11 (Proceedings resumed at 10:07 a.m.)
12 THE CLERK: Please come to order.
13 Thank you. Please be seated.
14 THE COURT: Good morning, Mr. Lohrer.
15 MR. LOHRER: Good morning, Your Honor.
16 THE COURT: Ready with your next witness?
17 MR. LOHRER: Yes, plaintiffs call Professor Preston
18McAFEE to the stand.
19 R. PRESTON McAFEE,
20 called as a witness, being duly sworn, testified as follows:
21 THE CLERK: State your name; spell your last name,
22 please.
23 THE WITNESS: Randolph Preston McAfee. M-c-a-f-e-e.
24 THE CLERK: Thank you.
25 THE COURT: Good morning.

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1 THE WITNESS: Good morning.
2 MR. LOHRER: Your Honor, I have placed a notebook at
3 the witness seat, and I have handed up a notebook to you as
4 well.
5 THE COURT: Thank you.
6 DIRECT EXAMINATION
7 BY MR. LOHRER:
8 Q Good morning, Professor McAfee.
9 A Good morning.
10 Q Do you hold a Ph.D. in economics?
11 A I do.
12 Q From where?
13 A From Purdue University in 1980.
14 Q Are you currently a professor?
15 A Yes. I am at the California Institute of Technology.
16 Q Does that go by "Cal Tech"?
17 A Yes. Popularly known as Cal Tech.
18 Q Do you hold the J. Stanley Johnson Chair at Cal Tech?
19 A I do.
20 Q Prior to teaching at Cal Tech, where did you teach?
21 A At the University of Texas at Austin.
22 Q You held the Murray S. Johnson Chair at the University
23 of Texas at Austin?
24 A I did.
25 Q Did you teach industrial organization at the University

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1 of Texas?
2 A Yes, I did.
3 Q Have you also taught at other universities?
4 A Yes. I taught -- my first academic job at Western
5 Ontario and also at MIT.
6 Q What did you teach at MIT?
7 A As I said, industrial organization.
8 Q Were you also a visiting professor at the University
9 of Chicago?
10 A I was, in the year 2000.
11 Q And what did you teach when you were there?
12 A Business strategy.
13 Q Professor McAfee, if you would open your notebook. I
14 have your resume which has been premarked as Exhibit 4021 A.
15 MR. LOHRER: Your Honor, it's in your notebook as
16 well, and I would like to tender a copy of the original to --
17 tender the original to the court right now.
18 THE COURT: That would be fine.
19 THE CLERK: Thank you.
20 BY MR. LOHRER:
21 Q And Professor McAfee, the document that's been marked as
22 4021 A, is that a copy of your resume?
23 A Yes, it is.
24 MR. LOHRER: Your Honor, I would ask to move a copy
25 of Professor McAfee's resume into evidence.

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1 MR. WALL: No objection.
2 THE COURT: Very well. 4021 A is admitted.

3 (Plaintiffs' Exhibit No. 4021 A
4 admitted.)
5 BY MR. LOHRER:
6 Q Professor McAfee, you're also an author of scholarly
7 articles?
8 A I am.
9 Q How many?
10 A Over 70.
11 Q On a broad range of topics?
12 A Yes.
13 Q Including antitrust economics?
14 A That's correct.
15 Q Are you also an editor of journals that publish scholarly
16 articles?
17 A Yes. I am currently an Associate Editor of the Journal
18 of Economic Theory and the American Economic Review.
19 Q Could you describe the readership of the American
20 economic Review?
21 A Yes. It's I think fairly described as the largest peer
22 review of economics journal, and I have served as a co-editor
23 for nine years of that journal.
24 Q You co-authored a book with John McMillan; is that
25 correct?

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1 A That's correct.
2 Q What is that called?
3 A Incentives in Government -- "Incentives in Government
4 Contracting."
5 Q And more recently you've had your own book published?
6 A That's correct. "Competitive Solutions: A Strategist's
7 Toolkit."
8 Q Is business strategy among the topics in that book?
9 A That is the topic of that book.
10 Q And you've testified in antitrust proceedings before?
11 A Yes, I have.
12 Q Could you provide some examples from the last several
13 years, and please feel free to include matters that did not
14 proceed to a final hearing on the merits.
15 A Sure. I was the Federal Trade Commission's expert in the
16 Exxon/Mobil merger, and also in the BP/ARCO merger. I helped
17 them with -- I helped them with a Monster/HotJobs merger that
18 was not consummated. These are online employment agencies.
19 I testified in the FDC versus Rambus. I worked on BMV
20 Software versus Neon Systems, which was an antitrust trial in
21 mainframe software.
22 Q Did you also testify in the Remax matter?
23 A Yes, that was a -- there was a question of what -- the
24 appropriate use of game theory in -- in trial.
25 Q And you've done some consulting work for businesses as

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1 well; is that correct?
2 A That's correct.
3 Q And could you provide an example of some consulting.
4 A The biggest one, certainly, was when the -- the Federal
5 Communications Commission sold Spectrum -- it was mandated by
6 Congress to sell Spectrum for cellular phones by auction.
7 They used an auction design that incorporated elements of my
8 design as well as the design of some professors at Stanford,
9 and that -- they raised over $20 million with that auction.
10 I also ran auctions in Mexico for similar purposes of selling
11 Spectrum, and, in fact, also silver mines; that raised over a
12 billion dollars.
13 MR. LOHRER: Your Honor, I tender Professor McAfee
14 as an expert in industrial organization and antitrust
15 economics.
16 MR. WALL: No objection.
17 THE COURT: Voir dire?
18 MR. WALL: No.
19 THE COURT: Very well.
20 MR. LOHRER: Your Honor, may we put up the first
21 demonstrative slide?
22 THE COURT: Yes, you may.
23 BY MR. LOHRER:
24 Q Professor McAfee, what was the nature of your assignment

25 in this case?

1 A I was asked to evaluate the likely competitive effects of
2 the merger of Oracle and PeopleSoft.
3 Q And when were you retained?
4 A In the Fall of last year.
5 Q With respect to relevant markets, what was the nature of
6 your assignment?
7 A I was not asked to define relative markets and have not
8 done a relative market analysis.
9 Q How is it that you went about working on your assignment
10 in this matter?
11 A I went about it -- actually much the same way as
12 Professor Elzinga, that is, I tried to learn as much about
13 the industry as possible. I did that by consulting
14 publically-available documents, examining business records,
15 the declarations and depositions that were obtained by the
16 Department of Justice, and just generally trying to learn as
17 much about how transactions take place in this industry as I
18 could.
19 Q You had an opportunity to review the expert reports in
20 this matter?
21 A Yes, I have.
22 Q And you also consulted economics literature?
23 A I did.
24 Q How many analyses did you perform in your work in this
25 matter?

1 A I performed three primary and independent analyses in
2 examining the likely competitive effects.
3 Q Let's take them one-at-a-time. What is the first that
4 you performed?
5 A The first is a series of 25 case studies that examines
6 specific transactions and looked for the effects in those
7 specific transactions of PeopleSoft and Oracle.
8 Q And you also did some summary statistics work related to
9 PeopleSoft and Oracle?
10 A Yes, that's correct. In addition to the 25 or more
11 intensive looks at competitive transactions I examined, I
12 produced some statistics on the overall set of transactions.
13 Q What was the second primary analysis that you performed?
14 A The second is an attempt to understand the -- the effect
15 of PeopleSoft on Oracle's discounting policies or on the
16 discounts offered by Oracle.
17 So, that is to say, an attempt -- a statistical or
18 regression-based attempt to evaluate the effect of
19 PeopleSoft's competition on Oracle's discount level.
20 Q And what was the third primary analysis that you
21 performed?
22 A The third approach is to ask whether -- an economic
23 model -- a theoretical economic model that's benefit to -- to
24 some facts that the industry would produce significant
25 competitive effects or not.

1 So, it's what is commonly called a "calibration
2 approach" using a theoretical model matched to the
3 circumstances to evaluate the likely competitive effects.
4 THE COURT: Perhaps you could put that in a little
5 plainer English.
6 THE WITNESS: Okay. So, I take a -- a somewhat
7 abstract theoretical model and then I stick in numbers from
8 the -- that have been generated from the -- from the case
9 itself, and then say, suppose that we -- we -- so, what's
10 coming in are things like market shares and the
11 competitiveness of the industry currently, and then I ask,
12 "What would have happened if PeopleSoft and Oracle were one
13 firm, what would have happened to the prices?"
14 THE COURT: I see.
15 THE WITNESS: -- in the theoretical model.
16 THE COURT: I see.
17 BY MR. LOHRER:
18 Q I want to ask you about an overview of the conclusions
19 you've reached in this case.
20 First, what is your overall conclusion based on your

21 work in this case?
22 A That the merger will likely have significant competitive
23 effects. That is, it will likely increase the license and
24 maintenance prices for the HR and FM software.
25 Q Did you also reach a conclusion based on your analysis of

1 the case studies?
2 A Yes. The case studies corroborate or support the
3 conclusion that at least for the specific instances that are
4 studied that PeopleSoft -- competition with PeopleSoft caused
5 Oracle to lower -- lower the prices that it asked.
6 Q And did you reach a conclusion based on your second
7 analysis, you -- the regressions that you performed?
8 A Yes, the regressions support a -- a finding of
9 significant price decreases associated with the presence of
10 PeopleSoft; and hence, absent PeopleSoft, significant price
11 increases.
12 Q And what conclusion did you reached based on the merger
13 simulation that you performed?
14 A The simulation supports, again, the conclusion of a
15 significant effect from the merger of PeopleSoft and Oracle,
16 and suggests a range of price increases that would result
17 from the merger.
18 Q Professor McAfee, with respect to these conclusions,
19 you're aware that Oracle has made some claims related to
20 efficiencies in this, case correct?
21 A That is my understanding.
22 Q Is there anything in Oracle's claims of efficiencies that
23 has caused you to alter the conclusions you've reached?
24 A Mo. Economists -- as Professor Elzinga testified,
25 economists generally look at efficiencies, especially in

1 merger analyses of cost decreases that will lead to lower
2 prices, and generally, you need marginal costs to fall in
3 order for prices to fall.
4 So, that is, if the firm -- the if the merged firm
5 can just do things more efficiently and as a result lowers
6 its marginal cost, the cost of selling additional units, that
7 can lead -- in principle can lead to lower prices.
8 But here, with -- there's been a substantial amount
9 of support for the proposition that marginal costs are
10 already very low. While fixed cost may or may not fall, it's
11 unlikely that marginal costs will fall, at least to any
12 meaningful degree.
13 Q And Professor McAfee, before we turn to the discount
14 request forms and case studies I want to ask you about a
15 subject that has come up in some of the testimony near the
16 end of last week.
17 You are aware that high-function HRM and FMS
18 software license and maintenance fees are only a small
19 portion of any given procurement?
20 A Yes. In particular, the buyers are generally buying
21 implementation services, possibly even training services, in
22 addition to buying the -- the software.
23 Q And the customers are purchasing the license and
24 maintenance fees from vendors like Oracle, SAP, and
25 PeopleSoft at the same time, and that's part of one purchase?

1 A Well, they may or may not buy the -- imple -- I'm
2 sorry -- you asked me about the license and maintenance fees
3 part of one purchase; is that --
4 Q Yes.
5 A Yes. So, generally, when you buy from the vendor your
6 license and maintenance fee, you buy those at the same time.
7 Q Then I was going where you were going; and the
8 implementation can be bought at roughly the same time?
9 A Yes. The implement -- generally to -- fit the product
10 to -- to make the product very useful for the business you
11 need to fill it out, you need to implement it in the -- in
12 the -- in the business. And so, as a consequence, often, --
13 don't know of any exceptions to this -- the implementation
14 services would be purchased at the same time, although they
15 may not be purchased by the same vendor. That is, Oracle
16 will sell implementation, but so does IBM Global Services or

17 Bearing Point, Capgemini. So, you can purchase that from
18 someone else or from the vendors in question.
19 Q Okay. When you're speaking about these services, is
20 there a term that economists might use to describe these
21 implementation services that might be applicable?
22 A Yes. The implementation services are called
23 "complements" -- or complementary goods. That's the
24 complement spelled with an "E." And complements are goods
25 that enhance or increase the value of other goods.

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1 So, gasoline and automobiles are complements;
2 automobile without gasoline isn't worth very much; and
3 gasoline pretty much used in automobiles and boats, maybe.
4 Tires and gas and automobiles would also be
5 complements.
6 So, these are goods that are often consumed together
7 and purchased together. But -- but are -- separate goods
8 nonetheless.
9 Q To the extent that might be purchased at the same time,
10 could the purchase of some of these complementary goods drive
11 discounts?
12 A Well, in many cases the --
13 EXAMINATION BY THE COURT
14 THE COURT: Prices of these complementary goods
15 drive discounts --
16 MR. LOHRER: Drive the discounting activities that
17 we've seen in this case.
18 THE COURT: Discounts of what; the license fee?
19 MR. LOHRER: Umm-hmm.
20 THE WITNESS: I think generally, the answer to that
21 is -- you wouldn't expect so -- or no, the discount, the
22 implementation services, the training, and so on, are a
23 separate product.
24 As I -- I haven't done a product market definition,
25 but as I understand it, just in the conventional use of it

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1 they are separate products. They are provided by different
2 companies. They are also provided by the vendors in
3 question, but they are in addition provided by different
4 companies, and you -- they are purchased at the same time,
5 but they aren't the same service at all.
6 THE COURT: These aren't products, though,
7 Professor. These are services.
8 THE WITNESS: Services.
9 THE COURT: Does that make a difference?
10 THE WITNESS: Generally not.
11 THE COURT: Why not?
12 THE WITNESS: So -- in some sense, products would --
13 we buy products in order to get services. Many products we
14 buy to get services from -- an economist generally just calls
15 them "products and services" or just "products," meaning
16 the -- the service as well.
17 It does have effects on things like price
18 discrimination. It's often easier to price discriminate with
19 a service than it would be with a fungible product.
20 THE COURT: Okay. Because why?
21 THE WITNESS: Well, if a -- so, for example, if a
22 product is sold on-the-shelf, it's hard to condition the
23 price on the buyer.
24 Whereas, if you buy lawn maintenance service, you
25 get your lawn mowed, the person quoting you a price can see

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1 where your house is; you can't really get a price quoted
2 without them seeing who you are and where you live and maybe
3 see what kind of car you drive and that sort of thing. Gives
4 them information about you as a buyer.
5 Whereas, if you walk into a store and buy a product,
6 that's sometimes an anonymous transaction, they can't say,
7 "Well, we're going to have a specific price just for you" in
8 the store very readily.
9 Now, of course, with a software that's for sale here
10 it's extensively demonstrated. They are in the account
11 before the prices are quoted, and that gives them the
12 opportunity to condition the prices on -- on buyer-specific

13 characteristics.
14 THE COURT: My understanding from the evidence in

15 the case so far is the vendors spend a long time with the
16 customers prior to working out a deal.
17 THE WITNESS: That's my understanding as well.
18 THE COURT: Six months, a year, 18 months, time
19 periods that have been mentioned in the trial so far.
20 THE WITNESS: Right. And that gives them a lot of
21 information about the buyer.
22 So, the vendor opens up more opportunities to price
23 discriminate.
24 THE COURT: All right. Thank you, counsel.
25 DIRECT EXAMINATION (Resumed)

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1 BY MR. LOHRER:
2 Q Professor McAfee, we can switch gears, because you've
3 testified that you reviewed some discount request forms from
4 Oracle.
5 A That's correct.
6 Q And what purpose -- and I'm not sure we need a slide just
7 yet -- what purpose within the Oracle sales organizations do
8 the discount request forms serve?
9 A So, my understanding is that a sales representative can
10 request a discount -- or -- there's -- has authority to
11 discount up to some relatively low level, 20 percent, that
12 neighborhood.
13 If they want a larger discount they need to request
14 from senior management, and the larger the discount they
15 want, perhaps the higher up in the hierarchy they need to go
16 to get permission. So, they need to request from senior
17 management the privilege or right of offering that discount.
18 And in the process, they create a discount request form. We
19 met one of those during Professor Elzinga testimony with
20 Teradyne. That creates a discount request form, and it, in
21 particular, has a justification or explanation of why the
22 sales representative thinks a larger discount is merited.
23 Q What is it -- what did you make of the justification
24 information you were able to see on the Oracle discount
25 request forms in your work in this case?

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1 A This is a -- a unique source of information about the
2 competitive situation. Generally, in -- in an antitrust
3 investigation you try to infer why companies are doing what
4 they're doing, just based on their actual behavior, the
5 prices and quantities, the prices they charge and the
6 quantities they sell.
7 In this case, we have a much closer look at their
8 own explanations internally for why they are doing what
9 they're doing, which is a -- a wonderful and unique
10 opportunity to see how they behave and why.
11 Q And in certain of these discount request forms would
12 there be a series of requests indicated?
13 A Yes. This can actually happen at least two ways. The --
14 in some cases we saw multiple discount forms that applied to
15 the same sales opportunity. So, that is to say, they are
16 selling to a particular firm. There was a request for a
17 discount, and then subsequently there was a request for, say,
18 a larger discount or perhaps a change in the exact set of
19 products purchased.
20 In addition, in some cases we saw a discount form
21 where it was a request for a larger discount where an earlier
22 discount had already been approved, and that was actually
23 attached to the same discount form. So, that is -- it's
24 attached to the same document.
25 Q Now, bringing your experience as an economist to bear,

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1 what, generally speaking, did your analyses of Oracle's
2 discount request forms reveal in this case?
3 A There are four main conclusions, economic conclusions, to
4 be drawn from the -- from the case studies of the discount
5 request forms.
6 Q What was the first?
7 A Many of these discount request forms document

8 head-to-head competition between Oracle and PeopleSoft, with
9 consequent -- using that as it is justification for lower
10 prices, so, that is to say, the sales representative is -- is
11 citing head-to-head competition as the reason for asking for
12 lower prices.
13 Q The second thing you found on the forms?
14 A The -- the software vendors, Oracle in particular, since
15 it's Oracle's discount request forms that I was examining,
16 the software vendors become informed about the -- the
17 presence of the competition, the -- to some extent about the
18 strategies employed by the competition, the pricing
19 strategies especially, but employed by the competition, and
20 also the desires of the buyer, the preferences of the buyer,
21 say, for Oracle over PeopleSoft or vice versa during the
22 course of a procurement.
23 So, you see reasonably -- not perfect but -- not
24 perfectly but reasonably detailed information about -- about
25 buyer preferences and -- and rival strategies on these forms

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1 themselves.
2 Q What was the third thing that you found that was
3 significant to you in your work on the forms?
4 A Many buyer characteristics are used as a justification
5 for increased discounts and a buyer justification. That's
6 generally a form -- that means price discrimination to an
7 economist.
8 I should say, I also teach business strategy, and
9 business strategy term for "price discrimination" is
10 "value-based pricing," which is generally a more palatable
11 word in the outside world.
12 Q The fourth thing that you found on the forms that you
13 found of significance?
14 A There are many, not all, but many instances that show
15 several rounds of bidding or -- multiple rounds of bidding.
16 That is, it's not a one-time best and final offer,
17 but instead an iterative process in which the pieces are
18 adjusted and readjusted.
19 Q I want to turn to the slide that you created based on one
20 of these forms.
21 MR. LOHRER: Your Honor, the document itself, the
22 exhibit itself, is P 1009, that is in evidence, and the
23 document itself is in your notebook.
24 Q Professor McAfee, this is a slide you created based on
25 the P 1009 exhibit, correct?

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1 A Yes, and it shows the first page of that document on the
2 left-hand side. This, again, is the same kind of document as
3 the Teradyne document that we saw Friday.
4 Q And with respect to what we're looking at here and the
5 excerpted language, what did you find that was significant to
6 you?
7 A Well, as I -- as I -- earlier testified, we see evidence
8 of a head-to-head competition, and in this case they actually
9 use the phrase, "head-to-head battle with PeopleSoft" in
10 the -- in the description. And -- and describe it as, for
11 example, "ultra aggressive on price and discount in order to
12 win the business."
13 Q And if we could take a look at the next slide.
14 And this slide is entitled, "Field Information
15 Revelation," and the first quote that you have excerpted is:
16 "PeopleSoft came back overnight with
17 a call from Conway with an offer of 1.2
18 million for licenses, and support at 15
19 percent to 17 percent."
20 What did you -- what did that say to you about the
21 principle of information revelation?
22 A Well, what is meaningful to me is as an economist is the
23 1.2 million is actual a pretty specific number, and then the
24 15 to 17 percent on licenses, that's not an exact number,
25 clearly don't know exactly what PeopleSoft is offering, but

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1 the sales representative considers that -- that they have
2 good -- or solid information on -- on what they their
3 competition is -- is doing. So, that is to say, information

4 is leaking through the process back to the vendor.
5 Q Let me ask you about the second excerpted quote.
6 "Customer wants Oracle but needs us
7 to be within ten percent to 15 percent of
8 the ten-year cost of ownership of
9 PeopleSoft in order for Oracle to win the
10 business."
11 Again, does this speak to the information
12 revelation?
13 A Yes. But in this case it's the buyer's decision rule
14 that's being cited, that is to say, the buyer prefers Oracle
15 over PeopleSoft but can't go too much higher in the total
16 cost of ownership in order to justify the -- the preference
17 for Oracle. And here, they say 10 to 15 percent. Again,
18 that's not an exact number. It's not like it was 12.2
19 percent, but it's a range. But it's nonetheless
20 buyer-specific information and information about the buyer
21 decision rule.
22 Q Now, earlier in the testimony you said you were able to
23 see multiple rounds -- indications of multiple rounds of
24 bidding from the discount forms. Were you able to see that
25 in the GAF case?

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1 A Yes, I was. And here, we see -- well, let me say that in
2 this case there are multiple discounts that we see, but in
3 addition, we see the direct statement of bidding and
4 counter-bidding against each other. That's meaningful for
5 multiple rounds of bidding, but -- but it's also useful that
6 it's -- they are actually describing it as "bidding."
7 Q Let me read the quote:
8 "Oracle account team and PeopleSoft
9 account team spent the entire day in
10 customer's office on 5/28 bidding and
11 counter-bidding against each other."
12 Focussing your attention on "spent the entire day in
13 the customer's office," what did you make of that in your
14 study of -- of the materials you looked at in this case?
15 A Again, the -- for my purposes, it's the bidding and
16 counter-bidding against each other that was significant, that
17 the -- teams are actually on-site bidding.
18 Now, this is more bidding than we see in most. This
19 would be, I think, an extreme version or description of an
20 extreme version. On the typical form -- on many -- let me
21 say it this way: On many forms we see several rounds of
22 bidding. Here, we're seeing a description of a process that
23 involves, I think, more rounds of bidding than just several.
24 Q Okay. And with respect to that multiple rounds of
25 bidding, from the GAF form, next slide, what was it that you

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1 were able to discern?
2 A So, this slide actually refers to the multiple discount
3 request forms that we observed, as opposed to the bidding and
4 counter-bidding which was just a description we don't see the
5 actual outcome of that.
6 There was an original discount request form,
7 requested 65 percent, and, in fact, used the phrase "worst
8 case" as description of the 65 percent discount. That was
9 later increased to 77 percent. And then finally, the one
10 that we looked at, I believe, was the 85 percent discount,
11 which was the third request, and citing PeopleSoft as the
12 reason for these increased discounts.
13 Q And these changes in the bidding summary and these
14 changes in the discounts, how did that impact GAF materials?
15 A So, let me say, I don't know -- I can't from the
16 documentary evidence say how we got to 65 percent, whether
17 PeopleSoft was viewed as having a role in that or not, but
18 the -- just going from 65 to 85 percent is a very large
19 reduction in price. Because even though it's only a 20
20 percentage point increase in the discount, since we're going
21 from 35 percent of the list price to 15 percent of the list
22 price, that's less than half of -- a price drop to less than
23 half of the former price. So, it's specifically a 57 percent
24 reduction in price. And so, that's a very large effect.
25 Q And that bottom-line number is the change in actual price

1 being paid?

2 A Yes. Taken that's just going from 65 percent to 85

3 percent.

4 Q I want to turn to the next case study, and that involves

5 Hallmark.

6 MR. LOHRER: Your Honor, the discount request form

7 for Hallmark is in evidence as P 1014, and a copy of that is

8 in the notebooks as well.

9 Q Professor McAfee, you've created a slide with respect to

10 the Hallmark discount request form as well, correct?

11 A Yes. The back -- the left-most or upper left page is

12 the -- is the cover page or the first page, discount

13 approval. And the relevant page is -- has been -- has been

14 put on ton top of that.

15 Q Let me read the first quote have you excerpted:

16 "Extremely competitive situation

17 against PeopleSoft. PeopleSoft in at less

18 than 1 million in license fees and lower

19 yearly support. Craig Conway all over

20 this account with meetings and calls."

21 How did this inform your analysis seeing this

22 information?

23 A Again, this suggests head-to-head competition in the

24 extremely competitive situation between PeopleSoft and

25 Oracle.

1 In addition, the -- there is some specificity, again

2 not exact, but some specificity about the price that

3 PeopleSoft is believed to be offering.

4 Q And there's a second quote:

5 "50 percent of Hallmark employees

6 are part-time, thus, a higher discount is

7 warranted."

8 Why did you excerpt that quote?

9 A The -- this is an example of buyer-specific information.

10 The fact that the Hallmark employees are part time generally

11 doesn't change the cost of the software. But it does change

12 perhaps the value to the buyer of the software. So, this is

13 an example of value-based pricing or price discrimination.

14 Q And why is it that this example of price discrimination

15 is important to your analysis?

16 A Well, as I said, that was one -- one of my findings from

17 the -- from the case studies, that price discrimination,

18 that -- they had the ability to price discriminate based --

19 not perfect price discrimination, but based on

20 characteristics of the buyer.

21 MR. LOHRER: We have another case study. This is

22 Greyhound, and a representative of Greyhound has testified at

23 the trial.

24 Your Honor, in the notebooks is a copy of the

25 document that is in evidence as P 1013. That's the Greyhound

1 discount approval form.

2 THE COURT: Very well.

3 BY MR. LOHRER:

4 Q And Professor McAfee, could you take the first quote for

5 us and explain why that was significant to your analysis.

6 A Well, again, this is -- this would be our third -- be a

7 third straight win over PeopleSoft in the flagship area.

8 This is, again, an indication of the head-to-head competition

9 that was part of my conclusion of the case studies that -- at

10 least, again, the -- broad overview of the -- broad

11 conclusion is that in many instances PeopleSoft and Oracle

12 are their closest competitor -- competitor on which they are

13 focussing, and this appears to be an example of that.

14 Q The second quote:

15 "Customer is getting squeezed in the

16 depressed travel industry. Money is

17 tight. Only very aggressive proposals

18 will move them off the dime."

19 What did that go to in your analysis?

20 A Again, this is a value-based pricing of their pricing

21 based on customer. Here, the customer is in the bus industry

22 and has a relatively low willingness to pay. And as a

23 consequence, they are offering conditioning prices -- or at

24 least the sales representative is requesting a discount based

25 on this buyer characteristic.

1 Q I think we have another quote from the justification

2 portion of this form as well. And this is:

3 "While PeopleSoft dropped off

4 earlier, they are back with a vengeance.

5 They have recent executive penetration and

6 some champions."

7 "Executive penetration and some champions." What

8 does that tell you as an economist?

9 A Something that I teach in my management strategy class is

10 that companies -- organizations are not monolithic

11 operations, and you often get disagreement among individuals

12 within organizations.

13 And I understand this reference to "some champions"

14 to be a reference to some of the buyers -- some of the

15 executives prefer PeopleSoft, some prefer -- perhaps one

16 could conclude some preferred Oracle, given that its "some"

17 champions and not "all" champions. That's an issue -- that's

18 an important issue that the -- those favoring one company

19 over the other might well be in a position to give useful

20 information. "If you bring your price down, we'll be -- we

21 can't buy your product unless you can bring your price down

22 given the state of the competition."

23 The example I give in my management strategy class

24 is that it's often the case that CIO -- the chief information

25 officer and the CFO disagree with one another; that the CFO

1 wants to buy the cheapest product, where the CIO wants to buy

2 the most functional and most robust and reliable product.

3 That -- I've been using that example for years it's

4 not based on this case.

5 This -- that conflict is actually -- creates a

6 potential source of information.

7 Q Now, I believe the Greyhound form also mentions Lawson,

8 and based on your view of this Greyhound discount request

9 form and the other evidence in this case, what did you learn

10 about Lawson's role in the competition at Greyhound?

11 A I should start -- the -- generally, I use whatever

12 information I had on the case studies, which could include

13 e-mails and other sources of information as well as the

14 discount approval forms that -- form the heart of the case

15 studies.

16 The description of Lawson's offer I think used the

17 word "low ball" and the -- at least at one point the Lawson

18 offer was described as $3- to $400,000. Oracle is a hundred

19 thousand dollars higher than PeopleSoft, 120 maybe. And

20 their reaction seems to be to PeopleSoft rather than to --

21 rather than to Lawson, although the prices continue to fall

22 here.

23 In addition, as I understand the Greyhound witness's

24 trial testimony, Greyhound did not see Lawson as a functional

25 equivalent to PeopleSoft and -- and Oracle, at least partly

1 because Lawson's product could not keep enough records on the

2 bus drivers, and so, it would have required some fairly

3 extensive modifications to keep the sort of information on

4 the drivers that they wanted to keep.

5 MR. LOHRER: I want to turn to another case study.

6 Again, a witness -- a representative of this company appeared

7 in court and testified. This is CH2M Hill.

8 And Your Honor, the actual discount form is Exhibit

9 P 1006. It's in evidence, and a copy is in the notebook.

10 Q And let me see if I can take you through these quotes,

11 Professor McAfee.

12 And -- back to I think what you were looking for

13 when you -- when we started out here.

14 First:

15 "We have been competing against

16 PeopleSoft in a head-to-head competition."

17 And that would be what?

18 A Well, again, I use the phrase that PeopleSoft and Oracle
19 compete head-to-head and they've used the same phrase here
20 that -- that that's their primary competition for winning
21 this account.
22 Q
23 "During this RFP cycle, we have
24 gained the trust and confidence of the
25 executives and were asked to review all of

1 their current licenses."
2 The significance of that?
3 A The signif -- two-fold -- my understanding is that
4 Oracle -- that CH2M Hill was one of the early adopters of
5 Oracle and in some sense a -- a show-off account for Oracle,
6 and then they had a misunderstanding or a disagreement of
7 some sort that left CH2M Hill not so happy with Oracle, and
8 they are in this account trying -- and in this situation
9 trying to fix that and win back the account. So, they are
10 describing trust and confidence.
11 So, again, this is insight into what's going on at
12 CH2M Hill.
13 But in addition, they've been asked to review all
14 the current licenses, and there's been at least some issue in
15 this case whether the existing products, do they have
16 information about the value of the existing products, and
17 this is an indication that at least in this particular
18 account they have some idea of what they've got currently
19 and how that works.
20 Q The reference to the "RFP cycle," was that meaningful?
21 A Yes. As Professor Elzinga testified, this is a request
22 for proposal. There's a description of this process taking
23 as much as 18 months, and thus, the notion of a cycle. In
24 some cases it's actually much quicker than that. The --
25 the -- RFP cycle starts out with a product -- understanding

1 what the -- the product that the buyer -- the buyer needs,
2 what the buyer's needs are, and how -- the company's
3 demonstrating what their products can do for the buyer. And
4 doesn't get to primary -- primarily doesn't get to pricing
5 until later.
6 Q And we have one additional excerpt.
7 "All of the discounts in concession
8 are required to win against PeopleSoft and
9 to accommodate the errors, mistakes,
10 settlements, and bad blood from the past."
11 I think you referred to this, but what was the
12 significance about this quote with respect to your analysis?
13 A Well, again, this is the discounts that are being
14 justified or not being justified on a cost basis, but are
15 being justified first on the extent of the competition, and
16 then second, on the somewhat unique relationship of Oracle
17 with CH2M Hill, and so, and -- and their history together.
18 And so, these are value-based prices.
19 Q And then it was -- and these excerpts come from that
20 justification portion of the discount request form itself,
21 correct?
22 A Yes, they do.
23 MR. LOHRER: Again, going to another justification
24 section, this is P 1004 in evidence, Your Honor. This is
25 Barnes & Noble.

1 Q And there is a brief justification section on one of the
2 following internal pages of the exhibit.
3 And let me take you to the first quote that you have
4 excerpted.
5 "This is a $4 billion retainer which
6 we have defeated the incumbent PeopleSoft
7 head-to-head."
8 Again, is that the head-to-head competition?
9 A Yes.
10 Q And:
11 "Although Oracle has been selected,
12 PeopleSoft continues to pursue the
13 opportunity with extremely aggressive

14 pricing to overturn the decision."
15 Why did you excerpt that second quote?
16 A Again, I think that shows the competition between Oracle
17 and PeopleSoft on pricing, the -- and the description of
18 extremely aggressive pricing is consistent with the -- the --
19 with the head-to-head competition.
20 MR. LOHRER: I wanted to take you through one more
21 case study.
22 This would relate to Merrill Lynch, Your Honor,
23 Plaintiffs' Exhibit 1019.
24 It's in evidence. And a copy of the discount form
25 is in the tab in the notebook for Merrill Lynch.

1 Q And again, Professor McAfee, the slide you've prepared
2 here has both a new justification and previous justification
3 section.
4 And I want to read the -- the first quote:
5 "We have verified that this price
6 point puts us in a competitive position.
7 Price is the number one key issue for
8 Merrill -- both up front and
9 implementation costs."
10 Why was that significant in your work?
11 A So, this is, again, information about the buyer's
12 valuation and what the buyer is looking for.
13 In this case, they are saying that the buyer is
14 primarily looking for a low price. The -- so, it's -- the
15 buyer's preferences, different -- you know, some buyers care
16 more about functionality than others. He is emphasizing
17 price, at least with respect to these two companies.
18 Moreover, it's an example that we've seen in other
19 cases that to the total cost of service is the primary choice
20 variable that the buyer cares about both up front, which I
21 take to be the license fee, and the -- and first year
22 maintenance as well as the implementation costs.
23 THE COURT: Mr. Lohrer, let me jump in here with a
24 question, and if it's one that you plan to get to with the
25 witness, take it up in due time.

1 But going back, Professor McAfee, to your testimony
2 that support services are a complementary product service to
3 the license fee, I notice in going through these executive --
4 discount request forms that the discount that is offered for
5 support services is at least as great in most of these
6 instances, and in some instances even greater, than the
7 discount being offered on the license fee.
8 THE WITNESS: When you say "support" are you talking
9 about the maintenance charges or the implementation?
10 Generally, we don't see the implementation services on these
11 forms. We see --
12 THE COURT: Ah, so, "support" is not
13 "implementation."
14 THE WITNESS: That's my understanding, that we see
15 the maintenance -- what's often called the "maintenance
16 charges" which are generally fixed percentage of the license
17 fee paid every year.
18 THE COURT: So, support here is -- is the
19 maintenance fee.
20 THE WITNESS: That's my understanding.
21 I should say, also you do see on --
22 THE COURT: Did you do any study of the pricing of
23 support -- of implementation services?
24 THE WITNESS: I haven't studied that specifically.
25 My understanding from Professor Elzinga is that that's a

1 separate product.
2 THE COURT: Yes, and I would think the cost
3 characteristics of that product would substantially differ
4 than the cost characteristics of the license.
5 THE WITNESS: Yes. That's my understanding. It's
6 very labor intensive, and, in fact, involves some of the most
7 expensive labor used in the world, and --
8 THE COURT: Next, of course, to lawyers.
9 (Laughter.)

10 THE WITNESS: And the over -- out of the total cost
11 of service -- we would have met this number later, but about
12 15 percent is for the software; and hence, 85 percent is
13 going to implementation of various kinds. And while there's
14 been some variance in that number, that seems to be a -- a
15 pretty close to widely accepted -- you expect individual
16 variation, but 15 percent is for -- of the total cost of the
17 product -- of the implemented product goes to license plus
18 maintenance. And the present value of the license is about
19 the same as the present value of the maintenance for the
20 relevant cost of ownership, so, that is --
21 THE COURT: How do you get your hands around this
22 business unless you study both the license market and the
23 market for implementation services at the same time?
24 THE WITNESS: Well, so, I think about this -- give
25 an example, that's not -- ideal example.

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1 When I buy an automobile, I buy tires at the same
2 time. If I was doing an antitrust analysis on the tire
3 market, I would be worried about some aspects of the
4 automobile market. But primarily I'd be focussed on
5 companies that produced tires.
6 Because automobiles aren't -- automobiles without
7 tires; they are very strong complements. A car without tires
8 is not much use, and vice versa.
9 THE COURT: Well, that's true, but there aren't
10 separate markets when you go out and buy an automobile. You
11 buy an automobile with the tires.
12 Buyers in this business have the option of buying a
13 license and implementation services from another vendor.
14 THE WITNESS: Right.
15 THE COURT: They don't have to buy the
16 implementation services from the vendor that sells the
17 license. So, the analogy to automobiles doesn't seem to
18 apply; does it?
19 THE WITNESS: So, that is a difference, but I
20 wouldn't want to lean on that analogy too hard, anyway. But
21 that is a difference in that particular analogy.
22 When you buy a computer and software -- let's take
23 software other than an operating system. You might have that
24 software bundled with the computer. Many computers are sold
25 with software already installed, say, media software or word

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1 processing software. They come with the computer or you
2 might buy it separately.
3 Those are very strong complements. Software without
4 a computer is completely useless, and a computer without
5 software isn't a whole lot of use.
6 And so, again, those are very strong complements for
7 each other, but they are separate markets, and you would
8 analyze them separately in a sense that -- that they aren't
9 necessarily sold together.
10 Again, Dell is perfectly happy to install software
11 for you, but somebody else makes it when Dell does that
12 installation. And they are just offering you a little bit of
13 convenience.
14 And if I were to study the computer market, while
15 I'd be worried about the software to some extent, I wouldn't
16 actually be confused on the software market in looking at the
17 competition in the computer market.
18 THE COURT: Doesn't it depend on what software
19 you're talking about in that situation?
20 You are talking about an operating system that is an
21 essential complement to a PC; but an application for word
22 processing is not essential. Many people can use a computer
23 without a word processing application or spreadsheet
24 application. Depends on what the individual user or
25 consumer's use of the computer is --

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1 THE WITNESS: Umm --
2 THE COURT: Here, the implementation services, as I
3 understand it, are essential to use of the software that is
4 licensed from these software vendors.
5 THE WITNESS: Yes. That is my understanding. But

6 again, it's also provided by different companies. Operating
7 system is not terribly bad analogy. To the -- in the sense
8 that it's -- that it is necessary -- I try to stay away from
9 operating systems, because probably the only industrial
10 organization economists didn't get involved in is in the
11 Microsoft case.
12 But given the strength of feelings on that case and
13 opinions on that case I try to stay away from operating
14 systems where I can.
15 I think the essentiality of it -- the gasoline is an
16 essential -- essential for modern automobiles. I guess we
17 now have electric cars coming on line. But essentially
18 gasoline is essential for automobiles. And that is a
19 completely separate market from the automobile market.
20 Again, a car without -- it's not sold by the same
21 companies.
22 Car -- they do actually give you the car with a full
23 tank, but -- it's a -- it's a completely separate product,
24 and yet, it is essential.
25 THE COURT: It might be different if gasoline supply

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1 contracts were sold together with automobiles, but that's not
2 how that business developed.
3 THE WITNESS: That's true. Complements are pretty
4 important. Pretty much a whole chapter of my book is
5 dedicated to complements and complementary goods, because
6 complements are very important for modern business strategy,
7 and you care a lot about your complements, but from an
8 economic analysis standpoint, that is to say, if I'm a
9 business, I very much want my people selling complementary
10 goods, to sell goods that will make my product more
11 attractive and valuable.
12 In this market, I've been essentially assuming that
13 the complement of installation services, since it is sold by
14 at least five other companies, is probably pretty
15 competitively supplied. Now, I don't know that as a fact,
16 because I haven't actually studied those markets
17 independently, but there are a lot of companies willing and
18 able to provide, implement services.
19 THE COURT: Could you turn the telescope around and
20 look it at it from the other perspective, that the
21 complementary goods here is the licensed software, and the
22 main product is the implementation service?
23 THE WITNESS: Well, certainly if you're IBM Global
24 Services, that is the way would you look at it, that the IBM
25 Global Service is not being in the -- in selling the product

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1 directly but selling the implementation services. They --
2 must view that as the main product.
3 And while that's true it doesn't -- to my thinking,
4 it doesn't actually help you assess the competitive effects
5 of the merger, or put another way, the market for
6 implementation services is unlikely to be harmed by this
7 merger in that particular market, because there are a whole
8 bunch of other companies, and large, capable companies
9 selling in that market, that market is unlikely to suffer
10 serious adverse effects.
11 And I think -- you actually pointed out earlier that
12 these companies by and large sell implementation to the
13 vendors; sell implementation services only for their own
14 product, so that the -- so, say, PeopleSoft sells it only for
15 the PeopleSoft product.
16 Oracle sells it for the Oracle applications product.
17 So, in that sense, even the raw count of companies
18 selling implementation services shouldn't be changing,
19 because presumably the combined entity will actually sell the
20 implementation services for all the products that they
21 current -- they continue to offer. And that -- so, in that
22 sense the number of companies willing and able to implement
23 PeopleSoft software is the same pre- and post-merger.
24 Now, from my perspective that means I don't have to
25 worry about that market, because competition is going to

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1 continue in that market.

2 In the same way that if we were considering the
3 merger of Daimler Chrysler and G.M., I'd be very concerned
4 about the U.S. automobile market, but I wouldn't be concerned
5 about the -- necessarily concerned about the tire market,
6 because there's still independent companies selling tires.
7 Now, you have created a large company buying and
8 selling automobile -- produce and selling automobiles. But
9 you haven't actually harmed the tire market to any real
10 significant degree because of the existence of these
11 independent companies.
12 THE COURT: Sorry, Mr. Lohrer.
13 MR. LOHRER: Not at all, Your Honor.
14 Q Just want to go back to -- to one specific question about
15 the discount forms and the support that is mentioned.
16 Is it your understanding that support there would
17 include the upgrades that some of the witnesses have
18 testified about in the case?
19 A Yes. That -- so what -- when you buy support, in
20 addition to getting bug fixes and -- and that sort of thing,
21 you also get the right to -- as I understand it, you get the
22 right to upgrade the product as new versions come out.
23 Q So, with respect to these forms, we have -- categories in
24 the justification -- categories in a template that list both
25 license and support.

1 BY MR. LOHRER: Your Honor may I approach?
2 THE COURT: Yes.
3 MR. LOHRER: I just turned to the copy of P 1019
4 that is in the witness's book so he could see the template,
5 and it's in the notebook as well. I don't believe we have it
6 for the screen, but Your Honor, going to direct the witness's
7 attention to this listing as it appears in this template on
8 the discount forms.
9 THE COURT: Thank you, sir. I have it.
10 BY MR. LOHRER:
11 Q And so, Professor McAfee, that's where you see the
12 listings of license and support; is that correct?
13 A Yes. So, this has the discounts, that's the second and
14 third entry, whether there's a -- a price hold on the -- and
15 what kind of support is being purchased here, updates and
16 product support, which I understand to be bug fixes and --
17 something goes wrong, isn't working as expected; you've got
18 someone to phone to check that to find out why; it's got
19 the -- what the list prices what -- would be on the software,
20 $17-, almost $18 million for the list license; it has the net
21 price which has applied the same discount both to the license
22 and the support; and then finally, it has the -- adds those
23 two up, although my understanding is the support price that's
24 listed there is an annual fee. Most companies expect to be
25 purchasing that support throughout the life of the product

1 because they want to keep current. They want to have bug
2 fixes, and -- as I understand it, the tax laws change, they
3 change the product to meet the current tax laws, and so,
4 that's part of the updates. And so you would typically --
5 you know, the tax laws change pretty much every year, and so,
6 you would want to keep current with that. This has the net
7 license, and then the total price is what was owed the first
8 year.
9 (Continued on following page; nothing omitted.)
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1 BY MR. LOHRER:
2 Q. And so the subject matter of that form is the purchase of
3 the license and the support, and with respect to the
4 implementation service, that's a separate purchase, sold
5 separately?
6 A. That's my understanding. It is not represented on this
7 form.
8 Q. Let go back and finish up on the case study.
9 "We need to request an additional 3 percent
10 discount for this PeopleSoft competitive HR
11 replacement,"
12 and that, again, that's 3 percent on the license, and I believe
13 the support in this case, is that correct?
14 A. That's my understanding. They went from 85 percent to
15 88 -- the request was to go from 85 percent to 88 percent, and
16 I should say, we don't know what got us to 85 percent in the
17 first place, and then in addition, there's another form that
18 talks about a 90 percent discount, but I don't know if that was
19 ever actually offered.
20 MR. LOHRER: We can cue the next slide.
21 Q. As we did with GAF, we have a summary based on what we
22 could see from P1019, based on that impact of that discount
23 change. Could you take us through this, please?
24 A. Yes, similar to the GAF materials, a three percentage point
25 drop in the discount doesn't sound like a whole lot on the
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1 surface, but when you're already at 85 percent, another three
2 percentage points is actually a 20 percent reduction in price.
3 So here we're going from 15 percent of the list down to
4 12 percent of the list, and that's a 20 percent drop in the
5 price. So that's a large magnitude for competition to lead to.
6 Q. And it's change in actual price being paid?
7 A. Yes, that's correct.
8 Q. With respect to the license for the software?
9 A. And the license and maintenances.
10 Q. Professor McAfee, I wanted to ask you about the senses in
11 which economists use the term "competition." Could you tell us
12 about that?
13 A. Yes. There are two somewhat distinct uses of the word
14 "competitive" that are frequently heard in the economics and
15 management professions.
16 Economists use "competitive" to mean perfect
17 competition, or -- and the outcome of perfect competition is
18 that the price actually gets driven down to the average cost,
19 which will also equal the marginal cost, and this is the sense
20 of "competitive" in textbooks, most economics textbooks. So
21 when you teach principles of economics, competition and
22 competitive means price is driven down essentially to the cost
23 of the item.
24 So that's one sense of competitive. But there's
25 another sense of competitive. I actually teach a course that's
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1 often entitled "Competitive Strategy," and that sense of
2 competitive is, it's aggressive business tactics. We seek --
3 we try to take our a rival's market share, we perform R&D and
4 try to leapfrog the a rival's product, and it's competitive in
5 the sense that they are aggressively seeking to take the market
6 away from each other, and those are actually often very
7 distinct notions.
8 In one case you have very low prices; in the
9 business strategy sense of the word "competitive," you can be
10 extremely competitive, but part of your purpose is not to have
11 low prices, but in fact, to have high prices. So much of what
12 will guide innovation strategy, for example, is to be unique.
13 Now, you also want to be better, and that part is
14 very competitive, as to offer the better product, but a goal of
15 competitive strategy is actually to have high prices rather
16 than low prices.

17 Q. Let's focus on that first sense of the term, perfect
18 competition, correct?
19 A. Yes.
20 Q. And in that sense of the term competition, how do you
21 assess the markets in this case?
22 A. Well, and as a Professor Elzinga testified, as well, these
23 markets are not competitive in that sense of the word. We see
24 very big differences in the prices. We've seen discounts
25 ranging all the way up to -- in fact, there are discounts that
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1 range into the upper 90's, not in these particular cases, but
2 in other cases, and even on these particular cases in the upper
3 80's, and then down into the 20's and 30's. There's quite a
4 large range in the discounts.
5 Under perfect competition or even anything close to
6 perfect competition, you would have prices offered to different
7 companies be approximately the same. Price would be
8 approximately average cost, which -- and that would be the same
9 across the companies, but we don't see that in this case. We
10 see very large price differences, and that suggests that by
11 that measure, these companies are not close today to perfect
12 competition.
13 Q. How about the second sense of the term, the business
14 strategy sense of the term, do you see indication of that in
15 this case or in the case studies?
16 A. Yes. When they describe themselves as highly competitive,
17 I believe them in the competitive strategy sense of the word.
18 I think they are aggressively trying to take each other's
19 market share away, they're aggressively trying to win the
20 business. They prefer not to compete on price. They're forced
21 to compete on price in many instances, as we saw in Merrill
22 Lynch, because the customer cares so much about price.
23 But they are very aggressive in their product
24 innovation. We've heard in the trial testimony, we've heard
25 about leapfrogging, and I think in that sense of the word, they
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1 are highly competitive.
2 Q. So we see buyers taking advantage of price competition to
3 get a better deal?
4 A. Yes, we do. In these head-to-head competition case
5 studies, one of the important things to draw from that is these
6 are instances where PeopleSoft was used to get a better price
7 from Oracle, and presumably vice-versa, although, of course,
8 I'm looking at Oracle's discount forms, and so what I see is
9 what Oracle offered.
10 Q. Right, and PeopleSoft was the head-to-head competitor in
11 those case studies, correct?
12 A. Yes, and in approximately 600 other instances -- I don't
13 want to say 600 were head-to-head competition, but 600 other
14 instances, PeopleSoft is identified as a competitor.
15 Q. Now, after a merger of PeopleSoft and Oracle, wouldn't
16 buyers be able to use SAP as competition to get a better deal?
17 A. Well, I'm sure they would try, and for some of them that
18 would be reasonably successful and for others not. Again, the
19 fact that it's not perfectly competitive today, it's not going
20 to get more competitive once PeopleSoft is folded into Oracle
21 and ceases to be a separate competitive threat to Oracle's
22 pricing.
23 Certainly some buyers who use PeopleSoft today would
24 attempt to use Oracle, and that would work to some extent, but
25 because it's not perfectly competitive -- one way to think
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1 about this is that if Oracle was a really good competitive
2 threat today -- well, in order for Oracle to be a really good
3 competitive threat after the merger, it should be a really good
4 competitive threat today, and that still leaves room for
5 dramatic differences in prices across buyers.
6 And so you wouldn't expect, in some sense, those
7 price gaps to narrow, and moreover, the buyers that are
8 currently using PeopleSoft will not have that option once the
9 merger is completed.

10 Q. You mentioned dramatic differences in price across buyers.
11 What were you speaking to?
12 A. Currently we see, as I testified, these differences in
13 discounts between -- in 80 percent and higher, all the way down
14 to very low discounts.
15 In addition, the absolute prices that are charged,
16 those differences are in the millions of dollars from buyer to
17 buyer. So some buyers are paying dramatically more,
18 essentially, for the same box of software, than other buyers,
19 and that's true today. We would expect that not to get less
20 post-merger.
21 Q. And why is that significant, if it doesn't get less
22 post-merger? What are you speaking to?
23 A. So that is to say, the use of SAP as a threat -- and again,
24 I expect companies to use SAP as a threat. That option exists
25 today, and we can see today how much the use of SAP is a threat
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1 has narrowed the price differences across firms.
2 And the answer is, these are very large price
3 differences. It hasn't -- I mean, maybe it's narrowed it some,
4 but nonetheless, they are still very large even today. That
5 won't change post-merger.
6 Q. We've been talking about the Discount Request Forms, and
7 with respect to the forms, was there something, I think you
8 just referred to, that you and the people working under you did
9 to get an overall sense of how PeopleSoft competed with Oracle?
10 A. Yes. Again, my focus was on competitive effects of the
11 merger. So I was actually looking for instances where
12 PeopleSoft and Oracle were competing with each other, and we
13 found -- I and my staff found approximately 600 instances where
14 PeopleSoft was identified as a competitor in the discount
15 forms.
16 THE COURT: Let me ask this: As I understand it, in
17 this market, the enterprise application software market,
18 PeopleSoft is a much bigger player than Oracle. Under those
19 circumstances, why wouldn't it matter more to look at the
20 Discount Request Forms of PeopleSoft and see how often Oracle
21 is identified as a competitor as opposed to SAP, for example,
22 or Lawson or one of these other vendors, rather than to look at
23 the Oracle Discount Request Forms?
24 If people PeopleSoft is such an much bigger player,
25 isn't it much more likely to appear in the Oracle request forms
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1 than in the PeopleSoft request forms to identify Oracle as the
2 main competitor?
3 THE WITNESS: If I had PeopleSoft Discount Request
4 Forms, I would have given them equal weight, but -- I don't
5 know --
6 THE COURT: They were not made available to you?
7 THE WITNESS: No. I also -- I think in human
8 resources in the United States, PeopleSoft is substantially
9 larger, and in fact, there was, in the videotaped testimony we
10 heard, that it took Oracle a long time to catch up to
11 PeopleSoft in the -- in the quality of its HR offering. But
12 I'm not so sure in the financial side that PeopleSoft is a much
13 larger competitor than Oracle. I think that in the HR side
14 that would be correct.
15 THE COURT: These Discount Request Forms identify
16 whether we're talking about HR or financial management
17 software?
18 THE WITNESS: They do, and so for example, in the
19 Merrill Lynch I think was HR, and in the Barnes & Noble it was
20 financial or primarily financial. I should also say, in some
21 cases there are database software sold, as well, or even many
22 of them concern the E-Business Suite that actually contains all
23 four of the pillars.
24 MR. LOHRER: Your Honor, may I approach?
25 THE COURT: So this -- let's see. Well, let's look
2492
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1 at Merrill Lynch.
2 THE WITNESS: So on Merrill Lynch, if you look under

3 the programs, right at the top of --
4 THE COURT: Yes, that's all HR.
5 THE WITNESS: That appears to be all HR.
6 THE COURT: And you say in some of these Discount
7 Request Forms database programs are included in the license
8 fee?
9 THE WITNESS: Yes, that's certainly the case in some
10 of them. Often it will say "technology" when that happens.
11 THE COURT: Yes, I see here it's the -- this is the
12 Barnes & Noble request form.
13 THE WITNESS: Right, so they have Internet
14 Application Server EE, Oracle Database EE, Oracle Partitioning.
15 THE COURT: PeopleSoft, of course, does not offer a
16 database program.
17 THE WITNESS: That's correct. In fact, my
18 understanding is it runs on all of the three most popular
19 databases and database programs.
20 THE COURT: So really, these Discount Request Forms
21 at least do not uniformly focus upon enterprise applications of
22 and the kind that we're dealing with in this case.
23 THE WITNESS: That's correct. They sometimes
24 include -- well, so there are two issues with that. They
25 sometimes include other management software, so they may
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1 include customer relations software, for example. Not this
2 particular one, I think, but they may --
3 THE COURT: They may.
4 THE WITNESS: They may, and then they also can
5 include -- at least they can include technology Oracle database
6 software. In some cases the prices are actually different for
7 the database software from the other software, and in fact, in
8 the Teradyne, there they had different prices even for the HR
9 replacement software, and so they had a discount that was a
10 hundred percent, they gave product away free, but not the
11 support, because they were replacing the existing -- an
12 existing product, an existing functioning product.
13 And so you'll see sometimes a reference to what's
14 called a blended discount, that averages the discounts -- I
15 think my understanding of the calculation is, it figures out
16 what the net price is, and then says what's the average
17 discount that's given over the products, even though the
18 discount is actually different for different products.
19 THE COURT: Well, then, these Discount Request Forms
20 really combine apples and oranges, don't they? Apples,
21 oranges, pears and kumquats.
22 THE WITNESS: They do include some things that, in a
23 perfect world, would not be present. That's, I think, par for
24 the course. That is to say, it's rare that we get to observe
25 exactly what it is that we would like to observe.
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1 That's also why -- my approach is generally to take
2 multiple looks at the issue that I'm asked to address, try to
3 look at it from different approaches, and this is just one of
4 those approaches.
5 I think it was compelling to me the price cuts that
6 were offered as a result of the competition with PeopleSoft,
7 but I wouldn't want to have it be the only mode of analysis, or
8 only methodology used.
9 THE COURT: All right. Thank you, Mr. Lohrer.
10 BY MR. LOHRER:
11 Q. You were just saying that you took different modes. Do you
12 recall the second mode of analysis you took with respect to
13 your work in this case?
14 A. Yes, but did you finish asking me about summary statistics?
15 Q. I was going to move ahead, but we can do summary
16 statistics, Professor McAfee.
17 A. That's fine.
18 Q. Why don't we go back to the summary statistics slide, and
19 in addition to the Discount Request Form work, was there other
20 Oracle data that you could look at to perform summary
21 statistics?
22 A. Yes. The --

23 Q. The sales rep survey data?
24 A. Thank you. So in addition to the Discount Request Forms,
25 there is a -- what's called a Sales Representative Customer
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1 Surveys that, on a customer-by-customer basis, identify various
2 features of the transaction, and the chart that's up here
3 provides some summary statistics associated with that database.
4 Q. And can you explain what you were looking for in pulling
5 together these statistics, please?
6 A. So this is sort of just a starting or broad overview of the
7 competition. It's not very detailed, and one of the things
8 that it shows is that Oracle does, at least on the larger
9 transactions, Oracle does face competition, most of the time,
10 not necessarily always, but most of the time there is at least
11 one competitor listed, 93 percent in this case, and that
12 PeopleSoft is one of the competitors on those larger
13 transactions about half the time.
14 Q. And again, you were able to get this from another Oracle
15 data source, the sales rep surveys?
16 A. Yes, this is a completely separate data source from the
17 Discount Request Forms.
18 Q. Okay, and Professor McAfee, there was a second primary type
19 of analysis that you conducted in this case, correct?
20 A. That's correct.
21 Q. Okay, and what was that?
22 A. It uses a statistical technique known as a regression, and
23 the purpose is to try to assess the effect of PeopleSoft and
24 other competitors on the discount that's offered by Oracle, and
25 any other factors that might also influence that discount, but
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1 in particular, to assess the effect of PeopleSoft and other
2 competitors on Oracle's discounts.
3 Q. Okay, and what was your source of data for the.... Let me
4 back up.
5 On the slide we have "Regression on Oracle's
6 Percentage Discounts." What is a percentage discount in the
7 context of the work you were doing?
8 A. Well, so that's the discount that was offered. So for
9 example, with Merrill Lynch, it was 88 percent. That's the
10 discount offered to the buyer, and in this case, with this
11 particular database, I actually had two separate databases, one
12 of which my staff constructed for me, available, and I used --
13 there were two charts of Mr. Ciandrini, who I believe we've
14 seen video testimony from; he had two charts, discount trends,
15 that gave me a source of data of Oracle discounts, and the
16 e-business -- that was only on the E-Business Suite, as I
17 understand it.
18 MR. LOHRER: Your Honor, the charts are in the
19 notebooks, and pursuant to the stipulation of the parties, I
20 would move P874 and P4887 into evidence, and I'm providing a
21 copy of the original to the clerk.
22 MR. WALL: No objection.
23 THE COURT: Very well, P874, and P4887 are admitted.
24 (Plaintiff's Exhibits 874 and 4887
25 received in evidence)
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1 MR. LOHRER: Yes, your Honor.
2 Q. And there's the percentage discount, and there's also
3 something known as an incremental discount that we'll get to?
4 A. Yes.
5 Q. Okay. So what was the purpose of running a percentage
6 discount regression?
7 A. Again, my purpose was to try to understand to what extent
8 PeopleSoft as a competitor causes or leads to or is associated
9 with larger percentage discounts offered by Oracle.
10 So we saw in the case studies these instances where
11 it appeared that PeopleSoft's presence led to significant
12 discounts. This is an attempt to do that across a broad
13 database to say, on average, what does the presence of
14 PeopleSoft do to the discount offered.
15 Q. Can you explain the information on the left side of the

16 chart, that left column listing PeopleSoft, J.D. Edwards and so
17 on?
18 A. Yes. The technique of regression allows you to use a list
19 of variables, and those variables are listed along the
20 left-most column in that chart, and I apologize if they're hard
21 to read. There are a lot of them.
22 So for example, PeopleSoft is one of the --
23 PeopleSoft is present in Mr. Ciandrini's database. It's got a
24 checkmark or a yes/no, and it's present in some cases and not
25 in others, and so that creates a variable that I can use to

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1 help explain the discounts, and the same with J.D. Edwards,
2 SAP, Siebel, and niche.
3 Siebel is there, even though Siebel doesn't sell one
4 of the products, relevant products as defined by Professor
5 Elzinga, Siebel is present because this is the E-Business
6 Suite, which includes customer relations software, which Siebel
7 does sell; and so Siebel might matter because of that.
8 In addition, Mr. Ciandrini indicated whether the
9 deals were less and 250,000, between 250,000 and-a-half
10 million, between a half million and a million, or over a
11 million, and so those show up as variables.
12 And then finally, you include a constant to pick up
13 anything that's not explained by the other variables.
14 And so the approach that's taken here is to try to
15 explain the discounts statistically, using all of these
16 variables.
17 Q. And what is it that you were able to find, in running this
18 regression?
19 A. I actually ran this regression two different ways, that
20 corresponds to the two -- to the two columns on the right.
21 In the first way of running it, what I find is that
22 there's, on the percentage discount, the effect of PeopleSoft
23 has a .102 effect, and that's 10 percentage points. So that is
24 to say, the people for whom -- the buyers for whom PeopleSoft
25 was cited as a competitor got, on average, 10.2 percent more --

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1 bigger discount. So a discount that was lower by 10.2
2 percentage points.
3 So if the average discount was on the order of .5,
4 that is, a 50 percent discount, the PeopleSoft customers got,
5 on average, .6, or 60 percent discount.
6 Q. Now, I just want to ask again, the focus of Mr. Ciandrini's
7 charts was the E-Business Suite product?
8 A. That's my understanding. All of the data concerns the
9 E-Business Suite product.
10 Q. And the .097 figure that we highlighted, as well, what is
11 that?
12 A. The transactions in the first regression almost certainly
13 include, for example, a division that just buys software or a
14 small company that buys software, and the approach taken by
15 Professor Elzinga -- and I should say that Oracle also uses
16 this distinction -- but the approach taken by Professor Elzinga
17 to try to eliminate what are smaller products was to look at
18 deals over half a million.
19 So I followed that logic in the second regression by
20 just eliminating all the transactions that were over -- under
21 half a million; so eliminating the ones under half a million.
22 And in this case, the effect of PeopleSoft -- well,
23 the apparent effect of PeopleSoft is reduced from a 10.2
24 percentage point decrease to a 9.7 percentage point decrease,
25 although those numbers are approximately the same. That is to

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1 say, on the smaller transactions, again, about a 10 percent --
2 percentage point decrease -- excuse me -- increase in the
3 discount is associated with the presence of PeopleSoft.
4 THE COURT: Wouldn't you expect the trend to go the
5 other direction? If Professor Elzinga's market definition is
6 an accurate portrayal.
7 THE WITNESS: Well, yes and no. So it does kind of
8 go the other direction, which will be the next point, I think,

9 that comes out.
10 THE COURT: All right.
11 THE WITNESS: Which is to say that 9.7 percentage
12 point decrease in the discount is actually a larger decrease in
13 the price; and that's because in the large deals they're
14 already getting a bigger discount. So a 9.7 percentage point
15 decrease is more meaningful, and if you think about this as --
16 if you go from --
17 THE COURT: You mean the absolute dollars, you mean.
18 THE WITNESS: Well, and the percentage dollars are
19 bigger. So that is to say, when I go from -- remember, when we
20 went from 85 to 88 --
21 THE COURT: But the discount off of list is less.
22 THE WITNESS: That's right.
23 THE COURT: Not very much, but certainly not enough
24 to draw any conclusion from, but you would tend to think the
25 discount would be greater.

2501

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1 THE WITNESS: Except that the base is bigger. So
2 the people who are -- who have big deals get a bigger discount
3 just for that reason, as well as -- and so we have to get an
4 even bigger discount to get the same number of absolute
5 percentage points drop.
6 So if you think about this as people with a large
7 deal ordinarily get a 55 percent or 60 percent discount,
8 whereas the people with the smaller deals are getting a
9 40 percent discount, it's a loss less painful to give an extra
10 10 points on a 40 percent discount than on a 60 percent
11 discount.
12 And that's actually reflected in the next numbers.
13 That 10.2 percent discount on all deals only translates into a
14 22 percent price decrease, but the 9.7 percent -- percentage
15 point decrease, because those customers are already getting a
16 bigger discount, actually translates into a 26 percent price
17 decrease for those customers. So in that sense, your Honor is
18 right, they do get a bigger effect.
19 Now, let me also say, economists would not normally
20 distinguish these kind of differences. They're just too small.
21 They're created by random error as well, and we wouldn't
22 actually -- I wouldn't testify that that difference is in any
23 sense economically meaningful.
24 THE COURT: Right.
25 MR. LOHRER: Your Honor, the entire chart is in the

2502

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1 notebook premarked as 4023B, and at this point, I would offer
2 4023B, the Percentage Discount Regression, as a Rule 1006
3 summary into evidence.
4 THE COURT: Hearing no objection, 4023B is admitted.
5 (Plaintiff's Exhibit 4023B
6 received in evidence)
7 MR. WALL: Your Honor, just, I was just thrown by
8 the 1006 summary. I don't have an objection to it, but I'm not
9 quite sure why it would be as a 1006 summary, that's all.
10 THE COURT: Well, it's admitted. Whatever we call
11 it, it's admitted.
12 BY MR. LOHRER:
13 Q. You said there were two sets of regressions.
14 A. That's correct.
15 Q. And we mentioned the incremental percentage discount
16 regression, as well. Now, again, let's focus -- what is the
17 incremental discount we're referring to here?
18 A. So in this regression, I've taken as a base price -- I've
19 taken out what I understand to be an automatic e-biz discount.
20 So on the Oracle, if you were buying the E-Business Suite or if
21 you were buying a set of products, there was an e-biz discount.
22 There was actually a calculator for that discount, and that was
23 a discount that I understand to be automatic.
24 So what I've done in this regression is I've removed
25 that discount from the base price, and then calculated what

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1 discount off of the already discounted base price was actually

2 offered.
3 So for example, a company that only got the
4 e-business discount would get a zero incremental discount.
5 They got nothing beyond this automatic discount; whereas a
6 company that went, say, from 25 percent to 50 percent, that
7 would actually be coded as a one-third discount, because they
8 were already at 25 percent, so they were paying 75 percent of
9 the list price. They got an additional 25 percent, so they're
10 paying -- they're getting 25 percent off of their 75 percent,
11 or a one-third discount.
12 So what this does is just -- it's an attempt to
13 translate the discounts for customers that got the e-biz and
14 customers that didn't, to try to make those comparable, because
15 you're making them off the relevant list price, as I understand
16 the e-biz to be automatic.
17 Q. Let me go back just for a moment to Mr. Ciandrini's data.
18 That was for the e-biz product, but the charts cannot break out
19 an e-biz discount for you?
20 A. That's correct, but that shouldn't actually matter for
21 those charts, since, as I understand it, all of them qualify
22 for the e-biz discounts. So at most, the e-biz discount seems
23 to range from about 25 to 30 percent. At most, that introduced
24 a little bit of error associated with that percentage.
25 Q. Now, this incremental percentage discount regression, what

2504

1 was the source of data for this work, sources of data for this
2 work?
3 A. So, let me back up and say why I did a second attack on
4 this. Mr. Ciandrini's data didn't have many explanatory
5 variables. Essentially, I only had the deal size and who were
6 the competitors.
7 So this is an attempt to actually offer a lot more
8 alternative explanatory variables, to bring to the question of
9 what is the effect of PeopleSoft.
10 Now, you wouldn't actually expect that to make a
11 difference to the estimation. So that is, when I add in a
12 variable that's unrelated to PeopleSoft, that shouldn't
13 actually affect my estimate of how much PeopleSoft matters, but
14 what it could do is if it was -- if PeopleSoft was, for
15 example, proxying for something else, it would allow me perhaps
16 to see that.
17 So in other words, if the PeopleSoft -- if the
18 PeopleSoft competitors were just the large annual revenue
19 customers, then I would be able to see that, because, in this
20 regression, because I have data on the customer revenues.
21 So I had my staff construct a new database that took
22 the Oracle Discount Approval Forms and matched them to the
23 sales rep surveys. The Discount Approval Forms generally don't
24 have much in the way of systematic information about the buyer.
25 The sales rep surveys did, and by matching those up, I was able

2505

1 to construct a database that had both information about the
2 buyer and information about the discount, and the competitors.
3 MR. LOHRER: Okay, if we could show the next slide.
4 Q. And this is the Incremental Percentage Discount Regression,
5 and again, starting with the left-side column, can you take us
6 down that left-side column, starting with PeopleSoft,
7 J.D. Edwards and so on?
8 A. Yes. So the first five variables are the same variables
9 that we saw before. That is to say, they represent variables
10 that -- for who is listed as a competitor.
11 In addition, I have the net license revenue, the
12 customer's annual revenue, so an estimate of how large the
13 customer is; the E-Business Suite, whether that was the product
14 being purchased, and then also whether or not the customer was
15 a previous customer of Oracle -- excuse me, a previous
16 applications customer of Oracle.
17 And that's important, because there's been some
18 testimony -- it was important, as I understand it, or
19 potentially important, because there's been testimony that
20 it's, in essence, easier to sell to a previous apps customer.
21 They've already got a footprint, I think is the common term,

22 and then this issue of convergence, and the issue of, you would
23 like to minimize the number of instances of applications that
24 you're running, again, if you're a previous apps customer, then
25 that should make it a little easier to sell to.

2506

1 Q. I want to ask you about the net license revenue figure.
2 Wouldn't the net license revenue be affected by the size of the
3 discount?
4 A. Yes, a large discount would tend to decrease the net
5 license revenue, which creates a threat of a feedback in this
6 regression in some sense. The purpose of this regression is
7 actually to explain the discount and not to explain the net
8 license revenue. So that threat of a feedback could cause us,
9 instead of explaining the percentage discount, or the
10 incremental percentage discount, to instead explain the net
11 license revenue.
12 Q. And what did you do with respect to that threat of
13 feedback?
14 A. There's a standard technique called instrumental variables
15 that offers a way of fixing that, and I ran that with also
16 with, or -- I had my staff run it with instrumental variables,
17 and the effect was actually not economically meaningful to the
18 estimates.
19 Q. So it turned out the feedback wasn't a problem?
20 A. That's correct.
21 Q. Now, could you take us to the second column, the one
22 numbered (1), and take us through that on the chart, Professor
23 McAFEE.
24 A. Yes, so in this case, the estimates -- again, the
25 interpretation of these is similar, although we're now looking

2507

1 not at the overall discount, but this incremental discount, so
2 that customers who got the E-Business Suite, that's a different
3 number than customers who didn't.
4 But again, we see a 7.6 percentage point increase
5 overall when PeopleSoft is listed as a -- increase in its
6 incremental discount when PeopleSoft is listed as a competitor,
7 and a 13.6 percent increase in the incremental discount on the
8 larger transactions. So the second column, the column labeled
9 (2) -- it's hard to read -- but with the 13.6, that refers to
10 the larger transactions, the ones over half a million.
11 Q. So the first bullet point, the presence of PeopleSoft, what
12 is it that you found here?
13 A. So again, the incremental discount is increased either by
14 7.6 percent for all transactions or 13.6 percent on the larger
15 transactions, and that translates -- those two numbers, when
16 you do the arithmetic, translate into 13 percent and
17 25 percent, respectively, price decreases. So that is to say,
18 PeopleSoft's presence as a competitor lowered prices 13 percent
19 for all transactions, and 25 percent on the larger
20 transactions.
21 MR. LOHRER: Your Honor, Exhibit 4023A, that's the
22 chart, is in the notebooks, and I would offer the original of
23 that at this point.
24 MR. WALL: No objection.
25 THE COURT: Very well, 4023A is admitted.

2508

1 (Plaintiff's Exhibit 4023A
2 received in evidence)
3 BY MR. LOHRER:
4 Q. Now, Professor McAfee, the regression analyses -- that was
5 the second primary analysis that you did, and I wanted to ask
6 you about your conclusions with respect to these analyses. It
7 was two sets of regressions for each of the incremental and the
8 percentage discount, correct?
9 A. Yes, that's correct, using two distinct databases. That
10 is, there may be some overlap on the number -- on specific
11 buyers, but they are two different sources of data, I guess, is
12 the best way of putting it, and also using two different
13 specifications.
14 So that is to say, I've got the different additional

15 right-hand side -- sorry, that's jargon -- I have additional
16 explanatory variables in the second regression available to me
17 than I had in the first, and yet, in both cases I found
18 economically similar results.
19 Q. Okay, and as you say, the translation, what did you find?
20 A. So the range over those two regressions, interpreting the
21 coefficients, is 13 to 26 percent decreases in Oracle's prices
22 when PeopleSoft is present as a competitor.
23 Q. And Professor McAfee, there was a third independent
24 analysis you performed in your work on this case, correct?
25 A. Yes, that's correct.
2509

1 Q. And what was that?
2 A. That's -- I use the word calibration. It's an application
3 of an economic model to the discounts or to the prices
4 constructed using some data both from Professor Elzinga and
5 elsewhere.
6 Q. And what type of model did you use in this case?
7 A. I used an auction theory model. So I used a -- in effect,
8 it's a basic auction theory model.
9 Q. I want to talk about terminology and actually what the word
10 "auction" means. To an economist, what does it mean to be
11 speaking about an auction?
12 A. Well, auctions are the model that economists use for any
13 sort of bidding situation. And so an example that I use in
14 class, because it's actually a true example from my own life,
15 is when I got a roof put on my house. I actually use this
16 example in three separate papers. When I got a roof put on my
17 house, I got people to come and bid, I talked with them about
18 what kind of shingles they use and what the product they were
19 selling was, although I was careful to not have them show up at
20 my house at the same time. And I talked to them about their
21 process, and I got bids.
22 When I was getting close to selecting one, I told
23 the runner-up that the -- they were essentially -- they were
24 headed to be runner-up at their current price, and extracted a
25 somewhat better bid out of them, and then used that to get a
2510

1 better bid out of the first one, and I, and I think other
2 economists, describe that process as an auction, or at least
3 that's the best economic model of that kind of situation, is an
4 auction, and that's what economists use -- that is one of the
5 uses of auction models.
6 Q. I'll ask you about another term. Isn't the case that you
7 were negotiating with the roofers?
8 A. Well, "negotiation" is much more of a management term than
9 it is a straight industrial organization term. Economists
10 would tend to say, bargaining.
11 And it's true, there was a certain amount of
12 negotiation that went on with this, but nonetheless, the
13 primary force of that, even though we might negotiate, an
14 example, was, how many nails per shingle, and this ranges, you
15 know, two, three and four, where a larger number is good.
16 And so you may negotiate or bargain over the exact
17 specification of what's going to be provided, the number of
18 nails per shingle, for example, but ultimately, when you're
19 using one bidder's or one company's willingness to provide to
20 extract a better price out of the other customer, you have a
21 bidding situation, and the fact that a certain amount of
22 negotiation goes on doesn't undermine that.
23 Q. And just to be clear, for an economist, does an auction
24 need to have the trappings of, let's say, an art auction or
25 something like that?
2511

1 A. No. The classic auctions like Christie's and Sotheby's are
2 auctions where you have an auctioneer or, for that matter,
3 estate auctions are another example where you typically have an
4 auctioneer.
5 When I got a roof put on my house, I did not have an
6 auctioneer, and when the Department of Defense buys fighter
7 aircraft, they don't typically employ an auctioneer, but

8 nonetheless, that's described as an auction.
9 Q. Okay, let's turn to your work with respect to the merger
10 simulation and the auction, and what were your findings in the
11 case that informed your decision to use an auction framework?
12 A. So I should say that there are many, many different auction
13 models. There are -- and I've contributed many auction models
14 and there are many different distinct auction models, and so
15 although they bear somewhat of a relationship to each other

16 that we will likely discuss, the one -- there were issues then
17 in what kind of auction to apply, and the sort of auction that
18 I use, which is sometimes called the English auction or an oral
19 ascending auction, one of the features of that auction is that
20 there are multiple bidders. There are -- and there are
21 multiple rounds of bidding, as we discussed earlier this
22 morning.
23 The price is determined ultimately in such an
24 auction -- excuse me. We also talked about the information
25 available to the bidders, and I spoke to the issue of how much
2512

1 information, and that some information was available, but not
2 perfect.
3 In such an environment, that typically means that
4 the auction winnows the process down to a highest and a second
5 highest bidder, and that leads to -- so that the price is
6 determined essentially by the best bidder that's excluded or
7 that fails to sell.
8 So the nature of this is, if you want to think about
9 what determines the price that ultimately the winning bidder
10 must offer, it's the value offered by the best excluded bidder
11 or the best losing bidder. And that's a feature of this
12 auction, as well.
13 Q. There was one more item, the winnowing down the number of
14 bidders. Where in the case did you see indications of that?
15 A. Well, I think it's commonly referred to as a down-select,
16 frequently referred to as a down-select. The firms demonstrate
17 their product, and ultimately those offering the highest
18 functionality or typically those are the offering the highest
19 functionality are the closest match in functionality to the
20 customer's needs, are invited to submit price pro- -- prices.
21 Q. What was it about Oracle's business processes that made you
22 think an auction was an appropriate model?
23 A. So one thing about Oracle's business approach is that
24 different levels of management are involved in sequentially
25 higher discounts, and in some sense, that suggests that's not
2513

1 going to be a -- and in fact, seeing the multiple Discount
2 Request Forms for the same transaction, that's evidence of
3 multiple rounds of bidding, and the way Oracle has designed its
4 approval process in some sense assumes that you get a second
5 attempt, a second chance to offer a larger discount.
6 So that is, it doesn't go all the way up to upper
7 management right off the bat, but instead, there's a lower
8 management approval level, and then if that's not adequate,
9 then you go up to upper management to decide just how far
10 they're willing to go.
11 Q. Okay. You mentioned calibrating the model. What is that
12 activity, again?
13 A. So the theoretical model that I'm going to employ involves
14 some theoretical assumptions, assumptions about things
15 generating, what are the buyer's values for the software, but
16 it also involves a specification or an assumption, if you will,
17 about who wins and how often they win. So how often does
18 Oracle win, and an Oracle win matters, and that, from my
19 perspective, is an assumption, and so I'm going to use market
20 shares to proxy how often Oracle and the other companies win,
21 in the data. And I --
22 Q. And the market share data, where did you get that?
23 A. Well, the market share data for the firms themselves I took
24 from Professor Elzinga. I just used his numbers, and in fact,
25 when he revised his numbers, I had to revise my tables, as
2514

1 well, since they came directly from his market share data.
2 The -- in addition, however, he doesn't count -- he
3 has just shares for actual firms. So I've added in shares for
4 a category called "other," which could include, I stuck with my
5 legacy system this year, that is, I didn't buy anything this
6 year, or I purchased from, you know, a point solution for some
7 of my divisions, or what have you, but it proxies for the set
8 of deals which we actually see in the Oracle data that go to
9 other parties besides those that he provides market shares on.

10 Q. Was this the sale rep survey data, again?
11 A. Yes, that's correct.
12 THE COURT: Mr. Lohrer, when you reach a convenient
13 point to break, let me know.
14 MR. LOHRER: We just have, your Honor.
15 THE COURT: All right. Then why don't we take our
16 luncheon break at this time, and can we resume at 1:30?
17 MR. LOHRER: Yes.
18 THE COURT: That will be fine.
19 (Luncheon recess taken at 12:10 p.m.)
20
21
22
23
24
25

1 MONDAY, JUNE 21, 2004 1:40 P.M.
2 PROCEEDINGS
3 THE CLERK: Please come to order.
4 Thank you. Please be seated.
5 THE COURT: Very well. Mr. Lohrer.
6 You may continue your examination of Professor
7McAFEE.
8 MR. LOHRER: Thank you, your Honor.
9 Two housekeeping matters, if I may.
10 The sales rep survey dated -- those are electronic
11 files, on P 820, P 821, and P 822. We would offer those into
12 evidence pursuant to stipulation.
13 THE COURT: 820 and -- 820, 821, and 822, correct?
14 MR. LOHRER: Yes, Your Honor.
15 THE COURT: Very well. And there is no objection,
16 correct?
17 MR. WALL: Correct.
18
19 (Plaintiffs' Exhibit No. 820, 821,
20 822 admitted.)
21 MR. LOHRER: And the 600 or so files of PeopleSoft
22 that were part of the work done by Professor McAfee's group,
23 again, an electronic exhibit, P 4729, we would offer that as
24 well as a summary exhibit. Again, it's P 4729.
25 MR. WALL: Your Honor, I need to reserve on this one

1 pending the conclusion of the cross-examination, if I may.
2 THE COURT: Very well.
3 Housekeeping done?
4 MR. LOHRER: Housekeeping is done, Your Honor.
5 THE COURT: Good.
6 MR. LOHRER: I think we had a slide.
7 Q Professor McAfee, I had asked you --
8 Good afternoon.
9 A Good afternoon.
10 Q I had asked you a question about an answer about "others"
11 about market share data, and I wanted to ask you about the --
12 your calibration and the issue of the percentage of value of
13 software accruing to buyers.
14 A Yes.
15 Q What is it that you need to do with that in order to
16 calibrate your model?
17 A Well, essentially, once I've made the technical
18 assumptions, the mathematical assumptions in the model, which
19 leave some parameters or variables unspecified, and I've
20 specified the market shares, there's one remaining parameter,

21 which could be viewed as a measure of how competitive is the
22 industry pre-merger.
23 And another way of measuring that is, what's the
24 percentage of the total value of the product that accrues to
25 the buyer?

1 So, how much of the value of the software to the
2 buyer actually accrues to the buyer and how much accrues to
3 vendors in the form of -- in the form of the -- of the price.
4 Q And what were you able to do in this case?
5 A In my report I've approximated the value in the following
6 way:
7 Small buyers overall pay list on a -- on a per user
8 basis, or so I understand it, they often pay list. So, for
9 them, the value should at least exceed the list price.
10 When you go to large buyers, there's at least some
11 support in the evidence that large buyers actually have more
12 use for this software than small buyers. That is to say, you
13 can manage a small organization in -- in a lot of different
14 means, and if it's small enough, you can just manage it sort
15 of with the telephone, for example.
16 Whereas, with a large organization, the software
17 pays lots of benefits in the form of superior management
18 techniques, and that suggests that large organizations should
19 value the software at least at list.
20 Now, that's the value that they get from the
21 software, as opposed to what they're willing to pay for it,
22 which is going to be determined by their competitive
23 alternatives.
24 The thing that I'm trying to assess here, which is a
25 hard thing to observe, is what's the value they put -- that

1 these buyers put on the software -- on the use of the
2 software?
3 And by -- by -- the assumption that they -- that
4 they value it at least at list, what they actually pay on
5 average is 46 percent of list, and that would suggest that at
6 least 54 percent of the value accrues to the buyer.
7 Q And then having made that assumption with respect to a
8 sensitivity analysis, what did you do?
9 A As I said, that's a -- that estimate of 54 percent I
10 believe to be a lower bound on this percentage of value that
11 accrues to the software, so I considered values ranging from
12 50 percent all the way up to 90 percent.
13 Q And with respect to the model, the principal assumptions
14 that you made with respect to value, for instance?
15 A Pardon?
16 Q The principal assumptions that you made with respect to
17 the model on the issue of value, what was the principal
18 assumption you were making?
19 A Well, the -- so, the -- sorry. I'm not exactly
20 understanding the question.
21 Q Well, why don't we take the full information
22 assumption --
23 A Yes.
24 Q -- as part of your -- an assumption you made with respect
25 to the model.

1 A I made some assumptions that I at least briefly referred
2 to in the morning, that the buyers -- the vendors know what
3 value the buyer puts on the software. I don't believe that
4 to be exactly satisfied, but as an approximation it seems --
5 based on my reading, it seems reasonable.
6 And so, the full information assumption is one in
7 which the -- both the vendor and the buyers know the values
8 that the buyer places on the software. And I should say,
9 when I talk about this value this is somewhat of an
10 idiosyncratic thing for an economist. This is the value that
11 the buyer gets out of the software.
12 The example I like to use in class is the value of
13 eyeglasses or vision correction. Because your willingness to
14 pay for eyeglasses might be $300 or $400 or something

15 depending on what kind of prescription you have. It isn't
16 very much relative to the actual value of vision correction.
17 If there was a monopoly over vision correction, they might
18 be -- I would personally be willing to pay as much as you pay
19 for a house to be able to see, because I am essentially
20 disabled without eyeglasses or without some kind of vision
21 correction. So, that's the kind of value that I'm talking
22 about is the buyer's value for the product, as opposed to
23 what you're willing to pay.
24 Now, what I'm willing to pay for eyeglasses, well,
25 if somebody tries to charge me $500, I go to the next vendor,

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1 because there is a competitive market in vision correction.
2 So, at least a more -- a reasonably competitive market, there
3 are many options.
4 THE COURT: Let me ask, Professor McAfee, when
5 you're calculating these discounts, do you do so on a per
6 license or per seat basis or do you simply calculate the --
7 the total license fee that is charged to the customer?
8 THE WITNESS: As I understand Oracle's policies, you
9 would actually get the same answer if you did the discounts
10 on a per seat -- because they charge per seat, and their list
11 price sends to be per seat. I understand you would get the
12 same answer with the exception of the e-biz discount we
13 talked about earlier. You may have to buy a certain minimum
14 amount to qualify for that, which is one of the more
15 interesting questions for the economist, depends on the
16 context.
17 When comparing across firms, I primarily have been
18 looking at the discount that -- at what level of discount the
19 firm got so that I am comparing the discounts, say, that
20 Daimler Chrysler gets from the discount that Merrill Lynch
21 gets. When you look at price discrimination generally, it's
22 actually the total price. That's the interesting -- that is
23 the purchase price.
24 So, as I mentioned this morning, we see purchase
25 prices varying. This is not the per seat. I don't think

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1 Oracle's cost vary significantly per seat. It may vary a
2 little bit in the number of telephone calls they get.
3 THE COURT: It doesn't cost the vendor substantially
4 more to supply 6,000 seats as opposed to 60 seats; does it?
5 THE WITNESS: That's my understanding. There might
6 be a modest difference that if I have 6,000 seats I'm more
7 likely to be calling their help line than if I have 60 seats.
8 I am just going to run into more problems. But I understand
9 those to be small costs, and I believe that Your Honor is
10 exactly right that 6,000 and 60 are pretty close.
11 THE COURT: So, the fact that you would observe
12 larger discounts with the larger customers shouldn't have any
13 significance; should it?
14 THE WITNESS: Well, that's one way of looking at it.
15 In fact, one of the first things I looked for was to see
16 whether larger customers paid for, that is the absolute
17 dollar, as opposed to the size of the discount just to make
18 sure that was happening was exactly that, that they weren't
19 just passing on -- so, for example, if they just charged a
20 million dollars for the software that would not be price
21 discrimination in the ordinary sense of the word. That --
22 that is, if every buyer paid a million dollars they would all
23 be paying the same amount for the product that they are
24 purchasing. So, that would not ordinarily be price
25 discrimination.

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1 One way you might implement a one-million dollar
2 charge is to say, you tell me how many seats you want, and
3 I'll charge you a million dollars, divided by the number of
4 seats per seat, so, I had to charge that. They didn't in
5 fact, do that, and they don't in the prices that they
6 charge -- so, that is the net list, and if you just look at
7 the five instances that you saw in the case studies, the net
8 list price, that is, the total check that they have to write,
9 varies quite dramatically from buyer to buyer, and so, in
10 addition to the discounts varying, the actual total purchase

11 price is varying as well. But I did actually check for that.
12 THE COURT: Very well.
13 BY MR. LOHRER:
14 Q Why don't we go ahead and turn to the chart showing the
15 market shares as part of the simulation. I'll read across
16 the top, "AMS," "LAW" for Lawson, "MS" for Microsoft, Oracle,
17 PeopleSoft, SAP, SCT and SSA or SSA Baan, B-a-a-n.
18 And the footnote for all of those is Professor
19 Elzinga's expert report, "Market shares from Professor
20 Elzinga," correct?
21 A Yes. The -- the source of the raw numbers is from
22 Professor Elzinga, and I -- but I have done one thing to
23 these numbers to adjust them, which is, I carved out a
24 category he didn't have, called "others." And the way that
25 I've carved them out -- so, in the first four rows, the way

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1 that I've carved them out is to assign a 14.7 percent market
2 share to "others," the number I get from one examination of
3 the -- of the sales rep survey, and then multiply by .853 all
4 of Professor Elzinga's numbers as a way of creating space for
5 the 14.7 percent assigned to "others."
6 So, that is to say, for example, .04 would not be
7 exactly his number for AMS or -- 1.3 would not be his number
8 for Lawson. But that's what I get when I multiplied his
9 number by the same number for each of the different
10 companies.
11 Q And for the others you testified before the break that
12 that could include legacy option in addition to other things
13 as shown in the Oracle data, correct?
14 A Yes. That's correct.
15 Q Now, could you explain the left side column's type of
16 software and deal size.
17 A Yes, so, we have two products at issue, the HR software
18 and the financial management software. And so, the first
19 thing I've done is I've got -- and so, for example, the first
20 four rows of this table will be either HR software or
21 financial management, as dictated by the first column. And
22 then it's either going to be as we worked earlier in the
23 morning all the deals are equal or greater than to a half a
24 million dollars.
25 So, again, I get different market shares, depending

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1 on whether I'm using all deals or deals greater than half a
2 million dollars, and I use Professor Elzinga's numbers again
3 for those market shares adjusted by the creation of this
4 "others" category.
5 Q Okay. So, the deal says, the type of software and the
6 market shares, including other, and then you calculated the
7 expected price increase given the market shares and that
8 information, correct?
9 A That's right, sir. This part of the table which we've
10 broken up, was one table into two tables, for the purposes of
11 putting it up on the slide. This part of the table is
12 showing you the inputs to the -- to the analysis.
13 Q What's that next slide?
14 And here we have -- you repeated the -- the two
15 left-most columns.
16 A That's correct.
17 Q For ease of reference.
18 And then across the top it's the fraction of gross
19 value of software accruing to buyers, that's what you were
20 testifying to?
21 A So, this is the parameter that is how much of the surplus
22 or the gains from trade goes to the buyer. And so, I've run
23 this from .5 up to .9. The lower bound that I testified to
24 earlier was .54. So, I expect it to be at least as large as
25 that, and it could be larger.

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1 And as you see, the larger is that number, the --
2 the larger is the -- the -- expected price. So, the number
3 that's in the table is -- numbers in bold, those are the
4 expected price increase from an Oracle/PeopleSoft combination
5 for that particular -- both the value parameter and the type
6 of deal.

7 So, whether it's HR or FM, and whether I use the
8 market shares for all deals or deals greater than half a
9 million.
10 Q Okay. So, all deals for HRM using the range of
11 fractions, you get a result of 13.0, 16.5, 20.6, 25.2, on up
12 to 30.4; is that correct?
13 THE WITNESS: That's correct.
14 THE COURT: Excuse me. I'm puzzled. If you look at
15 the first two columns, the rows appear to duplicate one
16 another.
17 THE WITNESS: Yes.
18 THE COURT: Let's go back to the prior table.
19 THE WITNESS: I used two sets of numbers for
20 "others," because there were multiple ways of assigning
21 market share to "others." So, I tried both -- approximately
22 15 percent and with 20 percent. So, that's why I have eight
23 rows instead of four --
24 MR. LOHRER: If I may, Your Honor --
25 THE COURT: I see. And all of the other data, or

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1 the data for the other vendors is the same?
2 THE WITNESS: That's correct. So, I used -- so, if
3 you want -- if you will, the fifth row, the one that says
4 HMS, all deals, and has .3 for AMS, the only difference in
5 that from the first row, the one that had .4 for AMS, is that
6 I've assigned a larger share to this other category.
7 THE COURT: How did you do that?
8 THE WITNESS: So, I took Professor Elzinga's
9 numbers, which summed up to a hundred percent, and I carved
10 out by multiplying his numbers -- I shrank his numbers
11 uniformly to carve out a category "others." That is, so I
12 assumed his firms, the eight firms that were -- that were
13 listed -- that he listed. I assigned them an 80 percent
14 market share, and then created a 20 -- assigned the rest of
15 it to an "others" category.
16 THE COURT: But where did the numbers for the others
17 come from?
18 THE WITNESS: So, in the sales rep survey there are
19 other things that happen -- besides the -- the eight that he
20 defined as being in the market.
21 So, that is, people buy point solutions. They may
22 have just stuck with the legacy systems. They buy Hyperion.
23 They buy products that aren't in this market, and hence,
24 don't have any market shares. And so, I assign those to the
25 "others" category.

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1 MR. LOHRER: Your Honor, while we broke up the table
2 for ease of reference, apparently a failed effort, so in the
3 notebook is the entire table, and it's been premarked as 4024
4 A. And that's the entire table as one. And I would offer
5 that now, Your Honor, as an 1006 summary exhibit, 4024 A.
6 MR. WALL: No objection.
7 THE COURT: Very well. 4024 A is admitted.
8 (Plaintiffs' Exhibit No. 4924 A
9 admitted.)
10 THE COURT: But you better take me through the last
11 five columns of 4024 A.
12 MR. LOHRER: The bottom five?
13 THE COURT: No, the columns -- no, I -- I -- skipped
14 ahead to 4024 A, which you just have admitted. It's not on
15 the screen.
16 Oh, I beg your pardon. It is on the screen.
17 Okay. Take me through those columns.
18 BY MR. LOHRER:
19 Q Professor McAfee, for a fraction of gross value of .5
20 percent you can go down for each of these deals, each of the
21 type of software in each of the deals to get an expected
22 price increase, correct? We just went across. But you can
23 go down as well?
24 A That's correct, and this is the -- so, starting with
25 the -- the column that's got a .5 at the top, this is a

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1 column that has the fraction of the value that accrues to the
2 buyer, being half, so --

3 THE COURT: How did you get those numbers? Where
4 did they come from?
5 THE WITNESS: So, they are -- they are -- I hope to
6 answer your question in two parts, if I could.
7 THE COURT: Okay. There were two questions. That's
8 fair enough.
9 THE WITNESS: It's a parameter in the model -- what
10 this model does, en route, is it says -- there's a
11 competitive situation before the merger, and that competitive
12 situation results in some amounts of value -- it could be
13 very competitive or it might not be very competitive.
14 If it's not very competitive, then the effects of
15 the merger are actually going to be relatively small, because
16 in some sense it's already not very competitive.
17 On the other hand, if it's very competitive today,
18 then the merger could actually have a fairly large effect,
19 because it could take out -- especially if -- already where
20 Professor Elzinga testified that between the two they could
21 be as much as 70 percent of the marketplace, then it's often
22 going to be the case that -- they're Nos. 1 and 2, if it's
23 very competitive today you could actually have a very large
24 effect in the merger.
25 The issue for the analysis -- so, I could put this

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1 as, the value of the -- you have a firm -- let's take
2 PeopleSoft. Say, they were the winning bidder. They have
3 a -- they provide a certain amount of value to the buyer.
4 The losing bidder, for example, Oracle, offered a certain
5 amount of value, and that's what the buyer turned down.
6 So, that's what determined how aggressive PeopleSoft
7 had to be in price.
8 Now, post-merger PeopleSoft -- the -- PeopleSoft's
9 next best alternative might be SAP. That's further down the
10 list.
11 How much further down the list is generally going to
12 be determined by how competitive is the market. If these
13 products are all very similar, then the market is going to be
14 pretty competitive, and you don't have to go very far down
15 the list in order to reach the third.
16 On the other hand, if the market is very
17 competitive, prices are going to be very low. So, the
18 percentage price increase can actually be quite high, and
19 that's what this model computes.
20 THE COURT: Very well.
21 BY MR. LOHRER:
22 Q Professor McAfee, can you explain what's happening with
23 those fractions as we move from .5 up to .9? What is that
24 signifying, that range in that direction?
25 A So, that's a measure of how competitive the market is

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1 pre-merger. At .5 it's not very competitive. It says that
2 only half the value of the product accrues to the buyer. And
3 that means half the value of the product's accruing to the
4 vendor.
5 So, the vendor in the process of competing gets to
6 keep most of -- gets to keep half of the gains from trade and
7 half of it accrues to the buyer.
8 At that -- with that assumption, the merger -- the
9 prediction of the model is that the merger of PeopleSoft and
10 Oracle would result in a 13 percent price increase.
11 As you increase the -- the competitiveness of the
12 industry you have two effects, one is, the prices fall
13 because the industry is more competitive. But the other is,
14 No. 3, if you will, the third-best firm, gets better, because
15 as the industry gets more competitive that third firm gets
16 better. Well, they all get better. They all get closer to
17 each other.
18 Turns out in the model that the effect of the prices
19 falling, that is the competitiveness of 1 and 2 forcing the
20 prices down, has a bigger effect than the competitiveness of
21 two and three or proximity of No. 3, so that the overall
22 effect of the merger is larger.
23 Q So, there's a relationship between the value accruing to
24 the buyer and the competitiveness of the markets, correct?

25 A Yes, and then actually, I was also asked how do I -- how
1 do I estimate that, and one -- the method that I use to
2 estimate it was to put a lower bound on it that was based on
3 the willingness to pay list, and the -- the fact that they
4 don't have to pay list, that they, on average, get
5 substantial discounts off list.
6 Q So, if we did the bottom row across, the expected price
7 increases would range 4.6, 5.7, 6.8, 7.9 and 9.0 percent,
8 correct?
9 A That's correct. And the source of that -- the reason
10 those numbers are so much lower is that according to
11 Professor Elzinga SAP is a much more potent force in
12 financial software than it is in HR.
13 So, that is, his market shares were substantially
14 larger in the -- market shares in the merging firms were
15 substantially larger for HR than they were for financial
16 management software.
17 And so, that means that SAP is much more likely to
18 be a competitive threat or to restrain any price increase
19 associated with the merger.
20 Q And would you describe this as merger simulation dealing
21 market-wide?
22 A Yes. These price increases are the average price paid by
23 buyers in the simulation.
24 Q And what conclusion did you reach having performed your
25 merger simulation?
1 A The basic conclusion is, is that these -- these numbers
2 are significant numbers. And so, that tells me that a
3 significant competitive effect, again, given the market
4 shares of Professor Elzinga -- a significant competitive
5 effect is consistent with basic economic analysis.
6 There is an economic theory. It's not the case
7 that -- from a theoretical perspective these numbers -- the
8 numbers that I saw in the regressions are too large. In
9 fact, these numbers, although they go lower, and they also go
10 higher, the range is just greater, but they are all
11 meaningful numbers.
12 Had it turned out that all those numbers were very
13 small, it would have given me pause for believing the -- the
14 previous analysis, analyses.
15 Q Why don't we go though those analyses and your conclusion
16 slide.
17 The first analysis you did was the case study, and
18 what -- case studies, and what did you conclude based on
19 those?
20 A That there are specific instances of -- of competition
21 where PeopleSoft caused Oracle to offer significantly greater
22 discounts, and hence, significantly lower prices.
23 Q Okay. The second analysis was the regression --
24 regressions, and what did those tell you?
25 A So, that tells me that as -- as a market-wide average the
1 presence of PeopleSoft as a competitor caused or was
2 associated with significantly greater discounts, and hence,
3 lower prices of Oracle.
4 Q And the merger simulation, what did that tell you in your
5 work?
6 A The merger simulation also says that -- that a standard
7 auction theory model produced large -- you know, meaningful
8 and economically meaningful and significant price increases
9 associated with the merger.
10 Q And you reach a bottom line conclusion as well.
11 A Yes, I -- find that the -- in the two products at issue
12 in this case, that there will likely be significant
13 competitive effects and higher prices as a result of the
14 proposed merger.
15 Q I wanted to ask you how the three analyses relate to one
16 another in the work that you did, the case studies, the
17 regressions, and the merger simulations?
18 A These are really different methodologies for addressing
19 the issue of the merger. They are independent from one
20 another.

21 Generally, they are using different sources of data
22 or at least distinct sources of data. They are using -- they
23 use completely different approaches. One's theoretical; one
24 is statistical; and one is a case study method.
25 And so, it gives me substantially increased comfort
1 in drawing my conclusion that every way I look at the issue I
2 come to a similar finding.
3 Q Now, Professor McAfee, the Judge had asked you some
4 questions about the discount forms and how they reflected
5 sale of licenses for products in addition to the FM and HRS
6 licenses; you recall those questions, correct?
7 A I do.
8 Q Does the sale of those products change your conclusion
9 regarding the likely effects of this merger on the HR and FMS
10 markets?
11 A No. The sale of complementary goods does not undermine
12 my conclusion.
13 Q And you also spoke to the Judge -- the Judge had some
14 questions about the implementation services there's been
15 testimony about in the case. You recall those questions?
16 A Yes, that's correct.
17 Q And does the sale of these implementation services change
18 your conclusion regarding the likely effects of this merger
19 on the HRM and FMS market?
20 A No, it does not.
21 Q I just want to ask you -- maybe you could use your
22 example with the car and the gasoline again to explain why
23 not.
24 A So, again, a merger of -- a merger of automobile
25 manufacturers -- I guess -- before I use the automobiles,
1 the -- issue of complementary goods is primarily an issue
2 of -- if you increase the price of the software sold by the
3 vendors, will that actually -- when you add to it, the price
4 of the necessary complements, that is, you need the
5 implementation service, will that choke off demand? Will
6 they -- they not be able to increase the price basically
7 because there's no head room in the value?
8 And I don't believe that to be the case. It might
9 be the case with a couple of individual companies.
10 Greyhound, for example, as I understand it still
11 hasn't purchased the software, even as of today. There may
12 be no room to raise prices to Greyhound and get them to buy.
13 But, in fact, the -- and, in fact, Professor Elzinga
14 also testified to this. The presence of the complements
15 means that a price increase of the vendors is really a small
16 percentage of the total package, so that if -- if the
17 software is about 15 percent of the price, and you increase
18 the price of the software ten percent, you've only increased
19 the price of the final product, -- that is, the implemented
20 product -- by 1.5 percent. And so, a significant price
21 increase to the vendors actually is easier to do generally as
22 an economic matter when you have these complements.
23 The really extreme example of that is hops. You
24 can't make beer without hops. This is, by the way, one of
25 Professor Elzinga's favorite examples, as I understand it.
1 You can't make beer without hops, and it only takes something
2 like a pound of hops for every thousand bottles of beer, and
3 a pound of hops retails for about three bucks. You could
4 increase the price of hops. You could triple it. You could
5 multiply it by ten, and we wouldn't see it in the price of
6 beer, and hence, we wouldn't see it in the demand for beer.
7 So, the fact that there are complementary goods in
8 many cases means that you've got more room to increase
9 prices, because in some sense, you're a small part of the
10 total package. And what appears in principle classes -- in
11 fact, I've had in my principles classes, the fact -- the best
12 of all worlds is to be a monopolist of a product that's a
13 tiny fraction of some larger product. So, if you can
14 monopolize a -- a product, that which is itself a small part,
15 like hops, of a -- that's both necessary and -- and a tiny
16 fraction of some larger product, you can have dramatic price

17 increases and yet really not have those price increases be
18 felt.
19 With automobiles, if you monopolize automobiles, the
20 fact that I need gasoline and tires and other products to
21 operate my car isn't going to stop them from raising prices
22 of automobiles.
23 Had you merged Chrysler and General Motors, they
24 would be able to raise prices, they are too often each
25 other's best substitute that they could -- they could raise

1 prices without the fact that there's gasoline and other
2 products that are -- that are complementary products
3 restraining that pricing ability.
4 Now, with gasoline, when gasoline goes up in value
5 that, of course -- or up in price, that harms the automobile
6 sales. You sell fewer cars. You sell more fuel efficient
7 cars; and you sell fewer of them total when gasoline prices
8 are high.
9 But that doesn't restrain the ability of -- or the
10 effect of a merger of automobile manufacturers.
11 MR. LOHRER: Thank you, Professor McAfee
12 THE COURT: Mr. Wall, would you like to
13 cross-examine.
14 MR. WALL: Thank you, Your Honor.
15 CROSS-EXAMINATION
16 BY MR. WALL:
17 Q Good afternoon, Professor McAfee.
18 A Good afternoon.
19 Q Professor McAfee, I would like to begin by making it
20 clear just what you have done and what you haven't done in --
21 in your work.
22 In the analyses that you are presenting today, in
23 particular, the merger simulation, you were testifying based
24 upon assumptions that you have made about the relevant
25 markets; are you not?

1 A There are certainly assumptions involved in that
2 testimony of performing a merger -- that merger simulation.
3 Q Well, for example, you haven't been asked to define
4 markets, right?
5 A That's correct.
6 Q So, you don't have an opinion one way or the other that
7 you have reached to a professional conclusion as to what
8 relevant markets are?
9 A That's correct.
10 Q And when you were being examined by Mr. Lohrer, he asked
11 you about whether you had come to certain conclusions that --
12 upon which your analysis was -- was based, and -- if I -- if
13 I heard you correctly on direct you said that you had; is
14 that right?
15 A As I testified, conditional on, for example, the market
16 definition, which I had not performed, but yes.
17 Q Right. But when I questioned you at your deposition as
18 to whether you were testifying based upon your own findings
19 as to these various matters or based upon assumptions, you
20 told me that you were testifying based upon assumptions; did
21 you not?
22 A As I said, there are assumptions involved. When an
23 economist does economic analysis we assume, for example, that
24 the theory is correct. There are assumptions involved.
25 I may not understand the import of your --

1 Q Well, let's take the nature of the bidding process. One
2 of the things that you said on direct examination was that
3 it's characterized by multiple rounds of bidding, correct?
4 A Yes, I did.
5 Q But at your deposition I asked you that question, and you
6 said you had not reached a professional conclusion based upon
7 your own economic analysis that the procurement process is
8 characterized as involving multiple rounds of bidding; isn't
9 that right?
10 A I don't recollect exactly what I said in my deposition.
11 I -- I may have not at that point -- well, so, in effect -- I
12 think my testimony today was that in some circumstances there

13 are multiple rounds of bidding, and I believe that to be the
14 case. I -- I -- I believe I was clear that I didn't -- I was
15 not testifying that in all circumstances there are multiple
16 rounds of bidding.
17 Q Well, let me just ask you the question I asked you at
18 your deposition. And just answer it, please.
19 Have you reached a professional conclusion based
20 upon your own economic analysis that the procurement process
21 for ERP software is fairly characterized as involving
22 multiple rounds of bidding; "yes" or "no"?
23 A I guess "yes" with qualifications.
24 MR. WALL: May I have his deposition, please.
25 Your Honor, I'll hand up Dr. McAfee's deposition, if

1 I may approach.
2 THE COURT: Very well.
3 Q Dr. McAfee if, you would be so kind, would you please
4 turn to page 65 of your deposition.
5 I will read to you from line 15:
6 "Question: Okay. Once again,
7 drawing the distinction between things you
8 were assuming and conclusions you have
9 drawn as a result of an economic analysis
10 of your own, have you reached a
11 professional conclusion based upon your
12 own economic analysis that the procurement
13 process for ERP software is fairly
14 characterized as involving multiple rounds
15 of bidding?
16 "Answer: No. As I said, I was
17 assuming that it's characterized by
18 multiple rounds of bidding."
19 Was that your testimony, sir?
20 A Yes, it was.
21 Q Now, in conducting your work on this case you never spoke
22 to any customers of ERP software; did you, sir?
23 A That's correct.
24 Q You didn't conduct any interviews of anyone, right?
25 A I conducted no interviews.

1 Q You didn't conduct any surveys of your own?
2 A I did not run any surveys.
3 Q You didn't do any kind of analysis that involved sampling
4 or any techniques that would assure you got a representative
5 picture of the market; did you, sir?
6 A As I testified, I did actually construct a new data set
7 with a specific purpose in mind, but I'm not actually
8 objecting to your characterization generally that --
9 That's the end of my answer.
10 Q And one of the things that you did to -- as I believe you
11 put at your deposition -- gain comfort about your assumptions
12 was to read the customer declarations that the Department of
13 Justice provided to you, right?
14 A I read many declarations.
15 Q But you agree; do you not, that the customer declarations
16 that were submitted in this case are a -- a biased sample of
17 what the full set of customers think?
18 A I do.
19 Q And, in fact, you would agree with me; would you not,
20 that -- that some of the customers that came forward and
21 provided declarations that you relied on came to the
22 Department of Justice's attention as a result of lobbying
23 efforts by PeopleSoft.
24 A I don't know one way or the other.
25 (Continued on following page; nothing omitted.)

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1 BY MR. WALL:
2 Q. Dr. McAfee, you've actually written about this case, have
3 you not?
4 A. Written about this case?
5 Q. About the proposed acquisition of PeopleSoft by Oracle.
6 A. You're going to have to refresh my recollection. You mean
7 other than the expert reports?

8 Q. Yes.
9 A. You may have to refresh my recollection.
10 Q. Be happy to do that. On your website, right now,
11 prestonmcafee.com, there is an article entitled, "The Strategic
12 Abuse of the Antitrust Laws," is there not?
13 A. Well, with the exception that you didn't get the name of
14 the website right, yes, there is such a paper on my website.
15 Q. I'm sorry about not getting at website right. What
16 actually is it?
17 A. You have lots of ways of getting there, McAfee.cc,
18 prestonmcafee.net, mcafee.name --
19 Q. That's fine. We only need a few. And Google.
20 And this paper, "The Strategic Abuse of the
21 Antitrust Laws," is something that you wrote this year, right?
22 A. Co-authored, yes.
23 Q. In January.
24 A. That could be when the draft is. I don't recall.
25 Q. After you were retained by the Department of Justice in
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1 this matter.
2 A. Actually, that paper was submitted last August, or -- that
3 paper was submitted before I was retained in this matter.
4 Q. And in this --
5 A. It may have been revised since then.
6 Q. And in this paper, you identified seven ways in which firms
7 strategically use the antitrust laws to further their own
8 interests, correct?
9 A. That's what that paper is about, generally speaking.
10 Q. Yes, and these were ways that you said were unrelated to
11 the social goal of promoting competition, correct?
12 A. That's the point of that paper, yes.
13 Q. And one example that you gave of a strategic abuse of the
14 antitrust law was that a firm can strategically use the
15 antitrust laws in order to prevent a hostile takeover, correct?
16 A. Well, I have to say, it not correct, as I sit here today,
17 exactly what's there, but something like that is certainly
18 listed in there.
19 MR. WALL: Well, let me hand out what we've asked to
20 have marked as Defendant's Exhibit 7105, which I'll hand up to
21 the Court.
22 And your Honor, may I approach?
23 THE COURT: Very well.
24 BY MR. WALL:
25 Q. You recognize what's been marked as Exhibit D7105 as your
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1 article, "The Strategic Abuse of the Antitrust Laws"?
2 A. It appears to be, yes. It is not printed the way it would
3 on my own printer, but it does appear to be that article, yes.
4 MR. WALL: Put up the first page, please.
5 Q. And you wrote this along with a Nicholas Vakkur,
6 V-A-K-K-U-R?
7 A. Yes.
8 Q. And if we could move to page 4, sir, and put up the middle
9 of the page here, it says, "The seven strategic uses of the
10 antitrust laws that we have identified are," and they follow,
11 and number 5 is, "Prevent a hostile takeover," correct?
12 A. Yes, that is actually listed there.
13 Q. Now, if we could move over to page 18 of the article, and
14 if we could highlight the middle paragraph, in this paragraph
15 you write,
16 "In order to stave off Oracle's hostile bid,
17 PeopleSoft, without filing an antitrust suit of its
18 own, has aggressively lobbied its own customers and
19 the public to make their views known to the Justice
20 Department."
21 Correct?
22 A. I should say, the actual words are written by my co-author,
23 but I stand by them, and my name is on the paper, and I believe
24 that actually to be correct.
25 Q. And you cited that as a strategic abuse of the antitrust
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1 laws, correct?
2 A. It's listed there.
3 Q. Now, sir, when you undertook your examination of the
4 evidence in this case, did you make any effort to determine
5 whether the customer declarations that you were reading and
6 relying on had been provided by witnesses who were the result
7 of what you called a strategic abuse of the antitrust laws?
8 A. My general -- my general approach is actually to read and
9 absorb a very large amount of material, and I have not engaged
10 in checking whether the -- whether -- what the original
11 motivation of the witnesses was.
12 Q. So you didn't do anything to check whether the things you
13 relied on were the result of some kind of a bias.
14 A. I guess I expect a certain amount of bias among witnesses
15 generally, and so that is, I don't believe everything I read in
16 every instance, but I'm looking for a consistent picture of
17 the -- of how the industry operates.
18 Q. Well, for example, you cite in your report the declaration
19 of Mr. Penney from Charles Schwab. You recall that?
20 A. I do recall that.
21 Q. And you cited Mr. Penney, among other things, for the
22 proposition that SAP was not a good substitute for all
23 customers. You recall that?
24 A. I do recall that citation in my expert report.
25 Q. Did you do anything to determine whether Mr. Penney knew
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1 what he was talking about in that regard?
2 A. I did not audit Mr. Penney beyond finding out what his
3 position was at -- in Charles Schwab, that he was a decision
4 maker in a position of responsibility with respect to the
5 purchase of software, which is generally an indication that --
6 again, it's not something that necessarily is a proof, but it's
7 generally an indication, or it creates an expectation for
8 economist when someone is in such a position of authority that
9 they know what they're talking about. They make these
10 decision.
11 Q. Did you --
12 A. But in addition -- in fact, I've read the entire trial
13 testimony, at least the testimony of the witnesses in this
14 trial, which is another way for me to check that the -- that my
15 understanding of the industry is, in fact, appropriate and
16 correct.
17 Q. And you didn't read any testimony from Mr. Penney, did you?
18 A. Mr. Penney, I don't believe testified at trial.
19 Q. He was dropped as a witness, is that right?
20 A. I don't know that I've ever seen the witness list, but I
21 don't -- I read the testimony at trial, and I don't recall him
22 testifying.
23 Q. Well, if I were to represent to you, sir, that Mr. Penney
24 testified at his deposition that Charles Schwab got involved in
25 this matter after Craig Conway of PeopleSoft called the CEO of
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1 Charles Schwab and asked him to get involved, and second, that
2 Mr. Penney said that he'd never been involved in an evaluation
3 of Oracle, SAP or PeopleSoft HR or FMS software, would that be
4 the kind of thing that you were worried about when you wrote
5 your article about the strategic abuse of the antitrust laws?
6 A. No. That would not, by itself, be the kind of thing I was
7 worried about. The -- again, the purpose of this article is to
8 look at the use of the laws outside the context where they
9 were -- where they were -- outside the public interest.
10 Now, the conclusion about use outside the public
11 interest is not necessarily that the public interest isn't
12 served. It's that a use has been made other than just using
13 them directly for the public interest.
14 Q. Let's move on, Professor McAfee.
15 A. I haven't actually finished my answer, if I could.
16 You've asked me, if Mr. Penney was asked to testify
17 by PeopleSoft, would that be the kind of thing I was worried
18 about, and as we discussed during my deposition, I actually
19 expect witnesses under oath to tell the truth. When they make
20 a declaration, I expect them to tell the truth; that I expect,

21 as a result, the evidence there derived to be at least
22 reasonably reliable.
23 Q. You also told me at your deposition, did you not, that you
24 would expect customers who had invested in the PeopleSoft
25 platform to have reasons to oppose this deal even if it did not
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1 harm competition, didn't you, sir?
2 A. Yes, I did.
3 Q. Let's move on, sir. Let's talk about your case studies,
4 first of all. Do you have the binder in front of you?
5 A. I do.
6 Q. Now, you said in your direct testimony that you thought
7 that these HQAPPs forms were a wonderful and unique opportunity
8 to study this market, right?
9 A. I did.
10 Q. In that case, sir, let's talk about them for a little bit.
11 First of all, is it your testimony that the examples of the
12 HQAPP forms that you presented today are typical or
13 representative of what you found overall?
14 A. No, it's not.
15 Q. Okay. I mean, you didn't, for example, just cherry-pick
16 ones that involve Oracle competing against PeopleSoft, did you?
17 A. In fact, since my purpose was to look for examples of
18 competition, I was, in fact, looking for examples where the
19 competition was clear.
20 Q. And was Oracle versus PeopleSoft.
21 A. That's correct.
22 Q. So you didn't bring us any ones of Oracle versus SAP.
23 A. I did not.
24 Q. Nor Oracle versus outsourcing.
25 A. I did not.
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1 Q. Oracle versus ADP.
2 A. I did not.
3 Q. Okay. Sir, let's begin with Plaintiff's Exhibit 1009,
4 which was the GAF Materials case study. I want to ask you a
5 few questions about that one.
6 Now, first of all, directing your attention to
7 page 3 -- do you have it by their number or do you need it by
8 ours?
9 This is a $1.4 billion manufacturer with 3500
10 employees, right?
11 A. That's what it says, yes.
12 Q. Okay. Do you have a view one way or the other whether this
13 is a so-called high-function customer or a mid-market customer?
14 A. As I've testified, I haven't engaged in market definition,
15 and my understanding of the use of the term "high-function" is
16 a market definition term.
17 Q. So you don't know one way or the other.
18 A. No, I know it's a roofing company, but I don't actually
19 know how its business operates.
20 Q. Well, let's take a look, sir, at what the deal was in the
21 case of GAF Materials. This was not, by any means, just an HR
22 or financial deal, was it?
23 A. That's correct, there are a variety of programs listed.
24 Q. In fact, if we can go to the bottom of page 2, the deal
25 summary, what you have there is a wide array of software,
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1 including warehouse management products, supply chain planning,
2 inventory optimization, global order to promise, collaborative
3 planning; a lot of software, right?
4 A. There are a variety of programs listed.
5 Q. Okay, and when you conducted your analysis in this case,
6 when you did your regressions, when you did your merger
7 simulation, you did nothing to control for the presence of all
8 of these other software products in the deals, do you, sir?
9 A. I can't break out just the two relevant products that
10 Professor Elzinga identified from these sources.
11 Q. In fact, the data to do that are not on the HQAPPs forms,
12 are they, sir?
13 A. No, they're not. Let look at some of the other features of

14 this deal. If we go over to page 3, and the Justification
15 section here, it says,
16 "The CIO has laid out a three-year plan for
17 bringing new software into the company and wants the
18 value of this plan," this three-year plan,
19 "reflected in the discounts applied in the first
20 phases, financials and req. to pay,"
21 and if you could just move over then to the next page, the top
22 of the next page, where it says, "Order management,
23 manufacturing and CRM will definitely be required," do you see
24 that, sir?
25 A. I do see that.
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1 Q. So you understand, do you not, that in this deal, the
2 buyer, according to the HQAPPs forms, wanted the discount to
3 reflect not just the existing products, but future products,
4 correct?
5 A. That's consistent with my understanding.
6 Q. And you've done nothing in your regressions or your merger
7 simulation to take that kind of phenomenon into account, have
8 you, sir?
9 A. That the buyer wants additional products in addition to the
10 relevant products in this case or that the buyer wants future
11 products?
12 Q. That the price reflects additional products today and in
13 the future outside of HR and financial management services.
14 A. So it's correct that I have not been able to control in
15 some sense for the volume of purchases from the company, which
16 at least theoretically could be relevant to the discount that's
17 struck.
18 Q. Another thing, if we go back to the bottom of page 3 is, it
19 says, "GAF is a low-margin roofing shingle manufacturer." Now,
20 that relates to this notion that you discussed earlier about
21 headroom, right? Customer ability to pay.
22 A. It does relate to that, or potentially relate to that, let
23 me put it that way.
24 Q. And you haven't done anything in any of your regressions or
25 merger simulations to control for headroom, have you, sir?
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1 A. In the regressions I haven't controlled for headroom. In
2 the merger simulation, the headroom is in some sense built in,
3 in the sense that the buyer has a value that you can't go
4 beyond, so -- and for that -- for some buyers that's going to
5 be low and for some buyers it's going to be high. So in some
6 sense, in the merger simulation, it has actually addressed that
7 issue, but I agree that in the regressions, I have no mechanism
8 for controlling for the value of the buyer.
9 MR. WALL: Could we go to the top of page 1, please?
10 Q. You see at the very top, in not only bold type but a larger
11 font, it's got the date, 5/30, and the time, Noon, Eastern
12 Standard Time. Do you recognize that as the day before the end
13 of Oracle's fiscal year?
14 A. I don't, but I'm happy for you to represent to me that
15 June 1st is their first day of the new year.
16 Q. Well, you followed the testimony in the case where a number
17 of witnesses have talked about how it's advantageous to make a
18 deal right at the end of the fiscal year, or of a quarter?
19 A. Yes, I have.
20 Q. But that's not controlled for by your regressions or your
21 merger simulation, is it, either?
22 A. No, and in fact, I looked into controlling for that;
23 actually not so much for that purpose, but because I was
24 worried that there were trends, and I did look into that, and
25 the problem is that at least on these sorts of forms, that some
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1 have dates, some don't, it's -- the dates aren't in any sort of
2 systematic place, and in some cases it's very hard to identify,
3 and I was not able to control for that, and I did actually look
4 into controlling for that.
5 Q. Okay, so let's move to Hallmark Cards, which is Plaintiff's

6 Exhibit 1014.
7 THE COURT: Before you do that, these are discount
8 request forms, correct?
9 THE WITNESS: That's correct.
10 THE COURT: Where on the form is it indicated that
11 the request was approved or disapproved?
12 THE WITNESS: It doesn't. We -- I looked --
13 actually, I had my staff look very carefully into that to try
14 to find out -- to make sure that they were, in fact, approved
15 and we did find one wasn't. There was a request from Alcoa --
16 I should say, there were a bunch that weren't approved, not
17 because of their discount terms but because of the other terms
18 in the mix. So that is to say that the management wasn't
19 objecting to the price, but was objecting to other aspects of
20 the contract.
21 But the only one that I found in the -- in my set
22 that wasn't approved, where the discount was, in fact, denied,
23 was Alcoa, which is one that we didn't present to the Court.
24 THE COURT: Did you throw out the forms for which
25 the discount was not approved?

1 THE WITNESS: Well, yes, but it was only one.
2 THE COURT: Well, did you --
3 THE WITNESS: I should say, to be fair, I believe
4 Alcoa was already out of the regression prior to that time.
5 THE COURT: And did you throw out the others where
6 the deal was not approved because of other terms?
7 THE WITNESS: My understanding is the terms were
8 just changed and not -- that the deal was still offered, but I
9 don't -- I'm a little leery, given the difficulty of actually
10 reading these, to be completely definitive on that point. But
11 yes, so that, if I believed it wasn't offered, I didn't use it.
12 THE COURT: You mean if the deal was not made, you
13 did not use the data; is that your testimony?
14 THE WITNESS: It's not -- so it depends on the word
15 "made." If the deal was offered -- what I was after were deals
16 that were offered to the customer. I'm looking at what prices
17 Oracle was quoting, and the determinants of the prices Oracle
18 quoted. So whether or not the customer accepted the deal I
19 didn't condition on, but I did try, as best I could, to only
20 look at deals that, in fact, were approved by the management.
21 THE COURT: Hence your use of the term "offers
22 made."
23 THE WITNESS: That's correct.
24 THE COURT: Sorry for the interruption.
25

1 MR. WALL: Not at all, your Honor. Let me just
2 follow up.
3 Q. Isn't it true, Professor McAfee, that what you saw, when
4 you looked at this, is that the discounts were approved by
5 management in virtually every single case?
6 A. As I testified, only in Alcoa did I find a disapproval.
7 Q. So let's look at Hallmark Cards, which is Plaintiff's
8 Exhibit 1014, and was the second one that you used in your
9 direct testimony.
10 If we can have that brought up.
11 Now, first of all, Professor, let's just focus on
12 what this deal was about. Let's go down to the product mix;
13 and this was, in fact, quite a bit more than HR, once again,
14 was it not, sir?
15 A. It appears to be HR plus database.
16 Q. Well, you have Enterprise Edition Database, that's a
17 database product, is that right?
18 A. That's my understanding.
19 Q. 9iAS Enterprise Edition, that's an application server?
20 A. That's consistent with my understanding.
21 Q. Spatial and Partitioning are database products, are they
22 not?
23 A. I know Partitioning is. I'm not actually sure what Spatial
24 is.
25 Q. Okay. Do you know how much of this deal was HR?

1 A. There is no way for me to tell that from the form.
2 Q. Okay, neither do you know how much was core HR, do you?
3 A. No, I do not.
4 Q. Okay, let's go back and look at the Justification section
5 on page 2, and you put this up before, "Extremely competitive
6 situation against PeopleSoft."
7 The second bullet point says it's,
8 "An icebreaker. This deal represents the first
9 application win in years at Hallmark. There are
10 several other large targets, manufacturing, CRM,
11 e-biz suite for Oracle in the next few years as our
12 footprint extends past financials at corporate."
13 Now, you understand, sir, that once again, what the
14 salesperson was arguing in favor of the discount was that there
15 could be future opportunities if they got the deal at this
16 price.
17 A. That's -- appears consistent with that statement.
18 Q. And there's nothing in your regressions that control for
19 that.
20 A. No, there is no way that I could control for the -- with
21 the data I had available, for the future opportunities.
22 Now, from an economic perspective, the future
23 opportunities worked for making the project larger. You would
24 want to account for that, for reasons that we discussed
25 earlier, which is, you may get a larger discount associated

1 with a larger overall implementation.
2 Q. But you didn't do that.
3 A. I was unable to do that, yes.
4 Q. All right, let's look down here at the fifth bullet, "OCS
5 License, Support and OFD involved." You see that?
6 A. I do see that, yes.
7 Q. Do you know what OCS is?
8 A. I don't recall as I sit here today.
9 Q. It's Oracle Consulting Services. Does that ring a bell?
10 A. It does, yes.
11 Q. So this is a reference to the possibility of consulting
12 business, is it not, sir?
13 A. As I said, I didn't remember what OCS was. I look at that
14 and think optical character recognition, although that's OCR,
15 but yes, it could be that there's consulting business
16 associated with this, or other cases.
17 Q. Now, if I wrote it down correctly, I believe you said in
18 your direct testimony that you would not expect implementation
19 services to affect the discount. Is that what you said, sir?
20 A. I don't remember exactly what I said. My testimony is that
21 I didn't think that implementation services were likely to
22 be -- the competition in implementations services was likely to
23 be harmed by the merger.
24 Q. I want to find out whether the price might be affected by
25 the potential for Oracle to sell consulting services. Do you

1 have a position on that?
2 A. Well, if they're making profit on the consulting services,
3 that makes -- and they can only sell their consulting services
4 when they win the -- when they win the bidding, then that would
5 make the sale of the -- it would make them more aggressive on
6 the price generally, it would make it worth a larger discount
7 in order to actually obtain those additional profits.
8 So insofar as they make profits on their consulting
9 services, that would encourage more price competition on the
10 bidding for the product.
11 Q. But you didn't control for that in your regressions, did
12 you, sir?
13 A. Well, again, so now, that -- there are two issues on that.
14 One is, no, I didn't, I was unable to control for that
15 directly. However, insofar as that every win carries with it
16 some option or some possibility of consulting services, it
17 would not tend to bias my conclusions at all.
18 Q. If every bid carried the same probability of consulting

19 services, it wouldn't bias your results, isn't that right, sir?
20 A. No, it wouldn't need to be the same probability, it just
21 needs to be somewhat independent of the presence of PeopleSoft.
22 Q. Exactly, but for example, if Oracle felt that in a
23 particular deal, if it got the license, it would prevail over
24 Accenture or IBM or BearingPoint in getting the implementation
25 service, that would create an incentive for its license pricing
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1 that wouldn't be there if it, for example, knew that Accenture
2 was going to work the -- going to get the work.
3 A. My only reason for hesitation is that that just -- that, as
4 I understand what you say, it's true, but it's entirely
5 unrelated to the previous question.
6 So that is to say, the issue from the regression
7 standpoint is purely a matter of whether the likelihood that
8 Oracle, having won, will get consulting services, is that
9 correlated with whether they're competing with PeopleSoft or
10 not, and I see no reason why there should be such a correlation
11 with PeopleSoft, but I do agree for the specific question that
12 if they know that Accenture already has the implementation,
13 that may make them a bit less aggressive on the bidding than if
14 they don't know whether Accenture has the implementation.
15 Q. So if I understand your testimony correctly, what you're
16 saying is, this incentive that we're talking about has nothing
17 to do with whether PeopleSoft is there or not.
18 A. That's my understanding, and that's, in some sense, an
19 assumption.
20 Q. Let's move on to the next case study you used, which was
21 Greyhound, and that would be Plaintiff's Exhibit 1013. Now,
22 you used Greyhound for one purpose. I want to look at it for
23 another one, which is, Mr. Lohrer asked you, in connection with
24 one of the earlier exhibits, what it told you -- what it said
25 to you as an economist about information revelation. I want to
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1 ask you the same question with respect to Greyhound, and in
2 particular, on page 2, under the Justification section under
3 Competition, I want to refer you to the first line:
4 "This has been a knock down drag out with
5 PeopleSoft and Lawson."
6 You see that, sir?
7 A. I do.
8 Q. Now, if you read the trial transcript, you know that
9 Ms. Glover testified last week that by the time that this was
10 written, Lawson had been eliminated by Greyhound as a
11 competitor. Do you recall that?
12 A. I recall that she said that they were eliminated. I can't
13 say how that connects to this particular form. I can't recall
14 her connecting it to this form. In fact, I don't know that she
15 was shown -- I don't recall her being shown this form one way
16 or the other.
17 Q. Well, I tried, but.... Let me just ask you, sir, if it's
18 correct that Lawson had already been eliminated by the time
19 this form was written, and the Oracle salesperson still wrote
20 this line that says that this has been a knock down drag out
21 with PeopleSoft and Lawson, what does that say to you as an
22 economist about information revelation?
23 A. Well, not to be too pedantic, that is actually in the past
24 sense, so that it could have been more of a drag -- knock down
25 drag out with Lawson, but to be fair, it is my understanding
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1 that that information, and as I testified, that information is
2 not generally perfect. I don't believe it to be perfect, and
3 in fact, the last PeopleSoft witness, he also testified that
4 his salespeople did not have perfect information.
5 I don't believe that information generally to be
6 perfect, and you've pointed to an example where perhaps this
7 sales representative does not yet know that Lawson's been
8 eliminated.
9 Q. Just skipping forward very quickly here, your merger
10 simulation model assumes what's called complete information,
11 does it not?

12 A. It does.
13 Q. And that means that the vendors all know what the
14 relative -- what values the buyers place on all the competing
15 brands of software, correct?
16 A. It does assume that.
17 Q. This is not complete information, is it, sir?
18 A. This does not appear to be an example of complete
19 information, but as I testified, I don't believe it to be
20 exact, complete information.
21 Q. Okay, let's move on, very quickly, just one question on
22 CH2M Hill, which was Plaintiff's Exhibit 206, and my question
23 is actually about what you had highlighted yourself, if we
24 could bring up -- I guess it's page 2 -- yes, in the
25 Justification section, you talked earlier about how there were
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1 these problems with the account, with the history of the
2 account, and that the discounts needed to accommodate the
3 errors and mistakes and settlements and bad blood of the past.
4 Do you recall that testimony?
5 A. Yes.
6 Q. Okay. There is nothing in your regressions or your merger
7 simulation that controls for the -- for Oracle's past history
8 with its accounts, is there, sir?
9 A. No, there's not. No, sir, that's not quite right. I'm
10 sorry. One of the regressions actually does have whether it
11 was a previous apps customer. So that's a very small part of
12 controlling for the past.
13 Q. I stand corrected, but it doesn't control for whether that
14 was a good or a bad experience, does it?
15 A. No, it does not, and that could be relevant to the discount
16 they offer, as we see in this instance here.
17 Q. Okay. I finally just want to move on to the Merrill Lynch
18 one, which was Plaintiff's Exhibit 1019, and if we could go to
19 page 3, please -- excuse me, previous page, I'm sorry -- and
20 the Justification and Previous Justification section, so a
21 couple of things about this one, sir.
22 First, sir, in this justification, it says, "Oracle
23 is the only other vendor they are considering." Do you see
24 that?
25 A. I can see that.
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1 Q. Now, your merger simulation assumes by design that
2 customers are considering all the vendors, does it not?
3 A. In my opinion, my merger simulation is consistent with
4 customers knowing who the best two vendors are and considering
5 only the best two. So I would say no, for that reason.
6 Q. Actually, sir, in your merger simulation, you used
7 Professor Elzinga's market shares to indicate the relative
8 preferences of customers for the various vendors, do you not?
9 A. I do.
10 Q. Now, second point about this one, and I think we have to go
11 down just a little bit, if we can, to the previous
12 Justification, it says,
13 "This is for a PeopleSoft competitive
14 replacement for the HR suite and complete ERP
15 commitment to Oracle. The price of PeopleSoft
16 migration to Version 8.8 is seen as expensive and
17 considered a new implementation for Merrill."
18 Do you see that?
19 A. I see that.
20 Q. It's true, though, sir, isn't it, that there's nothing your
21 regressions or your merger simulations that captures whether
22 the -- a price is the product in some respect of the migration
23 costs that a customer might have from one version of its
24 existing system to another?
25 A. There's nothing inconsistent with the simulation study with
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1 that -- with that being the reason. That's just something --
2 one of the reasons that they have different values for the
3 different products.
4 Q. As reflected in their market shares.

5 A. And again, as reflected in their market shares. There is
6 nothing in the regression that captures that that's the reason
7 that they're actually considering replacing the product.
8 Q. And then, once again, if we look down in the Why Approved
9 section below here, this is referred to as a "historic
10 opportunity to gain foothold in PeopleSoft core area of
11 strength." Do you see that?
12 A. I do see that.
13 Q. That would be a reference -- that would indicate that this
14 was a prime reference opportunity, correct?
15 A. I expect that given that PeopleSoft is relatively strong
16 for this kind of company, that Merrill would have a reference
17 value of it, that's what's referred to.
18 Q. But there's nothing in your regressions that controls for
19 reference value, is there, sir?
20 A. I have no way to systematically quantify the reference
21 value associated with these companies.
22 Q. And then under item 4, "Substantial oral consulting
23 services, opportunity for implementation," again, we discussed
24 that, that's the prospect of consulting revenues that is not
25 controlled for, correct?

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1 A. That's correct.
2 Q. And then the next one, "Marquee outsourcing opportunity,"
3 do you know what that means?
4 A. I'm sorry, I've forgotten, as I -- I no longer -- I believe
5 I did actually know the answer to that question, but I'm not
6 recollecting it as I....
7 Q. It refers to the fact that Merrill Lynch could be a -- one
8 of the first large customers to use hosted outsourcing by
9 Oracle, does it not?
10 A. That sounds right, yes.
11 Q. So again, a consideration goes well beyond the core
12 functionality of HR or financial management systems, correct?
13 A. Well, I actually read that -- again, I don't want to push
14 this too far, but I actually read that to be more of the
15 reference value. That is to say, if there is an outsourcing
16 opportunity, the marquee aspect of that is that they would be a
17 reference value for Oracle outsourcing. We already discussed
18 reference values, and no, I have not controlled for that, but I
19 don't believe that to be substantially different than the
20 general reference value of Merrill Lynch as a customer.
21 Q. And last one here is a timing factor, that "there won't be
22 enough time to replace PeopleSoft HR at Merrill due to the
23 upgrade cycle." Your regressions don't control for timing
24 factors, do they, sir?
25 A. I actually interpret that statement to mean that whoever

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1 wins this at HR -- in HR, has won for a long period of time. I
2 understand that to be the expectation on almost all of these
3 accounts, if not all of them. That is to say, when you put in
4 one of these systems, you expect to use it for 10 years. I
5 don't expect that to be different from Merrill Lynch or to
6 anyone else and that is to say, I don't think the timing is
7 actually an issue.
8 Q. I want to talk about -- I'm going to come back to your
9 regressions a little later, but I want to talk now about your
10 summary statistics chart that you put up.
11 And if you could put up the one that he used, our
12 copies are in black and white, but it's the same chart that you
13 used. The next one. Okay.
14 So you recall your discussion about this chart, sir?
15 A. Yes.
16 Q. Let me ask you a little bit of preliminary questions about
17 this analysis.
18 When you got ahold of this data from the Oracle
19 North American sales representative and customer surveys, you
20 did not in any way screen this data for whether the customers
21 were high-function or lower-function customers, did you, sir?
22 A. I did not.
23 Q. Okay. These are not just Global 2000 customers, are they?
24 A. No, this is, to the best of my ability, the complete data

25 set.

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1 Q. It's a mix of large and small customers, right?
2 A. That's my understanding, yes.
3 Q. They're not multinationals or using multiple languages or
4 any of those kinds of parameters, right?
5 A. It's a varied list.
6 Q. Okay. Now, you presented this here in court, but this is
7 actually not the table that you presented in your original
8 report, is it, sir?
9 A. I don't -- I don't recall if this table was in my original
10 report or not. My understanding is that approximately -- it
11 may have been in a subsequent report, but....
12 Q. Well, I should have done this earlier, and I apologize, but
13 let me hand up your various reports, which I think there's
14 five, and....
15 If I may, your Honor?
16 THE COURT: Very well.
17 BY MR. WALL:
18 Q. Would you please turn to page 42 of your original report,
19 sir.
20 And if we could have that displayed?
21 THE WITNESS: Yes.
22 MR. WALL: Maybe you can make that as big as you
23 possibly can. It's going to be hard.
24 Q. This is the original tabulation of your results from this
25 exercise, is it not?

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1 A. It is, although it's actually the one on page 45 is the one
2 that would be relevant to my direct testimony, as opposed to
3 this one, which is just a simpler version of the --
4 Q. Right, you actually had three versions. This is the
5 fullest version, correct? It has the most data?
6 A. That's correct.
7 Q. And then on page 45 you have -- you've presented the same
8 data with fewer revenue breaks, right?
9 A. That's correct.
10 Q. And in your direct testimony, you only presented the data
11 for the number of sales opportunities in total, the number of
12 sales opportunities with at least one competitor, and the
13 number of times that PeopleSoft was cited, right?
14 A. That's correct.
15 Q. But when you look at the full table, you also see the
16 frequency of sales opportunities when SAP is present, right?
17 A. That's correct.
18 Q. And you also see the frequency of opportunities with -- as
19 it says here, "Frequency of sales opportunities with a
20 competitor other than PeopleSoft or SAP," is that right?
21 A. That's correct.
22 Q. And if we look at this, we see, like for example, at the
23 top column, deals with license revenue of over 5 million of
24 which there were three, there was one involving PeopleSoft, and
25 three involving SAP, right?

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1 A. That's correct.
2 Q. And if we go to deals between a million and 5 million,
3 while there were 28 with PeopleSoft, there were also 20 with
4 SAP, right?
5 A. That's correct.
6 Q. And this says there were 17 with competitors other than
7 PeopleSoft or SAP, right?
8 A. It does say that, yes.
9 Q. Okay, and then I'll just do the next column. So you have
10 31 deals in the 500,000 to a million dollars range with
11 PeopleSoft and 28 with SAP, right?
12 A. That appears to be correct.
13 Q. But you made a mistake when you counted the others, did you
14 not, sir?
15 A. I believe that to be correct, yes.
16 Q. What you did is, you only listed "other" if neither
17 PeopleSoft nor SAP were present, isn't that right?

18 A. Yes, that's -- this table was not in accord with what I had
19 intended.
20 Q. Right, and you told me at your deposition, didn't you, sir,
21 that the right way to do this is to count the others just
22 however often they appear. Correct?
23 A. That was what I had intended, and as I told you in my
24 deposition, that's what I had intended and that's not what is
25 represented on this table.
2570

1 Q. Did you re-count them?
2 A. I have not.
3 Q. Well, sir, would it surprise you to know that if you
4 actually counted them the way you said you were supposed to,
5 that in the top level there are competitors besides Oracle and
6 SAP in all three of those large deals?
7 A. No, not necessarily. As Professor Elzinga testified, you
8 see a lot of companies buying bits of software -- Hyperion is a
9 leading example -- that don't offer the same functionality as
10 PeopleSoft or Oracle, but are nonetheless included in the
11 purchases.
12 Q. Well, would it surprise you to know that in the million to
13 $5 million band, that instead of others appearing 32.7 percent
14 of the time, others appear 79 percent of the time?
15 A. Again, I didn't actually compute that number. I don't know
16 who those others are.
17 Q. Would it surprise you if I told you that in the 500,000 to
18 1 million band, instead of others appearing 31.8 percent of the
19 time, they appear 76 percent of the time?
20 A. Again, no, it doesn't surprise me.
21 Q. But it would change the inference to be drawn from this
22 analysis rather significantly if you found that, in the great
23 majority of the times, there were other competitors besides SAP
24 and Oracle in these deals, would it not, sir?
25 A. I haven't actually engaged -- if that's relevant, it's
2571

1 relevant not to the assessment of the competitive effects but
2 to the market definition, which is something I haven't engaged
3 in --
4 Q. That's fine, I'll take that.
5 Let's go back to the demonstrative that he used in
6 his direct testimony.
7 Now, sir, in this one, when you -- you noticed here
8 that deals -- you broke it into deals with over $500,000 and
9 deals with less than $500,000, and the first thing that I'll
10 note, only about 13 percent of the deals have license revenues
11 of over $500,000, right?
12 A. That's, yes, approximately 13 percent.
13 Q. Okay, the balance were smaller deals, right?
14 A. That's correct.
15 Q. But you don't know, do you, sir, how many of those 131
16 sales opportunities with license revenue of over $500,000
17 involved an opportunity to sell more than $500,000 of HR or
18 financial management software, do you?
19 A. No, I don't. We do know that some of those deals do
20 involve products other than HR and financial management, so I
21 know that there's some piece of that, and I have no way of
22 assessing how much of it.
23 Q. You have no idea what that count would look like if you
24 limited the data to sales of the products that are in the
25 relevant markets alleged by the Department of Justice, do you,
2572

1 sir?
2 A. Actually, for the purpose of the screen of $500,000, it's
3 not clear that, having taken out the other products, that
4 necessarily you want to leave the same screen. The purpose of
5 the $500,000, as I understand it, is to -- and as I've used it,
6 is to try to focus on deals that are actually enterprise-wide
7 deals, and -- or at least large-company deals, and if you've
8 taken out some of the products, you may well want to actually
9 change that number.
10 Q. Professor McAfee, do you have some reason to believe that

11 it is only large and complex enterprises that buy more than
12 $500,000 of stuff from Oracle, if you account for the whole
13 product line?
14 A. Well, you expect larger companies to be buying more. So is
15 $500,000 arbitrary? Yes. It's actually used by people in the
16 industry, but nonetheless, it's somewhat arbitrary.
17 What I'm saying is that if you're focusing on a
18 narrower set of products, the relevant number that is the
19 number that compares to $500,000 for the larger set of products
20 would be a smaller number.
21 Q. I want to return to your regressions and ask you a few more
22 specific questions about that. Before I do, you are not an
23 econometrics expert, are you, sir?
24 A. I'm not an expert in econometric theory.
25 Q. I believe you told me at your deposition that you have not
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1 taught econometrics anytime recently, and your only past
2 experience teaching econometrics was for a basic undergraduate
3 course, is that right?
4 A. That's correct.
5 Q. Okay, let's begin with your first regression, which were
6 based upon -- which were based on, I believe what you call the
7 Ciandrini chart.
8 So could we have the demonstrative that he used with
9 the first regression, please?
10 Now, my understanding is that this is a slight
11 revision to what you had presented in your report, is it not?
12 A. I don't actually recall, as I sit here today.
13 Q. I don't think it's significant, but it looked to me like
14 you added a few records.
15 A. Yeah, it could be.
16 Q. Now, sir, this is an analysis -- what you are regressing
17 here are Oracle E-Business Suite deals, right?
18 A. That's correct.
19 Q. And in your report, I believe the way you stated your
20 conclusion was that Oracle tended to offer larger discounts on
21 its E-Business Suite when it competed against PeopleSoft; is
22 that your testimony?
23 A. Yes, it is.
24 Q. Okay. But again, this is not a study of just HR deals, is
25 it?
2574

1 A. No, E-Business Suite generally involves all four pillar
2 products.
3 Q. This is not a study of just financial management systems,
4 is it?
5 A. It is not.
6 Q. Okay. In fact, as you said, all you know about these deals
7 is that the customer was licensed the E-Business Suite, right?
8 A. When you say, "all you know about these deals," that --
9 Q. In terms of what was purchased.
10 A. Well, the data set that I'm using in this case is a data
11 set of E-Business Suite purchases, as I understand it. In some
12 cases I may know other things about specific entries of that
13 data, but generally, yes, that what's been selected are
14 these -- Mr. Ciandrini's E-Business Suite sales.
15 Q. And with respect to any given record in this data set, you
16 don't know whether the customer really acquired any financial
17 management or HR software, do you, sir?
18 A. My understanding is that they acquired it. What I don't
19 know for sure is whether they implemented it or not, but they

20 acquired it in the process of purchasing the E-Business Suite.
21 That's my understanding.
22 Q. But you could have a customer in here who acquired the
23 E-Business Suite just to use, for example, the supply chain and
24 customer relations management functions, right?
25 A. In principle, that's possible.
2575

1 Q. And you didn't do anything, and really, you couldn't do
2 anything, to try to figure out whether that was true or not,

3 did you; isn't that right?
4 A. Well, there was nothing in the data source that would
5 allow -- that would identify what the purposes of that
6 particular customer were in the process of running this
7 particular regression.
8 (Continued on following page. Nothing omitted.)
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1 MR. WALL: Now, let's -- if we can highlight the top
2 half of the box.
3 Q And you discussed this with Judge Walker earlier, and
4 what you said was, according to your findings here, the
5 presence of PeopleSoft in the -- in the deal -- let's just
6 look at the large deals, was associated with an additional
7 9.7 percent discount, right?
8 A Discount was larger by 9.7 percentage points.
9 Q I stand corrected. The discount was larger by 9.7
10 points, correct?
11 A Yes.
12 Q SAP had the same effect, right?
13 A It did.
14 Q And if we can now pull back to the whole column and
15 actually just highlight the bottom, can you tell the Court
16 what "R squared" means?
17 A Yes. That's the percentage of the variations explained
18 by the regressions.
19 So, what it's saying is, in the column 1 is that
20 about a third of the total variation in discounts is
21 explained by these factors. In column 2 it's saying 28
22 percent of the total variation is explained by these factors.
23 Q And conversely, what that means with respect to the large
24 deals is that a little over 71 percent of the variation in
25 the price is not explained by the factors in the regression,

1 correct?
2 A That's correct.
3 Q So, something else besides who was in the deal appears
4 have been explaining most of the variation in discount?
5 A Yes, that does not suffice.
6 THE WITNESS: Your Honor, I'm going to need a rest
7 room break.
8 MR. WALL: This would be a good time for --
9 THE COURT: That's almost always a good idea,
10 Professor.
11 So, we'll take our mid-afternoon break. Be ready to
12 go again in 15 minutes.
13 MR. WALL: Thank you, Your Honor.
14 (Recess.)
15 (Proceedings resume at 3:31 p.m.)
16 THE COURT: Very well. Mr. Wall, would you like to
17 resume your cross-examination.
18 MR. WALL: Thank you.
19 Q Professor McAfee, I would like to take up with you your
20 second regression that you presented, which I have put up on
21 the screen. This is the one that you said was based upon the
22 Oracle H.Q. apps. forms, correct?
23 A Well, the matching of the H.Q. apps. forms to the
24 customer surveys.

25 Q And what happened is, you found a number of deals that
1 are affected here by this number of -- 122 that you were able
2 to match from H.Q. apps. to the other document?
3 A That's correct.
4 Q And then once again, you broke it into deals where
5 whatever was being purchased costs less than $500,000 net
6 license price and deals where it was greater than that,
7 correct?
8 A No, sir. It's all deals versus deals greater than
9 $500,000.
10 Q Oh, I'm sorry. You're right.
11 So, the column No. 1 is all deals, column No. 2 is
12 just a subset of column No. 1; is that right?
13 A That's correct.
14 Q And once again, just so we're clear, you did not make any
15 effort at all to identify which of those deals that are in
16 column No. 2, the 47 deals in column No. 2, really involve
17 so-called high function customers, right?
18 A I didn't screen out any customers at all. I just used
19 all the deals over 500,000.
20 Q And similarly, you did screen out deals where the
21 $500,000 was for things other than where -- where a portion
22 of the $500,000 or more was for things other than for
23 financial or HR software?
24 A That's correct. I did not so screen out -- in fact, I
25 used all the ones that met that single standard of over

1 500,000.
2 Q So, to pick up on what Judge Walker said earlier, this is
3 not just the apples, it's the apples, the oranges, it's the
4 whole fruit section, right?
5 A That is not how I would characterize it.
6 Q Really. Okay.
7 Now, sir, did you make any effort at all to
8 eliminate from the 47 that you studied in the large deal
9 column deals that were sort of obviously outside of HR or
10 financial management?
11 A I used, again, from the -- from the discount request
12 forms, I tried to be inclusive with them. I did actually
13 want the products of HR and financial -- and/or financial
14 management present. But there aren't very many deals that I
15 can identify exclusively as those products. So, I needed to
16 include those deals that included other products as well.
17 MR. WALL: Well, let me just take an example.
18 I'll ask for Defendant's Exhibit 7116, which is an
19 H.Q. apps. form for Hanover Compression Company.
20 THE COURT: Is this the original, what you've handed
21 up, Mr. Wall?
22 MR. WALL: Yes, it is, Your Honor. I don't -- this
23 is not in evidence --
24 THE COURT: But I gather you're representing this
25 as -- what is this? Is this a --

1 MR. WALL: This is an H.Q. apps. form, Your Honor.
2 It just doesn't have the heading on the first page for some
3 reason. I am not sure what the reason for that is.
4 I'll represent that this comes from the group that
5 he identified as falling in the -- the study that he
6 presented in his regressions.
7 THE COURT: Very well.
8 BY MR. WALL:
9 Q Professor McAfee, if you could take a look at the
10 third -- excuse me -- the fourth page of this document.
11 A Okay.
12 MR. WALL: And highlight the top half.
13 Q It says: "We are in a competitive ERP battle with
14 PeopleSoft."
15 But then in the next paragraph it says:
16 "PeopleSoft is striving to get their
17 SCM market share. And they're desperate
18 for manufacturing customer in the oil
19 field industry. Their recent partnership
20 with Agile has enabled them to provide a

21 comprehensive SCM solution for Hanover."
22 Does that look like a deal that belongs in a study
23 of the pricing of HR or financial management software?
24 A I would say from this I can't tell that -- it's --
25 appears to be e-biz -- mostly e-biz Suite, 91 percent with

1 only nine percent to the database. This does say that --
2 that supply chain is an important factor in it, but it also
3 says it's a competitive ERP battle with PeopleSoft.
4 Q Look at the very top of the page. It says they have
5 outsourced HR and payroll to ADP; do you see that?
6 A I do see that.
7 Q It was pretty unlikely that HR was part of this deal,
8 right?
9 A If that's the core HR, yes.
10 Q And -- and this was in your study.
11 Do you see any mention at all in this deal that the
12 customer was trying to buy core financial management?
13 A I don't -- I don't know if -- whether I personally looked
14 at this form. I certainly haven't in a long time. I don't,
15 as I sit here, see any --
16 Q In any event, sir, you have made no effort to exclude
17 from the data set that you regressed deals that did not
18 appear on their face to have HR or financial management
19 software; did you?
20 A No. I did not try to -- exclude -- I did not try to
21 exclude such deals. I tried to include deals that did
22 involve those products, because those were the products at
23 issue in this case.
24 But there is a sense in which you'd expect -- in
25 which you'd be expecting that I'd underestimate PeopleSoft as

1 a competitor if I was including a bunch of deals where there
2 were other products where PeopleSoft is not strong or was not
3 a competitive -- a competitive threat or --
4 Q But in this deal you picked up PeopleSoft; didn't you,
5 sir?
6 A Yes, I did. But as I -- as I was trying to explain,
7 insofar as PeopleSoft is actually weaker in supply chain you
8 would actually expect as a result a smaller discount, and
9 thus, as PeopleSoft was cited, it would underestimate the
10 effectiveness of PeopleSoft as a competitor.
11 That is to say, if the other markets besides
12 financials and HR are actually more competitive than those
13 two markets, then it should be the case that -- that the
14 presence of PeopleSoft and other markets would be
15 associated -- or the -- you'd have the absence of PeopleSoft
16 in other markets and larger discounts due to the other
17 competition.
18 Q But you have not studied the SCM market; have you, sir?
19 A No. I have not studied the SCM market.
20 Q You have not studied the CRM market; have you sir?
21 A I have not studied the CRM market.
22 Q You did nothing in this regression to try and control for
23 the presence of SCM or CRM components of these deals; did
24 you, sir?
25 A I didn't have a systematic way of identifying the extent

1 in which deals were of -- of the relevant products for this
2 case.
3 Had I had that information I would have conditioned
4 on it, but I did not actually have a systematic way.
5 Now, as I tried to explain, I don't believe that
6 actually -- insofar as that creates a bias which would cause
7 me to underestimate the effectiveness of PeopleSoft as a
8 rival.
9 Q But you're just guessing that, because you're guessing
10 that the SCM markets and CRM markets that you've studied that
11 in those markets PeopleSoft is not as strong, correct?
12 A So, as I understand that particular question, the
13 hypothetical in that question is, if -- it would actually
14 create competitive -- significant competitive problems in the
15 SCM market as well as the other markets that have been
16 listed --

17 Q No. That's not my question. The question is, you
18 haven't studied either market, correct?
19 A I have not studied the other two markets.
20 Q And you have not studied PeopleSoft's strength in either
21 market; have you, sir?
22 A I haven't studied PeopleSoft's strength in the markets.
23 Q Thank you.
24 A But as I was trying to explain, what you asked me to
25 hypothesize was that PeopleSoft was actually much stronger in

1 the SCM market.
2 Q I did not ask you to hypothesize that, sir.
3 I had asked you whether you studied them or not. I
4 think you answered my question.
5 Let's put your regression back up.
6 Now, another thing that you have not studied in this
7 regression is the effect of the number of competitors that
8 were involved in any particular deal; isn't that correct?
9 A I haven't listed that as -- as an additional variable.
10 Q But what you found, if we could highlight the top half of
11 the chart, was that in this study the presence of PeopleSoft
12 had less of an effect on the additional discount than the
13 presence of SAP, correct?
14 A This regression does predict that the effect of SAP on
15 the discount is larger than the effect of PeopleSoft.
16 Q In particular, in the large deals it indicates that --
17 that the effect of having PeopleSoft in the -- in the deal is
18 an additional discount of 13.6 percent, right -- 13.6
19 percentage points?
20 A Well, in this -- yes. This is an incremental discount.
21 But yes, that's correct.
22 Q The incremental discount.
23 And the presence of SAP creates a larger -- is
24 associated with a larger discount of 16.4 additional
25 percentage points, correct?

1 A Yes, on average; that's correct.
2 Q Did you do anything to try to determine --
3 MR. WALL: Actually, could we pull the whole thing
4 back.
5 Now, let's highlight to the bottom.
6 Q So, looking at the R squared, can you confirm for me,
7 sir, in this case -- your regression with respect to the
8 large deal explains only about a third of the variation in
9 price.
10 A That's correct.
11 Q Now, sir, did you do anything -- of the -- of the 12
12 deals that you studied, did you do anything to try to figure
13 out how many of those deals involved Oracle, SAP, and
14 PeopleSoft as a competitor?
15 A So, how many involved all three --
16 Q Yes.
17 A -- is your question?
18 Q Yes.
19 A I believe I used to know the answer to that, but I have
20 now forgotten.
21 Q Does "zero" ring a bell?
22 A Could be.
23 But that was not actually what I was expecting it to
24 be.
25 Q Okay. Let's turn, sir, to your merger simulation, which

1 will be the last topic we need to cover.
2 Now, let's -- let's set the stage here.
3 This merger simulation that you are doing is based
4 upon auction theory, correct?
5 A It is, yes.
6 Q Which is to say, that the formula that drives the results
7 of the simulation incorporates auction theory, correct?
8 A That's correct.
9 Q And you have used the model to describe the industry
10 based upon this assumption of yours that the -- the
11 competition in this market is characterized by multiple
12 rounds of bidding, correct?

13 A That justifies the bidder-type auction or that is the
14 English or oral auction, as opposed to a sealed-bid auction.
15 Q And, in fact, so we're clear, what this model assumes is
16 that these procurements have the characteristics of --
17 so-called English auction?
18 A Well, yes. That is, if you want an exact fit of the
19 model, it would have to have the exact characteristics,
20 that's correct.
21 Q Okay. And so -- just so everyone's clear, the English
22 auction really is -- the classic example of the English
23 auction really is the Sotheby's art auction, correct?
24 A That's an example of the classic auction, not the way
25 economists use the phrase, "English auction," even

1 Christie's. And so, that wouldn't be a example, because
2 economists use idealized models, and our idea of an
3 idealized auction is that in business and even in Christie's
4 auction, you take pennies and even fractions of pennies
5 instead of the actual percent of the two when they do the
6 bidding.
7 Q But the process of an English auction is characterized by
8 the Christie's auction, where you have people outbidding each
9 other and eventually people drop out, correct?
10 A Yeah. That's -- they drop out as the price gets too rich
11 for them.
12 Q No. 2 --
13 THE COURT: Or if they get carried away?
14 BY MR. WALL:
15 Q It's true, is it not, sir, that it is this assumption
16 that you make about multiple rounds of bidding that just
17 fills the use of an English auction model.
18 A Well, that's certainly the justification that I put in my
19 expert reports, yes.
20 Q And if that assumption is wrong, then the use of the
21 English auction model would not be justified, correct?
22 A Well, I think it's -- as we discussed in my deposition,
23 there are -- the difference between a sealed bid, a one-shot
24 sealed-bid auction and an English auction, there are
25 differences, but there's a -- there's a similarity as well,

1 at least in terms of outcomes. There is not in terms of
2 process.
3 Q Well, one of the differences, though, between an English
4 auction and a sealed-bid auction is just that in an English
5 auction everybody knows what everybody else is bidding,
6 right? It's open?
7 A That's part of the assumption -- or the economic model of
8 the English auction.
9 Q And economists in particular auction theories distinguish
10 that from a sealed-bid auction in which firms don't know what
11 others are bidding, correct?
12 A That's correct.
13 Q And you did not use any kind of sealed bid auction model
14 to run this simulation; did you, sir?
15 A I did not use a sealed-bid auction.
16 Q Now, sir, we talked about this briefly earlier, but in
17 this auction model, you assume what economists call "complete
18 information," right?
19 A That's correct.
20 Q And complete information talks about a very specific kind
21 of information, meaning, the -- the value that buyers place
22 on competing products, correct?
23 A In the context -- in this context, the -- the bidders,
24 that is the vendors, in order to satisfy the complete
25 information assumption need to know the value that the buyer

1 places on others' product as well as their own, that's
2 correct.
3 Q So, an important question in understanding the
4 applicability of this model to this case is whether, in fact,
5 vendors really have good information about the valuations
6 that buyers place on competing products, correct?
7 A Yes. Models are abstractions. It is not my testimony
8 that the vendors in this case have perfect information. And

9 I believe I gave the example of 15 to 17 percent on support
10 as being a demonstration of imperfect information.
11 On the other hand, I don't expect the model to fall
12 apart as the information becomes imperfect. That is, a
13 little bit of imperfect information is not going to
14 significantly change the outcomes of the model.
15 Q In contrast to auctions, economists -- well, strike that.
16 Economists make a distinction; do they not, between auctions
17 on the one hand, and negotiations of bargaining on the other
18 hand?
19 A He -- he again -- as I testified, negotiation is more a
20 management term.
21 Economists tend to call it "bargaining."
22 Q But you would agree with me; would you not, that it would
23 be fair to characterize the transactions in this market, the
24 pricing round of the transactions in this market, as what --
25 what economists sometimes call "simultaneous bilateral

1 negotiations"?
2 A You know, after you asked me that in my deposition I did
3 actually go and research it, and I didn't find very many
4 economic references to it. I found a lot of psychological
5 references to it.
6 I do agree that there is an aspect of this of
7 simultaneous negotiations going on, but as I testified, the
8 auction is actually -- the auction can be a model of that
9 insofar as those negotiations involve using the bilerubin
10 process to improve the prices. They are not using the
11 bidding process.
12 So, if you are literally simultaneously negotiating
13 with multiple vendors in some sense in isolation -- so, the
14 example would be, suppose you use the -- the buyer used
15 different agents who didn't talk to each other to do those
16 negotiations? Then that might be an example that did not fit
17 the auction paradigm very well.
18 However, if they are going back and forth in some
19 sense which they have, of course, an tendency to do, then in
20 fact simultaneous negotiations isn't a very good model,
21 except insofar as it looks like an auction.
22 Q You told me at your deposition; did you not, that it
23 would be fair to characterize these as simultaneous bilateral
24 negotiations?
25 A And I -- that's correct.

1 Q That's correct?
2 A -- and I also told you in my deposition that that has an
3 auction element, that auctions are a model of simultaneous
4 bilateral fee negotiations.
5 Q Also, at your deposition I asked you whether you were
6 aware of any economic literature that explicitly discusses
7 the effects of mergers on markets characterized by
8 simultaneous bi-lateral negotiation; do you recall that?
9 A I do recall that.
10 Q And you said you could not recall any, correct?
11 A That's correct.
12 Q Now, sir, your model that -- the results of which you
13 presented, has just three components, correct?
14 It has an economic theory reflected in an equation;
15 the market shares that you got from Professor Elzinga; and a
16 consumer surplus parameter; isn't that right?
17 A It -- so, provided that we understand that an economic
18 theory is actually kind of a large object, yes, that would be
19 the three inputs would be the theory, the -- the two sources
20 of calibration.
21 Q Call them two sources of calibration. It's -- that
22 would -- it would be also fair to say two data inputs,
23 correct?
24 A Yes, it would.
25 Q So, you actually have just two data inputs which are

1 market shares, and this parameter that you came up with to
2 measure the percentage of the value that's being captured by
3 the buyers today?
4 A Yes. The competitiveness of the market parameter, that's

5 correct.
6 Q The competitiveness of the market parameter, and that is
7 something that you determined by taking the difference
8 between the list price for the software and the average
9 discount that you see in the marketplace, correct?
10 A At the time that I wrote my expert report that was the --
11 my best source of the value that the buyers place on the
12 product.
13 Q Okay. Now, Professor McAfee, let's talk just briefly
14 about that -- that parameter about the percentage of value
15 accruing to the buyers.
16 You -- you took the difference between the average
17 discount and list price, correct?
18 A That's correct.
19 Q Okay. And as I -- as I understand what you said in
20 your -- in your testimony, that large buyers should value the
21 software at least at list price, correct?
22 A The logic is that they should value it at least as much
23 on a per user basis as small buyers, given that large
24 organizations are harder to manage, and if so, if the small
25 buyers are willing to pay list price, the large buyers should

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1 have been -- should value it at least -- this is their own
2 internal value, of course -- should value it at least at the
3 list price.
4 Q But in your second set of regressions that we saw, you
5 looked at the incremental discount over the eBusiness
6 discount, because as you said on direct examination, the
7 eBusiness discount is automatic; do you remember that?
8 A I do, yes.
9 Q And so, in fact, the way that eBusiness discount works is
10 that on any eBusiness deal with license revenues over
11 $250,000 there is an automatic 20 percent discount, right?
12 A That's not exactly my understanding.
13 Q What's your understanding?
14 A I didn't understand it to be an automatic 20 percent,
15 because I sometimes observed it to be 25 percent.
16 Q Well, that's if the gross license revenue is over a
17 million dollars, correct?
18 A That could be.
19 Q So --
20 A But I understood the eBusiness, the automatic discounts
21 varies with the exact nature of the transaction and that
22 we -- my staff has the formula.
23 Q Had you used the eBusiness discount as your starting
24 point you would have -- you would have found that the market
25 is, as you put it, less competitive, and the predicted price

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1 effects of the merger would be smaller, correct?
2 A It is correct that if I had used the eBusiness discount,
3 that is, eBusiness discounted price, as the basis for that
4 estimate I would have come up with a smaller number.
5 However, that -- the logic that I gave you suggests not using
6 the eBusiness discount.
7 Moreover, given that there's been testimony as to
8 the return of investment that these companies experience in
9 the trial -- that was something I didn't have access to -- I
10 actually have much better estimates of that parameter based
11 on the trial testimony, at least from Nextel and Emerson.
12 Q Now, if you -- sir --
13 MR. WALL: If we could put his price increases up
14 there, I think it's the very last chart.
15 Q Now, sir, I want to talk a little bit about what these
16 mean here. These are what -- what you claim are
17 industry-wide average price increases, correct?
18 A That's what's calculated, yes.
19 Q But let's talk about a feature of your model, because
20 you've used an English auction model. What you are assuming
21 is that the price of a -- of a procurement is established by
22 the second-place bidder, correct?
23 A That's correct.
24 Q And what that means is that if the merger removed the
25 second- -- either the first- or the second-place bidder,

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1 price would move to the third-place bidder, right?
2 A The -- PeopleSoft and Oracle are Nos. 1 and 2, then
3 post-merger, SAP becomes No. 2, where it used to be No. 3 --
4 or whoever is No. 3, used to be No. 3 becomes the No. 2,
5 because you have merged 1 and 2, that's correct.
6 Q So, in the logic of the model and its complete
7 information assumption, the only people who get hurt by the
8 merger are consumers who would have ranked Oracle and
9 PeopleSoft first and second, correct?
10 A That is a feature of this model.
11 Q Okay. Any consumer that would have ranked SAP first or
12 second would not be hurt under the logic of this model,
13 correct?
14 A That's correct, because -- if SAP had been ranked No. 1,
15 it's still ranked No. 1 post-merger and moreover, the
16 combined firm is just as effective a threat to SAP as it was
17 pre-merger.
18 Q And vice versa. If the combined firm is No. 1, and --
19 but SAP was No. 2, it's as big a threat to the firm as it is
20 pre-merger.
21 A That's correct.
22 Q Okay. So, in fact, under the logic of your model, no
23 customer who views SAP as -- as good a substitute as
24 either -- as either, Oracle or PeopleSoft is harmed, correct?
25 A In this model, that is a feature of this model is that if

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1 the -- SAP is as good as either one of the firms, that is,
2 it's in the top two from the buyer's perspective, then it
3 would be that particular buyer would not be harmed.
4 Q And, in fact, even if SAP is No. 3, but the difference
5 is -- the gap between 2 and 3 is insubstantial, you would not
6 get a substantial price increase under the logic of this
7 model?
8 A That's correct.
9 If SAP is very close for that particular buyer to
10 the No. 2 slot, so, it's still No. 3, but it's very close,
11 the price essentially only drops by the difference of the
12 No. 2 and the No. 3.
13 Q So, when you say, for example, I'll just take the middle
14 of the top line here, "HRM, all deals for the fraction of
15 gross value of software accruing to the buyer is 0.7, that
16 the expected price increase is 20.6 percent," that's 20.6
17 percent on average across the market, right?
18 A That's correct.
19 Q But under the logic of your model, all of the burden of
20 that price increase is borne by customers who rank Oracle and
21 PeopleSoft 1 and 2 or 2 and 1?
22 A That's correct.
23 Q So, if we were to assume that, say, only 20 percent of
24 the customers in the market ranked Oracle and PeopleSoft 1
25 and 2, what you're really saying is that your opinion is that

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1 there would be a 100 percent increase in price to those
2 customers, correct?
3 A That's a feature of this model is that the -- because of
4 the nature of the English auction, the price effect is only
5 experienced when PeopleSoft and Oracle are 1 and 2.
6 Q So, what you're saying then, on that assumption is that
7 you think that customers would pay double what they are
8 paying now before they would turn to SAP.
9 A That's a feature of this model. It says that SAP for
10 some set of -- for enough customers is far enough behind that
11 they would pay double.
12 Q For some customers, you're -- the way your model is set
13 up, that's true for every customer who ranks Oracle and
14 PeopleSoft first and second under those assumptions; is it
15 not?
16 A No, sir.
17 Q On average, it is?
18 A The average of the percentage increase over all sets of
19 customers, yes.
20 Q So -- but the average customer that prefers Oracle and
21 PeopleSoft, 1, 2, would pay double what they are paying now
22 before they would switch to SAP, right?

23 A That's a feature of this model, yes, sir.
24 Q You don't really believe that's true as an prediction of
25 the real world; do you?

1 A So, as I told you in my deposition, I think that the
2 effect for -- that instances where PeopleSoft are 1 and 2 are
3 smaller, and that the effect is larger some of the time even
4 when SAP is No. 2.
5 Q And in your deposition when I -- when I asked you about
6 what -- how likely you thought a 30 percent price increase
7 would be, you said that was "jarring," correct?
8 A That's correct.
9 That's also the largest number I came up with in any
10 of my simulations. I don't -- I don't -- I would never
11 expect that -- bringing the maximum.
12 Q Now, we talked about your consumer surplus parameter.
13 Again, the only other parameter you have in the
14 model are Professor Elzinga's market shares, correct?
15 A That's -- the only -- data Professor Elzinga's market
16 shares adjusted by his addition of "other" and the consumer
17 surplus parameters, as you call it.
18 Q Now, there is a lot of discussion in the economics
19 profession today about the use of merger simulations to avoid
20 having to define markets in antitrust cases and merger cases,
21 correct?
22 A There have been some discussions of that.
23 Q Okay. And in that discussion, what people are talking
24 about and writing about are models in which transaction data
25 and other factors are used to estimate what are called the

1 "own price elasticity of the relevant products," correct?
2 A There is a literature with that description.
3 Q But you have not estimated the own price elasticity of
4 the relevant products in this market; have you, sir?
5 A Given the prevalences and magnitude of price
6 discrimination, it's not actually possible to eliminate price
7 elasticities, because with price discrimination each bidder
8 is a separate transaction.
9 Q Separate relevant market?
10 A I haven't done a relevant market analysis.
11 Q Instead, you used market shares as a factor which
12 determines substitution among firms in response to price,
13 correct?
14 A Yes. The -- the market shares indicates -- so, again,
15 the theory suggests that the -- buyer purchases from the
16 vendor who ranks a product No. 1, and the market share should
17 tell you what percentage of the buyers rank that vendor as
18 No. 1.
19 Q So, your predictions are only as good as the market
20 shares that go into them, correct?
21 A If the market shares are wildly incorrect, the theory
22 would -- so -- I think the -- the correctness of the
23 theory -- it's true that as you change the market shares you
24 change the predicted numbers.
25 Change them little bit, those numbers change a

1 little bit.
2 Change the markets share a lot, and those numbers
3 change a lot.
4 To some extent you can see that right in the numbers
5 themselves, because many of these deals -- each one of those
6 rows represent a different -- a change in the market shares
7 from -- Professor Elzinga's numbers.
8 So, when -- I guess the problem I'm having, when you
9 say, the theory is only as good as, well, the theory is the
10 theory. The -- as you change the numbers, the predicted --
11 as you change the input numbers, the predicted output numbers
12 change; and they do so in a continuous fashion.
13 Q So, I stand corrected. It's the predictions of the model
14 that are only as good as the market share numbers, correct?
15 A That's fair.
16 Q Okay. Now, sir, it is, in fact, a feature of this kind
17 of model that it will predict a price increase for all
18 mergers.

19 A That's correct. Although, it doesn't necessarily predict
20 a large increase. It will predict a small increase.
21 Q Lastly, Professor, I want to -- I want to ask you about
22 one aspect of -- of your theory and the way this works in the
23 merger simulation, because under auction theory in order to
24 have the price rise to the level of the third-place firm
25 post-merger, Oracle in this case is going to need to be able

1 to spot the customer that would have preferred PeopleSoft but
2 now has to turn to a third alternative, correct?
3 A I wouldn't say that, no. It's more that they are going
4 to need to assess the level of competition primarily with SAP
5 and how significant SAP is as a rival.
6 The counter-factual thought experience of, "Would
7 they have preferred PeopleSoft?" isn't relevant in that
8 calculation. It's just, "Can they assess what competition
9 they face post-merger?"
10 Q Fair enough.
11 But if Oracle perceives in a particular account with
12 a particular customer that SAP was as strong a substitute as
13 they would have faced pre-merger, you would not expect an
14 elevation of price with respect to that customer; would you?
15 A Did I miss a hypothetical? Let me ask you just to repeat
16 that, if you would.
17 Q Sure. Under the auction theory that is -- that you have
18 applied here, if after the merger Oracle is in a procurement
19 and SAP is across the table -- the vendor -- the buyer's
20 across the table, but SAP is the competitor, if Oracle
21 perceives that SAP is as strong a substitute for Oracle as
22 anyone it might have seen before the merger, whether that's
23 PeopleSoft or someone else, then there should be no price
24 effect from the merger; isn't that fair?
25 A That's not quite fair.

1 For example, if -- PeopleSoft had been No. 1
2 pre-merger, and it would have a price effect even under your
3 hypothetical. And moreover -- but -- if Oracle is No. 1
4 pre-merger in this situation, and SAP was the No. 2 or
5 equivalent to the No. 2 or perceived to be the equivalent to
6 the No. 2, then you would not expect an effect, according to
7 the theory.
8 MR. WALL: Thank you, Professor.
9 I have no further questions.
10 THE COURT: Mr. Lohrer. Would you like to redirect?
11 MR. LOHRER: Yes, please.
12 REDIRECT EXAMINATION
13 BY MR. LOHRER:
14 Q Professor McAfee, could you open up to your deposition
15 the same question and answer that Mr. Wall read. It was page
16 65.
17 A Yes, I have that.
18 Q And what Mr. Wall read to you was the question beginning
19 at line 15:
20 "Question: Okay. Once again,
21 drawing the distinction between things you
22 are assuming, conclusions that you have
23 drawn as a result of an economic analysis
24 of your own, have you reached a
25 professional conclusion based upon your

1 own economic analysis that the procurement
2 process for ERP software is fairly
3 characterized as involving multiple rounds
4 of bidding?
5 "Answer: No. As I said, I was
6 assuming that it's characterized by
7 multiple rounds of bidding."
8 And that's where Mr. Wall stopped, correct?
9 A That's correct.
10 Q And your answer continues on line 4:
11 "Answer: I see evidence of multiple
12 rounds of bidding, but that's just
13 evidence that makes me comfortable in
14 assuming that that's a normal business

15 practice. I haven't drawn a conclusion
16 that -- well, as I said, that's an
17 assumption that is in multiple rounds of
18 bidding, but I have seen evidence in favor
19 of that."
20 And that was your complete answer, correct?
21 A That's correct.
22 Q And can you speak to the evidence of multiple rounds of
23 bidding that you've seen in this case?
24 A Well, as I said on my direct testimony, there are a
25 number of instances in the discount request forms where we

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1 see multiple requests, that is, we see several requests from
2 the -- from -- so, that is to say, they are asking management
3 for progressively higher discounts, and that's leading to --
4 so, each of those occur on different days often, and on
5 different rounds. We spoke this morning of the bidding and
6 counter-bidding. I believe there have been witnesses that
7 talked about the multiple rounds of bidding as being the
8 norm.
9 Q Okay.
10 A But not all instances, and there was at least one who
11 issued a best and final offer right off the bat; but my
12 understanding that that's unusual.
13 Q You recall Mr. Wall asking you about certain specific
14 discount request forms, correct?
15 A He did, yes.
16 Q Including the Hallmark form?
17 A Yes, that's correct.
18 Q And there was a mention of a database product in the
19 Hallmark form?
20 A I don't actually recall that, but could be.
21 Q Let me see if I can get you the number.
22 So, in your book it should be under the binder of
23 P 1014.
24 A Yes, I have the Hallmark binder, the Hallmark discount
25 request form.

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1 Q Now, in that justification section, in the Hallmark form,
2 there's mention of PeopleSoft, correct?
3 A That's correct.
4 Q And competition with PeopleSoft.
5 A Cites that directly, "Extremely competitive situation
6 against PeopleSoft."
7 Q Now, PeopleSoft doesn't sell database, right?
8 A That's correct. PeopleSoft does not sell database.
9 Q So, given that PeopleSoft doesn't sell database, what
10 does that tell you about the presence of competition at
11 Hallmark with respect to PeopleSoft and database sale by
12 Oracle?
13 A I don't believe this phrase -- "Extremely competitive
14 situation against PeopleSoft" could possibly have to do with
15 the database, since the database is not sold by PeopleSoft.
16 Q And with respect to -- in a broader sense, with some of
17 the different products in the discount request forms, and
18 some discount request forms, including products other than
19 just HR and FM products, you recall the questions about that
20 from Mr. Wall?
21 A I do, yes.
22 Q How -- does that impact on the utility of your analysis
23 in this case?
24 A No. I don't believe that it does. There are many
25 instances in the -- in these discount request forms that

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1 repeat this head-to-head competition conclusion, or --
2 corroborate the head-to-head competition with PeopleSoft
3 conclusion.
4 And I think for -- I am comfortable with the
5 conclusion that for many buyers PeopleSoft is the best
6 alternative to Oracle and vice versa.
7 Q You used -- there was testimony about the word "bias"
8 with respect -- the possibility of bias with respect to
9 certain testimony in the case and materials that you
10 reviewed; do you recall that?

11 A I do, yes.
12 Q In what sense were you using that term?
13 A Well, you always -- word -- there are a couple of senses,
14 so, one that -- the set of people who complain about a
15 transaction is not representative of all buyers.
16 So, for example, you might discern that if you only
17 read, for example, the set of declarations of those who
18 complained about a transaction you wouldn't expect that to be
19 representative.
20 And so, if you were looking for market definition,
21 that's a -- a bad source of information or a bad source to
22 rely on exclusively at least.
23 For competitive effects, sometimes those are the
24 people most likely to be affected, and so, they may actually
25 provide good case studies to show that -- that the

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1 competition matters, at least for some.
2 When you wanted to assess broadly overall, you
3 wouldn't want to look only at those, because they wouldn't be
4 representative of the buyers set forth.
5 Q And there was also testimony about -- questions about
6 customers complaining at the urging of PeopleSoft executives.
7 You recall that?
8 A I do.
9 Q Do you take comfort in the fact that Oracle customers
10 have apparently -- have come to testify at trial as well?
11 MR. WALL: Objection. Leading.
12 MR. LOHRER: I'll withdraw it, Your Honor.
13 THE COURT: Thank you.
14 BY MR. LOHRER:
15 Q Was it only customers who you understood PeopleSoft have
16 requested they complain who have come to testify at trial in
17 your understanding?
18 A I don't actually know who PeopleSoft requested to
19 complain. I have no direct knowledge of that. My
20 understanding is that Emerson was called by -- by Oracle.
21 Q You mentioned Emerson and Nextel with respect to the
22 parameter in your auction model. And do you recall that
23 testimony?
24 A I do.
25 Q And you said that that was additional information you

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1 gained through their testimony at trial that informed your
2 understanding of the auction model, correct?
3 A That is correct.
4 Q Can you explain how that is.
5 A Yes. The thing that I wanted to know here is the -- the
6 internal value the companies put on the software that's
7 the -- the input to this model, and that's something that's
8 generally hard to observe as I talked earlier this morning
9 about eyeglasses. What we get to observe is what people
10 actually pay as to what they actually value the item at.
11 And -- and in this case, two companies that I saw in
12 the -- in the -- during the trial have actually provided

13 their return on investment.
14 Emerson -- the representative of Emerson said they
15 had a 70 percent return on investment; and the -- the Nextel
16 representative said an eighty -- 83 percent return on
17 investment. And that actually -- so, you have to take the
18 implementation costs out, but the -- for example, use the
19 Nextel example.
20 Nextel representative said that the implementation
21 costs were approximately 85 percent of the total cost of --
22 of the -- of the installation.
23 And so, I can actually take that cost out and get
24 the -- net return on buying the license. So -- so, again,
25 the product, for example, take the total value, subtract the

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1 implementation cost, and what's left is the value of the
2 license, and that gives you -- allows us to impute how much
3 value is accruing just to this particular buyer. And in this
4 case, the actual arithmetic of that gives you about either 84
5 or 85 percent of the value accrues to the buyer. So, in the

6 language of the model, this parameter would have been .84 or
7 .85 for Nextel.
8 Now, the number for Emerson was a bit lower,
9 although, I think Emerson may have testified that the cost of
10 licenses was also a lower fraction of its costs, which would
11 be tending to move in the other direction. That's only two
12 data points, but they are in the -- so, the sort of 80
13 percent range, rather than the 50 percent range.
14 Q And so, again, how did that compare with what you had
15 done in your merger simulation.
16 A Well, that was on the high end of the simulation.
17 So, it produced larger effects rather than smaller
18 effects.
19 Q Could you look in your notebook for the Merrill Lynch
20 form. That's P 1019.
21 A Yes, I have it.
22 Q And I'd like you to go to the second page of that form,
23 and starting at the bottom of the second page, please read --
24 you can just read to yourself, Mr. Kender's comments
25 beginning on the bottom of that page and continuing up to the

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1 recommendation on that -- on the next page.
2 A Yes, I've read that.
3 Q And you've gotten to the point where it says,
4 "Recommendation, we want to beat PeopleSoft. Approve,"
5 correct?
6 A I see that.
7 Q And that was with respect to HR, correct?
8 A That's my understanding.
9 Q And having read that, what was your sense of what was
10 driving the competition at Merrill Lynch in terms of
11 competitor and product?
12 A Again, this is very much focussed on PeopleSoft
13 corroboratively looking for -- PeopleSoft is a primary
14 competitor for some of the competitions.
15 Q Okay. And also in the discount forms in the -- in the
16 slides we had early in the testimony there are instances of
17 head-to-head competition with PeopleSoft. You do recall that
18 testimony on direct, correct?
19 A Yes, I do.
20 Q And then Mr. Wall on the cross-examination asked you some
21 questions about reference value, correct?
22 A He did.
23 Q And potential for different sales, following on, correct?
24 You recall that?
25 A He did ask me about subsequent sales.

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1 Q And potential for implementation opportunities?
2 Mr. Wall asked about it on cross?
3 A He did.
4 Q You recall that?
5 A He did ask me about the potential value of
6 implementation.
7 Q And what about your work allows you to comment on the
8 importance of these factors Mr. Wall mentioned if there had
9 been no head-to-head competition with PeopleSoft?
10 A So, I need to actually distinguish in your set -- the
11 potential for additional sales is somewhat different from the
12 other factors.
13 I've got potential future sales. That works in some
14 sense like having a larger project up for bid now.
15 That is to say, I might bid a bit more aggressively
16 because especially if I think once the buyer has -- purchased
17 from me that they are to a greater or lesser degree locked
18 in, that may make for -- for more aggressive discounting
19 today.
20 But much of that is -- is -- with the other factors
21 that you listed, or asked me about, or that Mr. Wall asked me
22 about, the -- it's competition that are driving the
23 discounts. Generally, the -- what makes these companies cut
24 their prices is competition. That's -- not just in this
25 instance. That's in all economic analyses. What induces

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1 competitive pricing is -- is competition.

2 And reduction in competition will not lead -- I
3 guess -- reference values aren't a cure for a reduction in
4 competition. It's true that they may have an effect on the
5 overall pricing, that is, we will struggle harder to get
6 reference values, and we will discount more heavily to get
7 reference values.
8 But ultimately, these companies are discounting or
9 -- because they face competition, and a reduction of
10 competition does not induce -- so, reference values aren't a
11 cure for a reduction in competitions, perhaps a better way of
12 putting it.
13 (Continued on following page; nothing omitted.)
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1
2 BY MR. LOHRER:
3 Q. Can you find the Hanover Compression slide, Hanover
4 Compression document that Mr. Wall presented to you? It's
5 D7116.
6 A. I thought I had it until you started read the number. This
7 is the ORLIT, ends in 87?
8 Q. Yes, there's a lot of numbers on the form. The first page
9 is ORLIT276587.
10 A. Yes, I have there.
11 Q. Okay, and I actually want you to look at the final page,
12 page 4, for ORLIT276590.
13 A. I'm on that page.
14 Q. And in the first full paragraph, "We are in a competitive
15 ERP battle with PeopleSoft." Do you see that first sentence of
16 the first full paragraph?
17 A. I do see that.
18 Q. And what do you understand ERP to include?
19 A. Generally the products at issue in this case.
20 Q. The financial management and HR software, corrected?
21 A. Yes. However, ERP -- certainly there are different people
22 using "ERP" differently from each other. It's not -- I've seen
23 "ERP" used to say all four pillars. Some use it only for the
24 products at issue for this case. I don't know that there's
25 been a completely consistent use of "ERP" in my reading of the

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1 testimony, and that's why I was somewhat hesitant to say these
2 appear to be those products in this case, simply because there
3 is ambiguity in the definition of "ERP."
4 Q. Well, you testified during the cross-examination about four
5 pillars, correct?
6 A. Yes.
7 Q. And those included HR, FMS, SCM and CRM, correct?
8 A. That's the four pillars, yes.
9 Q. Yes, and do you have some understanding that Siebel has
10 some abilities in the CRM and SCM pillars?
11 A. Yes.
12 Q. Given that, and to the extent that in your regressions you
13 included information on Siebel, what impact would that have on
14 the regressions you performed?
15 A. As I've tried to explain, insofar as PeopleSoft were to be
16 weaker in the other two pillars, that is to say, the effects of
17 the merger larger in the two products at issue in this case,
18 rather than in other products, and insofar as -- as a result,
19 so that competition with PeopleSoft would be primarily focused
20 on these two products and would be -- there would be other
21 competitors showing up in the other products, for example, like

22 Siebel, what that would cause me to do is to underestimate the
23 effect of PeopleSoft by including data where there were large
24 discounts given, but not because of PeopleSoft; they were
25 given, say, because of Siebel.
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1 So that is to say, if the data has CRM competitions
2 and that those get larger discounts because of -- without
3 citing PeopleSoft, then I would tend to be -- I would tend to
4 be understating the effect of PeopleSoft in these products,
5 essentially because I'm including other instances where there
6 are other large discounts given but for other reasons and
7 they're not being picked up. I mean, I'm seeing large
8 discounts whether PeopleSoft is present or not, would be the
9 explanation.
10 Q. Towards the end of the cross-examination, Mr. Wall asked
11 you a series of questions about SAP, PeopleSoft and Oracle, in
12 the context of one or the other being one, two and three. You
13 remember those questions.
14 A. I do.
15 Q. Could you explain to us your understanding of how
16 competition works in the HRM FMS markets, but instead of using
17 one, two and three, would you assign, maybe, an A, B, C
18 ranking, or an A, B, C designation to various of these
19 competitors, and explain how you analyze competition in these
20 markets?
21 MR. WALL: Your Honor, I object, he did not conduct
22 a relevant market analysis and testifying on assumptions.
23 MR. LOHRER: Just with respect to the competitive
24 effects, and that's what Mr. Wall's questions were on cross,
25 and we're trying to understand it in that context.
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1 THE COURT: Objection overruled.
2 THE WITNESS: So my understanding of Mr. Wall's
3 questions and the questions to which I responded had to do with
4 how the model works with respect to these companies, and in
5 particular, the likelihood that, say, SAP was a close third
6 when PeopleSoft and Oracle were one -- numbers one and two.
7 What makes that all sort of confusing is -- so the
8 way this model works, if I could use A, B and C for the
9 companies, when the market shares tell us how often a company
10 is ranked number one, given that the buyer ranks -- buys from a
11 company it ranks number one. So the direct effect of the
12 market shares is to tell us how often the companies are
13 numbered -- is number one.
14 Given that a company wasn't number one, what is an
15 assumption of the model, but it's actually quite a reasonable
16 assumption, I think, is that a company is going to be number
17 two essentially proportional to its market share.
18 So a company that's often number one, when it isn't
19 number one, it's quite likely to be number two, or it's often
20 number two, and that's because -- you think about this as, it's
21 got a good product.
22 And so finally, who's number three will, again, if
23 you're not numbers one and two, your likelihood of coming in
24 number three -- so C will be number three, with a --
25 approximately when -- will be number three when -- if it's got
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1 a high market share, it's more likely to be number three, given
2 that it failed to be one and two, and it's just the quality of
3 the products speaking. So that is, if you've got a good
4 product, even if you're not ranked number one, you're more
5 likely to be ranked number two.
6 Now, what's going on in some sense is that when --
7 given that Oracle often fails to be number one, and we see that
8 because it's not the product chosen, either Oracle or
9 PeopleSoft was chosen, so the question on the table and the
10 question Mr. Wall asked me, as I understood it, was, well,
11 couldn't -- I think -- did I just say Oracle? I may have meant
12 SAP.
13 Given that SAP wasn't number one, couldn't it have
14 been a really close to third? And that means that effectively

15 there wouldn't be much of an effect from the merger because SAP
16 was really quite close to where -- so if Oracle was number one,
17 to where PeopleSoft was, and if PeopleSoft was number one, to
18 where Oracle is.
19 And what makes that all not very plausible in my
20 mind, and from an economic analysis, and not plausible in the
21 context of the model, is that in order for Oracle to sometimes
22 win and sometimes lose, there ought to be some distance between
23 it. That is to say, the products ought to be somewhat
24 different. Otherwise, you know, they essentially win about
25 equal chances. There ought to be some difference in the
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1 products. That is, buyers are saying yes, I prefer Oracle, and
2 then Oracle's product, some of the time, then other times
3 they're saying they prefer PeopleSoft and other times SAP.
4 And in essence, the difference between number one
5 and number two, on average, ought to be about the same as the
6 difference between number two and number three. And that's a
7 feature of the model, and this is just to say, well, why did
8 number two come behind number one? Well, it came behind number
9 one because it's got different functionality and different
10 features, and it's got higher implementation costs, for
11 example.
12 So if it falls 5 percent behind, then in some sense
13 number three ought to fall 5 percent behind number two, on
14 average.
15 That's a feature of this theory, and that's a
16 feature that drives the conclusions, that leads to these price
17 differences. It's, in some sense, built into the model, but on
18 the other hand I find it plausible because we're talking about
19 what generates the buyer's values. If the buyer's values
20 differ between the highest valued product ant second highest
21 valued product on average by 5 percent, you'd expect that
22 approximate increment for number two and number three as well,
23 and it's that 5 percent that's driving the results of the
24 model, or the results of the simulation.
25 I didn't really give a very good account of that,
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McAFEE - QUESTIONS BY THE COURT
1 I'm afraid.
2 MR. LOHRER: Thank you, Professor McAfee.
3 THE COURT: Professor McAfee, Oracle and PeopleSoft
4 sell product with integration services, and some of their
5 product has integration already built in.
6 THE WITNESS: You mean the -- what do you mean built
7 in? The software has integration built in?
8 THE COURT: Yes.
9 THE WITNESS: Well, they have -- they have a
10 pre-configured version.
11 THE COURT: They pre-configured the versions, and
12 the various modules are integrated, perhaps even pillars are
13 integrated.
14 THE WITNESS: Yes, so that the products work
15 together to help you manage the enterprise. I think that's
16 been the testimony of many witnesses.
17 THE COURT: And yet, also those integration services
18 can be purchased separately.
19 THE WITNESS: So you could -- I think they're
20 actually multiple -- when they talk about the systems
21 integrators, as I understand it, you might be buying additional
22 services besides the kind of -- the integration of the
23 products, but there's certainly some overlap there.
24 And so for example, if I want a particular kind of
25 report that maybe draws on my HR database as well as on my
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McAFEE - QUESTIONS BY THE COURT
1 financial database, I want something that involves data from
2 both of those, and maybe even if the customer relations, if I
3 buy the suite, it's easy to have that built in, because in some
4 sense they're already integrated in advance.
5 If I don't buy a suite and I buy separate products
6 from separate companies, I might have to write a program that
7 plucks information from one of the, say, from the HR and also

8 from the financial management software, and produces the --
9 produces the chart that I want, that maybe gives, you know, the
10 average cost of my employees and what I'm paying out -- paying
11 to my employees and the raises over time, which is contained
12 both in the HR, but it's also contained in my financial
13 management, because it's -- that's part of my costs.
14 And so as I understand it --
15 THE COURT: Well, would it -- I don't want to cut
16 you off, but with respect to those products in which
17 integration services are built in, products that are
18 pre-integrated, part of the license fee is compensation for
19 those integration services, correct?
20 THE WITNESS: Yes, so part of the value of the
21 license is that you can -- in fact, one of the -- there's been
22 at least one witness who testified that implementing Lawson
23 would have, in fact, been much more expensive because it didn't
24 offer this functionality that you got with the three products
25 here, the three products, SAP, PeopleSoft and Oracle, because

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McAFEE - QUESTIONS BY THE COURT

1 it just didn't -- it had much more limited functionality and
2 you'd need to have spent a lot more in systems integration
3 expenses in order to get that software up and running, and
4 doing the job that the company needs.
5 THE COURT: Well, given that situation, what does
6 this do with respect to the definition of the product which is
7 at issue here, and these complementary products that you
8 address? Isn't that line rather a blurry one?
9 THE WITNESS: Well, so, I do think there are two
10 kinds of system integration on the table. So one thing is, how
11 do we get charts that are useful for managing our corporation,
12 and that's certainly -- I have two ways of doing that. I could
13 hire Accenture to write software that allows me with any
14 database to produce the kind of statistics and management
15 tools, if you will, that will let me operate my company.
16 But in addition, I'm hiring from the -- and so
17 that's something that's actually being incorporated into the
18 products, and I think the witness from DaimlerChrysler said,
19 when they want -- when they see functionality that they would
20 like that's missing, they actually go and say, why don't you
21 put this in the product, because it lowers their cost, rather
22 than hire it from Accenture. If it's built into the product,
23 then you don't have the upgrade issues that you had if it's --
24 if you have it from Accenture.
25 So that's one kind of integration, but the other

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1 thing you need from a systems integrator, which you're always
2 going to need if you buy one of these very sophisticated
3 products, is you have to fit it to your company. So you
4 need -- it needs to reflect your management structure and
5 your -- the way your organization operates.
6 And I think that kind of systems integration, which
7 is -- I know when I go to the charts at Caltech, it recognizes
8 that I'm a professor, and it's actually an Oracle product and
9 it recognizes that I'm a professor and it allows me to put
10 information in about myself and I can pay graduate students and
11 that sort of thing, through their software.
12 Well, all of that is -- I don't know that it's
13 Caltech-specific, but it's higher-education specific. That
14 kind of functionality had to be programmed into it.
15 So even though it was ready to accept that --
16 Professor Iansiti talked about how many different levels of
17 management the software recognized, and these three companies
18 can recognize unlimited levels of management. That's useful if
19 I merge two companies, when you merge two companies, you often
20 now have somebody above the two former independent business
21 units. There's no limit to that in the three products of this
22 case, but there is in other software.
23 THE COURT: Well, when you've talked about
24 complementary products in other lines of commerce, as you have,
25 talked about tires, batteries and accessories with respect to

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McAFEE - QUESTIONS BY THE COURT

1 automobiles and so forth, one is able to identify tires,
2 batteries, accessories and so forth. It's pretty hard to
3 identify the complementary products here, isn't it?
4 THE WITNESS: Yeah, I -- so my read of Professor
5 Iansiti, which that's my -- you know, I was actually very
6 interested in it, but he's the expert in some sense -- is that
7 he's saying that you need to actually fit your -- the way your
8 organization works, you need to flesh out in the software.
9 Now, in addition, you may also want some additional
10 reports, and some additional capabilities, and that's where I
11 think the distinction is blurry. Every new vintage of this
12 software offers additional capability, some of which individual
13 companies might have purchased in the past.
14 So for example, DaimlerChrysler, they get the
15 companies to include functionality that wasn't -- that they
16 previously maybe had to buy separately, and is now incorporated
17 in the product.
18 The testimony about Hyperion is that it integrates
19 disparate companies' products, and so it allows you to get, in
20 some sense, summary statistics, pay your taxes, and that sort
21 of thing, even when you have differences using separate
22 products, with the Hyperion product.
23 So you're always going to need to match your
24 organization to the software. That's always going to be a
25 separate product. Some of these charts that you produce, it

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McAFEE - QUESTIONS BY THE COURT

1 may be that you used to buy that as a complementary service,
2 and that gets folded into the software. After every generation
3 they get more and more capabilities, but I guess more and more
4 capabilities is never going to recognize that Preston McAfee is
5 a professor at Caltech because you're not going to program the
6 software to have every single business unit of every
7 organization in the world. You're still going to have to flesh
8 that out, and that's always going to require some systems
9 integration. But whether you can handle paying graduate
10 students or DaimlerChrysler's very complicated business
11 processes, that is something that the capabilities get bigger
12 every year.
13 THE COURT: You also testified about the traditional
14 notion of perfect competition. If I remember my principles of
15 economics course, as an undergraduate, the marginal cost curve
16 at some point or other began to rise. Well, as described in
17 this case, marginal cost doesn't rise very much.
18 THE WITNESS: That's my understanding.
19 THE COURT: It's pretty flat, and maybe even
20 approaches zero. Well, in that kind of a context, does the
21 traditional economic model apply?
22 THE WITNESS: So -- I said a little bit about this
23 in my direct testimony earlier, I touched on it, which is,
24 these companies would lose money under the perfect competition
25 model. You wouldn't expect to get entry to the point where

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McAFEE - QUESTIONS BY THE COURT

1 they ever reach perfect competition, because once prices equal
2 the marginal cost, they're losing money, because that's such,
3 as you've suggested, such a low number.
4 So no, we wouldn't expect them to be perfectly
5 competitive. Actually, my reason for wanting to talk about
6 that was the suggestion that SAP was a perfect competitor, I
7 think, for the existing two entities is actually mistaken.
8 They're not perfect competitors. We wouldn't expect them to be
9 perfect competitors, because they would lose money under
10 perfect competition. They would be pricing it as -- you know,
11 they'd be sell their software for $50 or a hundred dollars or
12 something, maybe a bit more than that if you include the fact
13 that they do actually have to go demonstrate the software.
14 They have to recover those marginal costs, but they would have
15 such low -- you know, it costs them, you know, many, many
16 millions of dollars, maybe even billions of dollars, to develop
17 this software. They have to recover that some way, and that's
18 just a feature of software markets and low marginal cost
19 markets generally work.
20 It's also not an unusual feature. We see estimates

21 for the production costs of Intel chips, the production cost,
22 the marginal cost as covered in textbooks are a dollar or less.
23 Those are very cheap and they sell them for hundreds of
24 dollars, and they used to sell them you know, for $700, $900,
25 and most of the costs of developing chips are fixed costs.
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McAFEE - QUESTIONS BY THE COURT

1 They're very expensive to develop and they're very cheap to
2 produce. That's also a feature of pharmaceutical drugs.
3 Again, a pill that might have cost them half a billion dollars
4 to develop costs them 50 cents to make, or a penny to make in
5 some instances.
6 So there are actually many industries that have this
7 feature. This is not -- software is not unique in that regard.
8 There are many industries with very low marginal costs, and in
9 that case you would expect product differentiation, you would
10 expect differences in the companies' offerings, you would
11 expect to see them doing, as I said, the kind of competitive
12 behavior that we see them engaging in. They vigorously attempt
13 to take their -- each other's market share, they leapfrog each
14 other technologically when they can, they very much
15 aggressively promote their own company interests.
16 The distinction I wanted to draw is, that doesn't
17 lead to a perfect competitive outcome, and the features of this
18 market will be less competitive post-merger.
19 THE COURT: Well, then, are you saying price
20 behavior is not a very good indicium of competition in these
21 markets?
22 THE WITNESS: No, so -- the price behavior is a very
23 good indicator of the level of competition in the traditional
24 economic sense, which is to say, we see that it's not very
25 competitive in that price sense. We see very large prices and
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McAFEE - QUESTIONS BY THE COURT

1 very low prices.
2 I think for some buyers, especially the very
3 price-sensitive buyers, they're getting quite competitive
4 prices. Greyhound will probably get a pretty good price,
5 because they're very price-sensitive.
6 I do think that a lot of competition has to do with,
7 Professor Elzinga testified, with the product development,
8 introducing new features, attempting to leapfrog -- we heard
9 testimony just this morning about that it took Oracle a pretty
10 long time to respond to PeopleSoft's entry in HR. It's that
11 kind of competition that is very much valuable to the buyers in
12 this industry.
13 THE COURT: Very well. Thank you, Professor McAfee,
14 for your testimony, sir. You may step down.
-----Subsequent section omitted-----
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