says in the specification of the patent that it can be done with pen and paper, and that was the end of that. And, of course, it doesn't say that in the specification.

And, so what SAP has done is try to rely on Mr. Liebich who had an example, which is not practicing the invention. He was describing an example in his declaration, and

then -- and specifically in those paragraphs said, in each case he was talking about computer software that was configured to do these things.

JUDGE TIERNEY: See, I'm just trying to understand for purposes of claim construction, what term -- I understand you said data source cannot be done by pen and paper because you're saying it's a computer.

MR. ZOLTICK: Yes.

JUDGE TIERNEY: What beyond that in claim construction, though, requires more than pen and paper? And Mr. Siegel, at least, indicated whether he could or not, that this was able to be done by pen and paper. And there is an allegation that your witness also has indicated it can be done by pen and paper. So, when you're saying there is no evidence, that's not correct. There is no credible evidence.

MR. ZOLTICK: Okay.

JUDGE TIERNEY: So, the question for you is, please walk me through on claim construction what terminology here could not be done by pen and paper other than the data source you identified.

MR. ZOLTICK: If you look at Demonstrative Exhibit Number 38, that is starting -- that is addressing the fact that this claim 17, 26 and 29 can't be performed entirely in the human mind or by human using a pen and paper. And the cases say

entirely. So, it's talking about the entire process being done in the human mind.

And, I guess, I should also note that in the institution decision, at page 31, the Board indicated -- it may take me a minute to get this. That we agree that Versata's claims require the manipulation and reorganization of data on a computer. So, you know, we have followed that along, we agree with that that it's on a computer, and we think that the support for that, as I said, starts with data source and also is based on the only reasonable interpretation in light of the specification.

It's just unreasonable, if you look at the specification and you think about this claim, it's just unreasonable to say that this invention can be done in your head or with pen and paper.

JUDGE TIERNEY: I understand we're saying that we could consider the claim saying a computer is required to conduct the method because that is what your spec indicates. So, this is to be conducted on a computer. What beyond the term data source, however, indicates that it has to be something done on a computer and cannot be conducted via pen and paper is what I'm getting at, and I'll leave that.

And, I guess, maybe I'll hear you on the rebuttal, let you have time to think about it?

MR. ZOLTICK: Sure. Thank you.

MS. ARNER: Your Honor, we did not hand up copies of our demonstratives. And, so, my co-counsel will do that now.

MR. PALYS: May I approach?

JUDGE TIERNEY: Yes, please. Do you have a copy for the court reporter?

MR. PALYS: I do.

JUDGE TIERNEY: Thank you. And a copy for your opponent.

MR. PALYS: I've got lots of copies.

JUDGE TIERNEY: Thank you. Even better. You may begin.

MS. ARNER: Thank you. So, the Patent Owner has pointed out correctly that the drawings shown in Demonstrative Slides, starting at slide 21, were drawn by SAP's counsel with Mr. Liebich present and affirming each of the steps. He provided the mapping between the performance of the steps in the drawings with the claim elements, element by element, all the way through claim 17.

But it doesn't really matter whether Mr. Liebich performed it or SAP's counsel, or indeed as I did earlier with you, I performed it, completely, mentally, or on paper and pencil with these drawings. The question is not -- it's a question of law. And Patent Owner's counsels repeatedly mentions evidence and what evidence is there before you and what Mr. Liebich said or what Dr. Siegel said. But this isn't a situation where we have dueling experts informing the Board. The Board doesn't need the expert testimony at all. It may be helpful, but it's not required in

a section 101 question. As you know, it's a question of law, and the fact that the claims, at least recited in claim 17, can be performed entirely by hand has been demonstrated today.

The so point of distinction that Mr. Liebich raised was the term data source in claim 17. And Patent Owner made much of this in their briefing and in their argument today. The claims don't say database, they say data source. And the specification, as you saw, said the invention may be implemented using any data source that may be different from a conventional database. In the process that we performed here, that was also performed during Mr. Liebich's deposition, the data source was a handwritten table, much like the figures in the patent itself.

And, moreover, this is not a question of dueling experts because Mr. Liebich does not qualify in this case, and his testimony should be given little if any weight. He doesn't meet the Board's undisputed definition of a person of ordinary skill in the art.

But perhaps more importantly what the Board is left to decide is whether the claims are patentable under section 101. And returning to the Supreme Court's framework, the Supreme Court has explained that it doesn't matter whether the abstract idea --

JUDGE MEDLEY: Can you mention the slide number, please, for the record?

MS. ARNER: Oh, I'm sorry. Thank you for the reminder. Yes.

So, I'm going to slide 12, where the Supreme Court's framework is discussed. And in particular, when an abstract idea is involved, the Court has said that what else is in the claims is what we must determine whether it's conventional or routine.

For example, in *Parker v. Flook*, where the Court found a multiple-step, process here on slide 14, with many steps found it unpatentable. They said, even in the Court's opinion, "Respondent's application simply provides a new and presumably better method for calculating alarm limit values. Nonetheless, whether that method was new or not it was an abstract idea and unpatentable."

JUDGE TIERNEY: Can you reconcile *Alappat* with *Parker v. Flook*?

MS. ARNER: Can I?

JUDGE TIERNEY: Reconcile *Alappat* with the specialized computer language in that case with *Parker v. Flook*?

MS. ARNER: Yes. And, you know, the Federal Circuit is struggling with the same questions you're asking. And I think that the Patent Office's brief in the *CLS Bank* case, which Patent Owner put into the -- or, I'm sorry -- yeah, Patent Owner put into evidence draws -- attempts to draw a line and reconcile those cases together. And what the position was, and they evaluated each of these Federal Circuit cases, and they explained

that there is a line that can be drawn between inventions that particularize improvements in computer science, or the functioning of computerized systems themselves, such as inventions based on linear programming, data compression, and the manipulation of digital signals.

And then contrasting that, those are related to the *RTC* case, and *SiRF Technologies*, for example. And then contrasting that with claims that do no more than merely recite the use of a computer for its ordinary functions of performing repetitive calculations, storing data, or automating routine tasks, they're less likely to be patent-eligible, and that's *Bancorp*, and *Dealertrack*, and the other case is *CyberSource*.

And I think that that distinction makes sense, and it's one that the Federal Circuit also adopted in the *Bancorp* opinion when they looked at arguments that were presented saying there is a computer here. If you look at the claims in the *Bancorp* case shown on slide 18, there were claims construed to require a computer to perform the method of claim 9. And the Federal Circuit found that those were not the types of improvements in computer technology that warranted patent protection, but rather simply putting a computer on an unpatentable abstract idea.

To the extent that the Patent Owner attaches much interest and importance to the words data source, beside the specification which explains that it could be implemented in any data source, or a non-conventional database, it is not

unreasonable to consider a data source to be a table handwritten in a patent, much like *Benson* -- *Gottschalk v. Benson* where there is a table printed in the patent, and that was the data source that could be used by a person performing that process mentally.

Moreover, the use of the word database, the claims did used to recite database, and during prosecution claim 17 recited database where now it says data source. And during prosecution, the Patent Owner amended all of the pending claims at the time to replace the word database with data source. If they had meant a database in these claims, they could have said it.

As far as the specificity of the claimed product pricing algorithm, by looking at the cases like *Flook* and *Mayo*, it's obvious that the question is not whether abstract ideas are non-conventional or new. But rather what is added to the claims. And in all of these claims, they recite only the abstract ideas with minimal computer elements added, which the Federal Circuit has found in several cases is not enough.

JUDGE TIERNEY: Can you address the Patent Owner's commentary about the storing, retrieving, sorting and eliminating are significant meaningful limitations?

MS. ARNER: Yes. So, those are the steps to calculate a price. And, actually, as far as those steps, both the Patent Owner's witness and the Patent Owner's response explained that those are the steps to calculate a price. For example, in -- give me just one second, please.

JUDGE TIERNEY: I understand that there are steps to calculate a price. But are they adding significant, meaningful limitations beyond the abstract idea?

MS. ARNER: No, they are the abstract idea. That's the point. I mean, if you look at the case law, I mean, *Bancorp* is right on point here, where they looked at a lengthy claim with lots of maybe specific elements. *Bancorp* is on slide 18. Or similarly, if you look at *Parker v. Flook* where we have a couple different algorithms or formulas here on slide 14. And the Court even said, this may be a new and presumably better way to calculate a number. Well, that's what those steps in claim 17 do. As you saw, as we walked through them today, they calculate the final price at which a product can be sold to a customer. And the novelty or non-conventional nature of the abstract idea is not the proper question under the Supreme Court's framework.

JUDGE TIERNEY: The Patent Owners pointed out, or at least alleged, that this process is an improvement in computing for large databases, calculating price. How do we take that into account under the 101 analysis?

MS. ARNER: So, as for it allegedly being an improvement in computing, it's hard to see that in claim 17 where there is nothing about a computer, or even a database as the specification and prosecution history show it's something other than a database. But, moreover, the improvements that

they talk about with the large database or large tables or number of queries, none of that appears in the claims.

And in *Dealertrack*, for example, the Federal Circuit said you must -- that algorithms described in the specification cannot save unpatentable ideas in the claims. And maybe they did invent something that's described in the specification that is a computer advance, but that did not make its way into the claims, which can be performed by pencil and paper, which don't recite the words database or database table, or any of the other many computer-related elements that Patent Owner relies upon to argue somehow that the computer is integral to these claims.

And if you look at -- yes, sir?

JUDGE TIERNEY: Does claim 17 require the use of a computer?

MS. ARNER: No. If you look at the Federal Circuit's cases, this isn't even really a close call. I mean, there are many of their cases where, for example, in *SiRF Technologies*, you know, a computer that is functioning solely as a mechanism to achieve a solution more quickly, they find efficiency gains, they call it *Bancorp*. Simply doing something on a computer that could be done manually, even if less efficiently, is not the kind of invention that is an advance in computer technology like the Court found in some of those other cases that you mentioned.

JUDGE MEDLEY: Can you speak to the other independent claims, like, for example, independent claim 29? It

does recite an apparatus with a processor, memory, computer program, et cetera.

MS. ARNER: It does. And claim 29 has the apparatus -- on slide 10. Claim 29 has an apparatus, a processor, a memory, and computer program instructions added on to the two abstract ideas of customer and product hierarchies and price calculation. So, essentially, what claim 29 really says is add a computer to these abstract ideas.

And if you look at the case law, that doesn't do it. If you look at the Supreme Court cases, they show that it doesn't work, for example, in *Gottschalk v. Benson* on slide 13. There was a computer element explicitly in the claims, the re-entered shift register. The Supreme Court found the process in *Benson* had no substantial practical application except in connection with the digital computer, and yet it was abstract. So, simply putting it on a computer, the Supreme Court has said multiple times, is not enough. Likewise, *Parker v. Flook*, and more recently cases like *RCT*, or, I'm sorry, like *CyberSource,* where we had software implementation of an otherwise mental process.

There is some argument about whether apparatus claims and method claims are subject to the same, you know, doesn't an apparatus automatically make something patentable. It says apparatus. But the Court has said -- both the Supreme Court has said that we think that a product and a process are evaluated in the same way for section 101.

And more recently, the Federal Circuit in the *Bancorp* decision specifically looked at those type -- at that question of whether different types of claims are handled differently under section 101. And they said that, in this case, in *Bancorp*, which is very similar to here, the equivalence of the product and method claims was readily apparent because the only difference was the claims -- the form in which the claims were drafted. So, similar to here, they had unpatentable method claims, parallel versions of those in computer-readable medium, and also in system, which are usually treated as a product claim.

And the Court said -- the Supreme Court has told us repeatedly that we cannot allow the draftsman art to determine whether claims are patentable under section 101. And, really, the claims in the 350 patent are sort of the height of draftsman art. I mean, they are just exactly the same recitations, adding a computer-readable storage media, and likewise the set on slide 10 of claims 27, 28 and 29.

And, moreover, regarding apparatus claim 29, if you look at the actual language of the claim, the apparatus doesn't have to do anything. The processor is there and it's coupled to a memory, but it doesn't -- it's not required to execute or perform or do anything. And, in fact, the Patent Owner has said that the patent covers the capability to execute a pricing procedure. The capability language is one that they focused on. And, so, to the extent that claim 29 may say put it on a computer, it doesn't

actually have to do anything. And I think that's instructive under some of the Federal Circuit cases where they look to see whether the machine is actually performing the process or not. And I don't think that's required by claim 29.

JUDGE MEDLEY: Thank you.

MS. ARNER: I'd like to address the SAP documents that are in Patent Owner's Demonstratives at slide 16 and 17 for just a moment. They use the SAP documents as a way to try and demonstrate that there was some improvement to the technology in the marketplace. And they point out a key difference between slide 16 and 17 is -- am I using the right slide numbers? I don't have their demonstrative.

MR. BAUGHMAN: You mean their slides?

MS. ARNER: No. Yeah, their slides 16 and 17. The two SAP documents on 16, and then on 17, and they talk about the difference being that you could take multiple tables and reduce them to a single table. And that's something that was a problem in the prior art, supposedly, because SAP R3 couldn't do that. But, in fact, during his deposition, Mr. Liebich admitted that SAP R3 could be implemented using a single table, that it did have that capability. And he also agreed, as he has to, that the claims don't actually recite a number of tables or a number of queries, or any kind of reduction in the number of tables. None of those words are present, as Mr. Liebich noted.

But moreover, to the extent we're comparing SAP's own prior art to the claim elements here, you know, the Supreme Court has said in *Diehr*, and again in *Mayo*, that novelty is not the question here, and that, instead, it's a question of law of what is inside the four corners of the patent. And the patent here takes pains to say any computer, any kind of data source. This is only an example. It's really the innovation, the solution -- which is on the Patent Owner's Demonstratives -- the solution is this pricing procedure. And it's cited the same quote that is here in green on slide 8. The solution is using price adjustments that are associated with these ubiquitous customer and product hierarchies, and that's not the kind of innovation that is meant to be patented.

I think, you know, we can talk a lot about the different witnesses and the evidence before the Board, but really it's a question of law whether the claims satisfy section 101. The Board should follow the Supreme Court's framework, which is set forth in the *Mayo* decision and its prior decisions. You cannot patent abstract ideas. And wrapping them in conventional or routine window dressing, the what else is in the claim before us, does not transform an unpatentable abstract idea into a patentable invention.

And looking at the recent Federal Circuit cases applying this precedent, I think they have really drawn a line between those cases finding invention in the computer science

area, signal processing, and business methods with a simple computer added as a draftsman's effort. And this one is not even a close call really. It's so parallel to many of the cases.

As for the challenge claims, claims 17 and 27 recite abstract ideas and little else. The only thing else is in 27 that says computer implemented. But in the *Dealertrack* case, the Court looked at ones specifically like that and said, just adding that to abstract ideas is not enough.

For claims 28 here on slide 10, 26 on slide 9, adding a computer-readable storage media comprising computer instructions to implement that method is not enough. That a software implementation of an abstract idea, something that could be performed mentally, as we demonstrated today, is not enough to make it patentable.

And as far as claim 29, it's -- it really reflects kind of the classic draftsman's effort to transform abstract ideas into some patentable computer invention. But the specification belies any argument there because it says it's not an invention, and there is not an advance in computer technology.

JUDGE TIERNEY: Can you touch upon the preemption argument?

MS. ARNER: Yeah, so, preemption. I guess the question there is -- comes from the Supreme Court cases where they say, for example, in *Benson*, they found that this process was simply converting one format of a number to another, and

that if this patent were allowed to stand, it would preempt all use of that calculation, and that's why this is not patentable.

Sort of taking the next step was the *Parker v. Flook* case, where it was argued that -- that this claim does not wholly preempt the use of those mathematical formulas there because it requires in the preamble a catalytic chemical conversion process. And, so, it's not wholly preempting the abstract ideas with the argument that was made, and the Court rejected that kind of argument. And they said, even if a claim does not wholly preempt an abstract idea, something like this post-solution activity cannot transform an unpatentable principle into a patentable process.

So, I think to the extent preemption is even needed here, which I don't believe it is. I think the abstract idea framework for *Mayo* is really the key to this question. I think *Parker v. Flook* answers that even if a claim does not wholly preempt math, like in *Diamond v. Diehr*, for example, the Arrhenius equation was not wholly preempted because there were a lot of other things in the claims.

Here, even if that's the case, there is nothing else added. There is nothing more than routine, conventional subject matter.

JUDGE TIERNEY: Well, *Mayo* makes clear that appending conventional steps, specified at a high level of generality, to abstract ideas cannot make the ideas patentable.

Can you walk us through your claim 17, the method there, and show us why there are only conventional steps?

MS. ARNER: Well, under the *Mayo* framework, the only thing we looked at in claim 17 is the preamble because the other two groupings there, the arranging steps and the product pricing procedure are the abstract ideas.

JUDGE TIERNEY: Well, let's assume that the Board does not find that calculating the product price is the abstract idea.

MS. ARNER: Okay.

JUDGE TIERNEY: That is the argument I believe we heard today.

MS. ARNER: Yes, I believe it is.

JUDGE TIERNEY: Can you walk us through the storing, retrieving, sorting and eliminating as to why they would be conventional?

MS. ARNER: Sure. Well, they can be performed mentally using paper and pencil, as we demonstrated earlier today. That nothing in the claims requires there to be some special computer programming. And, in fact, the whole thing could be performed on paper. So, it's a mental step, which is not patentable.

And, moreover, the question of whether this math or this algorithm, this series of steps was new or not is not the question. If you look back at the *Flook* case where they said,

specifically, we think they probably have invented a new and presumably better way of calculating an alarm limit. Translate that to this case. Maybe they have figured out a better -- a newer and better way to calculate a product price, but the abstract idea cannot render it patentable.

JUDGE TIERNEY: But are these -- I'm just asking. Are these conventional steps from your point of view?

MS. ARNER: Well, you know, if we have to go -- I don't think it's appropriate to compare the abstract ideas to prior art. But if we need to go there, we have testimony from Dr. Siegel, who found that each one of these steps was present in the prior art systems. Although 102 is not in the case any longer, there is testimony that these were -- even that -- if that -- if it does matter whether the abstract idea is new or if it's not an abstract idea in your hypothetical, it's not.

JUDGE TIERNEY: So, it's your position here that there is nothing in the limitations beyond abstract ideas.

MS. ARNER: In claim 17, that's correct.

JUDGE TIERNEY: And the other claims?

MS. ARNER: As well.

JUDGE TIERNEY: Thank you.

MS. ARNER: Thank you.

JUDGE TIERNEY: Patent Owner, when you're ready.

MR. ZOLTICK: I want to start with the slides that Ms. Arner was talking about where they've got the arranging

steps in blue, and they said that's just customer and product hierarchies. And then they've got the -- all of the other steps in green calculating a product prices on Number 9 -- I believe it's 9 and 10 of their slides.

And if I can also refer you, we addressed this in our slides as well. This is beginning at slide 21. And this argument showed up in the reply. We were dealing with the abstract -- alleged abstract idea of the customer and product hierarchies. And then focusing on the meaningful limitations in the rest of the claim, and, now, the position is, well, all that other -- all the other things that are in that claim, all the other steps that said are meaningful, that's also just an abstract idea of calculating the product price, and that's just -- it doesn't make any sense.

If you look at those individual steps, the storing, as we've gone through before, the retrieving, the sorting, I mean, this is not an abstract idea. So, instead of hitting it head on and trying to explain why these aren't meaningful, well, they're all just an abstract idea. And it mischaracterizes what those steps actually are, what those steps actually show. To simply say it's calculating a product price, we've addressed that on slide 22. And then on 23 and 24, we just sort of compare this calculating a product price with the specific claim limits, and you can see it just doesn't -- it doesn't work, it doesn't fit.

As far as, if I can also direct you to 26 of Demonstrative Exhibits, you know, we can't forget about looking

at the claim as a whole, and all the steps. And I want to go back to the meaningful and advantageous -- why these are meaningful and why they're advantageous, and what's there. And we've cited to some evidence, but it's the process that is claimed that enabled the improvement. So, just because the claim doesn't refer to a number of tables or a number of queries or a database or a computer, it's what's meaningful and advantageous is this combination, this sequence of steps, that allegedly includes the abstract idea about arranging hierarchies, but the storing, retrieving, the sorting and the eliminating steps all in combination are what enabled this improvement, and that's why they're meaningful.

JUDGE TIERNEY: In *Parker v. Flook* wasn't there an improvement? I just turned to *Benson*, both of them were alleging to have improvement.

MR. ZOLTICK: Well, but they -- there was a mathematical algorithm and then some other steps. A mathematical algorithm, I guess, would be akin to the abstract idea here. And the question is are those other steps meaningful in combination with the mathematical algorithm? Is it a practical application of the abstract idea or is it going to preempt practicing that abstract idea. And that's not the case here, you know, for the reasons we've already discussed because these claims are very detailed and specific in terms of the functions they're performing. And they actually provide some

improvement, benefit, whatever, advantage, that's one of the factors we need to look at.

We submit that the evidence shows that these steps in combination were not routine, conventional or well known, and we have to look at all those factors. And when you look at them, you can't just simply say it's mere data gathering, it's insignificant post-solution or pre-solution activity, it's token this, it's not. These are meaningful steps. And we think the evidence from the patent, the claim, and the testimony to the extent it's considered shows that.

JUDGE TIERNEY: Well, how is this more patentable than the invention in *Bancorp* then? Those steps have the fee calculator, credit calculator, investment calculator, policy calculator, digital storage for storing policy unit and value, better for moving value. Those are specific limitations.

MR. ZOLTICK: Well, in that case they were talking about that it was simply repetitive calculations on the computer. And that's not what we have -- this is not simply just repetitive calculations. These are not -- each of these steps is not just a calculation. When you're talking about -- the pricing information is not just a number. I mean, you've got customers that are, you know, a specific customer. You've got groups of customers, some may be retailers, some may be wholesalers, some may be -- so, that's what is meant by these groups of customers. You have a specific product like a smart phone or

something. You have a type of product -- well, okay, an iPhone or --

JUDGE TIERNEY: I understand you've identified a product and a customer. But at the end of the day, it's a method of determining a price, which is a calculation. It's a calculation for a particular customer and product, but it's still -- how is it not a calculation?

MR. ZOLTICK: Well, the calculation is, if anything, determining the product price using the stored information. That's when you've got to -- the rubber is going to meet the road, and you're going to say, here is the base price, here is the percentage discount we're going to apply, apply it, here is the number. But all those things that are going on before that are looking at what kind of customer it is, what kind of product it is, what category does it fall into, what discount if you want to use a discount they get, or whatever -- whatever the data point is, that information is being processed in such a way to ultimately get to the point where you're going to be able to calculate -- determine the product price using the stored information. So, it's not just pushing numbers, you know, through a formula.

JUDGE TIERNEY: But digital storage -- digital storage for storing the policy unit value for the current day, so, it's not a calculation in that sense. And you also have storing pricing information. How are you distinct from *Bancorp*? I mean, there is more --

MR. ZOLTICK: In the *Bancorp* claim, it says, I believe it's just generating the value, calculating the fee, calculating the credit, determining a value -- I don't even know what protected -- oh, value protected, value calculating, and then, yes, it's storing a value, and it's removing a value. So, it's only dealing with, essentially, what arguably in that case was called repetitive -- performing repetitive calculations. And this is -- this claim is different than that.

Well, because, well, number one, as I was pointing out, the pricing information is different. It's not just a number. There is information on -- I mean, all the things that it says. There is when the retrieval is done, the product, the purchasing organization, each product group above the product group, and each branch of the hierarchy of product groups in which the product is a member, and each organizational group above the purchasing organization, each branch of the hierarchy of organizational groups in which the purchasing organization is a member.

So, there is more -- yes, in the end, when you get to the finish line, the point of this is determining a price of a product. But you're not just dealing with simply pushing numbers around and calculating throughout this entire process. You're dealing with arranging a whole host of information in the specific kinds of hierarchies. It isn't just numbers. That is --

JUDGE TIERNEY: *Bancorp* is a policy generator for generating life insurance policy including a stable value protected investment with an initial value based on a value of underlying securities of the stable value protected investment. And you're trying to say that this is just pushing numbers around in *Bancorp*?

MR. ZOLTICK: Well, it says generating -- well, again, I'm repeating what the Court said. And the Court said that the use of a computer in the claim process here is not simply for "ordinary function of -- that it is for ordinary function of performing repetitive calculations."

JUDGE TIERNEY: So, I guess what is the point I'm getting at, if this can be done by hand, and all you're doing is putting it on the computer, isn't that merely using the computer for its normal purposes, which is a calculating machine?

MR. ZOLTICK: If, well, this process, which is set forth in claim 17, we don't agree can be done with pen and paper --

JUDGE TIERNEY: That's where you left off --

MR. ZOLTICK: -- or in the human mind. Yes. Yes.

JUDGE TIERNEY: I understand you said data source for this computer.

MR. ZOLTICK: Yes, data source is one of the reasons. And, you know, we've addressed this in our Demonstrative Exhibits. I can point you to that. Let me get that.

Beginning on 34, Demonstrative Exhibit Number 34, and this is consistent with the arguments that we set forth and the evidence we identified in our response. And you'll see it refers first to the data source, which a person of ordinary skill in this field would understand to mean a conventional or unconventional computer database, electronic storage of some kind. Right?

And it -- and this is consistent. We cited to the portion of the specification that Ms. Arner referred to, column 10, lines 55 to 61. And then the -- there is a discussion in our response. And then in Mr. Liebich's declaration, paragraph 67 to 70, that's Exhibit 2091, where he addressed this point and indicated that a method requiring data to be stored in a computer data base requires a computer.

So, and also as I mentioned before in the institution decision, the Board recognized that this process involves a computer.

JUDGE TIERNEY: So, *Bancorp* says this, as I mentioned earlier, that "To salvage an otherwise patent-ineligible process, a computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations or computations could not." Can you explain how your method goes beyond just a person making the calculations themselves?

MR. ZOLTICK: Again, I point out that this specific claim requires the data source, which is what we talked about

before. And that in this case there is no evidence. In fact, there is testimony -- there is no credible evidence that we believe that shows that this process of claim 17 and all of its steps can be done mentally or with pen and paper.

And then, in addition, you know, our position is that these claim steps are meaningful limitations. And if you get -- if you wrap all that together, then performing these steps -- programming a computer to perform these steps, turns this computer into a special purpose computer. I think that's a question you asked me before.

JUDGE TIERNEY: But then why wouldn't Bilski program -- computer program to perform the hedging method of *Bilski* be a specialized program computer?

MR. ZOLTICK: Well, in *Bilski* they found that the claim limitations beyond the alleged abstract -- I think they found the whole claim was an abstract idea. But they found there is no meaningful limitations in the claim, you know, beyond the abstract idea. So, in that case, once you get there, nothing else matters.

I think I mentioned before in the *Research Corp. Technologies* case, which we think is close to our case, that the Court and the claim -- I'm not going to get into the claim numbers. The claim is page 865, 627 F.3d. 865. But there the Court was recognizing -- specifically referring to some of the other claims in the patent that required either a film or a film

printer or a memory or printer, and that confirmed the Court's holding that the invention is not abstract. And then the Court referred to -- the Court notes that inventions with specific applications were improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language in the framework of the Patent Act.

They referred to the invention there, which I think is the case here, "The patentees do not seek to patent a mathematical formula." Instead they seek patent protection for a process of in this case half toning and computer applications. And here we're seeking a patent for an improved process of pricing and a computer application, as I explained before. So, we think the -- that case and the way that the Court analyzed the claim there is similar to the case here, and that the Board should consider that.

With respect to Mr. Liebich, his qualifications, and so on, I just point out that that is addressed in our Demonstrative Exhibits. An indication of the evidence it shows why Mr. Liebich is more than qualified to give testimony as to one who is skilled in the art. That's on slides 45, 46, 47 and 48. It includes, you know, the testimony from Mr. Liebich explaining his more than 20 years of experience designing, configuring, and programming computerized pricing systems. So, we think that places him, at least on par with, and, in fact, you know, gives him expertise beyond a person having at least a bachelor's

degree in computer science, and experience developing computerized financial systems.

Anything further?

JUDGE TIERNEY: Nothing further.

MR. ZOLTICK: Thank you very much.

JUDGE TIERNEY: That concludes the hearing for today. Thank everyone for coming here. We'll now take the matter under advisement, and we'll have a decision in due course. Thank you.

(Hearing concluded at 3:50 p.m.)

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