IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ORACLE CORPORATION and ORACLE U.S.A., INC.,	)	
Plaintiffs-Counterdefendants,	)	
v.	)	C.A. No. 06-414 (SLR)
EPICREALM LICENSING, LP,	)	**REDACTED PUBLIC VERSION**
Defendant-Counterclaimant.	)	

SUPPLEMENTAL APPENDIX OF ORACLE EXHIBITS
FILED ON AUGUST 21, 2008

VOLUME I

MORRIS, NICHOLS, ARSHT & TUNNELL LLP
Mary B. Graham (#2256)
James W. Parrett, Jr. (#4292)
1201 N. Market Street
P.O. Box 1347
Wilmington, DE 19899-1347
(302) 658-9200
mgraham@mnat.com
jparrett@mnat.com
Attorneys for Oracle Corporation and Oracle U.S.A., Inc.

OF COUNSEL:

James G. Gilliland
Theodore T. Herhold
Joseph A. Greco
Robert J. Artuz
Eric M. Hutchins
TOWNSEND AND TOWNSEND AND CREW LLP
379 Lytton Avenue
Palo Alto, CA 94301
(650) 326-2400

Dorian Daley
Peggy E. Bruggman
Matthew M. Sarboraria
ORACLE CORPORATION
ORACLE U.S.A., INC.
500 Oracle Parkway
Redwood Shores, CA 94065

August 21, 2008
Redacted Filing Date: August 28, 2008

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61469657 v1

CERTIFICATE OF SERVICE

I hereby certify that on August 28, 2008, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF which will send electronic notification of such filing to the following:

Richard L. Horwitz
David Ellis Moore
POTTER ANDERSON & CORROON, LLP

Additionally, I hereby certify that true and correct copies of the foregoing were caused to be served on August 28, 2008 upon the following individuals in the manner indicated:

BY E-MAIL

Richard L. Horwitz
David Ellis Moore
POTTER ANDERSON & CORROON, LLP
1313 N. Market St., Hercules Plaza, 6th Floor
P.O. Box 951
Wilmington, DE 19899-0951

rhorwitz@potteranderson.com
dmoore@potteranderson.com

BY E-MAIL

George S. Bosy, Esquire
JENNER & BLOCK
330 N. Wabash Avenue
Chicago, IL 60611-7603

gbosy@jenner.com

/s/ James W. Parrett, Jr.

James W. Parrett, Jr. (#4292)

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INTELLECTUAL PROPERTY LAW GROUP LLP

12 SOUTH FIRST STREET

SUITE 1205

SAN JOSE, CA 95113

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/008,574*.

PATENT NO. *5894554*.

ART UNIT *3992*.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,574	04/03/2007	5894554	FRIENDFINDER.RX1	2817

8791 7590 05/04/2007

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER	
Scott L. Weaver	
ART UNIT	**PAPER NUMBER**
3992	IFW

DATE MAILED: 05/04/2007

Please find below and/or attached an Office communication concerning this application or proceeding.

Order Granting / Denying Request For Ex Parte Reexamination	Control No.	Patent Under Reexamination	
	90/008,574	5894554	
	Examiner	Art Unit	
	Scott L. Weaver	3992	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed *03 April 2007* has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☒ PTO/SB/08, c)☒ Other: *Decision on Request*

1. ☒ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

2. ☐ The request for *ex parte* reexamination is DENIED.

This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). **EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.**

In due course, a refund under 37 CFR 1.26 (c) will be made to requester:

a) ☐ by Treasury check or,

b) ☐ by credit to Deposit Account No. _____, or

c) ☐ by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).

cc:Requester (if third party requester)

Decision on Request for Ex Parte Reexamination

Reexamination has been requested for claims 1-11 of United States Patent Number 5,894,554 to Lowery et al. issued on April 13, 1999 from application No. 08/636,477 filed on April 23, 1996.

A substantial new question of patentability affecting claims 1-11 of United States Patent Number 5,894,554 to Lowery is raised by the request for reexamination filed on April 3, 2007 for the reasons set forth below.

The References Cited in The Request

The Request identifies the following documents as providing teachings relevant to claims 1-11 of United States Patent Number 5,894,554 to Lowery

Exhibit B: Installation and Planning Guide for Microsoft Internet Information Server, Version 1.0 ("Installation Guide").

Exhibit C: ODBC Web Database Add-on for Microsoft Internet Server Beta Release Notes (Exhibit B and C collectively hereafter referred to as "ODBC Notes").

Exhibit D: Oracle® Web Server User's Guide, Release 1.0 (1995).

Exhibit E: Katrina Montinola, "The Oracle WebServer: A Technical Discussion," September 25, 1995 (Exhibit D and E collectively hereafter referred to as "the Oracle references").

Exhibit F: John Gaffney, "Illustra's Web DataBlade Module, An Illustra Technical Paper," SIGMOD Record, Vol. 25, No. 1, March 1996 (hereafter "Illustra").

Exhibit G: Carl Lagoze, Erin Shaw, James R. Davis and Dean B. Krafft, "Dienst: Implementation Reference Manual," pp. 1-69 (May 5, 1995) (hereafter "Lagoze" or "Dienst").

Exhibit H: Alexander Clausnitzer, Pavel vogel and Stephan Wiesener, "A WWW Interface to the OMNIS/Myriad Literature Retrieval Engine" (1995) (hereafter "Clausnitzer").

Exhibit I: Christian Derler, "The World-Wide Web Gateway to Hyper-G: Using a Connectionless Protocol to Access Session-Oriented Services," Institut fur Informationsverarbeitung und Computergestutzte neue Medien, pp. 1-104 (March 1995) (hereafter "Derler") .

Exhibit J: U.S. Patent No. 6,249,291 to Popp (hereafter Popp).

Exhibit K: Bowman et al., "Harvest: A scalable, Customizable Discovery and Access System" (March 12, 1995) (hereafter "Harvest").

Exhibit L: Antchev et al., "A WWW Learning Environment for Mathematics" (December 12, 1995) (hereafter "Antchev").

Exhibit M: Ashley Beitz, Renato Iannella, Andreas Vogel, zhonghua Yang, "integrating WWW and Middleware"(May 2, 1995) (hereafter "Beitz").

Exhibit N: Ari Luotonen, and Kevin Altis, "World-Wide Web Proxies" (April 1994) (hereafter "Luotonen").

Exhibit O: Richard Knudson, "Application Development with Microsoft's Internet Information Server" (February 2, 1996) (hereafter "Knudson").

Each of the references listed as Exhibit B through Exhibit O has not previously been made of record during prosecution of the application which became the 5,894,554 patent to Lowery and as such has not been previously considered nor addressed during an 'examination' of the application which became the 5,894,554 patent to Lowery, nor in a final holding of invalidity by the Federal Courts. The references listed above are not cumulative to the prior art of record.

Prosecution History

The 5,894,554 patent to Lowery discloses management of dynamic web page generation requests to a web server with the request intercepted and routed from web server to a page server such as to release the web server from processing the request and so that the web server may process other requests concurrently. A dynamically generated web page with data dynamically retrieved from one or more data sources is generated from the intercepted request and sent back to the requesting client or stored on machine accessible to web server for later retrieval (col.2,ln.21-33; col.4,ln.54-62; col.5,ln.38-48; col.6,ln.21-32).

Claim 1 is representative:

> 1. A computer-implemented method for managing a dynamic Web page generation request to a Web server, said computer-implemented method comprising the steps of:
> routing said request from said Web server to a page server, said page server receiving said request and releasing said Web server to process other requests, wherein said routing step further includes the steps of intercepting said request at said Web server, routing said request from said Web server to a dispatcher, and dispatching said request to said page server;
> processing said request, said processing being performed by said page server

while said Web server concurrently processes said other requests; and dynamically generating a Web page in response to said request, said Web page including data dynamically retrieved from one or more data sources.

The examiner did not indicate reasons for allowance during prosecution of the application which became the 5,894,554 patent to Lowery. The record indicates that the prior art of record did not teach or suggest 'dynamically generating a Web page in response to a request wherein the Web page includes data dynamically retrieved from one or more data sources, as claimed'.

Issues Raised in the Request

The Requestor alleges that an SNQ is raised by Exhibits B and C collectively (ODBC Notes).

It is agreed that the consideration of Exhibit B and C (ODBC Notes) raises a substantial new question of patentability as to claims 1-11 of the 5,894,554 patent to Lowery.

Request pages 12-16 are hereby incorporated by reference from the request for reexamination for their explanation of the teaching provided in ODBC Notes that was not present in the prosecution of the application which became the 5,894,554 patent to Lowery.

In summary, ODBC Notes provides a discussion of features of the Microsoft Internet Information Server as shown in figure 2 of page 2 of the Release Notes Document portion of ODBC Notes which provides dynamic generation of web pages using a database connector as described in steps one through six on pages 12-16 of the request. Requester takes the position that the web server performs as a dispatcher dispatching the requests to database(s) and necessarily releases connections in order to support the described multiple simultaneous connections.

There is a substantial likelihood that a reasonable examiner would have considered the ODBC Notes reference describing these features important in making a decision as to the patentability of claims 1-11 during the examination of the application which became the 5,894,554 patent to Lowery. The ODBC Notes references describing the dynamic generation of a web page using the database connector and dispatch of requests to database by web server as described on pages 12-16 and 34-42 of the request was not before the office during any previous examination of the application which became the 5,894,554 patent to Lowery.

Accordingly, ODBC Notes raises a substantial new question of patentability as to claims 1-11, which question has not been decided in a previous examination of the 5,894,554 patent to Lowery.

The Requestor alleges that an SNQ is raised by Exhibits D and E collectively (the Oracle references).

It is agreed that the consideration of Exhibit D and E (the Oracle references) raises a substantial new question of patentability as to claims 1-3 and 5-11 of the 5,894,554 patent to Lowery.

Request pages 16-20 are hereby incorporated by reference from the request for reexamination for their explanation of the teaching provided in the Oracle references that was not present in the prosecution of the application which became the 5,894,554 patent to Lowery.

In summary, the Oracle references provides a discussion of features of Release 1.0 of Oracle Web Server, which disclose a Listener which determines if a received request from a client is for a dynamic or static document (p.1-3 Exhibit C and p.3 Exhibit D). A web agent is invoked if the request is for a dynamic document and thus the interception of the request occurs at the listener. The web agent is described as serving as a dispatcher which dispatches a request to a dynamic web page server (Oracle Server 7) and releasing the listener to process other incoming requests.

There is a substantial likelihood that a reasonable examiner would have considered the Oracle references describing these features important in making a decision as to the patentability of claims 1-11 during the examination of the application which became the 5,894,554 patent to Lowery. The Oracle references describing the dynamic generation of a web page using the database connector and dispatch of requests to database by web server as described on pages 16-20 and 42-50 of the request was not before the office during any previous examination of the application which became the 5,894,554 patent to Lowery.

Accordingly, the Oracle references raises a substantial new question of patentability as to claims 1-3 and 5-11, which question has not been decided in a previous examination of the 5,894,554 patent to Lowery.

The Requestor alleges that an SNQ is raised by Exhibit F (Illustra).

It is agreed that the consideration of Exhibit F (Illustra) raises a substantial new question of patentability as to claims 1-5 and 7-11 of the 5,894,554 patent to Lowery.

Request pages 20-22 section C are hereby incorporated by reference from the request for reexamination for their explanation of the teaching provided in Illustra that was not present in the prosecution of the application which became the 5,894,554 patent to Lowery.

In summary, Illustra provides a discussion of features of the Illustra web server architecture for generating a dynamic web page as shown on page 110 figure 2 of Illustra.

There is a substantial likelihood that a reasonable examiner would have considered the Illustra reference describing these features important in making a decision as to the patentability of claims 1-5 and 7-11 during the examination of the application which became the 5,894,554 patent to Lowery. The Illustra reference describing the dynamic generation of a web page using the described components as described on pages 20-22 and 50-55 of the request was not before the office during any previous examination of the application which became the 5,894,554 patent to Lowery.

Accordingly, Illustra raises a substantial new question of patentability as to claims 1-5 and 7-11, which question has not been decided in a previous examination of the 5,894,554 patent to Lowery.

The Requestor alleges that an SNQ is raised by Exhibit G (Lagoze (Dienst)).

It is agreed that the consideration of Exhibit G (Lagoze (Dienst)) raises a substantial new question of patentability as to claims 1-4 and 7-11 of the 5,894,554 patent to Lowery.

Request pages 22-24 section D are hereby incorporated by reference from the request for reexamination for their explanation of the teaching provided in Lagoze (Dienst)) that was not present in the prosecution of the application which became the 5,894,554 patent to Lowery.

In summary, the request provides a discussion of Lagoze (Dienst)) which includes a system and method for managing requests for documents ("Web Pages") stored on page server (Dienst server) or other server from WWW clients. The requester indicates that Dienst discloses the requests from the client being intercepted at the server by a CGI (Common Gateway Interface) stub as shown via figure 2 on page 10 of Dienst. The CGI stub dispatches the requests to a page server (Dienst server) which retrieve the requested dynamic content for delivery to the requesting client and which allows the WWW server to handle other incoming requests.

There is a substantial likelihood that a reasonable examiner would have considered the Lagoze reference (Dienst) describing the dynamic generation of a web page using the Dienst Server , WWW server and CGI stub important in making a decision as to the patentability of claims 1-4 and 7-11 during the examination of the application which became the 5,894,554 patent to Lowery. The Lagoze (Dienst) reference describing the dynamic generation of a web page using the described components as described on pages 22-24 and 55-61 of the request was not before the office during any previous examination of the application which became the 5,894,554 patent to Lowery.

Accordingly, Lagoze (Dienst)) raises a substantial new question of patentability as to claims 1-4 and 7-11, which question has not been decided in a previous examination of the 5,894,554 patent to Lowery.

The Requestor alleges that an SNQ is raised by Exhibit H (Clausnitzer).

It is agreed that the consideration of Exhibit H (Clausnitzer) raises a substantial new question of patentability as to claims 1-5 and 7-11 of the 5,894,554 patent to Lowery.

Request pages 24-26 section E are hereby incorporated by reference from the request for reexamination for their explanation of the teaching provided in Clausnitzer that was not present in the prosecution of the application which became the 5,894,554 patent to Lowery.

In summary, Clausnitzer provides a discussion of a WWW interface to a search and retrieval system as shown in figure 5 as shown on page 25 of the request. The figure and explanation accompanying show a CGI gateway program, OMNIS servers and document servers which manages requests for documents stored on a server from WWW clients. The request indicates the requests from the client being intercepted at the server by a CGI (Common Gateway Interface) stub as shown via figure 5 of Clausnitzer.

There is a substantial likelihood that a reasonable examiner would have considered the Clausnitzer reference describing these features important in making a decision as to the patentability of claims 1-5 and 7-11 during the examination of the application which became the 5,894,554 patent to Lowery. The Clausnitzer reference describing the dynamic generation of a web page using the described components as described on pages 24-26 and 61-66 of the request was not before the office during any previous examination of the application which became the 5,894,554 patent to Lowery.

Accordingly, Clausnitzer raises a substantial new question of patentability as to claims 1-5 and 7-11, which question has not been decided in a previous examination of the 5,894,554 patent to Lowery.

The Requestor alleges that an SNQ is raised by Exhibit I (Derler).

It is agreed that the consideration of Exhibit I (Derler) raises a substantial new question of patentability as to claims 1-6 and 9-11 of the 5,894,554 patent to Lowery.

Request pages 26-29 section F are hereby incorporated by reference from the request for reexamination for their explanation of the teaching provided in Derler that was not present in the prosecution of the application which became the 5,894,554 patent to Lowery.

In summary, Derler provides a discussion of a WWW (world wide web) Gateway which includes software features including Master, Slave, and Child processes which intercept and dispatch requests to the page server (a Hyper-G server) while the WWW Gateway processes other requests. Derler describes the generation of dynamic web pages using architecture as shown in figure 4.17 on page 95.

There is a substantial likelihood that a reasonable examiner would have considered the Derler reference describing the dynamic generation of a web page using the Master, Slave, Child processes of the gateway and Hyper-G server important in making a decision as to the patentability of claims 1-6 and 9-11 during the examination of the application which became the 5,894,554 patent to Lowery. The Derler reference describing the dynamic generation of a web page using the described components as described on pages 26-29 and 66-73 of the request was not before the office during any previous examination of the application which became the 5,894,554 patent to Lowery.

Accordingly, Derler raises a substantial new question of patentability as to claims 1-6 and 9-11 which question has not been decided in a previous examination of the 5,894,554 patent to Lowery.

The Requestor alleges that an SNQ is raised by Exhibit J (Popp).

It is agreed that the consideration of Exhibit J (Popp) raises a substantial new question of patentability as to claims 1-3, 5, and 7-11 of the 5,894,554 patent to Lowery.

Request pages 29-31 section G are hereby incorporated by reference from the request for reexamination for their explanation of the teaching provided in Popp that was not present in the prosecution of the application which became the 5,894,554 patent to Lowery.

In summary, Popp provides a discussion of using a web server, CGI Messenger and page servers to generate dynamic web pages. The CGI messenger takes over the request for dynamic content and acts as a dispatcher releasing the web server to process other incoming requests.

There is a substantial likelihood that a reasonable examiner would have considered the Popp reference describing the dynamic generation of a web page using these features important in making a decision as to the patentability of claims 1-3, 5, and 7-11 during the examination of the application which became the 5,894,554 patent to Lowery. The Popp reference describing the dynamic generation of a web page using the described components as described on pages 29-31 and 73-78 of the request was not before the office during any previous examination of the application which became the 5,894,554 patent to Lowery.

Accordingly, Popp raises a substantial new question of patentability as to claims 1-3, 5, and 7-11 which question has not been decided in a previous examination of the 5,894,554 patent to Lowery.

Requestor further alleges that claims 4-8 may be unpatentable in consideration of various combinations of exhibits A-J and secondary references K-O as indicated on pages 78-81 of the request. Since each of the exhibits A-J as indicated in the request is considered to raise a substantial new question of patentability as noted above, the combinations of exhibits in combination therewith as suggested on pages 78-81 of the request also raises substantial new question of patentability for similar reasons.

All claims 1-11 of the 5,894,554 patent to Lowery will be reexamined as requested in the request filed on 4/3/2007.

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving U.S. Patent Number 5,894,554 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Please mail any communications to:
Attn: Mail Stop "Ex Parte Reexam"
Central Reexamination Unit
Commissioner for Patents
P. O. Box 1450
Alexandria VA 22313-1450

Please FAX any communications to:
(571) 273-9900
Central Reexamination Unit

Please hand-deliver any communications to:
Customer Service Window
Attn: Central Reexamination Unit
Randolph Building, Lobby Level
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Scott L. Weaver
Primary Examiner
Central Reexam Unit 3992
(571) 272-7548

SCOTT L. WEAVER
CRU EXAMINER-AU 3992

Conferees:

ROLAND G. FOSTER
CRU EXAMINER-AU 3992

MARK J. REINHART
SPRE-AU 3992
CENTRAL REEXAMINATION UNIT

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that:

The patent owner's correspondence address for all communications in an *ex parte* reexamination or an *inter partes* reexamination is designated as the correspondence address of the patent.

> *Revisions and Technical Corrections Affecting Requirements for Ex Parte and Inter Partes Reexamination*, 72 FR 18892 (April 16, 2007)(Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), automatically changed to that of the patent file as of the effective date.

This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, including the present reexamination proceeding, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the patent owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address patent owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination and Amendment Practice	(571) 272-7703
Central Reexam Unit (CRU)	(571) 272-7705
Reexamination Facsimile Transmission No.	(571) 273-9900

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May 1, 2007

A73

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IN THE UNITED STATES DISTRICT COURT FOR THE
WESTERN DISTRICT OF PENNSYLVANIA

- - - -

ORACLE CORPORATION and)
ORACLE U.S.A. INC.,)
)
Plaintiffs,)
) C.A. No. 06-cv-414
-vs-) (SLR)
)
EPICREALM LICENSING, LP,)
)
Defendant.)

- - - -

VIDEOTAPED DEPOSITION OF:
MICHAEL SHAMOS, Ph.D., J.D.

- - - -

DATE: June 30, 2008
Monday, 9:12 a.m.

LOCATION: JONES DAY
One Mellon, 31st Floor
500 Grant Street
Pittsburgh, PA 15219

TAKEN BY: Defendant

REPORTED BY: Heidi H. Willis, RPR, CRR
Notary Public
Reference No. HW07873

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A. I haven't looked at it in that way. I mean I haven't gone down my experiences and rated them as this is the most relevant thing. I've been teaching electronic commerce for nine years. I've been working in computer-related and internet-related inventions for at least 13 years. There's just a lot of experience that accumulates during that time. I worked on a lot of internet patent cases during that time.

Q. What specifically have you done by the filing date of the '554 patent that you would view as being experience that is important to your work on this case?

A. Important to my work. It's difficult to say that a particular piece of experience is important to the work or not. I mean we are the sum total of everything that we have done and remember in our lives. I've been involved with computers since I was 14 years old, and so there's a tremendous amount of experience that you get in various -- use of various kinds of systems. I ran two computer software companies. There's just a lot of experience that's relevant.

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I can't point to anything and say specifically, ahh, I'm glad I did that in my life, that's what permitted me to right this section of my report. I don't have identification for you of that.

Q. Could I ask you to turn now to what's marked Exhibit 3, which, coincidentally, is marked Exhibit 3 to your report, Dr. Shamos.

A. Yes.

Q. And --

A. I never actually imagined anybody would print this out. I figured it would take the entire side of a building, and it might if you pasted these all up on a wall. I never printed it out.

Q. On the first page of Exhibit 3, you've got some text at the top, Invalidity analysis of Lowery, et al., '554 and '335. Do you see that?

A. Yes.

Q. Directly below that there's a statement that says, Note: A large number of cells in this table are automatically replicated. These are denoted by tan shading.

Does that mean that portions of your

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claim charts were simply copied from a limitation in one claim to a limitation in another claim?

A. Yes. So, for example, there's identical language for many process steps in the different claims. One, to avoid error, if they are the same, then you may as well draw them from a common source.

So where I list the claim elements, that's row 15, along the top, they are replicated elements there.

Then if I find, for example, that a reference satisfies a particular limitation, then of course I want to indicate by replication that it also satisfies the same identical elements elsewhere. That's what that's about.

It cuts down the work. I mean the total number of elements, the total number of elements was large here. I think I was able to cut it down by a factor of two-thirds by using replication.

Q. Did you replicate cells only where the claim language was identical?

A. No.

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Q. Why not?

A. Because I didn't feel it was necessary. I replicated -- for example, where we are talking about the difference between an HTTP compliant device and a web server, I treated those as the same.

Q. And the next line down there's a statement, Claim elements found in an accused instrumentality --

A. Yes.

Q. -- are indicated by nonblank entries in the right-hand portion of the table?

A. Yeah, so that's an error. So the way I did this is I started out with -- I used this kind of format before for both invalidity and infringement. I pulled an Excel spreadsheet that happened to have all that commentary up at the top, and I didn't look at line 2. So it should be claim elements found in an item of prior art are indicated by nonblank entries in the right-hand portion of the table.

Q. Okay.

A. It's the dangers of replication.

Q. Is there somewhere in your report or claim chart here where you indicate what claim

construction you are using in finding that these limitations are supposedly disclosed by their particular prior art references?

A. Okay. So in a lot of cases it doesn't matter because I've used a narrower claim interpretation, so it satisfies the narrower, it satisfies the more general. In a number of cases I think I've quoted the language from the claim term interpretation.

So I spent a lot of time on what's the dynamic information maintained about page servers, for example, which indicates which construction I'm using.

But I don't think that there's -- and every once in a while I make reference to a particular theory of epicRealm, releasing, for example, whether it's TCP releasing, but otherwise I don't think I make -- I have specific statements in here that say under this interpretation it's this, under that it's not. It may happen a few times.

Q. Well, let me just give you an example to ask a question here. Just on this first page, you've got a Reference 18, Poole, et al., U.S. patent. Do you see that?

A. Yes.

Q. And if we go over to the column that you have designated 1b3 --

A. Yes.

Q. -- the claim limitation listed there I believe is, Releasing said web server to process other requests. Do you see that?

A. Yes, yes.

Q. Then in the Poole row for that column, you've written, Communication in the invention is by pipes (for applications on the same processor) or a TCP\IP across a network. TCP provides TCP releasing for epicRealm's contentions. Therefore, the server application is released when the request handed off.

A. Yes, according to epicRealm.

Q. Did you disclose an opinion on whether this piece of prior art meets the limitation under Oracle's proposed claim construction?

A. There's no specific statement there, but if -- everything depends on whether the act that's referred to in the Oracle claim construction is satisfied by TCP releasing.

Q. Why do you say that?

A. Because an act is required to free the web

server, and there's dispute as to whether these acts that are performed actually do effectuate a release.

Q. In the next column your entry for Poole says, Requests for data are intercepted at server application 148 when a data collector script is processed.

A. Yes.

Q. Do you see that?

A. Yes.

Q. Is it your belief that that claim element is disclosed under epicRealm's claim construction or Oracle's claim construction or both?

A. Well, I think it's -- there's an argument that it satisfies both. It all depends where the collector script is and whether the collector script is executed before the web server executable. If so, it satisfies Oracle's. If in either event, it satisfies epicRealm's.

Q. And what you are saying now is just your testimony here today as opposed to something that's in your report; correct?

A. Well, what's in the report is right there.

Q. Did you indicate in your claim charts which claim construction you were using for any of

these cells?

A. Well, there are thousands of cells. I don't recall. It's possible and maybe not.

Q. Okay. Back in the --

A. I mean I'm sure that I have their references to constructions. I mean literally, the literal word "construction" I can probably find in my search.

Q. If we could --

A. Oh, I wasn't --

Q. Are you finished?

A. No, I was just leafing through. I wasn't performing a function.

Q. Let's turn back to your main report, please, which we've marked Exhibit 2. In paragraph 14 of your report, you make reference to some reexamination proceedings.

A. Yes.

Q. Do you see that?

A. Yes.

Q. Did the existence of these reexamination proceedings have any effect on your opinions?

A. Effect on my opinions, so I mean the existence of the requests or the action of the patent office on the requests?

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Q. The action of the patent office on the requests.
A. I don't think so. It might have bolstered my confidence, but it didn't change what my opinion was.
Q. Do you know what percentage of requests for ex parte reexamination are granted by the United States Patent and Trademark Office?
A. No.
Q. Would that matter to you in your opinions?
A. I have an understanding that the United States Patent Office likes to defend its prior decisions and that often the result of reexamination is a confirming of all claims. That's not universally true, but I believe that to be the prejudice of the patent office.
Therefore, when the patent office decides to undertake review and, in fact, finds claims invalid, it's an unusual event, to my understanding.
Q. You believe it's an unusual event for the patent office to grant an ex parte request for reexamination; is that correct?
A. No. For it to grant and then find claims invalid based on the request.

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Q. When you say find claims invalid, you mean make a final determination or simply issue an office action rejecting the claims?
A. I haven't distinguished between them.
Q. So you believe it would be unusual then for the patent office to issue an office action and the reexamination that rejects claims?
A. If unusual means happens less than 50 percent of the time, then, yeah, that's my understanding.
Q. What's that understanding based upon?
A. Just hearsay, just having been around, listening to patent attorneys talking.
Q. Did I understand one of your earlier answers to say that you believe there is a prejudice of the patent office with respect to reexaminations?
A. Yes. Don't quote me to the commissioner, but I think that's true.
Q. Why do you say that?
A. Because it is in the natural order of things, government agencies defend their prior decisions.
Q. Dr. Shamos, are you familiar with something called client server architecture?

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A. Yes.
Q. What is client server architecture?
A. Client server architecture represented a fundamental change in the nature of computing. In the old days there was a computer. You programmed the computer to do what you wanted. You fed it data, and you waited for the results to come back. There was no client. There was no server. There was a computer.
Network architectures made it conceivable that one computer could actually ask another computer to do work for it, and that computer in turn could turn around and ask a third computer to do work for it, because the results -- first of all, the data necessary to do the processing could be transmitted over the network, the request to do the processing could be transmitted over the network, and the results of the processing could be transmitted back over the network.
And so at any moment a machine could be in client state or it could be in server state depending on whether it was the client or server at that particular moment, and that

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was brought about by the existence of networking technology, so it's quite old.
And client server became a paradigm in computing because it permitted there to be a very clear functional separation between what different computers on a network were doing, and it even impacted how programming teams were created and how systems were built because you could have created one team that would focus completely on the application that was going to run on the one server, and they didn't have to concern themselves with the details of the rest of the system once they were given interface specifications.
That's client server.
Q. Are you familiar with something called a web server architecture?
A. Yes.
Q. Is a web server architecture the same as a client server architecture?
A. It's an instantiation of a client server architecture.
Q. What do you mean by that?
A. If the generic class is client server, then web server is a species of it.

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A. Well, it certainly is.
Q. Are there any other ones, any other reasons for your conclusion other than what you perceive as a failure to mention any act of releasing?
A. There's no reason that I'm currently aware of or that I relied on in my report. There might be other reasons.
Q. Did you review the deposition testimony of the inventors in this case?
A. Yes.
Q. I'd ask you to turn to page 30 of your report, please. There's a paragraph there 102.
A. Yes.
Q. About midway through the paragraph, I'll read a sentence to you, "The decision can be based on server load, which is conventional load balancing, or may be based on the data sources available to the various page servers, or both."
A. Yes.
Q. Do you see that?
A. I do.
Q. Can you explain what you meant in that sentence?

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A. Yes. So in all the remaining asserted claims, dispatching is either a claim step or there's an apparatus that performs dispatching, and the specification talks about the basis on which a page server can be selected, and there's one section that talks about being able to base it on server load. There's another section that talks about basing it on the data sources available to the page server.

It avails you nothing to send a request to a page server that is incapable of responding to the request, and so if you have knowledge that a particular data source is needed and is only present on page servers 1 through 3, then you are going to send it to page servers 1 through 3, not the other servers, and that's what I mean. And there's nothing in the patent that says you couldn't do both.

Q. Your discussion here of dispatching, is that discussion in the context of what you perceive the term "dispatching" to mean in the claims?
A. It's not what I perceive. It's based on the Texas construction, and the construction in

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the Oracle case is more general. So if something satisfies dispatching in the Texas case, it satisfies dispatching in the Oracle case.
Q. You say that the decision can be based on server load which is conventional load balancing?
A. Yes.
Q. What is your basis for saying that that is, quote, conventional load balancing?
A. Because that's what it is.
Q. What do you mean by conventional load balancing?
A. Load balancing is a very old concept. It long predates computers. It is done -- the formal analysis came with queuing theory in the 1940s where you have service lines, people are waiting for service, how do you allocate the people who are waiting for service in the different lines.

It happens in banks, it happens at U.S. Immigration, where there's a guy, you can call him a dispatcher, if you like, that points you to the right line to stand in so he can balance things and keep the operating

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going efficiently. That's what load balancing is.

Now, in the context of client server computing, when there were a number of servers available to handle requests -- this is even in the pre-web days -- an intelligent decision was better than a nonintelligent decision about where should you send a request to your pool of servers, and the idea of load balancing to increase the general efficiency of the operation so you don't assign tasks to servers that are already burdened is very old.

Now, we move to the web world. It's exactly the same thing. You have a queue, requests are coming in, you have end servers that are capable of responding to the request, which one do you send it to. That's load balancing.
Q. Did you say in your answer that is exactly the same thing?
A. Yes, I said that.
Q. Do you really believe that?
A. Oh, absolutely. It is exactly the same thing.
Q. So in your view designing a web server architecture offered no additional challenges

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Q. We'll get those for you in a minute.
A. You can help me out in the meantime by telling me whether a tree falling in a forest makes a sound if no one's around to hear it. Give me the answer to that question and I think I can give you the answer to the other one.
Q. I would hire an expert witness who is very smart and ask him that question, ask him what his opinion is.
A. I think we are going to end up philosophers to answer this in. If it would help, I have this document which I may exhibit to you.
Shall I show it to him?
Q. I'll go ahead and mark an exhibit that has both in them here.
A. Okay. Fine.
Q. This is -- we'll mark as Shamos Exhibit 5 a copy of another report entitled Defendant epicRealm Licensing, LP's Expert Report of Dr. David Finkel.
- - - -
(Exhibit No. 5 marked for identification.)
- - - -
Q. Dr. Shamos, we have handed you what's been marked as Exhibit 5, and I believe if you look

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at Tab A and Tab B, you will see the epicRealm proposed claim construction and Oracle proposed claim construction, so you could look at each of those for dispatching and then answer for me the question of whether in your opinion a system with only a single page server can perform dispatching.
A. Okay. Under epicRealm's proposed claim construction, no, because it requires an informed selection, and if there's no choice, it doesn't seem to me to be an informed selection, but that's not a technical opinion of a computer scientist. That's an opinion of a hopefully rational human being considering the philosophical issues.
Q. Okay. How about under Oracle's proposed claim construction?
A. Okay. So dispatching said request to said page server, Analyzing a request to make an informed selection of which page server should process the request and sending the request to that pager server.
No, still requires informed selection, so I don't see what -- I don't see how the selection is informed.

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Q. If there's only one page server?
A. There's no selection. It's rote. But, again, it's not a technical opinion.
Q. You mentioned I think earlier in your answers on this topic that you had been told that epicRealm had accused certain systems having only a single page server of infringing --
A. Yes.
Q. -- is that correct?
A. I have been told that.
Q. What is your basis for saying that epicRealm has made those accusations?
A. Because I was told that.
Q. By whom?
A. By counsel for Texas defendants.
Q. What systems having only a single page server were accused of infringing to your knowledge?
A. I do not know.
Q. Were they systems of the Texas Defendants as opposed to Oracle?
A. They were of the Texas Defendants.
Q. Are you aware of any similar situation with respect to any of the Oracle products and accusations?
A. When you say a similar situation, meaning?

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Q. Has anyone told you that epicRealm has made an accusation against Oracle that would involve single server systems being accused of infringing the claims?
A. I don't recall. It might have happened.
Q. But not that you recall?
A. Right.
MR. PATRAS: Okay. Let's take a break.
- - - -
(There was a recess in the proceedings.)
- - - -
THE VIDEOGRAPHER: We are now back on the record. The time indicated on the screen is 12:03 p.m.
BY MR. PATRAS:
Q. Dr. Shamos, I wanted to go back and just clarify one thing. Earlier you were looking on your computer at a copy of your report?
A. Yes.
Q. It's the report for the Delaware case; correct?
A. Yes.
Q. Dr. Shamos, do you have an understanding of what dynamic information is?

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A. Yes.
Q. What is dynamic information?
A. Information that can change.
Q. Is that your complete definition of dynamic information?
A. If the term is "dynamic information," that's what it means. If you are asking about dynamic information maintained about page servers, that might be different.
Q. What in your opinion is dynamic information maintained about page servers?
A. My understanding is it's information that may change and, therefore, cannot be precompiled into code. I can give numerous examples of information maintained about page servers that would be dynamic information?
Q. What would be such an example?
A. An example is the existence of the page server. New page servers can spawned. The dispatcher can't know that it can dispatch to them unless it's informed about the existence of the page servers. Page servers can drop off line. Page servers can be added, not spawned, but literally added in hardware. Page server load changes over time. The

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resources and protocols available to a page server can be reconfigured and changed, such as even discussed in the patent. Website administrator can go do things to the page servers, and precompiled code couldn't know about those changes. It would have to make -- it would have to access some kind of data in order to be able to process the request properly.
Q. Can you show me where in your report you are referencing?
A. You didn't ask me with reference to my report. You just asked me if I had an understanding of what dynamic information was, and I answered.
Q. Have you disclosed that opinion in your report anywhere?
A. I don't think I was asked to. I think in specific cases where I'm applying prior art, what I'm obliged to show is that under the construction requiring dynamic information maintained about page servers, I have to identify what that dynamic information is. I was never asked to, until you just asked me now, to give a general definition of dynamic

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information maintained about page servers.
Q. What in your view is the difference between dynamic and static?
MR. ARTUZ: Objection, vague, calls for narrative.
A. Okay. So in the abstract, just looking at those two words, static means that which does not change, dynamic means that which changes.
Q. Can a static web page be changed over time?
MR. ARTUZ: Objection, vague, lacks foundation.
A. This is a philosophical question because if I change the static web page, it's no longer the same web page, and so the answer is in the philosophical sense, no, but normally one regards static pages as unchanging; that is, they can be delivered as-is without the need for further processing.
The distinction between dynamic and static web pages is not the same thing as the difference between static and dynamic information.
MR. PATRAS: Let me hand you a copy which we'll mark as Shamos Exhibit No. 6 of the '554 patent-in-suit.

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- - - -
(Exhibit No. 6 marked for identification)
- - - -
BY MR. PATRAS:
Q. Dr. Shamos, if I could direct your attention to claim 1 in the '554 patent.
A. Yes.
Q. Do you see the preamble refers to a computer implemented method for managing a dynamic web page generation request --
A. Yes.
Q. -- et cetera? Do you have an understanding of what dynamic means there?
A. Yes. It is a request for a dynamic web page.
Q. What does dynamic mean in that context, in your opinion?
A. Dynamic means a page that was not in existence at the time the request was made, but must be composed in response to the request.
Q. Could I ask you to turn back to Dr. Finkel's report which had the claim constructions in it.
A. Yes.
Q. And looking first at Appendix A, which is the epicRealm proposed claim construction --

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A. Yes.
Q. -- do you see for the dispatching entry a reference within that proposed construction to dynamic information?
A. Yes.
Q. Do you believe that dynamic information -- strike that.
Do you believe that dynamic in that context means something different than dynamic in terms of a dynamic web page --
A. Sure.
Q. -- as set forth in claim one?
A. Sure.
MR. ARTUZ: Objection, calls for a legal conclusion, lacks foundation.
A. Nevertheless, I do believe it's different because static and dynamic web pages are terms of art. We understand what they mean. Dynamic information doesn't have a universally ascertainable meaning. It depends on the context in which it's used.
Q. What do you think dynamic information means in this context?
A. I think I answered that question. Dynamic information is information that can't be known

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at the time that the software in use was compiled but must be ascertained when the software is running because it's changeable.
Q. It can't be ascertained at the time that the software is compiled or when it's first executed?
A. When it's compiled. There's no real such concept as first executed, because web server software, for example, runs continuously. You can start it, and it can run for two years without stopping. In fact, that's the hope. You don't want any downtime in your web server.
Q. You mentioned earlier several examples of what you believe to be dynamic information maintained about page servers. Do you remember that?
A. Yes.
Q. I think you mentioned a server being up, a server being down, things of that nature?
A. Server load, resources available to the server, protocols available to the server, yes.
Q. Do you believe that dynamic information that you described of, for example, a server being

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down is the type of information that would meet the requirements of dispatching as proposed by epicRealm here?
A. Yes. It's dynamic information. Whether the server's up or not changes with time. You can't know it in advance. You certainly couldn't compile it into the web server code or the dispatcher code.
Q. So for your -- from your perspective in determining whether dispatching is occurring, the question of whether something meets the proposed limitation as construed by epicRealm simply falls within your test of whether it could have been compiled into the code?
A. Well, it certainly meets that test.
Q. Are there any other qualifications that the information must meet in order to show dispatching in your view?
MR. ARTUZ: Objection, calls for narrative.
A. Okay. So we are just focusing on whether the information is dynamic or not. There is still the requirement in the construction that an informed selection has to be made and that the dynamic information has to indicate which

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pager server can more efficiently process the request. So all of those are required in this construction.
Q. Does information about whether a page server is up or down meet those other requirements in your view?
A. Yes.
Q. How so?
A. Because if it's down, it can't efficiently process the request. So if I have a choice of page servers, some of which are up and some of which are down, the ones that can more efficiently process the request are the ones that are up, and that's dynamic information because the status of the servers is changing moment to moment possibly.
Q. The servers that are down cannot process the request at all; correct?
A. That's right, therefore they can't efficiently process the request.
Q. Would your answers be the same under the Oracle proposed claim construction relating to dispatching?
A. Let me look, and then I'm afraid we'll have to go through the questions again since I don't

remember the questions.
I've looked at the -- I've looked at the construction.
Q. Do you believe that your answers with respect to the types of information that could be used would also show dispatching under Oracle's proposed claim construction?
A. Oh, they would certainly show that, but less is required because there's no discussion in here of dynamic information that the selection has to be informed on some basis, not necessarily on the basis of dynamic information.
RECORDED MESSAGE FROM CONFERENCE CALL: Due to inactivity in your conference, this call will be terminated unless you press the digit 1 on your telephone. Once again, please press the digit 1 on your telephone in order to continue your call.
- - - -
(There was a discussion off the record.)
- - - -
BY MR. PATRAS:
Q. Dr. Shamos, what is an example of information about page servers -- strike that. What is

the example of dynamic information about page servers -- strike that.
What is an example of information about page servers that can be compiled into the code?
A. Oh, for example, suppose I had a configuration in which I had three page servers, I knew their network addresses, and those things were never going to change, then that could be compiled into the code. I could write a dispatcher that dispatched among three different page servers.
Q. Is that a practical way to go in your experience?
A. There are certainly configurations in which a company decides that it has a certain investment that it's willing to make in servers. It buys that number of servers, and for efficiency purposes, it compiles a code that understands that number of servers, and if six months later they decide to add a fourth server, all they have to do is change a parameter in the code and recompile the code.
There's nothing inefficient about that if the number of servers isn't going to

change frequently. In fact, it makes it more efficient at run time because it doesn't have to go out and dynamically inquire as to how many servers there are, so it's practical.
Q. Have you ever advised anyone to make a system that way?
A. No, and I wouldn't necessarily advise against it. If those were the conditions, that there were a given number of servers and that number was not expected to change with any frequency, then sure.
Q. You say in paragraph 106 of your report that dynamic information is information that can change and is not an inherent feature of the architecture. Do you see that?
A. Yes. That's exactly consistent with what I just said. If you have a fixed number of servers, then that's an inherent feature of the architecture, and you can compile that into the code.
Q. Did you use the term "dynamic" in your patent?
A. Yes.
Q. In what sense did you use the term "dynamic" in your patent?
A. I used the word "dynamic" in the sense that --

the whole purpose of the patent was to allow prices of goods to change over time, and so dynamic meant that over time different prices were going to be charged for the same goods, and that decision was going to be made by software, not by human beings.
But I dispute the notion that the word "dynamic" as used in my patent has any relevance to the word "dynamic" as used here. It wasn't dynamic information maintained about page servers. It was dynamic prices of goods, and I already explained before that the definition to me of dynamic is that which is susceptible to change.
Q. Did you use the term "static" in your patent?
A. I don't recall. Static would not normally be a term you'd use with respect to price, but it might be, I don't know.
Q. Did you say in your patent that in traditional commerce, prices are typically static with change only occurring with major market changes?
A. As I say, I might have, and judging from the fact that you appear to be reading from it, I'll bet I did.

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Q. So on your patent something that was static could change with major market changes; correct?
A. Yes.
Q. What is a configuration file?
A. Okay. So I had earlier talked about compiling things into code, parameters and information about a configuration, and if the configuration really changes very rarely, then it's practical to have the parameters in code because code gets recompiled all the time anyway. I mean you are fixing bugs, you are adding features, it's no big deal to recompile.

If, on the other hand, you expect the architecture, the configuration to change with fair frequency, then it's unreasonable to do a new build of your system every time that happens.

So instead, you tuck the parameters of the configuration off into a file, and then the code goes and reads the file and says aha, now I know we have eight page servers today, whereas yesterday -- of course it won't remember this -- yesterday we had seven, and

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we have eight now, and tomorrow we can have nine, and you can go and change the configuration, and that has immediate effect as of the moment the software reads the configuration file.

And the configuration file, as a general matter, configuration files have been around forever, and all kinds of information goes in them.

Q. What in your view is the difference between a static web page and a configuration file?

MR. ARTUZ: Objection, vague.

A. A static web page, I answered before, is a page that is not in existence at the time the request is made for it. I'm sorry, that is in existence at the time that the request is made for it, whereas a dynamic page is one that is not in existence at the time. A configuration file doesn't relate to that.
Q. Am I correct that a static web page and a configuration file both reside in the memory of the file system?
A. No.

MR. ARTUZ: Objection, vague, lacks foundation.

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A. No, that's not necessarily correct. A static web page can be -- can sit in RAM.
Q. Who modifies a configuration file?

MR. ARTUZ: Objection, vague.

A. That is vague. It depends on what the configuration file is describing. If the configuration file is describing some aspect of the system, then it would typically be a system administrator who would modify the configuration file, although one can certainly imagine systems in which the configuration file is created and modified by software.

For example, suppose that as we bring servers on, the servers identify themselves to the network through a network protocol, and there's a listener process that's listening for our new servers coming on, and it counts the number, and it stores their web addresses in a configuration file. It doesn't have to be done by a human being, it could be done by software.

So it depends on what's being configured and had how rapidly is it changing. If it's changing every microsecond, it's not being done by a human.

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Q. You say in paragraph 106 of your report that epicRealm has accused of infringement certain systems which make use of configuration files for dispatching.
A. Yes.
Q. Is that correct?
A. It says that.
Q. Where did epicRealm make that accusation?
A. I don't know. I was told it.
Q. By whom?
A. By counsel for the Texas Defendants.
Q. Paragraphs 110 and 111 of your report, Dr. Shamos, you have a discussion of aspects of SQL*NET I guess. Do you see that?
A. Yes.
Q. Did you contend in your report that a system using load balancing of requests for database connections anticipates any of the asserted claims of the patents-in-suit?

MR. ARTUZ: Objection, vague, lacks foundation.

A. So I'm aware that Dr. Finkel has claimed that what's going on in certain instantiations of Oracle is connection requests rather than web page generation requests.

To me a connection request is also capable of being dispatched because it has to be sent to an available page server; that is, it has to make an informed selection of which page server should process the request. So it is dispatching, and I believe -- I don't know if I contended it expressly, but it's certainly contended by implication in here.

Q. Does the load balancing of database connections that you referenced route dynamic page requests?

MR. ARTUZ: Objection, vague, lacks foundation.

A. It routes in the sense that it provides a pathway to where the request is going to be handled.

Q. But does it route the request itself -- excuse me, does it route the dynamic web page request itself?

MR. ARTUZ: Same objections.

A. So the answer is that if it doesn't route the request, it doesn't route the request. If it does route the request, it does route the request. I don't know how to say it much better than that.

The details of what's going on in these connection requests are not before me, and so I -- what typically happens is a request is made for a dynamic web page that when that request is made, there's at that time no connection to a database that can handle it.

So the -- a request for a connection is generated, and a connection is made to a server that's capable of handling a request, and then the request comes to that server. That's routing the request. It's indicating where the request should go.

Q. And do you believe that that meets the dispatching limitation of the claims?

A. What's "that"? What do you mean by "that"?

Q. What we have talked about in terms of the routing of a a request for a database connection.

A. Okay. The mere routing of a request for a database connection by itself isn't dispatching. That's -- then there's no request made to the page server. It's when the request is made to the page server that was the object of that selection, then, yes,

that's dispatching.

Q. So in your view, making the -- or excuse me, routing the request for a database connection would not be dispatching, but when the request for work to be done actually then uses that connection, that would involve dispatching or the combination of the two would involve dispatching?

MR. ARTUZ: Objection, vague, lacks foundation, compound.

A. I think the mere request for a connection itself is not a dynamic web page generation request. So that's the answer.

Q. Do you believe that the combination of that with a second step of actually routing the work request to use that connection then makes the dispatching, as you understand it, in terms of the claims of the patents-in-suit?

MR. ARTUZ: Same objections.

A. Well, we are going to have to look at whose construction, and I think I have alternative theories about what page server is when we look at both of those theories.

Q. Okay. Under epicRealm's construction, do you believe that that is dispatching?

A. Well, I think I've said so in my report and in the spreadsheet of my Exhibit 3. The informed selection that's going on there is based in some cases on load balancing and in other cases on the existence of page servers capable of handling the request. So, yeah, it certainly meets that, and if it meets that, then it he automatically meets Oracle's, Oracle's construction because the epicRealm's construction is narrower.

Q. Does the listener in the SQL*NET that you reference here use a redirect message to establish a connection between the client and the server?

A. It can.

Q. What is a redirect message?

A. Redirect message says instead of asking me, you should ask him.

Q. Is a system that uses such redirect messages doing dispatching to your understanding?

A. Yes.

MR. ARTUZ: Objection, vague, lacks foundation, incomplete hypothetical.

A. Okay. I'll answer anyway. Yes.

Q. Can you explain why you believe that to be

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true?
A. Sure. Because the concept of dispatching here is that the dispatcher has to figure out where the requests should go, and it goes and tells the requester where the requests should go so it dispatches.
The sending of the request, there's -- if we look at the claim language, it says there's a step of dispatching said request to said page server, and I'm looking at claim 1. I'm looking at the first step of claim 1. It's a long step. It has many substeps, but I'm looking at the one, the last one in the first step, and dispatching said request to said web server. It doesn't say that the dispatcher has to do that. Anybody can dispatch the request to the page server, and so once the dispatcher figures out where it should go, if it ends up going there, it's been dispatched.
Q. Am I correct that your view is the dispatcher does not need to be the entity doing the dispatching?
A. That's certainly my view. It doesn't say it there, that it has to do -- it's not in the

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claim. The claim recites steps. In some cases it says who has to do them. In some cases it doesn't. If it doesn't say who has to do them, it can be anybody. Yeah, that's permitted by logic and physics and, you know, the laws of electricity, but, yeah.
Q. What is a dispatcher as used in claim 1 to your understanding?
A. Well, I think there are constructions of dispatcher, and if we look at epicRealm's proposed claim constructions, I don't think that the word "dispatcher" is there, but dispatcher is something that performs dispatching I suppose, whereas Oracle was more careful about it, and Oracle said that a dispatcher is a software program for determining which page server should be used to process a dynamic web page generation request, so it makes the determination.
It's like a dispatcher in a railway station. I ask a guy which track is my train on, and then I go and get on that train. He doesn't have to shove me onto the train. I do it myself.
MR. ARTUZ: Do you guys want to

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break? I think we've gone past half an hour.
MR. PATRAS: We'll just finish this line.
MR. ARTUZ: Okay.
MR. PATRAS: Okay. We can break for lunch.
- - - -
(There was a luncheon recess in the proceedings.)
- - - -
THE VIDEOGRAPHER: We are now back on the record. The time indicated on the screen is 1:29 p.m.
BY MR. PATRAS:
Q. Dr. Shamos, did you review Dr. Clark's report in this case?
A. No.
Q. Have you had any discussions about Dr. Clark's report?
A. No.
Q. Do you intend to offer at trial any opinions with respect to any infringement issues regarding the accused Oracle products?
A. I'll answer that in a standard way. If I testify at trial, I'll be asked questions. If they are not objected to and I know the

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answer, I'll answer them. I don't have any subjective intention either way. As I told you before, I haven't been involved in the infringement side of this case.
Q. As you sit here today, do you have in your view adequate knowledge about the workings of the accused Oracle products to reach opinions regarding whether they infringe any of the asserted claims of the patents in suit?
A. I don't think I do since I don't even know what the products are that are accused.
Q. Could I ask you to turn back to Dr. Finkel's report for the purpose of looking at that claim constructions that we were looking at, proposals of each party.
A. Mm-hmm.
Q. In particular, could you look at Oracle's proposed claim construction with respect to dispatching said request to said page server.
A. Yes.
Q. Do you see that Oracle has proposed that that limitation be construed to mean, Analyzing a request to make an informed selection of which page server should process the request and sending the request to that page server. Do

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proposed claim construction?
A. Okay. So the way claims are written, we hardly ever write out absolutely every little nitty-gritty thing that is occurring, and so examining to make an informed selection, if you notice there isn't a separate step recited of selecting. So the selecting and the examining have all been clumped together, and so the examining here is the same as the analyzing in Oracle, but the making of the selection is different because it's based on different information, or that this is narrower than the Oracle construction.
Q. How do you understand the epicRealm proposed construction to be narrower?
A. It's narrower because the examination -- the selection has to be based on dynamic information maintained about page servers that's not present in the Oracle, in the Oracle construction, and there's the further definition of what the dynamic information is about. It's about which page server can more efficiently process the request. That's not part of the Oracle construction either.
Q. The final clause in the epicRealm proposed

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claim construction reads, And sending the request to the selected page server. Do you see that?
A. Yes.
Q. Does the request have to be sent to the page server that can most efficiently process the request to meet that limitation in your view?
A. No.
MR. ARTUZ: Objection, vague, incomplete hypothetical.
A. Not most efficiently. Most, the word "most" doesn't occur here.
Q. Does the request have to be sent to the page server that can more efficiently process the request?
A. Yes. Those are the literal words.
Q. Am I correct, Dr. Shamos, that in your opinion you have reviewed at least something in the neighborhood of 30 or so references, each of which discloses this examining or analyzing a request?
A. I don't know the exact number, but it's in that range, yeah.
Q. And am I correct, Dr. Shamos, that that 30 or so references in your view all disclose

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dispatching as construed by epicRealm's proposed claim construction?
A. The ones where I do not have a green box in the corresponding cell of the Exhibit 3, yes.
Q. Am I correct that in your view, Dr. Shamos, all approximately 30 references also disclose dispatching under Oracle's proposed claim construction?
A. Oh, if they disclose dispatching under epicRealm's claim construction, then they disclose dispatching under Oracle's, because one completely subsumes the other.
Q. Are you familiar with Dr. Clark's opinions that the accused Oracle products do not perform dispatching under either party's proposed construction?
A. No.
Q. Can you imagine a case, Dr. Shamos, where an informed selection of page server is made without the request itself being examined or analyzed?
MR. ARTUZ: Objection, vague, lacks foundation, incomplete hypothetical.
A. Because I pride myself on having vivid imagination, the answer is yes.

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Q. Could you give me such an example, please?
A. Sure. I don't -- suppose I have a situation in which there are what are sometimes referred to as parallel servers; that is, every server has exactly the same capabilities and exactly the same resources available to it. We know in advance that the request is going to go to one of them, and it -- the success or not of generating the dynamic page will not depend on which one it goes to, although the time required to satisfy the request may vary, okay.
In such a situation, I do not have to examine the request, once it's been determined that it's a request for a dynamic page, but I don't have to examine the request to determine which page server it goes to, and if I do pure load balancing and I don't make the decision based on the resources available to the server, because they all have the same resources, then I -- it wouldn't say the construction. That's my -- that's my imagined situation.
Q. Do you believe that the Oracle accused products do not meet the dispatching

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implied that if all the packets have come from the same IP address that that means the IP address is part of the message? I don't know. There's not enough fine structure to answer the question.

Q. Do you know, Dr. Shamos, how Oracle's Mod OC4J works?

A. Not in detail.

Q. Enough to testify about it at trial?

A. Maybe about some aspect of it.

Q. What aspects about it are you familiar with to that degree?

A. I don't know. It depends on -- it depends on what I'm asked.

Q. Well, tell me --

A. I don't have any anticipation of testifying about accused systems at trial.

Q. Dr. Shamos is load balancing a broader concept than dispatching as used in the claims here?

MR. ARTUZ: Objection, vague.

A. It is -- I wouldn't characterize it either as broader or narrower. It's different and related. You can have load balancing without dispatching. You can have dispatching without load balancing. You can have dispatching that

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has nothing to do with balancing. You can have load balancing that doesn't have to do with dispatching as construed here. They are related but not the same.

Q. Okay. Could you give me an example of load balancing that is not dispatching?

A. Yes, sure, if there are no page servers, it's not dispatching.

Q. Can you give me an example, any other examples of load balancing that are not also dispatching as proposed by, say, epicRealm's construction?

A. Well, epicRealm's claim construction, if the -- if load balancing is done by -- does not base -- if the informed selection is not based on dynamic information maintained about page servers, then it's not dispatching under epicRealm's construction.

Q. Let's say, for example that --

A. It can still be load balancing.

Q. -- that a product were to use a random distribution of requests to suitable page servers. Would that be dispatching in your view?

MR. ARTUZ: Objection, incomplete

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hypothetical, lacks foundation.

Q. Let me actually add on under epicRealm's construction first.

MR. ARTUZ: Same objection.

A. By random distribution I assume you mean as a request comes in, it is randomly assigned to some pool of servers and the size of that pool does not change. If that -- under --

Q. You can make that assumption.

A. Under those assumptions, then I can't see in there what the dynamic information maintained about page servers is. If the number of page servers was changing and the dispatcher had to inform itself of what is the available set to which I may dispatch, that would be dynamic information, but just as I laid it out, I don't see how that fits dispatching.

Q. Okay. As you first laid it out, I guess a set number of page servers --

A. A known, fixed, constant number and purely random selection among them.

Q. -- would that system be using load balancing?

A. Sure.

Q. What if the system were to use -- again, if you want to assume a fixed number of page

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servers -- a round-robin algorithm to distribute requests? Would that be dispatching under epicRealm's construction in your opinion?

MR. ARTUZ: Objection, vague, lacks foundation, incomplete hypothetical.

A. I can see an argument either way.

Q. What are those arguments?

A. The argument is it's clearly based on dynamic information maintained about page servers because the information that it's maintaining is which was the least recently used server that I sent a request to, okay?

Q. Can I interrupt right there just for a second? I'm sorry.

A. Yes.

Q. You said which was the least recently used.

A. Yes.

Q. How would round-robin determine the least recent -- you mean time-wise?

A. Yes, least recent in time.

Q. I got you. I misunderstood, sorry.

A. And the other argument is while that maintains no information -- no dynamic information whatsoever about page servers, it only

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maintains dynamic information about the dispatcher, where did you least recently send the request to, and it almost becomes a matter of philosophy at that point.
Q. Which argument do you think is correct?
A. I haven't -- I mean I've batted both of them about in my mind. I haven't come to a conclusion as to which one I prefer. It's not even clear that either is correct, since arguments, decent arguments can be made for both and there is no arbiter that we are going to go to that is going to give us the final God-like determination, well, except a judge, they are god-like.
Q. Dr. Shamos, are you familiar with a reference that you've referred to I believe as the Garland reference, your Reference 13?
A. Yes.
Q. Do you contend that the Garland reference anticipates any of the asserted claims of the patents-in-suit?
A. No.
Q. Why not?
A. Because it does not have express mention of web pages or dynamic web pages, and,

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therefore, I can't find it in the four corners of the reference, so it can only be an obviousness reference.
Q. Dr. Shamos, if I can direct your attention back to your report and in particularly to paragraph 71, please.
A. Yes.
Q. You state in paragraph 71, Every asserted claim requires the page server to expressly release the web server or HTTP-compliant device. Do you see that?
A. Yes.
Q. What is your basis for that statement?
A. Because every claim contains an expressed step, an expressed act of releasing.
Q. Can you explain where you get the expressly portion of that from?
A. In -- I'm in the '554 patent.
Q. Okay.
A. I see in the first step of claim 1, Releasing said web server to process other requests. The next independent claim in that patent is 9. It's not worth talking about 9 since it's a hybrid claim, but in any case the releasing is also recited in claim 9.

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Claim 11, the next independent claim, Releasing said web server to process other requests, and likewise with the '335. Go through every claim of the '335, there's an express releasing step.
Q. In your report did you talk about expressly routing the request, for example?
A. Expressly routing?
Q. Well, if the basis for putting the term "expressly" in paragraph 71 is because the word "release" is in the claim, I mean there's lots of other words in the claim too; right? So I'm not understanding why "expressly" you believe is appropriate here, but not with respect to apparently to other claim limitations?
A. Because I don't understand epicRealm to contend that those other steps do not occur in the prior art, whereas you do contend that the releasing step doesn't occur in the prior art, so that's why I discussed releasing specifically in that way.
We have the All Elements Rule. In order to infringe a claim, you have to perform -- if it's a process claim, you have

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to perform all the steps. One of the steps at each one of the process claims in these patents is the step of releasing the web server. That's what I mean by it's an expressed step, expressly releasing.
Now, later on there's a discussion of how you may release, okay, and there I use a -- I also use the word "express" in a different sense, which is an actual message which says "Thou are hereby released" is one way of doing it, but there are other ways of doing it that still fall within an act of releasing.
Q. So, for example, what I think you might refer to somewhere as implicit releasing --
A. Yes.
Q. -- that might still be something to be pointed to for purposes of paragraph 71 as expressly released?
A. No, implicitly releasing is not expressly released.
Q. Then I don't understand the two different ways you say you are using the word "express" in paragraph 71 versus your discussion of how to release?

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might not be, depending on the specific implementation.
Q. You are discussing now, I think, if you want to look at a system whether or not it would meet to that limitation.
My question is whether the limitation, as construed by Oracle, requires there to be necessarily a transmission over a network?
MR. ARTUZ: Same objections.
A. You mean whether transmitting? The Oracle construction of routing is the word "transmitting."
Q. Correct.
A. Are you asking does that transmitting always have to be over a network?
Q. Correct.
A. I don't see why. It could be over a dedicated line, that's not a network. Now, that will get us into a philosophical discussion of what a network is. Are two computers connected by a dedicated line, are they a network or not? And there isn't a sound technical answer to that question. It depends on what you mean by a network.

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Q. What if you had the web server and dispatcher on a single machine?
A. There may be a transmission. There may not be a transmission. As I said, there are two -- there are different ways of passing information between processes.
Q. If on the single machine scenario there was, in fact, a transmission, would that meet the routing limitation as construed by Oracle in your opinion?
A. Well, I think the --
MR. ARTUZ: Objection, vague, lacks foundation, incomplete hypothetical.
A. I think that you virtually answered your own question. The question is is transmitting transmitting? Yes, transmitting is transmitting. If there is a transmission, there is a transmission. I don't see how that advances us in any way, but it's true.
Q. Would you consider a function call on a single machine between a web server and a dispatcher to meet the routing limitation as construed by Oracle?
MR. ARTUZ: Objection, vague, incomplete hypothetical, lacks foundation.

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A. It depends on how the request gets to the receiving process. If the request gets to the receiving process by being put in an argument stack or something, then I suppose we could get a bunch of computer scientists in the room and argue over whether that's transmitting or not.
If the method of data communication is that the receiving process goes and it looks in a known memory location for the data, then it's difficult to say that that is transmitting. If I write a note to you on a Post-It note and I leave it here on the table and later on you come around and look at it, have I transmitted something. It's a philosophical question.
Q. Do you believe that it's possible to transmit a request from a web server to a dispatcher on a single machine?
MR. ARTUZ: Objection, incomplete hypothetical, lacks foundation.
A. It is possible.
Q. If I could ask you to turn in your report, Dr. Shamos. Did you go through the routing analysis that you just articulated in

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determining that the approximately 30 references you believe anticipate the claims perform routing in that manner?
A. I didn't have to because here the one construction subsumes the other.
Q. What do you mean by that?
A. Well, if you -- let's look at epicRealm's construction of routing, if there is one. In the Texas -- I forget now, in the Texas case, was there an agreed construction of routing, or is that one of the terms you didn't require construction of?
In any case I've understood routing to be sending, which is essentially the same thing as transmitting, and so I don't see a difference.
Q. Well, if there's no difference, then I guess the question again becomes did you do the analysis that we just discussed about whether or not there is routing for each of the approximately 30 references that you believe anticipate claim 1 of the '554?
A. There was no need to do a separate analysis because the answer would have been the same in each case.

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Q. What analysis did you do to determine that there is routing of the request as set forth in claim 1 with respect to the approximately 30 references that you believe anticipate claim 1?
A. I think I just answered that question. I don't consider there to be a substantive difference between epicRealm's and Oracle's construction of routing and, therefore, it's the same analysis. So whatever analysis I did for the one construction applies to the other construction.
Q. Did you determine in doing that analysis whether the request was routed over a network for each of those approximately 30 references that you believe anticipate claim 1 of the '554 patent?
A. I don't think I considered specifically whether it was a network or not.
Q. Okay. Could I direct your attention to paragraph 94 of your report.
A. Yes.
Q. First sentence in paragraph 94 reads, Intercepting is inherent in any system in which the web server processes some but not

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all requests.
A. Yes.
Q. Do you see that?
A. Yes.
Q. Could you explain what you mean by that?
A. Yes. If the web server is processing all the requests, then there's, of course, no intercepting going on because intercepting is deflecting the request away from the web server so somebody else processes it.
If the web server is processing no requests, then that's a vacuous case that we don't even have to consider.
In the case where the web server is processing some requests and not others, then a determination is being made as to which ones it will process and which ones it isn't. That's what I have taken to be intercepting.
Q. When you refer here to the web server processing the request, could you explain what processing means?
A. Oh, well, this is massively difficult. Okay? Here's the problem. The specification is completely unclear as to what intercepting really is, and it doesn't do a good job of

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showing it in a drawing. So, in fact, the drawing's inconsistent with the words of the specification.
So the whole issue boils down to what's a web server, and unfortunately neither the parties nor the Court was really precise about what a web server is. It could be two different things, a machine, it could be some software running on a machine, it could be executable, a very specific type running on a machine.
So when we even talk about the web server examining the request, does that mean the web server executable or does that mean other software that might happen to be running on the web server? Totally unspecified in the constructions.
So the real issue is how much work is the web server executable allowed to do on the request before it says no, no, no, this really isn't mine, I abjure from this, I'm passing it off to somebody else.
Under Oracle's construction, it can't do any. The interceptor has to be before the web server executable. The web

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server executable can't even execute a single instruction, okay?
But that begs the question as to if I show you this web server executable and the first five instructions are the interceptor, you might argue that those first five instructions really aren't part of the web server executable but -- I mean it all depends on where you draw the line, and there isn't enough information in the spec or in the constructions to draw the line in a precise way.
In most situations the interceptor is going to be one line of code. It's going to look for something, it's going to look for a substring in the request, and it's going to say aha, that's a CGI request, I'm sending it off here, in many cases.
And the question is is the web server allowed to do that, or does it have to be something else that we are careful not to call the web server but we call the intercepter that does that.
It's an issue, don't know how to resolve it because there just isn't enough

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Oracle's proposed construction for intercepting?

A. So I don't recall specifically, but there certainly are conceivable, conceivable configurations. For example, suppose I have a load balancing server, which we haven't discussed in -- in this case, but it's common in server farms where all requests initially come to a load balancing server. That server does nothing else except pass the request on somewhere else.

The load balancing server can look at the request, see if it's a static page request, in which case it sends it to one set of servers. If it determines that it's a dynamic request, then it sends it to a different set of servers. That would be intercepting under Oracle's construction because the web server itself never looked at the request, not even one character of it.

Q. And what you've called the web server in that answer --

A. Would be the thing that would be delivering the page. There's either one set of servers for delivering static pages, a different set

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of servers for delivering dynamic pages, and the load balancing server is none of those. It would be the intercepter.

Q. Could I direct you in your report, Dr. Shamos, to paragraph 186.

A. Yes.

Q. Beginning at the bottom line on page 52, you state, "One of skill in the art would understand that a web page has not been generated until it is complete; that is, if data is to be retrieved and surrounded by HTML tags so it can be sent to a browser, then the page has not been generated until the tags have been added."

A. If there are tags, yes.

Q. Do you believe that a web page has to include HTML?

A. You've just raised a question that is one of the most difficult issues in this case. No, it doesn't have to be HTML, but it -- I believe that one of skill in the art would understand that a web page contains some web markup. It could be XML, it could be something else, but it's not simply text. I realize that the Texas Court didn't go along

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with that, and thereby created a mess.

Q. What about a flash page?

MR. ARTUZ: Objection, vague.

A. I don't actually have a good understanding of how flash -- what flash pages look like when they are sent to -- when they are sent to a browser. I don't know what the header looks like, whether there is any HTML in the header or not. If there is, then there's HTML there.

Q. Did flash exist in April 1996? Do you know?

A. I don't know. I would now agree that flash is web conference. The whole issue here is pure text, is the digit 2 a web page, because the digit 2 is displayable by a web browser. I don't like a construction that makes the digit 2 into a web page, don't like it.

Then we have the issue of partial web pages. Suppose the dynamic portion of the web page consists of a stock quotation that's going to be inserted in a template that, you know, has the ticker symbol and all that stuff.

When you generate or when you retrieve the stock quote, is that a web page? The quote itself, without any HTML, could be

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displayed in a browser because it's just a number, but we understand, typically, that if there's other stuff that goes on the page, you are not done generating it until you are done, until you have everything, yet the constructions in this case leave open the possibility that pieces of web pages can be web pages. I don't like it, but I have to live with it.

Q. Do any of the references that you rely on as anticipating claim 11 of the '554 patent disclose a machine readable medium as you understand that term's use in claim 11?

A. Yeah, all of them, at least by inherency. They are all computer systems. Computers read their instructions from computer readable medium. If you don't have a computer readable medium, you've got no computer these days. It was different in the old days when you hardwired computers to do things, but you don't hardwire them anymore. You read the instructions off a medium.

Q. Do you have an understanding, Dr. Shamos, as to what the test is for enablement of a patent claim?

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A. Yes, I think I do.
Q. What do you understand the test for enablement of a patent claim to be?
A. A claim is enabled if one of skill in the art is able to practice the claimed invention without undue experimentation, make --
Q. Does the -- sorry.
A. -- make and use the invention without undue experimentation.
Q. Does enablement need to be determined on a claim-by-claim basis as opposed to the patent as a whole?
A. Well, it applies to claims. The claim is either enabled or it isn't. It's quite possible to have a patent in which no claims are enabled, but it is an individual determination.
Q. Is it your opinion that all the asserted claims in this case are not enabled?
A. I think it is.
Q. You think it is?
A. Yep.

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(There was a discussion off the record.)

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A. And the reason I say that is that because releasing is required in every claim and there is no enablement of releasing, there is no claim that's enabled.
Intercepting, is intercepting required in every claim too? There could be lots of reasons that the claims aren't enabled. Let's go to the report and let's see.
Q. You can of course look where you like. I might suggest looking at page 163 as a starting point.
A. That might help us. Thank you. Invalidity -- okay. Yeah, I think I characterized it properly.
Q. Does the examiner in the patent office have an opportunity to consider enablement issues during prosecution?
A. Yes.
Q. Do you believe that the examiner made a mistake in concluding that each of the asserted claims in this case was properly enabled?
A. I don't have information that the examiner considered enablement. You asked me whether

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he had the opportunity to consider enablement.
Q. Was the examiner supposed to consider enablement in reviewing the claims to determine whether they should be allowed as a patent?
A. Well, I think the way it really works is that if it's clear to the examiner that there's no enablement, that is if it's an egregious case, then he'll issue a nonenablement rejection, but if it requires him to put himself in the role of system designer and attempt to be one of skill in the art and actually go and imagine what he would have to do to make and use the invention, I don't think a lot of examiners do that.
Q. Does the MPEP instruct examiners that part of their job is to ensure that the claims are properly enabled?
A. It's been a bit since I've bedded down with the MPEP. I wouldn't be surprised to learn that there are instructions to the examiner to do that.
My belief is that if the examiner's followed every instruction in the MPEP, they might get through about one patent application

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per year.
Q. So you don't believe that the examiner of the '554 patent did a good job in determining enablement of the asserted claims of the '554 patent; is that correct?
A. I don't want to characterize it that way. Examiners are very hard working people. I've even practiced law with some of them. It is possible that the examiner didn't consider it or didn't realize that there was an issue.
If he considered it and came to the conclusion that there was enablement, I would disagree with his conclusion. It doesn't mean he did a bad job. Examiners come to the wrong result all the time, and that's what patent litigation is about, and that's how patents get found invalid, et cetera.
Q. You've got a statement in paragraph 779 of your report. The last sentence reads, "In addition, far from containing enabling disclosure for a claim that would support such a contention, the express words of the specification directly contradict epicRealm's attempt to apply the claims this broadly."
Do you see that?

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not there, then I don't know of any such argument.

MR. PATRAS: Okay. Why don't we take a break.

THE VIDEOGRAPHER: We are now off going off the record. The time indicated on the screen is 3:46 p.m.

- - - -

(There was a recess in the proceedings.)

- - - -

THE VIDEOGRAPHER: We are now back on the record. The time indicated on the screen is 4:06 p.m.

BY MR. PATRAS:

Q. Dr. Shamos, if a reference discloses that the web server and the page servers are on different machines, then is the machine readable medium of claim 11 inherently present?

MR. ARTUZ: Objection, vague, lacks foundation.

A. We are looking at claim 11 of the '554?

Q. Correct.

A. Well, we are back to philosophy. Does the machine readable medium have to be a unitary

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thing? For example, do all of the instructions have to reside on the same compact disk, or can you have two different compact disks that together constitute the computer -- the machine readable medium. Let's call in the philosophers.

The fact is that the instructions, if you have a separate web server and a separate page server, the instructions for both of them have to be on machine readable media or a computer cannot interpret the instructions.

And so if I draw the box around, if there's more than one medium, if I draw it around the two of them and say that's the medium, is the medium a single thing, or is the medium, for example, a compact disk or a magnetic tape or a floppy? What is it? There's always machine readable medium these days when you have a computer system.

Q. Do you believe that if the software is on two disks that's a different infringement question for purposes of claim 11 than it becomes on a single disk?

MR. ARTUZ: Objection, vague, lacks

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foundation.

A. I'm not addressing an infringement question. I think what you were asking me was with respect to if the web server and the page server are on different machines, and I can interpret that with respect to prior art references --

Q. Okay.

A. -- is it inherent that there's a machine readable medium, and the answer is yes, because there's no way for the page server and the web server to get their instructions unless there's a machine readable medium.

Now, I recognize that there's this amusing philosophical question as to whether the medium needs to be unitary or not. I don't think it does, because, for example, if you get a Microsoft developer's kit, for example, it's on a huge number of CDs, it's not on one, and one wouldn't say that it's any less on a machine readable medium because it has to extend over more than one disk. So I say yes, it's inherent.

Q. Do any of the references that you relied on as anticipatory references for claim 1 of the

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'554 patent disclose a web server and a page server as being implemented on a single computer?

A. I'm sorry, say it again? Any of the references that I rely on for?

Q. For your opinion that claim 1 is anticipated --

A. Yes.

Q. -- the claim 1 of the '554 patent is anticipated, do any such references to a web server and page server on a single computer?

A. I think there are some, and for that I used epicRealm's contention that having them on the same box would be infringement, but it's a very small number.

Q. I'd ask you to turn in your report, Dr. Shamos, to paragraph 228.

A. Yes.

Q. You have a statement at the top of page 63, "Requests for dynamic documents are intercepted (not processed by the web server) but handed off."

A. Yes.

Q. With respect to the Oracle 1.0 references I guess?

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Then I say, now, unquote, Thus the web agent makes an informed choice of which web agent service is being invoked to handle the request, and it does that by referring to a configuration file to make that determination, and I say it's configuration file dispatcher.

Q. What dynamic information is maintained by the web agent about which page server can more efficiently process a request?

A. The OWA.CFG file contains information about the agent services, what they are capable of handling and what parameters have to be passed to them. It's not useful to pass the request to a web agent service that's not capable of responding to the request.

Q. Do you believe that the web agent is the dispatcher for all Oracle 1.0 anticipation arguments?

MR. ARTUZ: Objection, vague.

A. So there is further discussion in the next cell under element 1b6, the dispatching element, that talks about what SQL*NET does also. So we can consider SQL*NET as part of the web agent or is it the web agent plus

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SQL*NET doing the dispatching.

Q. What is the dispatcher in your view?

A. I think there are two theories here. One theory, if you ignore SQL and you just use configuration file dispatching, then it's the web agent. Under the other theory, it's the web agent plus that component of SQL*NET that does load balancing or whatever other functions SQL*NET performs for dispatching.

Q. Is the web agent a CGI process?

A. I think there's a statement that says the Oracle -- this is from the documentation -- the Oracle web agent is a CGI program that the web listener executes whenever a request is received for a dynamic document. Now, but the Oracle web agent itself isn't the page server, so it doesn't suffer from the drawbacks listed for CGI in the patent. All it does is it's a CGI process for dispatching purposes, and the request is handed off to something that is presumably not a CGI program.

Q. Was CGI state of the art in the 1995, 1996 time frame?

MR. ARTUZ: Objection, vague.

A. That question really is vague. State of the

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art for what?

Q. For handling dynamic web page requests.

A. It was a mechanism. It was a widely-used mechanism for handling dynamic page requests.

Q. Did you review the Montinola deposition testimony on this point?

A. Yes.

Q. Did she indicate that in her view CGI was state of the art in 1995, 1996 time frame?

MR. ARTUZ: Objection, best evidence rule.

A. I don't recall, but I'll take your word for it. State of the art has two different meanings. Some people take state of the art to mean the best available thing. Patent attorneys take state of the art to mean whatever is known in the art, not necessarily the best.

Q. What is the difference between the prior art CGI web server described in the '554 patent and Oracle 1.0?

MR. ARTUZ: Objection, calls for a narrative.

A. I think I just answered that. CGI is a mechanism to allow ordinary programs in

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standard programming languages, such as Java, C, Perl, to interact with the worldwide web in a relatively easy-to-program and seamless way.

What those CGI programs do can be very computationally intensive, such as complete generation of a huge, dynamic web page, or it can be computationally trivial. You can have a two-line CGI program, which requires essentially no overhead on the -- no processing overhead.

Here in Oracle 1.0, the CGI program is not the program that is generating the dynamic web page. The CGI program is simply the dispatcher to decide who should be processing the dynamic web page. That's presumably much more efficient because dispatching is a lot less work than generating the entire dynamic web page.

Q. Could the prior art CGI process connect to a database?

MR. ARTUZ: Objection, vague.

A. Okay. I'm not sure I'd characterize it as vague. I think it's -- we'll have to correct the meaning of it.

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Q. Okay.
A. CGI stands for Common Gateway Interface. It is a sequence of calls that can be executed by programs in various programming languages. Perl has a CGI interface. All it does is it's a way to -- for programs to invoke web communications and for web communications to invoke programs. There's no implication that a CGI program is either brief or trivial or huge and cumbersome. It can be either one of those two.
And so with that, let's have the question again.
Q. Did the prior art CGI program access a database?
A. I think what you said was process, but, yes, a CGI program could access a database if it wanted to. In Perl, you can access a databases in Perl for it has a database interface. Microsoft software had open database connectivity, you could access a variety of databases through a program.
It's not -- it's not a facet of CGI. CGI is simply a way of having a client invoke a program on a server. That program

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can do anything a program can do.
Q. In the mid-1990s, were there problems that were recognized with CGI?
MR. ARTUZ: Objection, vague.
A. It is vague. So the problem, to my recollection, is that normally whatever you are doing with a CGI program is taking longer than simply serving a static web page, and so if your solution to the generation of dynamic web pages is to invoke one or multiple CGI processes on the same server that's serving static web pages, you are going to face severe processor time degradation and you won't be able to respond to requests very quickly. This is because the total time required to generate a dynamic web page can be hundreds or thousands of times longer than the time necessary to push a static web page out of RAM.
That's the problem. It has nothing to do with CGI itself. It has to do with wasting the time of the web server processing dynamic page generation requests.
Q. Dr. Shamos, I'd like to ask you a couple questions about what you have referred to as

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Reference 141, which is Derler Gateway to Hyper-G?
A. Yes, I'm again, just referring to the machine readable version of Exhibit 3. Yes.
Q. What do you contend is the web server in your anticipation argument based on Hyper-G, or Reference 141?
A. Exhibit 3 says, The web server is the WWW Gateway. The page server is the Hyper-G server.
Q. Can the web server in Reference 141 satisfy a request on its own?
MR. ARTUZ: Objection, vague, lacks foundation.
A. A request for what?
Q. A dynamic web page request.
A. I don't know if it was implemented so that it could do that, but in general, if a web server feels like responding to a dynamic web page generation request by itself, it could do it. It's not sensible to do it, and it's not the objective of Hyper-G.
Q. Was it disclosed to be able to do that in the reference?
A. I don't recall.

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Q. Am I correct that the only tasks that it was assigned to do was accepting connections and forking?
A. When you say "it," meaning what?
Q. The web server.
A. Well, I don't know that to be true. I might be able to review the reference and determine that.
Q. Do you believe that intercepting is disclosed in Reference 141?
A. Yes.
Q. Would you explain to me how intercepting is disclosed in Reference 141?
A. Sure, intercepting occurs when a decision is made that the web server is not going to process a request but somebody else is going to process a request, and the request is deflected or pushed onto someone else so the web server does not process it.
Q. Would that be intercepting even if the web server never processes a request on its own?
MR. ARTUZ: Objection, vague, lacks foundation.
A. Let's go to the construction.
Q. Sure.

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A. All right. I'm first looking at epicRealm's construction of intercepting. Intercepting, the handling of a request at a web server. I think we've discussed before I'm not real happy with that because it's not clear what handling means. It's also further not clear what at a web server means. Does that mean right before the web server or in the middle of the web server.

But if there is code that says this is going to get handled by somebody else, not the web server, that's intercepting according to this construction.

Now let's look at Oracle's construction. Intercepting, receiving a request at the web server and diverting the request before the web server executable can process the request.

Well, what you just described also is intercepting under Oracle's construction because the web server is not processing it. Somebody else is.

Q. So you believe, even if the web server is not capable of processing a request on its own, there could be intercepting under each party's

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proposed claim construction; is that correct?

A. Well, I certainly believe that because I'm reading what the constructions are, statements in the prosecution history notwithstanding.

Q. Am I correct then that in Reference 141, there is only one Hyper-G server for WWW Gateway?

A. I don't know that that's true. I actually did a search through the reference where there's discussion of multiple Hyper-G servers, and one -- it is disclosed that one Hyper-G server can actually retrieve information from another Hyper-G server, so I know there are multiple Hyper-G servers.

Now, as to whether they are serviced by the same Gateway, I have to go look at that.

Are we near a time when we can take one quickie break before the final rush toward the finish line?

MR. PATRAS: If you'd like to take a break now, we certainly can. I won't promise you it's the last one before the finish line, but we can take a break.

THE VIDEOGRAPHER: We are now going off the record. The time indicated on the

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screen is 4:44 p.m.

- - - -

(There was a recess in the proceedings.)

- - - -

THE VIDEOGRAPHER: We are now back on the record. The time indicated on the screen is 4:53 p.m.

BY MR. PATRAS:

Q. Dr. Shamos, I'd like to ask you some questions now related to your opinions regarding Oracle 2.0.

A. Okay.

Q. And to start, I'd like to have you explain, just as we did with Oracle 1.0, what specifically do you say anticipates the asserted claims based on Oracle 2.0 or any particular references for Oracle 2.0?

A. Okay. So in my Exhibit 3, there are two rows. There's a row labeled 604, 605, and those references really exist, unlike the 503, 504, and then there is a row immediately above there with an unnumbered reference that's Oracle Web Server User's Guide Release 2.0 and Oracle Web Server 2.0 Technical Note. This raises the same issue as to whether two

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documents that are describing the same system are describing the same reference or not, but we have already discussed that.

And there are different theories of invalidity cited on those two different rows of the spreadsheet, and I mean we can go through it in detail but --

Q. Let me ask you a general question just, again, so I understand where we are starting from.

A. Yes.

Q. You have essentially two anticipation arguments then that relate to Oracle 2.0. One of them combines, I guess, Oracle release 2.0 and a technical note, the second anticipation argument combines References 604 and 605?

A. Yes, which are --

MR. ARTUZ: Objection, misstates the testimony.

A. -- which are release 2.0.2 and the technical note together. I didn't testify to that, but that's correct.

Q. So you have not opined that release 2.0 without the technical note anticipates any of the asserted claims?

MR. ARTUZ: Objection, lacks

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the web server, then it wouldn't meet the Oracle's intercepting construction. There are a lot of ifs there.
Q. If we assume that the extension is part of the web server --
A. Executable.
Q. -- part of the web server executable, would that allow this to meet intercepting under epicRealm's proposed claim construction?
MR. ARTUZ: Objection, lacks foundation, incomplete hypothetical.
A. Yes, epicRealm's construction is intercepting the handling of a request at a web server. Well, it's at the web server. If the extension, which is doing the intercepting, is part of the web server, it's certainly happening at the web server, although I still insist that the word "web server" in this construction is ambiguous. It's not clear whether web server means the machine or whether it means the code, but in either case it's being intercepted at the web server machine and it's being intercepted at the web server code. So it means both.
Q. Does the fact that a custom extension exists

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in the same process and memory space as the web server executable prevent it from performing intercepting?
MR. ARTUZ: Objection, vague, incomplete hypothetical.
A. I'd like to hear it again because I didn't understand the import of all the words in the question.
MR. PATRAS: Would you read that back, please.
- - - -
(The record was read by the Reporter.)
- - - -
A. Okay. I understand what it means to co-exist in the same memory space, but existing in the same process, I'm not exactly sure what that means.
Q. I'd ask you to turn in Exhibit 7, Dr. Shamos, to the page ending with the Bates number ending in 766. "The first paragraph begins, Web clients connect to Oracle 2.0 using HTTP just like any other web server."
A. Yes.
Q. "A request is delivered in the form of a URL, which conceptually is an identifier for a web

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object (normally an HTML page). The HTTP engine does not make any attempt at interpreting the URL, instead it is immediately handed off to the Web Request Broker for further processing."
Do you see that?
A. Yes, I do.
Q. Is this process different than the intercepting described for the typical HTTP API approach that we talked about a little while ago?
A. It depends what you consider the web server to be. I don't think it is different if the web server is the web listener plus a portion of the WRB dispatcher that examines the request.
Q. Is the HTTP engine referenced here the same as the HTTP server?
MR. ARTUZ: Objection, vague, lacks foundation.
A. I'm not even sure, by the way, that this is an accurate description. I think it is an accurate description of processing dynamic pages, but it may not be an accurate description of processing static pages.
I think when the HTTP engine does

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not make any attempt at interpreting the URL, I think it is the case that it doesn't interpret it if it's a request for a dynamic page.
But in any case, your question was?
Q. What is the HTTP engine referenced here?
A. Well, I think the HTTP engine is that component of the Oracle web server that is listening for HTTP requests.
Q. How does the WRB dispatcher determine which WRB engine will process a request?
A. Well, there's a statement in the middle section on page 5 that says, "The WRB dispatcher must decide what type of object is being requested. To do this, it examines the WRB configuration file which maps virtual directories to WRB services."
So it goes and looks at a file, and then it performs dynamic load balancing. It says, "The WRB dispatcher performs dynamic load balancing between multiple instances of a WRB service, and the webmaster can configure each WRB service to have a minimum and maximum number of instances. An instance corresponds to a process in a UNIX environment."

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Q. Do you have an understanding of how the WRB dispatcher performs what it references here as dynamic load balancing?
A. So there is an explanation back in the Oracle Web Server 2.02 manual at page A-13. This is referenced in cell 1b6, corresponding to 1b6 of this reference.
"The WRB dispatcher makes an informed selection of which page server WRBX to process the request based on dynamic information: Which WRBX is free and which one is configured to run the desired service."
So you have the webmaster or the web administrator configures a minimum and a maximum number of these processes. At any given time a process may be busy or free. If a process is capable of satisfying the request and it is free, then the dispatcher is able to dispatch to it.
My reading of this is that if it doesn't have the capability of handling the request or if it's not free, it won't.
Q. If the WRBX process is handing one request, does that mean it's not free?
A. That's my understanding.

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Q. In your opinion does the WRB dispatcher have any dynamic information about which available WRBX process can more efficiently process a request?
A. Sure.
MR. ARTUZ: Objection, vague.
Q. What information?
A. The information is whether it's free or not. One that's free can more efficiently process a request than one that isn't free.
Q. Am I correct that one that isn't free cannot process the request?
A. Can't process it instantly. There may be a situation in which all of the processes are not free and it's necessary to wait for one of them to become free. That would happen if the webmaster misconfigured his system, didn't have enough -- the maximum number of processes was not large enough or the load was unanticipated.
Q. How does the dispatcher determine which of the, I think you characterized them as available and free, processes should handle the request?
A. I don't know how it does it, but it does it as

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described in the manual.
Q. Is there any way that it -- could the WRB dispatcher determine which free and available process to send a request to based on a random distribution amongst those free and available processes?
MR. ARTUZ: Objection, vague.
A. It's conceivable that it might do that, but that's not the only basis on which it's making the decision. It's making the decision based on the information in the configuration file as to whether the resources are available to process the request, so it's not just based on whether free/not free.
Q. I understand. But once it has determined let's say that there are three processes that are both available --
A. Yes.
Q. -- and free --
A. Yes.
Q. -- could the WRB dispatcher decide which of those processes would receive a request based on a random distribution of those requests?
A. Well, as I said, I don't know how it works. It's conceivable you could do it randomly, but

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nonetheless meet the dispatching limitation of both parties.
Q. Could the dispatcher make that decision of which of a group of available and free processes should receive a request based on simply traversing a list and selecting the first available and free process on that list?
A. It might. I don't know how it works, but if it did that, it would still meet the dispatching limitation of both parties.
MR. PATRAS: All right. Why don't we take what I think this time will be our last break.
THE WITNESS: I'm not holding you to it.
THE VIDEOGRAPHER: We are now going off the record. The time indicated on the screen is 5:34.
- - - -
(There was a recess in the proceedings.)
- - - -
THE VIDEOGRAPHER: We are now back on the record. The time indicated on the screen is 5:44 p.m.
BY MR. PATRAS:

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Q. How about a round-robin distribution?
A. As I said, there are arguments on both sides of that one.
Q. What do you believe to be your strongest single-reference obviousness argument with respect to claim 1 of the '554 patent?
MR. ARTUZ: Objection, vague, asked and answered.
A. I haven't ranked references either for anticipation or for obviousness purposes. So really, really, sitting here I don't have one in mind that's the best.
If -- assuming dates prove out, if Oracle 2, for example, fails for some reason to anticipate, then it would be a really strong obviousness reference.
The garland I believe to be a very strong obviousness reference, but there are others. Anything that's strong for anticipation, if it fails on anticipation would very likely be strong for obviousness.
Q. Is it your opinion that there are at least tens of thousands of two-referenced obviousness combinations that invalidate at least some of the asserted claims?

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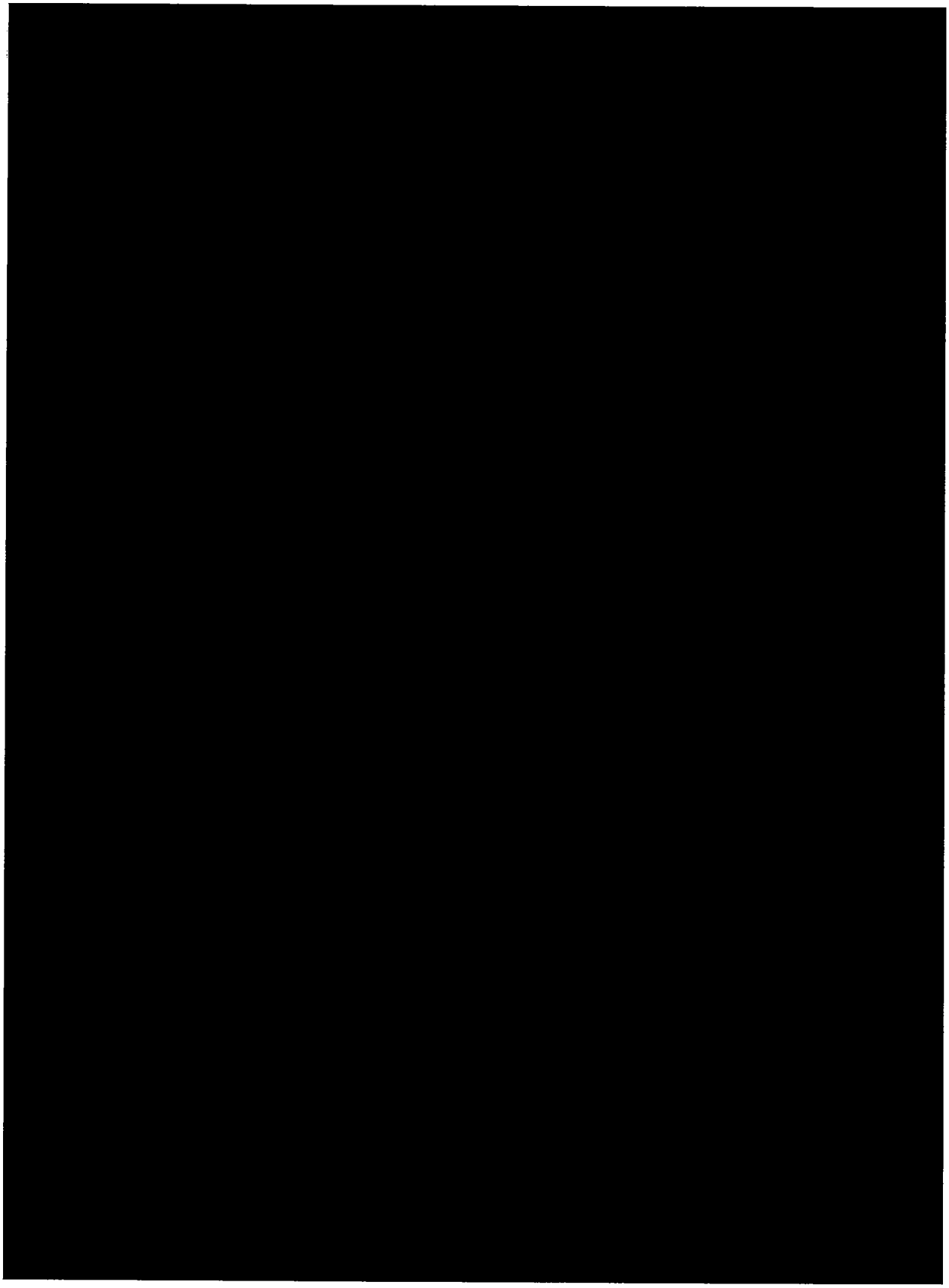
A. Yes.
Q. What do you believe is your strongest two-reference obviousness combination with respect to, let's say, claim 1 of the '554 patent?
MR. ARTUZ: Objection, vague.
A. I haven't formulated an opinion as to that. By the way, the fact that there may be tens of thousands of two-reference combinations, that doesn't mean that the combinations are different. There can be many hundreds of references that teach the same thing, for example, teaching load balancing among servers, and so while the number of combinations may be very large, the number of results that you get from those combinations can still be very small.
This is responsive to a comment that I saw in Finkel's report, Dr. Finkel's report about a designer would be confronted with too many possibilities. Those are not too many possibilities. If you get the same thing from a huge number of references, it only increases the obviousness, not decreases the obviousness.

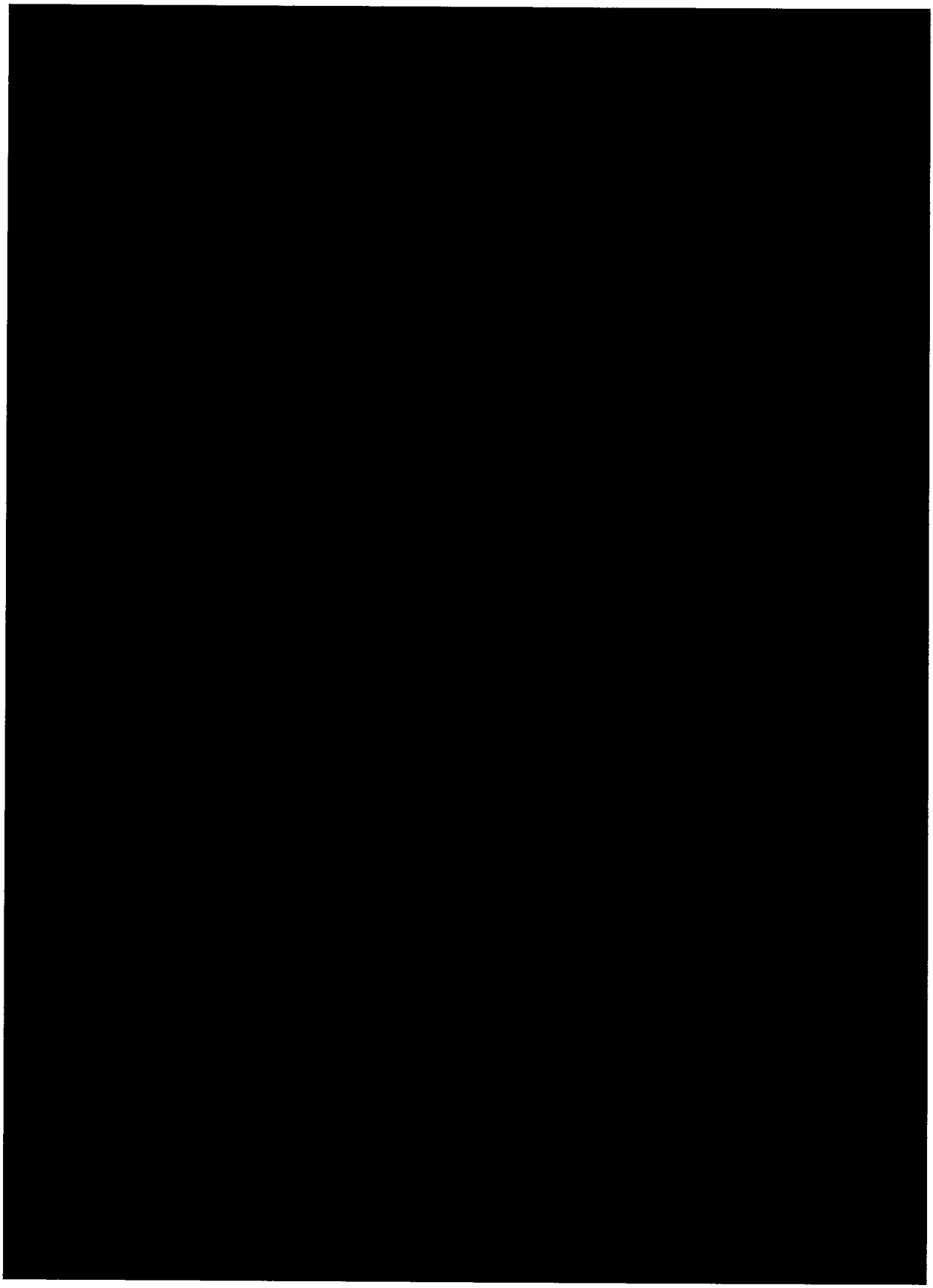
308

Q. Did you rely on any combinations of more than two references in reaching any of your obviousness opinions?
A. I don't think it was necessary to do so, so I don't think so.
Q. Am I correct that in your view all of the references that you combined were properly combined because they are from the art of dynamic web page generation? And I'm referring to paragraph 675, if that's helpful.
A. Yeah, I don't think that's the only basis. I think what I show, for example, if you look at paragraph 676, I list some references that can -- these can be combined with those, but then I list specific references that teach both and, therefore, provide the motivation to combine, and I do that for all of the obviousness combinations. It's paragraph 676 through at least paragraph 685, every one of those contains an express list of references which suggests the combination.
So it's not merely the fact that they are all the from the art of dynamic web page generation.

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Q. Am I correct that separate from the obviousness section of your report you have a section on secondary considerations?
A. I believe so.
Q. It begins, Dr. Shamos, I believe at paragraph 799 if that's helpful.
A. Yes.
Q. Why didn't you include the secondary considerations analysis in the obviousness section of your report?
A. I don't know. It may be that in the final haste to get the report done in the deadline, I didn't do a careful examination of exactly where the right place is. My understanding is that under the federal rule regarding expert reports, the order of presentation is immaterial.
Q. Did you do a careful examination of the secondary considerations?
A. A careful examination, I think that the secondary considerations occupy one to one and a half pages. They are expressed at a very high level, and I'm not sure what would be meant by a careful examination. I did an examination enough I believe to form an





COMMONWEALTH OF PENNSYLVANIA) CERTIFICATE

COUNTY OF ALLEGHENY

I, Heidi H. Willis, RPR, CRR, a Court Reporter and Notary Public in and for the Commonwealth of Pennsylvania, do hereby certify that the witness, MICHAEL SHAMOS, Ph.D., J.D., was by me first duly sworn to testify to the truth; that the foregoing deposition was taken at the time and place stated herein; and that the said deposition was recorded stenographically by me and then reduced to printing under my direction, and constitutes a true record of the testimony given by said witness.

I further certify that the inspection, reading and signing of said deposition were NOT waived by counsel for the respective parties and by the witness.

I further certify that I am not a relative or employee of any of the parties, or a relative or employee of either counsel, and that I am in no way interested directly or indirectly in this action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office this 2nd day of July, 2008.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Heidi H. Willis, Notary Public
City Of Pittsburgh, Allegheny County
My Commission Expires July 8, 2008
Member, Pennsylvania Association Of Notaries

Notary Public

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF ALLEGHENY

I, Michael Shamos, Ph.D., J.D., have read the foregoing pages of my deposition given on June 30, 2008, and wish to make the following, if any, amendments, additions, deletions or corrections:

Page/Line	Should Read	Reason for Change

In all other respects, the transcript is true and correct.

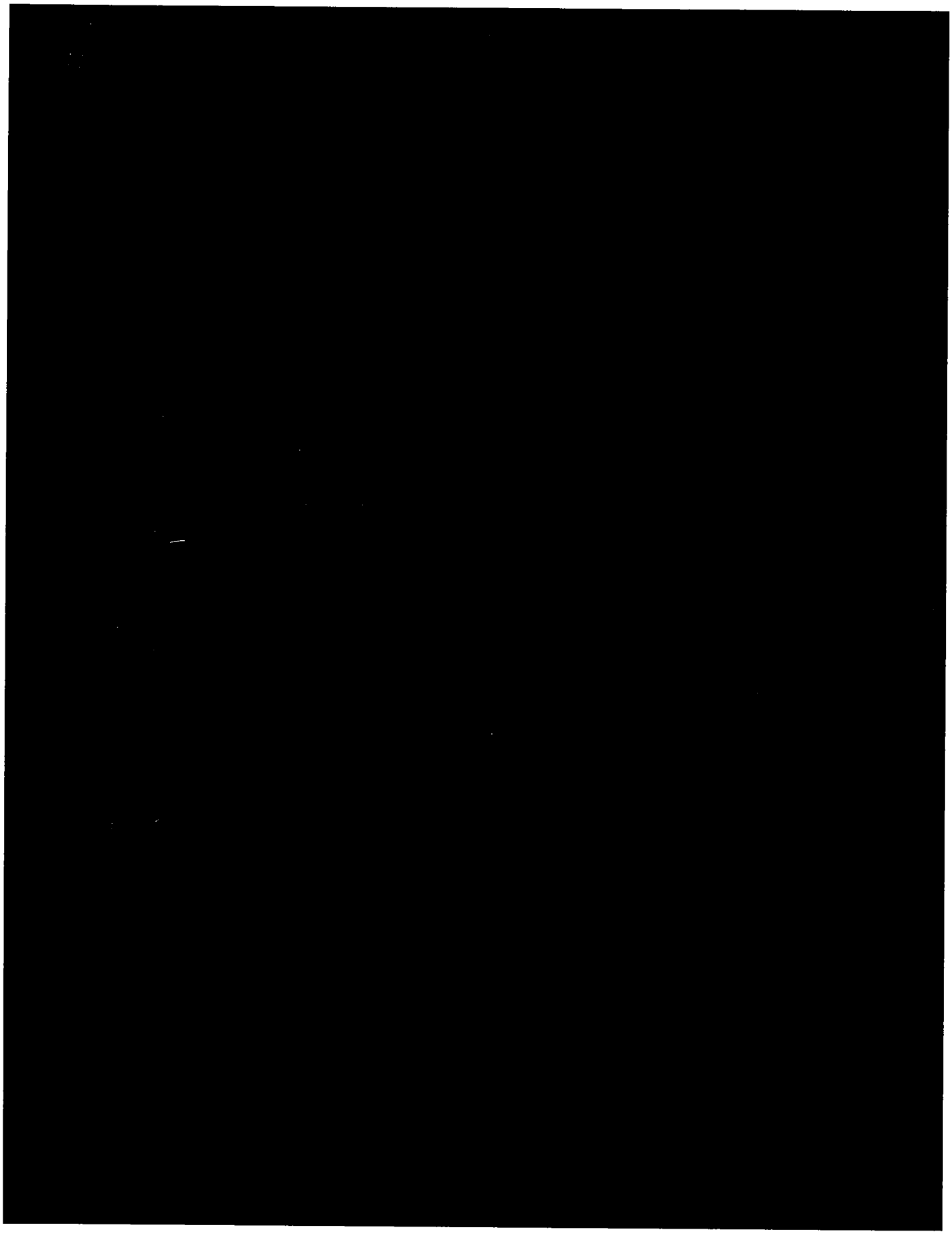
MICHAEL SHAMOS, Ph.D., J.D.

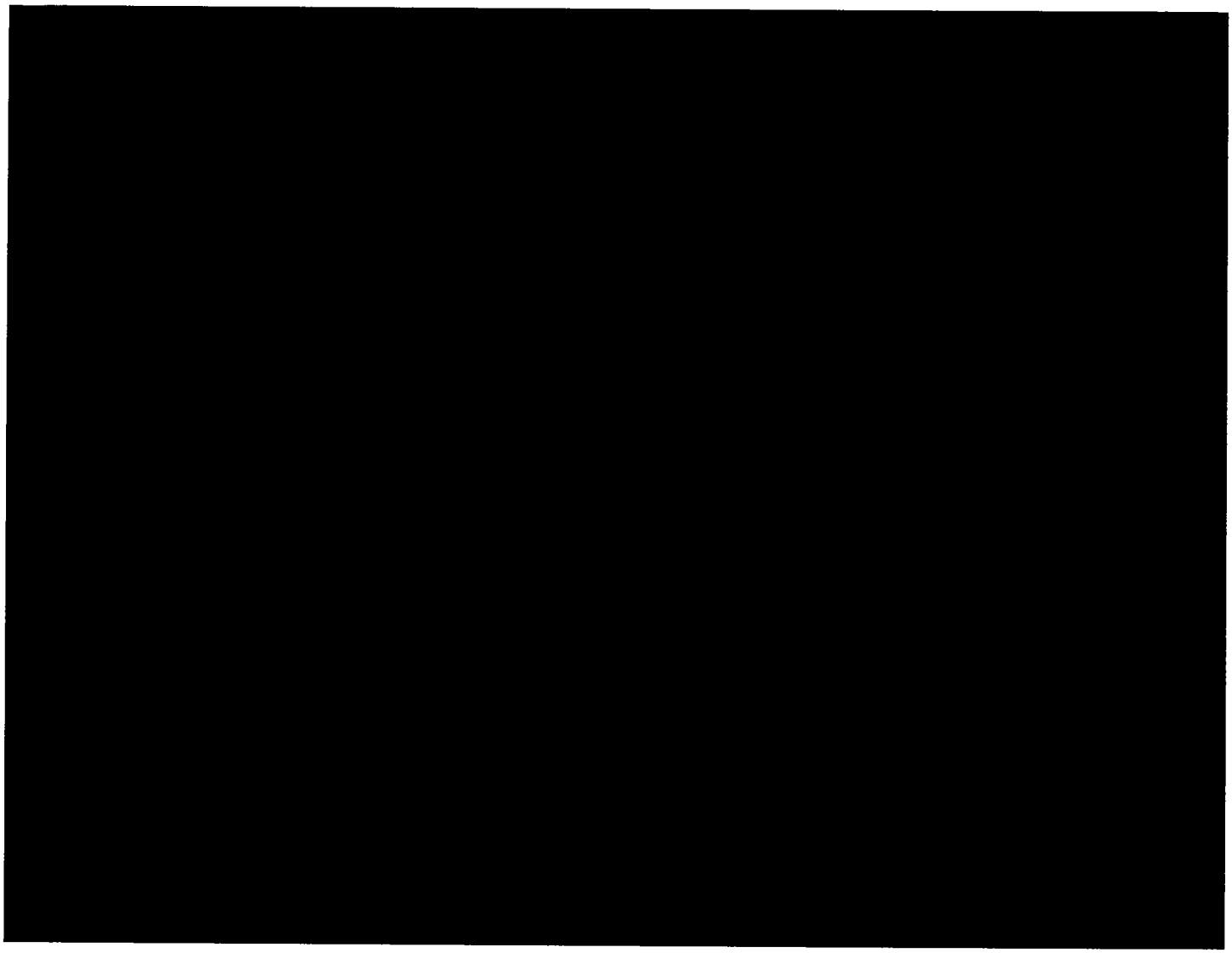
Subscribed and sworn to before me this 28th day of July, 2008.

Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Linda M. Hager, Notary Public
City Of Pittsburgh, Allegheny County
My Commission Expires Mar. 17, 2010
Member, Pennsylvania Association of Notaries

My Commission Expires:





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