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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAP AMERICA, INC.
Petitioner

v.

PI-NET INTERNATIONAL, INC.
Patent Owner

CASE IPR2013-00194
Patent 8,108,492

PATENT OWNER'S CORRECTED RESPONSE PURSUANT TO

37 C.F.R. § 42.120

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
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CORRECTED LIST OF EXHIBITS

PREVIOUS EXHIBIT No.	**CORRECTED EXHIBIT NO. PURSUANT TO ORDER TO CORRECT PAPERS OF 02/03/2014**	
PI-NET 1001	PI-NET 2001	Excerpt from File History of Patent No. 8,108,492
PI-NET 1002	PI-NET 2002	Excerpt from File History of Patent No. 8,108,492
PI-NET 1003	PI-NET 2003	Maria Aapan, *Five Key Questions About Retail Banking's Future*, American Banker (Mar. 12, 2013, 1:49 PM ET) http://www.americanbanker.com/issues/178_49/five-bigquestions-for-the-future-of-retail-banking-1057441-1.html?pg=2
PI-NET 1004	PI-NET 2004	Plaintiff Pi-Net International, Inc.'s Answering Brief in Opposition to Defendants' Motion for Partial Summary Judgment of Indefiniteness, No. 12-280-RGA, No. 12-282-RGA, No. 12-355-RGA (D. Del.)
PI-NET 1005	PI-NET 2005	Excerpt from File History of Patent No. 6,212,556
PI-NET 1006	PI-NET 2006	1.131 Declaration by inventor Dr. Lakshmi Arunachalam
PI-NET 1007	PI-NET 2007	Prosecution History of U.S. Patent No. 5,778,178
PI-NET 1008	PI-NET 2008	Prosecution History of U.S. Patent No. 8,037,158
	PI-NET 2009	Unused exhibit number
	PI-NET 2010-2118	Exhibits to 1.131 Declaration by inventor Dr. Lakshmi Arunachalam (PI-NET 2007)
	PI-NET 2119	Declaration of Dr. Lakshmi Arunachalam in support of Motion to Amend Claim 6

I. INTRODUCTION

Pursuant to 37 C. F. R. § 42.120, the following will set forth the response of Pi-Net International, Inc. ("Patent Owner"), to the petition, addressing those grounds for unpatentability not already denied by the Board.

Patent Owner sets forth, below, detailed reasons why claims 1-8 and 10-12 are patentable over Chelliah individually or in any combination with Valentino or Electronic Banking by Lipis. Furthermore, Patent Owner demonstrates, in the attached Declaration under 37 CFR 1.131 of the inventor, Dr. Lakshmi Arunachalam Pi-Net 2006, that Chelliah does not qualify as prior art under 35 U.S.C. § 102(e) and thus all rejections under sections 102 and 103 in view of Chelliah should be withdrawn. For both of these reasons, Patent Owner respectfully requests that the Board withdraw its decision to review claims 1-8 and 10-12 of the '492 Patent. A Motion to Amend Claim 4 and expert declaration in support thereof by the inventor are attached herewith. While Patent Owner demonstrates herein that Claim 4 in its present form is patentable over the cited art, however, in an abundance of caution, Patent Owner has moved to further amend Claim 4.

II. Claim Construction

1a. VAN Service

PTAB's construction:

The Board did not construe "value-added network service" ("VAN service"). Patent Owner, however, respectfully suggests that a construction of this term will be helpful in addressing the issues presented in this Review.

Patent Owner's construction:

"a point of service application displayed on a Web page and offered as an online service over the Web."

A value added network ("VAN") service should be construed based on its clear meaning and as expressed in the specification. "VAN Service" is a term coined by the inventor. Support for Patent Owner's claim construction is found in '492:9:9-23, as well as in Figs. 6A, 5D, 5C, 5B and 7, for example, "Application service **704** includes POSvc applications such as Bank POSvc described above, and illustrated in FIG. 6A. Other examples of VAN services include multi-media messaging,…financial services, home banking, …a variety of other vertical services. Each VAN service …VAN service **704**…" (underscoring added). *See* '492:8:61, "application network." *See* '492:7:10-23, "Each Web merchant may choose the types of services that it would like to offer its clients. . ." A Web

banking application displayed on a Web page, as shown in Fig. 5D, is an example of a value-added network service or VAN service, where Web banking is the value-add in the value-added network service. The provider of the VAN service, in this example, the Bank as a Web merchant offering a Web banking application, is the VAN service provider.

Accordingly, the construction is straightforward and helpful in analyzing the ‘492 claims relative to the prior art.

1b. VAN Switch

PTAB’s construction:

"OSI application layer switch that has a switching component, management and object routing component."

Patent Owner’s construction:

“an OSI application layer switch having a switching component, an object routing component, a management component, and an application service which includes one or more POSvc application(s).”

Patent Owner respectfully requests the Board's construction be modified to include **“**an application service which includes one or more POSvc applications.” This is displayed on a Web page and is also the VAN service **704**. The ‘492 specification provides the detailed characteristics of the VAN Switch at ‘492:7:51-9:23; 4:58-

5:27; 6:18-25; 33-38; Figs. 3, 7, 5B, 6A, 5C, 5D and 8. The four-quadrant VAN switch is shown in Fig. 7, which illustrates the four types of services provided by the VAN Switch, namely, Boundary service **701**, Switching service **702**, Management service **703** and Application service **704**, as further detailed in the specification at '492:8:40-9:23. The specification at '492:8:41-43 further states: "Exchange **501** and management agent **601** together constitute a VAN switch." Exchange is illustrated in Fig. 5B, as well as in Figs. 5C, 5D and 6A. The specification at '492:6:18-20 states: "Exchange **501** comprises Web page **505** and point-of-service (POSvc) applications **510**." It is therefore clear from the text and drawings in the specification that an application service which includes one or more POSvc application(s), each of which is a transactional application that is a Web client in a Web browser, displayed on a Web page or other graphical user interface is a key component of a VAN switch and needs to be included in the claim construction for VAN Switch. See construction of "POSvc application" here below and the construction of "Web application" in Patent Owner's Response in CBM2013-00013, filed concurrently herewith.

1c. Web application

Board's construction:

"software program that can be accessed by an internet user."

Patent Owner's construction:

"an application that is a Web client in a Web browser."

See detailed discussion of "Web application" in Patent Owner's Response in CBM2013-00013 for related U.S. Patent 8,037,158, filed concurrently herewith.

The Patent Owner respectfully points out that the Board's construction of "Web application" as a "software program that can be accessed by an internet user" has overlooked, for example, that a data base that is accessed by a user or internet user is NOT a Web application - it is an application local to the back-end of an enterprise. A database in a Back Office of a Web merchant, as illustrated in Fig. 5D of the '158 patent as "data repository 575" is NOT a Web application. The database is not displayed on a Web page and is NOT a Web client in a Web browser. It is NOT a POSvc application that may be chosen from a POSvc application list displayed on a Web page.

1d. Object Routing

Since the construction of "VAN switch" properly invokes "object routing," which in turn invokes "individual networked objects", it is important to refer to and apply the construction of the latter terms as well.

PTAB's construction:

"The use of individual network objects to route a user from a selected transactional application to the processing provided by the service provider."

Patent Owner's construction:

"The routing of individual networked objects from a selected transactional application on a Web page to the processing provided by the service provider."

See detailed discussion of "object routing" in Patent Owner's Responses in CBM2013-00013 for related U.S. Patent 8,037,158, filed concurrently herewith.

1d.1 Individual Networked Objects

Patent Owner's construction:

"the information entries and attributes in a DOLSIB."

2. POSvc Application

PTAB's construction:

"software program that facilitates execution of transactions requested by a user."

Patent Owner's construction:

"a transactional Web application displayed on a Web page, and displaying an object data structure in the Web application with attributes and information entries."

Support (*see* pp. 40-53 Patent Owner's Preliminary Response, CBM2014-00018). In IPR2013-00194 and in the current litigation in Delaware, Patent Owner adopted this construction, which is fully supported in the specification, drawings and prosecution histories of the '492, '158 and parent '178 patents. This support was

not provided to the PTAB by Patent Owner in the preliminary response to the PTAB in IPR2013-00194. This construction is Patent Owner's first choice. Alternatively, "a Web application displayed on a Web page that executes the transactions requested by a Web user,"[1] only if the PTAB does not agree with Patent Owner's first construction.

Fig. 5D displays the object data structure with information entries and attributes in the POSvc application displayed on the Web page. This is further consistent with the specification at '492:8:7-13:

> "The networked object identity identifies the information entries and attributes in the DOLSIB as individual networked objects."

As set forth at 492:6:23-25: "POSvc applications 510 are transactional applications, namely applications that are designed to incorporate and take advantage of the capabilities provided by the present invention." and at '492:6:41-44: "A POSvc application is an application that can execute the type of transaction that the user may be interested in performing. The POSvc list is displayed via the graphical user interface component." Figs. 4B, 5B, 5C, 5D, 6A and '492:6:39-55

[1] Patent Owner shows that both constructions are supported in the patent and record.

show that the POSvc application is displayed on a Web page. The specification at '492:9:9-23 states, "Application service **704** includes POSvc applications such as Bank POSvc described above, and illustrated in Fig. 6A...VAN service **704**…"

"Point of service application" (POSvc) is not a term of art. It is a term coined by the inventor. The disclosure of the '492 patent accordingly defines it as described in the specification, above, and as very specifically shown in Fig. 5D ("BANK (1) 510", for example). In the example of the Bank POSvc application 510 displayed on a Web page, shown in Fig. 5D, the POSvc application also displays an interactive checking account "object" data structure with information entries and attributes, "NAME" and "PASSWORD."

With regard to Patent Owner's alternative construction,[2] such construction is based upon the Board's construction with certain minor changes which are respectfully believed to be proper. First, Patent Owner suggests changing the construction from "a software program" to "an application." The actual claim term, "Point Of Service Application" includes the word "application," and thus Patent Owner's construction is more faithful to the actual claim language than "a software program." It is believed that the word "application" is no less clear than

[2] Again, Patent Owner offers this construction only if its first construction, above is not accepted.

"a software program," and it is perfectly understandable to those skilled in the art, without further construction. *See U.S. Surgical* , 103 F.3d at 1568 (Claim construction " is not an obligatory exercise in redundancy.")

Second, Patent Owner submits that it is more proper to say that the Point of Service Application "executes the transactions," rather than "facilitates execution of transactions." Neither the claims nor the specification state or suggest that the POSvc application "facilitates" execution, and Patent Owner respectfully suggests that there is no basis for inclusion of this word in the construction, which, if anything, only adds vagueness to the construction.

Finally, in context, it is clear from the claim as a whole, and from the specification, ('492:5:46-54) that the user of the POSvc application is a Web user, and thus, the appropriate alternate construction is believed to be limited thereto.

Here, the patentee clearly defined and explained the term in the Patents, and Patentee's definition of the term follows precisely the definition in the Patents. Thus, the Patent defines the term as follows:

"POSvc applications 510 are transactional applications…" ('492:6:22-25) "…displays an Exchange Web page 505 that includes a list of POSvc applications 510 accessible by Exchange 501." ('492:6:39-41) "…The POSvc list is displayed via the graphical user interface component." ('492:6:43-44)

"An example of a POSvc application list is illustrated in FIG. 5C. User 100 can thus select from POSvc applications Bank 510(1), Car Dealer 510(2) or Pizzeria 510(3). … If user 100 desires to perform a number of banking transactions, and selects the Bank application, a Bank POSvc application will be activated and presented to user 100, as illustrated in FIG. 5D." ('492:6:51-58.)

A key defining aspect of the POSvc application is that it has a transactional data structure, which the Patents call the "object." This is depicted in Figure 5D, which, together with the accompanying text, demonstrates that the POSvc application incorporates the transactional data structure or object:

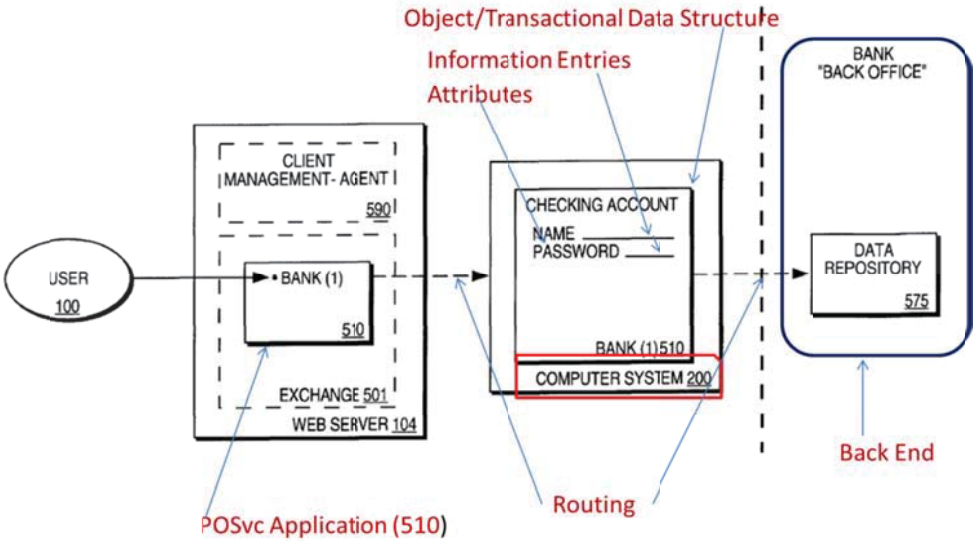

Fig. 5D displays the object data structure with information entries and attributes in the POSvc application displayed on the Web page. This is further consistent with the specification at '492:8:7-13:

"The networked object identity identifies the information entries and attributes in the DOLSIB as individual networked objects…"

The original prosecution history of the parent '178 patent shows full support for the Patent Owner's claim construction that the POSvc application is a transactional Web application displayed on a Web page and displaying an object data structure with information entries and attributes in the POSvc application on a Web page. The record shows that **the object is displayed in the POSvc application on a Web page**, and in the example in Fig. 5D, the checking account object in Bank POSvc application 510 is displayed on the Web page and is the individual networked object with information entries and attributes, NAME and PASSWORD.

Excerpts from the parent '178 Prosecution history (PI-NET 2007) show that the checking account displayed in Bank POSvc application 510 on the Web page in Fig. 5D is an object with information entries and attributes, as reproduced here below: "…Specifically, Davison does not teach or suggest a method or apparatus for enabling object routing on a World Wide Web. Davison does not teach or suggest a method or apparatus for enabling object routing on a World Wide Web. Davison does not teach or suggest…an object identity with information entries and attributes wherein the object identity represents a networked object… The Examiner contends that Davison teaches the above elements in "an HTML Web

page with URL links to application programs," … the object identities according to the presently claimed invention are distinctly different from an HTML page with URL links…the object identity represents a networked object…access the object from the virtual information store. This type of an "object" is significantly different from an HTML page that is accessed via a URL. Although an HTML page may be utilized by a user to specify the type of transaction desired (e.g. **a POSvc application is essentially viewed by the user as a Web page**, as described in the specification), the HTML page described in Davison is simply an entry form and does not provide any type of object routing capability…Davison describes how to create a standard HTML Web page that contains HTML forms. These forms are non-interactive Web pages that do not allow a user to perform live, real-time, bi-directional transactions, with object routing, as claimed.

In contrast, according to the presently claimed invention, as described in the specification on Page 15, for example, if a Web merchant decides to offer a **POSvc application** that allows access to checking and savings accounts, the **object identities according to the claimed invention refer to the individual checking and savings accounts**, not to the POSvc application Web page. **Each account is an individual network addressed object** that is accessible on the Internet. Thus as claimed in Claim 12, for example, **each account is an object identity associated with information entries and attributes**, and the object

identity represents a networked object. The **object identity (the account)** is associated with a unique network address, and the unique network address is utilized to identify and route the object identity on the World Wide Web. This type of an object routing system is not taught or suggested by Davison." (emphasis added)

In this regard, *see* '492:7:10-23; "Each Web merchant may choose the types of services that it would like to offer its clients. In this example, if Bank decided to include in their POSvc application access to checking and savings accounts, user **100** will be able to perform real-time transactions against his checking and savings accounts. Thus, if user **100** moves $500 from his checking account into his savings account, the transaction will be performed in real-time, in the same manner the transaction would have been performed by a live teller at the bank or an ATM machine. Therefore, unlike his prior access to his account, user **100** now has the capability to do more than browse his bank account. The ability to perform these types of robust, real-time transactions from a Web client is a significant aspect of the present invention." (emphasis added).

In this example, the checking account is an object data structure with information entries and attributes in the Bank POSvc application 510 displayed on a Web page. The information entries and attributes are user **100** for USER NAME; checking account number, savings account number for ACCOUNT NUMBERS; $500 as

AMOUNT OF TRANSFER. This is described in the '178 prosecution history cited above.

The fact that the POSvc Application included the transactional data structure was repeatedly argued by the inventor in the Patent office, to distinguish the prior art. Excerpts from the Prosecution history of the '158 (PI-NET 2008) patent deriving priority from Inventor's Provisional Application S/N 60/006,634 is provided below: In the prosecution of the '158 patent, the inventor argued that "the prior art did not disclose "an object that is a transactional data structure specific to a transactional web application… asserted a new reference, DeBettencourt. (*Id*. at 98-99). The inventor responded that the new reference was also deficient, because

> "An 'application,' in DeBettencourt, is readily distinguished from a transactional Web application with an 'object' or transactional data structure that connects to a transactional Point-of-Service application…" (*Id*. at 117, 128).

See, for example the arguments upon which the PTO issued the claims of the related 8,037,158 patent ("'158,").

> Montulli lacks a point-of-service application on a Web page or a transactional Web application, offered as an online service atop the Web, with an "object" or transactional data structure, that connects to a transactional application across a service network atop the World

Wide Web, as these terms would be understood by one skilled in the art after reading the subject application and as claimed in the subject Application. ***

As described above, the subject application is directed to a point-of-service application on a Web page, a transactional Web application, offered as an online service atop the Web, with an “object” and/or a transactional data structure, that connects to the services of a Web merchant or VAN service provider or to a transactional application corresponding to the POSvc application displayed on a Web page across a service network atop the World Wide Web.

3. Real-Time

PTAB’s construction:

"non-deferred processing of the transaction."

Patent Owner’s construction:

“opposite of deferred” or “non-deferred.”

The basis for this construction is the ordinary meaning of "real-time." Alternatively, "real-time" can be construed as “non-deferred” or “the opposite of ‘deferred.’” As set forth in the specification at ‘492:1:42-48:

“Additionally, the user has limited ‘deferred’ transactional capabilities, namely electronic mail (e-mail) capabilities. E-mail capabilities are referred to as ‘deferred

transactions' because the consumer's request is not processed until the e-mail is received, read, and the person or system reading the e-mail executes the transaction. This transaction is thus not performed in real-time."

Although '492:7:48-50, the specification states that an employee receives his paycheck "immediately," in context, the employee does not receive his paycheck" immediately" in a strict sense, since there will always be some, albeit small, delay. The specification at '492:7:48-49 states that "..the transaction is thus processed in real-time…" Accordingly, a better, more appropriate construction of "non-deferred" is believed to be either "the opposite of deferred" or "non-deferred."#

At '492:7:10-23, patent states that "real-time" is as in an ATM transaction or a live teller transaction. This is from the standpoint of the user experience, NOT processing of the transaction.

4. Service Network

PTAB's construction:

"a network on which services, other than underlying network communications services, are provided."

Patent Owner's construction:

"a network, running within the application layer of the OSI model, on which services are provided over the World Wide Web."

Patent Owner adopts the Board's construction, but with the following exceptions: (1) substituting "running within the application layer of the OSI model" for "other than underlying network communications services," and (2) substituting "World Wide Web" for "Internet."

Regarding the first substitution, the claim term "service network atop the World Wide Web" specifies that the service network operates in a specific layer of the OSI model. As set forth in'492:4:62-64, "The present invention is implemented to function as a routing switch within the "application layer" of the OSI model." The specification makes clear that the limitation of the service network within the application layer is critical to the invention: "Application layer routing creates an open channel for the management, and the selective flow of data from remote databases on a network." '492:5:25-27. Moreover, at '492:5:59-61, the specification makes clear that the "service network run[s] on top of a facilities network, namely the Internet, the Web or e-mail networks." *See* '492:4:58-5:27 and Fig. 3, which further distinguish the application layer from the network or transport or other lower layers of the OSI model. Accordingly, "atop the World Wide Web" can be precisely construed to mean "within the application layer of the OSI model."

This is in contrast to the Board's construction which equates "atop the World Wide Web" to "other than underlying network communications services." This is

respectfully believed to be arbitrary and without basis. It is believed that "within the application layer of the OSI model" is the proper and precise construction of "atop the World Wide Web."

With regard to the second substitution, namely "World Wide Web" for "Internet," this is believed to be proper and correct since the claim specifically calls for a service network atop "World Wide Web," not "the Internet." Those two terms mean different things and are not interchangeable. The Internet is a broader term and typically refers to a networking infrastructure (TCP/IP up to layer 4 of the OSI model), as in "an IP-based facilities network" as in '492:6:31-33, whereas the World Wide Web is about display over the Internet typically utilizing browsers, such as Internet Explorer or Firefox, to access Web documents called Web pages.

> "The Web is just one of the ways that information can be disseminated over the Internet. The Internet, not the Web, is also used for e-mail, which relies on SMTP, Usenet news groups, instant messaging and FTP. So the Web is just a portion of the Internet, albeit a large portion, but the two terms are not synonymous and should not be confused."

http://www.webopedia.com/DidYouKnow/Internet/2002/Web vs Internet. asp.

Accordingly, Patent Owner respectfully requests that the phrase "Service network atop the World Wide Web" be construed to mean “A network, running within the application layer of the OSI model, on which services are provided over the World Wide Web.”

For services, see VAN services from POSvc applications on a Web page.” *See* ‘492:9:9:23; Figs. 6A, 5D. “Application service **704** includes POSvc applications such as Bank POSvc described above, and illustrated in FIG. 6A. Other examples of VAN services include …Depending on the type of service, …VAN service **704**…” *See* ‘4921:35-36. “…on-line services…on-line users.”

A service network provides VAN services or POSvc applications displayed on a Web page as on-line services over the World Wide Web. Support for this is at Figs 3, 5D, ‘492:5:59-61; “service network running on top of a physical network such as the Web, Internet or email networks.”

5. back-end

PTAB’s construction:

"a computer system or database accessed by a user via an application."

Patent Owner’s construction:

Plain and ordinary meaning.

However, if any further construction is required, then the term "Back-end transactional application" means "application provided by the Web merchant or value-added network service provider that corresponds to the front-end POSvc Application on a Web page."

Patent Owner respectfully disagrees with the Board for the following reasons. A Web user does not ever access a computer system or database in a Back Office, for obvious security reasons, a Bank or other Web merchant or VAN service provider would not allow a user to access the computer system or database in the Back Office, even via an application.

6. Computer System Executing The Back-End Transactional Application For Processing The Transaction Request In Real-Time

PTAB's construction:

"the computer system of claim 1 or another computer."

Patent Owner's construction:

Patent Owner accepts PTAB's construction.

7. Web server

PTAB's construction:

Each instance of Web server in claim 10 be construed as the same Web server.

Patent Owner's construction:

Patent Owner agrees with PTAB's construction.

8. Back-Office Server

PTAB's construction:

"a server computer controlling execution of transaction related tasks."

Patent Owner's construction:

"A server [or host] located in the back office [of a web merchant]."

As used in the Patents, "back-office" and "back-office server" carry their plain and ordinary meanings.

III. Chelliah Does Not Anticipate Claims 1-7 and 10-11 Or Render Claims 8 and 12 obvious in view of Valentino or Electronic Banking.

In its Decision, the Board instituted review of claims 1-7 and 10-11 as anticipated by Chelliah and claims 8 and 12 as obvious over Chelliah in view of Electronic Banking and Valentino respectively. Patent Owner respectfully requests that such decision be withdrawn for two independent reasons:

First, Chelliah is not prior art because the inventor of the '492 patent conceived of the claimed inventions prior to the August 29, 1995 filing date of Chelliah and also CORBA of July 1995, and proceeded to diligently reduce to practice the claimed inventions from before the August 29, 1995 filing date of the Chelliah patent at least until the November 13, 1995 filing of provisional application No. 60/006,634,

upon which the ‘492 patent is based and derives priority from. A declaration of the inventor under Rule 131, along with supporting exhibits, which establish an invention date before the filing date of the Chelliah patent, is submitted herewith. Specifically, conception is demonstrated by the detailed references to the numerous, corroborating documents, and diligence is demonstrated by the high level of activity memorialized in the corroborating documents from at least August 29, 1995 through to at least November 13, 1995. This demonstrates that Chelliah is not 35 U.S.C. § 102(e) prior art and likewise overcomes the grounds of obviousness, to the extent that a 102(e)-type reference is disqualified in the context of obviousness. Accordingly, Patent Owner respectfully requests the Board to withdraw its decision on this basis alone.

Second, the above claims, as properly construed, were not anticipated nor rendered obvious by Chelliah individually or in combination with Electronic Banking or Valentino, as will now be discussed.

Chelliah was already considered by the USPTO during prosecution of the ‘492 patent and the then Examiner agreed with the inventor that the claimed inventions in the ‘492 patent are clearly distinguished over Chelliah and that Chelliah neither anticipates nor renders obvious any of the claims of the ‘492 patent alone or in combination with any other cited art and allowed the claims to issue.

Chelliah represents the problems that existed in 1995. In 1995, applications were local to the back office and were not connected to a Web application on a Web page, because there were no Web applications at the time (and as discussed below). There were no connected applications connecting from a back-end transactional application to a front-end Web application on a Web page. A back-end transactional application was an island and local to the back-end and did not connect to a non-existent Web application at the front-end.

In fact, Chelliah belongs to a class of systems in the early days of the Web, successfully distinguished by the inventor over the cited Davison prior art, over "**an HTML Web page with URL links to application programs**," as seen in the '178 Prosecution History, where the Examiner said that

> "Specifically, Davison does not teach or suggest a method or apparatus for enabling object routing on a World Wide Web…The Examiner contends that Davison teaches the above elements in "**an HTML Web page with URL links to application programs**," … the object identities according to the presently claimed invention are distinctly different from an HTML page with URL links…the object identity represents a networked object…access the object from the virtual information store. This type of an "object" is significantly

different from an HTML page that is accessed via a URL. Although an HTML page may be utilized by a user to specify the type of transaction desired (e.g. **a POSvc application is essentially viewed by the user as a Web page**, as described in the specification), …Davison describes how to create a standard HTML Web page that contains HTML forms. These forms are non-interactive Web pages that do not allow a user to perform live, real-time, bi-directional transactions, with object routing, as claimed.

In contrast, according to the presently claimed invention, as described in the specification on Page 15, for example, if a Web merchant decides to offer a **POSvc application** that allows access to checking and savings accounts, the **object identities according to the claimed invention refer to the individual checking and savings accounts**, not to the POSvc application Web page. **Each account is an individual network addressed object** that is accessible on the Internet. Thus as claimed in Claim 12, for example, **each account is an object identity associated with information entries and attributes**, and the object identity represents a networked object. The **object identity (the account)** is associated with a unique network address, and the unique network address is utilized to identify and

route the object identity on the World Wide Web. This type of an object routing system is not taught or suggested by Davison."

(emphasis added)

At least Davison provided the interface called CGI to strip a Web form field by field and send it field by field as standard I/O to a back-end application. Chelliah does not disclose what interface to the Web is provided from the Sales Representative Object, which is an internal subsystem in the backend, whereas Chelliah teaches extensively how the Sales Representative Object interfaces to other back-end internal or external subsystems, for example, to VISA or Fedex back-end subsystems and Oracle databases, using standardized interfaces and APIs at the back-end and via an ORB using CORBA. Chelliah does not disclose how Sales Representative Object internal subsystem interfaces to the Web page in the Electronic Storefront, Chelliah merely discloses how Sales Representative Object interfaces to the back-end via an ORB or APIs. Chelliah does not disclose that the back-end internal and external subsystems in Chelliah are connected to any POSvc application on a Web page or a Web application that is a Web client in a Web browser or to the Web server. In other words, Chelliah has created more internal backend subsystems that are additional islands of information, none of which connect to a Web application displayed on a Web page. Chelliah's back-

end internal and external subsystems are not in the Web browser. Chelliah's Sales Representative Object is not a Web client in a Web browser.

Chelliah discloses a series of hyperlinks and image icons clicked on by a user serially in multiple one-way browsing and return of new Web pages from the Web server, but no object with information entries and attributes in a POSvc or Web application on a Web page being routed as a complete data structure as an encapsulated whole from a POSvc Web application on a Web page to the services of a Web merchant in an automated end-to-end real-time Web transaction through a Web server. A series of disjointed clicks by a user to hyperlinks and being hyperlinked away to another Web page and clicks on image icons displaying items in Chelliah does not disclose a connected application, connecting a POSvc/Web application on a Web page to the services of a Web merchant or a VAN service provider in a corresponding transactional application at the back-end.

Even with the Board's construction, in Chelliah, these internal and external subsystems which are in the back-end are not Web clients in a Web browser nor are they displayed on a Web page, nor is there an individual networked object with information entries and attributes displayed on a Web page in these applications, nor is an individual networked object with information entries and attributes on a Web page routed anywhere from a Web page, nor through a Web server to

anywhere. Chelliah's object is a program object which passes arguments and function calls to a remote program via an ORB in the back-end. Patent Owner's individual networked object are information entries and attributes in a DOLSIB and this object with information entries and attributes is displayed in a POSvc or Web application on a Web page. This is not disclosed in CORBA or Chelliah. The '492 patent connects the back-end to the Web application at the Web page or Web browser via object routing of the individual networked object with information entries and attributes in the POSvc Web application in the Web browser. Chelliah's back-end internal and external subsystems are not in the Web browser.

A. Chelliah Does Not Teach Or Suggest The Use Of A "Web Application" As Claimed And Properly Construed

As discussed above, the proper construction of "Web Application" is respectfully believed to be "an application that is a Web client in a Web browser." Even if Chelliah's interface 13 were a web page, giving Chelliah the benefit of the doubt, it teaches nothing more that the use of hyperlinks, in the same manner disclosed by, for example, Payne, Gifford, Popp, and as discussed with reference to Fig. 1A of the '492 patent. Chelliah does not, in any manner, teach or suggest the use of a "Web Application," *i.e.* "an application that is a Web client in a Web browser,"

nor would such have been obvious in view of any other prior art, including, without limitation, CORBA, Electronic Banking or Valentino.

Indeed, as described at col. 12, lines 3-8, and col. 14, lines 45-51, for example, Chelliah does not commit to any particular front end, refers to run-of-the-mill web browsers (displaying hypertext links, as described in the background of the invention of the '492 patent, at Fig. 1A, for example), and goes so far as to suggest that user selections can be made from a set-top cable box. This is not surprising because Chelliah's goals for his invention are unrelated to the inventions in the '492.

> "It is desirable to provide a system and method for conducting commerce via an electronic means, such as a computer network, cable television network, or direct dial modem…to provide a versatile system capable of supporting a wide range of providers of goods and services." '887:1:14-22 (underscoring added).
>
> "… object of the invention to provide actual implementations of some commerce subsystems where existing commerce subsystems used for physical commerce (e.g., marketing subsystems) are not readily extendible to electronic commerce or where those subsystems do not currently exist." '887:2:50-55 (underscoring added).

> "This invention relates to … a computer architecture comprising a family of distributed, interface-compatible commerce subsystems, where each electronic store operator selects a particular combination of subsystem implementations to meet store specific operating needs." '887:1:6-12 (underscoring added).

Chelliah himself states that the internal and external subsystems are all

> "…(**back-end subsystems**),…" '887:1:28-41(emphasis added).
>
> "…the distinction between External and Internal is somewhat arbitrary, as it reflects the commercial availability of existing subsystem technologies rather than any fundamental difference between the two subsystem categories." '887:8:13-17 (underscoring added).

Chelliah never discloses how any of these back-end subsystems connect to any front-end, whether it is a cable TV set-top box or a Web page.

In conclusion, nothing in Chelliah, or any of the other prior art presented in this Review, or those of the related Review (CBM2013-00013) teaches or suggests, alone or in combination, the use of a VAN switch as claimed and as properly construed. Accordingly, because all of the claims of the '492 patent are limited t

the use of "Web applications," all of the claims are patentable in view of Chelliah alone or in combination with any other prior art.

a. Chelliah does not disclose "A system, comprising: a Web server …for offering one or more Web applications as respective point-of-service applications in a point-of-service application list on a Web page," as claimed in Claim 1, even with the terms "Web application" and "POSvc application" as construed by the Board.

Chelliah does not meet the claim language, much less does Chelliah meet the claim language as construed by the Board or the Patent Owner. There is simply no "software program or list of software programs that facilitate the execution of transactions requested by the user" on a Web page in Chelliah or CORBA of July '95 or July '96. As noted above, while Chelliah generally refers to a web interface, user choices are presented as hyperlinks - the standard of that time - not web **applications** in the webpage, as clearly claimed. There is no mention of a Web server for offering any applications or internal or external subsystems as point-of-service applications in a point-of-service application list on a Web page. Even with the Board's constructions of "Web application" and "point-of-service application" were correct [and not missing integral components (as detailed above) as required by the specification and the claim language,] as "a software program that can be

accessed by an Internet user" and "a software program that facilitates execution of transactions requested by a user" respectively, Chelliah does not disclose in any manner, alone or in combination with any other prior art, the notion of "offering one or more Web applications as respective point-of-service applications in a point-of-service application list on a Web page" or the use of a Web server for doing so, as claimed.

b) Chelliah does not disclose "each Web application of the one or more Web applications for requesting a real-time Web transaction," as claimed in Claim 1, as construed by the Board or Patent Owner. Claims 3, 5, 6, 7, 8, 10 and 12 are not anticipated by Chelliah, all of which require a Web application, as Chelliah does not disclose a Web application or point-of-service application, as construed by the Patent Owner, that is a Web client in a Web browser.

For the same reasons as stated in III. A. a) above, this claim term is not met by Chelliah.

c) Chelliah does not disclose "a service network connecting through a Web server to a back-end transactional application," as claimed in claim 1, or "VAN service", as claimed in Claims 4 and 5.

As per the specification in '492:9:9-23, VAN service is a point of service application displayed on a Web page and offered as an online service over the

Web. As Chelliah does not disclose a Web application or point of service application displayed on a Web page, as discussed above, Chelliah does not disclose VAN service.

The Figures in Chelliah, including Fig. 2, while they show a user interface, do not show anything routed from a Web page or an application displayed on a Web page through a Web server to a merchant's services at the back-end.

Chelliah discloses the possible use of CORBA, but CORBA has nothing to do with user interfaces or Web browsers. CORBA is an object request broker that was used entirely at the back-end in 1995, removed from any involvement with the Web browser and Web server. As noted in Chelliah, column 14, lines 31 – 38, CORBA was used as a way of distributing objects across multiple computer platforms, to enhance interoperability of back office systems. Because its use, even as disclosed by Chelliah, was with respect to back office systems, it neither disclosed nor suggested the use of point-of-service Web applications that are Web clients in a Web browser, or the routing of objects from a point-of-service application that is a Web client in the Web browser through the Web server to the services provided by a transactional application.

CORBA of 1995 did not disclose the use of a Web server for connecting to a back-end application. CORBA disclosed an ORB, NOT a Web server, to connect from one program object to another program object, all in the back-end. Furthermore,

CORBA IIOP relates to a physical network, a TCP/IP-based facilities network. A TCP/IP-based physical network is clearly at a lower layer, Layer 4 of the OSI model, than the "application layer network" or "service network atop the Web." These two distinctions alone eliminate CORBA and hence Chelliah.

The POSvc application which is a Web client in a Web browser is “a significant aspect of the present invention.” ‘492:7:21-23. This is non-existent in CORBA and Chelliah. CORBA did not disclose the use of a Web server, nor did Chelliah. Therefore, Chelliah does not disclose “a service network connecting through a Web server to a back-end transactional application,” as claimed in claim 1.

In 1995, CORBA did not provide POSvc applications as a Web client in a Web browser. Furthermore, ‘object routing’ in the ‘492 patent routes individual networked objects with information entries and attributes in a distributed on-line service information base from a POSvc application in a Web browser to the services of a Web merchant or value-added network service provider through a Web server over a service network atop the Web. Whereas in CORBA and Chelliah, the so-called object routing is between a CORBA client to a CORBA server which is a program object implementation, all of which are at the back-end, none of which are Web clients in a Web browser. This distinction alone eliminates CORBA and Chelliah, which relate to a back-end operation, not to object routing

from a Web application in a Web browser or a service network for connecting through a Web server to a back-end application.

d) Chelliah does not disclose "Object Routing'" which is required for the Proper Construction of "a value-added network switch," as that term is construed by Patent Owner.

Chelliah does not disclose a VAN switch that is an application layer switch in the application layer of the OSI model, as claimed in claim 2.

Chelliah and CORBA fail to disclose a key requirement of "VAN switch," namely object routing from a Web client running in a Web browser. Chelliah and CORBA disclose a CORBA client object which runs local to the back-end of an enterprise making a call to an ORB, requesting service from a remotely executing CORBA server object. The ORB as well as the CORBA client and remote CORBA server object run local to the back-end of an enterprise, and do not run in a Web browser. CORBA, as referred to by Chelliah, had no interface to a Web server or a Web page or to a Web client in a Web browser. The Board relied on CORBA to state that Chelliah disclosed object routing, but the object routing was performed in the back-end, local to the back-end of an enterprise, not from a Web client in a Web browser. Additionally, the CORBA object had data and functions, but was NOT the individual networked object with information entries and attributes in a DOLSIB and displayed in a POSvc application on a Web page, as in the '492

patent. So, any object routing in CORBA and Chelliah was not object routing from a Web client in a Web browser to a Back-end transactional application or server. CORBA and Chelliah are irrelevant to the VAN switch as claimed in the '492 patent independent claims 1, 10 and 12, and hence irrelevant to the dependent claims 2-8 and 11, as well.

Even with the Board's construction of "point-of-service application" as "a software program that facilitates execution of transactions requested by a user," there is no notion in Chelliah (*see* Chelliah Fig. 2) of an application layer switch that includes POSvc application(s), displayed on a Web page or other graphical user interface or that is an application that is a Web client in a Web browser. No application is displayed on a Web page in Chelliah. Chelliah states:

> "At least one supplier is presented on the display for selection by the customer using the input device. Similarly items from a supplier can be displayed for the customer to observe…receiving a customer's selection of a presented item…" (Abstract) (underscoring added)

There is not even a notion of a point-of-service application in a point-of-service application list on any kind of user interface, as evidenced by Fig. 2 in Chelliah. Even if Pricing Engine 120, Payment Handler 124, Tax Engine 122, External payment Handler 126, Sales Representative Program Object 114 or Distributed Program Object 118 illustrated in Fig. 2 of Chelliah were considered POSvc

applications even as construed by the Board, these are not displayed on any user interface, much less displayed on a Web page nor do they run on a Web browser. Chelliah himself states that the subsystems are in the back-end and the Storefront is in the front-end.

> "…The invention provides…Internal Commerce Subsystems … External Commerce Subsystems…with each store being able to select the particular combination that best suits its specific needs…At the **front end**, a customer shops in the electronic store through an **Electronic Storefront**, and at the **back end,** the store management interfaces with and controls the various **subsystems** through a Store Management Dashboard…" '887:28:18-41 (emphasis added).
>
> "…(**back-end subsystems**),…" '887:1:28-41(emphasis added).
>
> "The Electronic Storefront…is the graphical user interface presented to a customer browsing that store." '887:7:46-48 (underscoring added)

See also Chelliah:'887:8:13-17 and 8:22-24; 8:29-33.

> "…Commerce Subsystems are called Internal Commerce Subsystems--those where existing subsystems for physical commerce cannot be directly used in electronic commerce...Such Internal Commerce Subsystems might include: Incentives; Observations Subsystem; Participant Subsystem; Pricing; Promotions; Sales Representative;

> and Security…these subsystems… use well-established, commercially available technologies…Oracle or Sybase databases for… Observations and Participant Subsystems… RSA Public Key encryption…for…Security Subsystem. These Internal Commerce Subsystems are developed by simply wrapping the aforementioned technologies with the appropriate hooks to interface with the standardized APIs. The process is similar to that third party developers would use to create interface-compatible External Commerce Subsystems." '887:8:65-9:19 (emphasis added).
>
> "Sales Representative Program Object 114…forms part of an Internal Commerce Subsystem 16 shown in FIG. 1…" '887:10:35-43 (underscoring added).

Nor are any of these internal or external subsystems in Chelliah a Web client in a Web browser nor displayed on a Web page, nor is an individual networked object with information entries and attributes displayed in any application or POSvc application displayed on a Web page. Chelliah does not anticipate the claims, or render them obvious in view of any other prior art, with the claim terms as construed by the Board or the Patent Owner.

Moreover, the IR in CORBA does not have information entries and attributes and does not qualify as a DOLSIB, as the IR in CORBA only has information entries (data) and methods or function calls, no attributes.

What CORBA provides is happening at the back-end, not at the Web server or Web page or utilizing a POSvc application displayed on a Web page and running on a Web server or Web browser. CORBA provides a CORBA client program object connecting to an Object Request Broker and then to an "object implementation" utilizing the raw wire and at most using a transport layer or facilities network and in IIOP, only the TCP/IP-based transport layer or IP-based facilities network running on up to Layer 4 of the OSI model, which has been distinguished away (*see* '492:4:58-5:27; 5:59-61; 6:30-33) from the inventions in the '492 patent from a service network running over the Web, which is an application layer network running on Layer 7 of the OSI model, as construed by both the Board and Patent Owner. Therefore, even as per the Board's claim construction for a VAN switch, Chelliah fails to disclose an application layer switch which has the switching, management and object routing components. CORBA was merely a framework and CORBA of 1995 clearly states that "application objects" were not standardized by OMG that specified CORBA; and that applications and transactions were not part of CORBA of 1995 and was up to an enterprise or vendor to provide it, when CORBA was unrelated to web servers,

web pages and POSvc applications on a Web page, running on Web servers or Web browsers.

Therefore, Chelliah does not disclose the claim elements of claims 1-8, 11-12, as construed by the Board or the Patent Owner. Neither Electronic Banking nor Valentino supply the missing elements in Chelliah in claims 8 and 12. Therefore, Chelliah does not anticipate nor render obvious individually or in combination with Valentino or Electronic Banking both of which precede the Web by over a decade, claims 1-8 and 11-12.

B. Claims 8 and 12: Valentino and Electronic Banking do not disclose "…complete a real-time Web banking transaction as one of the real-time Web transactions from a banking Web application as one of the one or more Web applications," nor "point-of-service employee Web applications on a Web page."

As detailed in Section III. b. above, Chelliah does not disclose a Web application, or a point of service application displayed on a Web page, with either the Board's or the Patent Owner's construction. Neither Valentino nor Electronic Banking supply this missing element. Valentino and Electronic Banking are Back-Office applications that preceded the Web by over a decade and do not disclose a Web application in a Web browser or a Web server. Therefore, Claims 8 and 12 are not rendered obvious by Chelliah over Electronic Banking or Valentino. Electronic

Banking and Valentino represent the art that existed prior to the Web, when applications were local to the back office. They were not Web applications or point-of-service applications on a Web page, nor were they connected to a point of service application or Web application on a Web page.

IV. CONCLUSION

For at least the foregoing reasons, the Patent Owner, Pi-Net International, Inc. respectfully requests the Board to withdraw IPR2013-00194 of claims 1-8 and 10-12 of the '492 patent. If any fees are due in connection with this matter, the Commissioner is hereby authorized to charge them to Attorney Deposit Account 06-0600.

Respectfully submitted,

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CERTIFICATION OF SERVICE

The undersigned hereby certifies that the above-captioned "Patent Owner's Corrected Response Under 37 CFR 42.120" in Inter Partes Review of U.S. Patent No. 8,108,492, along with the I.131 Declaration by Inventor and Patent Owner, Dr. Lakshmi Arunachalam, Dr. Arunachalam's Declaration Pursuant to 37 C.F.R. §42.64(b)(2), the Motion to Amend Claim 4 of the '492 Patent, expert declaration by inventor and all corresponding Exhibits was served electronically in its entirety on February 5, 2014, upon the following parties:

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