

Filed on behalf of SAP America, Inc.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

**PETITION FOR COVERED BUSINESS METHOD REVIEW UNDER 35
U.S.C. § 321 AND § 18 OF THE LEAHY-SMITH AMERICA INVENTS ACT**

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Petitioner SAP America, Inc. ("SAP") petitions the United States Patent Office to institute post-grant review of claims 1-6 and 11 (collectively, the "challenged claims" or "claims under review") of United States Patent No. 8,037,158 to Lakshmi Arunachalam ("the '158 patent"). According to Office records, the '158 patent is assigned to Pi-Net International, Inc. ("Pi-Net" or "Patent Owner"). A copy of the '158 patent is provided as SAP 1001.

The challenged claims of the '158 patent relate to performing a real time Web transaction, namely, transferring funds from a checking account to a savings account. As discussed below, the '158 patent admits that performing bank transactions over the Internet was not new, providing as background examples of a user accessing bank accounts and making a loan account payment over the Internet and World Wide Web using a bank's Web server. ('158 patent, 2:5-10).

The '158 claims are unpatentable for a variety of reasons, not least of which because they claim well-known subject matter. For example, claim 1 (the sole independent claim) recites steps that were notoriously well known prior to the earliest filing date of the '158 patent, such as "providing a Web page for display" and "providing a point-of-service application as a selection within the Web page." Claim 1 culminates in a limitation that recites "transferring funds from the checking account to the savings account in real-time." But transferring funds from a checking account to a savings account is a commonplace function that has been

performed by tellers for as long as there have been banks. And the '158 patent admits that transferring funds according to the purported invention is performed “in the same manner the transaction would have been performed by a live teller at the bank or an ATM machine.” ('158 patent, 7:6-10). The Federal Circuit and Patent Trial and Appeal Board have repeatedly held that performing a well-known method on the Internet does not convey patentability. *See e.g., Soverain Software, LLC v. Newegg Inc.*, No. 2011-1009, Slip. Op. at 11-12, ---- F.3d ---- (Fed. Cir. January 22, 2013). For this reason alone, the claims of the '158 patent are not patentable.

There are a number of reasons why the claims of the '158 patent are unpatentable. In addition to being unpatentable over the prior art, the claims fail to recite statutory subject matter under Section 101, and are indefinite under Section 112(b). Below, SAP presents five grounds of unpatentability which show that claims 1-6 and 11 of the '158 patent should have never issued.

I. Mandatory Notices (37 C.F.R. § 42.8(a)(1))

Real Party In Interest: The real party-in-interest of Petitioner is SAP America.

Related Matters: Petitioner notes that U.S. Patent No. 8,037,158 is involved in the following current proceedings that may affect or be affected by a decision in this proceeding:

In the District of Delaware: *Pi-Net International, Inc v. Citizens Financial Group, Inc.* (No. 1:12-cv-00355); *Bank of America, N.A. and Merrill Lynch, Pierce, Fenner & Smith, Inc.* (No. 1:12-cv-00280); *JP Morgan Chase & Co.* (No. 1:12-cv-00282); *Capital One Financial Corporation et al.* (No. 1:12-cv-00356); *Sovereign Bank, N.A.* (No. 1:12-cv-00354); *UBS Financial Services* (No. 1:12-cv-00353); *Wilmington Trust Company et al.* (No. 1:12-cv-00281); and *WSFS Financial Corporation et al.* (No. 1:12-cv-00358).

In the Central District of California: *Pi-Net International, Inc. v. 1st Valley Credit Union* (No. 5:12-cv-01989); *Cal Poly Federal Credit Union* (No. 2:12-cv-09703); *In-Land Valley Federal Credit Union* (No. 5:12-cv-01990); *Media City Community Credit Union* (No. 2:12-cv-09699); and *South Bay Credit Union,* (No. 2:12-cv-09705).

In the Northern District of California: *Pi-Net International, Inc. v. Commonwealth Central Credit Union* (No. 5:12-cv-05730); *My Credit Union* (No. 3:12-cv-05733); and *San Jose Credit Union* (No. 4:12-cv-05732).

Also, on March 19, 2013, SAP America filed a declaratory judgment of non-infringement of U.S. Patent Nos. 8,037,158; 5,987,500; and 8,108,492 against Pi-Net International, Inc. in the Northern District of California (No. 3:13-cv-01248).

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II. Grounds for Standing (37 C.F.R. § 42.304(a)).

The undersigned and SAP certify that the ‘158 patent is available for post-grant review. Because the ‘158 patent is a covered business method, as defined by § 18 of the AIA, the timing requirements of 35 U.S.C. § 321(c) do not apply.

A. Claims 1-6 and 11 are Directed to a Covered Business Method.

The AIA defines a covered business method (“CBM”) patent as “a patent that claims a method or corresponding apparatus for performing data processing or

other operations used in the practice, administration, or management of a financial product or service....” AIA § 18(d)(1); *see also* 37 C.F.R. § 42.301.

The USPTO noted that the AIA’s legislative history demonstrates that “financial product or service” should be “interpreted broadly,” encompassing patents “claiming activities that are financial in nature, incidental to a financial activity or complementary to a financial activity.” 77 Fed. Reg. 157, p. 48735. Moreover, the language “practice, administration, or management” is “intended to cover any ancillary activities related to a financial product or service, including . . . marketing, customer interfaces, [and] Web site management and functionality. . . .” 21 Fed. Cir. Bar J. 4, pp. 635-636.

The ‘158 patent, titled “Multimedia transactional services,” is exactly the type of patent envisioned by Senator Schumer as a CBM patent. The sole independent claim recites, *inter alia*, “providing a point-of-service application as a selection within the Web page, wherein the point-of-service application provides access to both a checking and savings account” and “transferring funds from the checking account to the savings account.” Thus, the ‘158 patent claims an activity that is entirely financial in nature: transferring money from one bank account to another. Moreover, the ‘158 patent claims a customer interface directly related to financial services, i.e., retail banking, and Web site functionality ancillary to such financial services.

The specification of the '158 patent further demonstrates that the '158 patent is for a CBM. The patent describes transactions or user interactions that include “a deposit into a bank account, a request for a loan from a bank...or a purchase of a car with financing from a bank.” ('158 patent, 5:25-29). The '158 patent further notes that a bank “may also decide to provide intra-merchant or intra-bank services” such as “payroll processing.” ('158 patent, 7:30-41).

Because the '158 patent claims a method for transferring funds between bank accounts and is directed to and focused on retail banking, it is a CBM patent subject to review under Section 18.

B. Claims 1-6 and 11 are Not Directed to a “Technological Invention.”

The AIA excludes “patents for technological inventions” from the definition of CBM patents. AIA § 18(d)(2). To determine when a patent is for a technological invention, “the following will be considered on a case-by-case basis: whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art; and solves a technical problem using a technical solution.” 37 C.F.R. § 42.301. When this definition was first proposed by the USPTO, commentators asked the USPTO to revise the definition to clarify that a technological invention could meet one of these tests or the other, or to provide a wholly different test. See, e.g., 77 Fed. Reg. 157, p. 48736-37.

But the USPTO declined to loosen the definition, deciding instead to maintain the limited effect and scope of the “Technological Invention” exception to CBM patents. In particular, citing the legislative history, which explained that the “‘patents for technological inventions’ exception only excludes patents whose novelty turns on a technological innovation over the prior art and are concerned with a technical problem which is solved by a technical solution,” *id.* at p. 48735, the USPTO declined to change the definition, leaving the “and” and explaining that this definition is consistent with the AIA’s legislative history and represents “the best policy choice.” 77 Fed. Reg. 157, p. 48735-36.

Thus, to qualify as a technological invention, and therefore not be a CBM patent, a patent must have: (1) a technological feature; (2) the technical feature must be novel and unobvious; and (3) the patent must solve a technical problem using a technical solution. Moreover, to institute a CBM post-grant review, a patent need only have one claim directed to a CBM, and not a technological invention, even if the patent includes additional claims. 77 Fed. Reg. 157, p. 48736.

The claims of the ‘158 patent fail all these requirements of being a technological invention. In particular, the ‘158 patent fails to recite a novel and unobvious technological feature and fails to recite a technical problem solved by a

technical solution. Thus, the '158 patent is not directed to a technological invention.

First, the claims of the '158 patent do not recite any novel and unobvious technical features. Claim 1 recites “providing a Web page for display on a computer system coupled to an input device,” “providing a point-of-service application as a selection within the web page” and “accepting a first signal from the Web user input device to select the point-of-service application.” These steps, as well as the other steps of claim 1, do not recite technical features. Even assuming, *arguendo*, that they recite some *de minimus* technical feature, they are not novel and unobvious over the prior art, as discussed below. Nor does the remainder of the claim recite any other novel and unobvious technical features.

Moreover, “transferring funds from the checking account to the savings account in real-time” is neither a technical problem, nor is it solved by a technical solution. To the extent it qualifies as a problem at all, it does not involve technology, and its solution does not involve technology. Thus, a technical problem neither existed nor was it solved by a claimed technical solution.

Accordingly, the '158 patent does not qualify for the “technological invention” exception, and the patent is a CBM patent subject to review under Section 18.

C. Petitioner has standing to petition for review, and Petitioner is Not Estopped (37 C.F.R. § 42.302)

As noted above, Patent Owner has sued Citizens Financial Group, Inc. (“Citizens”) in the District of Delaware, and has accused Citizens of infringing claims 1-6 and 11 of the ‘158 patent (“Concurrent Litigation”). Based on an agreement between SAP’s subsidiary (Financial Fusion/Sybase) and Citizens (*See* SAP 1009), Citizens has requested indemnification from SAP for, *inter alia*, losses and legal fees incurred by Citizens associated with the Concurrent Litigation.

SAP thus has standing to bring a declaratory judgment action in Federal court. *See Arris Group, Inc. v. British Telecommunications PLC*, 639 F.3d 1368, 1375 (Fed. Cir. 2011). (A “supplier has standing to commence a declaratory judgment action if (a) the supplier is obligated to indemnify its customers from infringement liability...”). In fact, SAP has recently sued the Patent Owner for a declaratory judgment of non-infringement of the ‘158 patent. Accordingly, “a real and substantial controversy regarding infringement of a covered business method patent exists,” and SAP has standing to file the instant petition to institute a covered business method patent review. 37 C.F.R. § 42.302(a).

Further, SAP is not estopped from challenging the claims on the grounds identified in the petition. 37 C.F.R. § 42.302(b). SAP has not been party to any other post-grant review of the challenged claims.

III. Identification of Challenge

A. Statutory grounds for the challenge

SAP requests post-grant review of claims 1-6 and 11 (collectively referred to herein as the “challenged claims”) based on the following grounds:

Ground 1: Claims 1-6 and 11 are unpatentable for failing to recite statutory subject matter under 35 U.S.C. § 101.

Ground 2: The combination of Lawlor and Computerworld renders claims 1-6 and 11 unpatentable under 35 U.S.C. §103(a).

Ground 3: The combination of Electronic Banking and AAPA renders claims 1-6 and 11 unpatentable under 35 U.S.C. §103(a).

Ground 4: The combination of SFCU and Electronic Banking renders claims 1-6 and 11 unpatentable under 35 U.S.C. §103(a).

Ground 5: Claims 1-6 and 11 are unpatentable under 35 U.S.C. § 112(b).

B. Citation of Prior Art

The earliest possible priority date is November 13, 1995¹. The following prior art references are applied in the above grounds:

¹ Solely for this Petition, it is assumed *arguendo* that the ‘158 patent is entitled to the November 13, 1995 filing date of U.S. Provisional Application No. 60/006,634.

1. **Electronic Banking, Lipis et al.** (“Electronic Banking,” provided as SAP 1004). Electronic Banking is § 102(b)² prior art to the ‘158 patent. Electronic Banking is a book published in 1985.
2. **Stanford Federal Credit Union Pioneers Online Financial Services** (“SFCU”, provided as SAP 1005). SFCU is § 102(a) prior art to the ‘158 patent. SFCU is an article appearing in Business Wire published June 21, 1995.
3. **Applicant Admitted Prior Art** – Column 1, line 27 to Column 2, line 36, and FIGs. 1A and 1B of the ‘158 patent (“AAPA”).
4. **U.S. Patent No. 5,220,501 to Lawlor et al.** (“Lawlor,” provided as SAP 1006). Lawlor is § 102(b) prior art to the ‘158 patent. Lawlor was issued on June 15, 1993.
5. **Computerworld, June 26, 1995** (“Computerworld,” provided as SAP 1007). Computerworld is § 102(a) prior art to the ‘158 patent. Computerworld was published on June 26, 1995.

C. Summary of the ‘158 Patent

a) Background

According to the ‘158 patent, before its earliest possible filing date, a web user’s capabilities from a web browser were “extremely limited.” (‘158 patent, 1:34-35). For example, users were limited to browse-only interactions, with certain

² Electronic Banking and Lawlor also qualify as prior art under § 102(a).

deferred transactional capabilities possible using e-mail. ('158 patent, 1:36-38). Thus, banks could only provide limited on-line transaction capabilities to their users. ('158 patent, 2:5-8).

Notwithstanding the foregoing, the '158 patent concedes that it was well known for banks to offer various transactional capabilities over the Internet and Web through their Web sites. For example, a user could access a checking account and loan account on the Web, and make an on-line payment to the loan account. ('158 patent, 2:5-16). Ostensibly, to provide this functionality, banks needed to create common gateway interface (CGI) application scripts for each account and each service that the bank wished to offer. (*Id.*) According to the '158 patent, "creating and managing individual CGI scripts for each service is not a viable solution for merchants with a large number of services." ('158 patent, 2:13-17).

b) The '158 Patent's Disclosure

To solve the above-identified problems and to provide "real-time transactional capabilities," the '158 Patent discusses a solution in which a user connects to a Web server running an exchange, and selects a point-of-service application from a list of presented options. ('158 patent, 9:16-22). A switching component in the exchange switches the user to the selected point-of-service application. ('158 patent, 9:24-25). An object routing component then executes the user's request. ('158 patent, 9:25-26).

But the claims of the '158 patent do not describe a solution to the problem of creating and managing individual CGI scripts for each service a bank wishes to offer. In fact, the '158 patent claims *recite only one service*: the transfer of funds from one account to another.

D. The Claims of the '158 Patent and their Construction

In covered business method review proceedings, a claim in an unexpired patent is to be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.300(b). Except as set forth below, the claim terms of the '158 patent should be given their broadest reasonable construction, as the '158 patent has not expired. Petitioner submits the following, as relevant to the broadest reasonable interpretation of certain terms.

1. The Claims.

The challenged claims include independent claim 1 and claims 2-6 and 11, which depend from claim 1.

2. Claim Terms for Construction

a) "Web application"

The preamble of claim 1 recites "performing a real time Web transaction from a *Web application*." Claims 2-4 and 11 also recite "in a *Web application*."

The Specification of the '158 patent does not specifically define a "Web application." For example, the '158 patent does not specify whether the Web application is running on a user's computer, a server device, or whether a Web

application can be considered part of a Web site. In the absence of a specific definition, a “Web application” should be construed broadly as encompassing at least, for example, a Web browser, Web server software, or CGI scripts. (Sirbu Decl., ¶ 18).

b) “service network atop the World Wide Web”

A “point-of-service application operating in a *service network atop the World Wide Web*” appears in claim 1.

The ‘158 patent describes a “service network” in the context of its functionality, stating that “[f]ive components interact to provide this service network functionality, namely an exchange, an operator agent, a management agent, a management manager and a graphical user interface.” (‘158 patent, 5:58-60).

In referring to FIG. 5A, “[e]xchange 501 comprises Web page 505 and point-of-service (POSvc) applications 510. Exchange 501 also conceptually includes a switching component and an object routing component.” (‘158 patent, 6:8-13). In referring to FIG. 5B, “[e]xchange 501 may also include operator agent 503 that interacts with a management manager . . . Exchange 501 creates and allows for the management (or distributed control) of a service network, operating within the boundaries of an IP-based facilities network. Thus, exchange 501 and a management agent component . . . together perform the switching, object routing,

application and service management functions according to one embodiment of the present invention.” (‘158 patent, 6:19-29). Further, a “POSvc list is displayed via the graphical user interface component.” (‘158 patent, 6:34-35). Thus, under the broadest reasonable interpretation consistent with the patent disclosure and as understood by a person of ordinary skill in the art, a “service network” is construed as a network (e.g., hardware and/or software) that provides a service between two or more computers. (Sirbu Decl., ¶ 21).

The Specification does not define how a service network runs “on top of” the World Wide Web, nor is the meaning of “**atop** the World Wide Web” a term of art or clear to a person of ordinary skill in the art. (Sirbu Decl., ¶ 22). Accordingly, as best understood by Petitioner, a “service network atop the World Wide Web” is a network (e.g., hardware and/or software) that provides a service between two or more computers over or involving the Web, for example involving Web client or Web server software. (Sirbu Decl. ¶ 22).

c) “Web user input device”

Claim 1 recites “accepting a first signal from the Web user input device...” The claim term “Web user input device” has no antecedent basis in the claim. Accordingly, the term “Web user input device” should be construed as the previously recited “computer system coupled to an input device.” If the term is not

construed in this way, then the term is indefinite and violates 35 U.S.C. § 112(b) as lacking antecedent basis.

d) “routed transactional data structure that is both complete and non-deferred”

Claim 1 recites “transferring funds...utilizing a routed transactional data structure that is both complete and non-deferred.” The recited “routed transactional data structure” cannot be found in the Specification. This term was added to the claim in an Amendment dated June 7, 2010, but the Applicant did not provide any citations to the Specification to show where the amendment was supported. As best understood, the term “routed transactional data structure” is any data structure or data structures used in a transaction that is/are sent to a destination. (Sirbu Decl., ¶ 23).

Moreover, the Specification only discusses the word “complete” in the context of other terms, such as to “complete robust, real-time transactions” or to “complete the purchase of the car”, or when describing a “merchant capable of providing complete transactional services”. (‘158 patent, 2:34-36, 5:25-28, 5:40-45). But the Specification does not describe what a “complete” data structure is or could be. Accordingly, as best understood, the term “complete” should be construed to be a data structure used to complete a transaction. (Sirbu Decl., ¶ 24).

Finally, the word “non-deferred” is only defined in the Specification in the negative. That is, the Specification describes “deferred,” but not “non-deferred,”

transactional capabilities. According to the Specification, e-mail capabilities are “‘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.” (‘158 patent, 1:37-43). However, the Specification does not define what a “non-deferred” transaction or data structure is. The term “non-deferred” should be construed to describe any transaction or data structure that is processed immediately without any delay. (Sirbu Decl., ¶ 25).

e) “routing occurring in response to the subsequent signals”

Claim 1 recites “the routing occurring in response to the subsequent signals.” However, claim 1 does not recite a step of “routing.” The Applicant amended the claims to recite “the routing occurring...” in an Amendment dated June 7, 2010. Prior to such Amendment, the claim recited “transferring funds...in response to the subsequent signals.” In light of the earlier recitation of “transferring funds,” “the routing occurring in response to the subsequent signals” should be construed as “the transferring of funds occurring in response to the subsequent signals.” If the term is not construed in this way, then the term is indefinite and violates 35 U.S.C. § 112(b) as lacking antecedent basis.

f) “object routing”

Claim 4 recites “wherein object routing is used to complete the transfer of funds in a Web application.” The specification states “the object routing

component executes the user's request." ('158 patent, 9:25-27). Accordingly, "object routing" should be construed as encompassing actions or data that execute a user's request, which may include sending an object from one point to another. An object in the context of object routing could include a message. (Sirbu Decl., ¶ 26).

g) "distributed on-line service information bases"

Claim 5 recites "the object routing includes the use of a distributed on-line service information bases." The Specification provides that "DOLSIBs are virtual information stores optimized for networking." ('158 patent, 7:65-66). The Specification does not further define "distributed on-line service information bases." The term should be construed as any data store on or available over a network. (Sirbu Decl., ¶ 27).

h) "virtual information store"

Claim 6 recites "wherein a virtual information store is used to complete the transfer of funds." The specification provides that "DOLSIBs [distributed on-line service information bases] are virtual information stores optimized for networking." ('158 patent, 7:65-66). The Specification does not further define "virtual information store," but notes that it contains information entries and attributes. ('158 patent, 2:53-58). A "virtual information store" should therefore be

construed as any data store that contains, for example, information entries and attributes. (Sirbu Decl., ¶ 28).

IV. PROPOSED GROUNDS UNDER SECTION 101 (37 C.F.R. § 42.304(b))

A. Ground 1: Claims 1-6 and 11 are invalid for failing to recite statutory subject matter under 35 U.S.C. § 101.

Independent claim 1 fails to recite statutory subject matter under 35 U.S.C. § 101. Claim 1 is directed to the abstract idea of providing a point-of-service application as a selection within a web page and, responsive to signals received from a user input device, selecting the application and transferring funds from a checking account to a savings account. The abstract functionality of transferring funds between accounts when instructed to do so has been employed by the banking industry for centuries.

The subject matter of claim 1 is similar in many respects to the abstract subject matter found unpatentable by the Supreme Court in *Bilski*. In *Bilski*, the patent applicant “attempt[ed] to patent the use of the abstract idea of hedging risk in the energy market and then instruct[ed] the use of well-known random analysis techniques to help establish some inputs into the equation.” *Bilski v. Kappos*, 130 S. Ct. 3218, 3231 (2010). The Supreme Court in *Gottschalk* solidified the notion, long before *Bilski*, that “abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technical work.” *Gottschalk v. Benson*, 409

U.S. 63, 67 (1972). In claim 1, the abstract idea of performing fund transfers from a checking account to a savings account is simply paired with well-known computing techniques.

This pairing of abstract ideas with a “computer system” and “input device” in claim 1 is insufficient to establish statutory subject matter for at least two reasons. First, all of the limitations of claim 1 are directed to non-statutory abstract ideas, providing no meaningful limit on the scope of the claims. Second, claim 1 can be interpreted as software *per se*, which is also non-statutory subject matter.

The recited method steps of claim 1 are directed to providing a Web page “*for* display on a computer system” and accepting signals “*from* the Web user input device.” This recitation fails the machine-or-transformation test, as these steps themselves are not tied to a particular machine. While the machine-or-transformation test is not the sole test for determining patentability, it nevertheless remains “a useful and important clue, an investigative tool, for determining whether come claimed inventions are processes under § 101.” *Bilski*, at 3227; M.P.E.P. § 2106(II)(B). Claim 1 does not transform an article into a different state or thing (see, *Bilski*, at 3221; cf. *In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007)), and is on its face not tied to any particular machine, since the method steps merely describe arms-length transactions with “a computer system” and an “input device”.

Moreover, when considering the fact that the claim simply describes interacting with the “computer system” and “input device” in an arms-length transaction (“providing a Web page *for* display,” “*accepting* a first signal”), the steps of claim 1 are nothing more than a computer program *per se*. M.P.E.P. § 2106(I). A computer program can perform the steps of providing information to a computer and accepting signals, and physical hardware is not required or specified within the scope of claim 1. Even if another interpretation is possible, “[a] claim that covers both statutory and non-statutory embodiments (under the broadest reasonable interpretation of the claim when read in light of the specification and in view of one skilled in the art) embraces subject matter that is not eligible for patent protection and therefore is directed to non-statutory subject matter. M.P.E.P. § 2106(I).

As noted by the Supreme Court in *Bilski*, “*Diehr* emphasized the need to consider the invention as a whole, rather than ‘dissect[ing] the claims into old and new elements and then ... ignor[ing] the presence of the old elements in the analysis.’” *Bilski*, at 3230 (citing *Diamond v. Diehr*, 450 U.S. 175, 188 (1981)). The Board is not being asked to ignore any elements of claim 1, but to consider that the recitation of the “computer system” and “input device” in claim 1 is insufficient to support patentability of the abstract idea that is being claimed. While claim 1 recites the steps of “providing a Web page for display on a computer

system coupled to an input device,” “accepting a first signal from the Web user input device to select the point-of-service application,” and “accepting subsequent signals from the Web user input device,” such interactions with the “computer system” and “input device” fail to meet the statutory requirements under 35 U.S.C. § 101.

As in *Bilski*, the interactions with the “computer system” and “input device” in claim 1 fail to bring the claimed subject matter out of the realm of the abstract. In particular, the claimed interactions with the “computer system” and “input device” have no bearing whatsoever on the actual steps of the claim. Given this structure of claim 1, it is evident that the interaction with the “computer system” does not itself impact the operation of the underlying abstract idea. The effect of this particular claim language is that simply providing a web page “for display” on the computer system is nothing more than a form of post-solution activity, which does not render the claim patentable. *Parker v. Flook*, 437 U.S. 584, 590 (1978).

Similarly, the interaction with the “input device” in claim 1 in order to accept signals (which simply indicate that the point-of-service application should be selected or that funds should be routed from a checking account to a savings account) is nothing more than an ancillary data-gathering step appended to the abstract idea. The mere addition of the ability to receive an input signal, claimed as being from an “input device,” is “nothing more than a drafting effort designed to

monopolize” the unpatentable idea itself. *Mayo v. Prometheus*, 132 S. Ct. 1289, 1297 (2012).

To the extent that the “computer system” and the “input device” are employed in claim 1, it is not even for the purpose of performing the claimed steps themselves (thereby failing the machine-or-transformation test), but in their most basic function as a target *for* display of a web page (the display of the web page is not itself affirmatively recited) and as a source from which signals can be accepted to merely trigger the performance of a step. This approach does not impose a meaningful limit on the scope of the claims, and therefore provides no support for eligibility under 35 U.S.C. § 101. *Bancorp v. Sun Life*, 687 F.3d 1266, 1278 (Fed. Cir. 2012). In fact, the lack of such meaningful limit on the claim’s scope allows for an interpretation of claim 1 as software *per se* as noted above.

Dependent claims 2-6 and 11 do not supply any additional subject matter that would render them statutory under 35 U.S.C. § 101. “[A]n exchange over the Web” (claim 2), “a management agent used to complete the transfer of funds” (claim 3), “object routing” (claim 4), “distributed on-line service information bases” (claim 5), a “virtual information store” (claim 6), and a “Web application” (claim 11) are all abstract ideas that likewise lack any ties to a particular machine. Moreover, as noted above, each of these operations or components can themselves

be interpreted as a computer program *per se*, and are therefore not patent eligible for that additional reason.

For at least the foregoing reasons, claims 1-6 and 11 are unpatentable under 35 U.S.C. § 101. A finding of unpatentability of claims 1-6 and 11 for at least this reason is therefore respectfully petitioned.

V. PROPOSED GROUNDS UNDER SECTION 103 - APPLICATION OF PRIOR ART TO CLAIMS 1-6 AND 11 OF THE '158 PATENT (37 C.F.R. § 42.304(b))

A. Level of Ordinary Skill in the Art

Based on the technologies disclosed in the '158 patent, one of ordinary skill in the art would have a B.S. degree in Computer Science or Computer Engineering, as well as at least 3-5 years of academic or industry experience in the relevant field. (Sirbu Decl., ¶ 16).

B. Grounds Based on Lawlor

1. Ground 2: Lawlor in view of Computerworld renders claims 1-6 and 11 obvious.

Lawlor is a U.S. Patent titled "Method and System for Remote Delivery of Retail Banking Services," and describes a "practical system and method for the remote distribution of financial systems (e.g., home banking and bill paying)..." (Lawlor, Abstract).

"Computerworld" is a magazine that includes articles relevant to the computing industry. Page 80 of Computerworld includes an article titled "The

Cyberbanks,” discussing a “list of banks that are moving aggressively to offer services on the Internet.” (Computerworld, p. 80). In particular, Computerworld describes Security First Network Bank, which obtained approval to “provide a full range of banking services, including the ability to make money transfers or bill payments or access checking account balances over the Internet.” (*Id.*) Computerworld also describes Wells Fargo Bank, which allowed customer inquiries into account balances for users using Netscape Navigator. (*Id.*)

The combination of Computerworld and Lawlor renders claims 1-6 and 11 obvious.

a) Lawlor and Computerworld renders claim 1 obvious.

(1) Lawlor and Computerworld teach “a method for performing a real time Web transaction from a Web application over a digital network atop the Web”

Lawlor describes a “practical system and method for the remote distribution of financial services (e.g., home banking and bill-paying)...” and further describes “debiting the user’s bank account in real time...” (Lawlor, Abstract). Lawlor further describes a digital trunk connected to a packet network switch, and thus a digital network, that connects users’ remote terminals to a bank system. (Lawlor, FIG. 1). Thus, Lawlor teaches performing a real time transaction over a digital network. (Sirbu Decl., ¶ 36).

Computerworld describes Security First Network Bank, which “[provides] a full range of banking services, including the ability to make money transfers or bill payments or access checking account balances over the Internet” and Wells Fargo Bank which allowed “customer inquiries into account balances using Netscape’s Navigator secured browsers.” (Computerworld, p. 80). As Computerworld specifically lists the Web site address for Wells Fargo Bank, it teaches a real time Web transaction. (Sirbu Decl., ¶ 37). Accordingly, Lawlor and Computerworld teach this limitation. (Sirbu Decl., ¶¶ 36-37).

(2) Lawlor and Computerworld teach “providing a Web page for display on a computer system coupled to an input device.”

Lawlor discloses, “[m]ain menu routine 388 causes remote terminal 54 to display a ‘main menu’...[t]his main menu display screen lists four options in the preferred embodiment: pay bills; transfer funds; get account information; and exit account session...” (Lawlor, 41:35-40). Thus, Lawlor teaches providing a page, or menu, for display. (Sirbu Decl., ¶ 38).

Lawlor further describes providing the menu to a computer system coupled to an input device. For example, Lawlor’s terminal 54 is “an asynchronous, portable data processing device.” (Lawlor, 24:12-13). The terminal includes an LCD display, screen control keys, and an alpha-numeric keypad. (Lawlor, 24:15-

20). Thus, Lawlor teaches providing a page for display on a computer system coupled to an input device. (Sirbu Decl., ¶ 39).

Lawlor does not explicitly describe that the page is a Web page. However, providing such Web pages was well known; for example, the Computerworld article lists the URL for the Security First Network Bank home page, along with other banks' home pages. (Computerworld, p. 80). Such home pages are Web pages, and persons of ordinary skill would appreciate that such online banking home pages would list applications for accessing accounts and performing banking transactions. (Sirbu Decl., ¶ 40). Accordingly, Lawlor in view of Computerworld teaches "providing a Web page for display on a computer system." (Sirbu Decl., ¶¶ 38-40).

(3) Lawlor and Computerworld teach "providing a point-of-service application as a selection within the Web page, wherein the point-of-service application provides access to both a checking and savings account, the point-of-service application operating in a service network atop the World Wide Web"

Lawlor discloses providing a point-of-service application as a selection within the page. For example, as noted above, the "main menu display screen lists four options in the preferred embodiment: pay bills; transfer funds; get account information; and exit account session..." (Lawlor, 41:35-40). Lawlor further states, "the main menu of services is then presented on the terminal display, the user selects one of four major choices (bill paying, account transfer, account

information or other services)...” (Lawlor, 32:67-33:2). Thus, Lawlor describes providing a point-of-service application (i.e., the transfer funds option) as a selection within the page. (Sirbu Decl., ¶ 41). As noted above, Lawlor does not explicitly describe a Web page. However, the Computerworld article describes that similar services (including account transfers) were performed using Web pages, such as the Security First Network Bank Web page. (Computerworld, p. 80; Sirbu Decl., ¶ 42).

Lawlor does not explicitly state that the transfer funds application provides access to both a checking and savings account. However, checking and savings accounts were well-known, as were transfers between checking and savings accounts. (Sirbu Decl., ¶ 43). Also, in the description of the transfer funds application, Lawlor states that the transfer function “permits users, for example, to time transfers between accounts in order to maximize interest (such as moving funds into a non-interest bearing checking account...)” (Lawlor, 51:41-45). One of ordinary skill in the art would understand that a savings account is a common account that pays interest. (Sirbu Decl., ¶ 43). Moreover, Computerworld also describes Wells Fargo Bank, which “[a]llows customers inquiries into account balances using Netscape’s Navigator secured browsers. The bank also offers transaction histories for checking and savings accounts over the Internet.” (Computerworld, p. 80; Sirbu Decl., ¶ 43).

Lawlor further explains that the point-of-service application operates in a service network. As previously noted, a service network is a network (e.g., hardware and/or software) that provides a service between two or more computers. Lawlor discloses, for example, a “dialup telephone network 62 selectively connecting remote terminal 54 to the communications interface” of the central computer through a digital packet network. (Lawlor, 17:43-53). The digital packet network is a network that provides a service (i.e. funds transfer) offered as a point-of-service application from the remote terminal and through the central computer, over a packet data network. (Sirbu Decl., ¶ 44). Accordingly, Lawlor teaches the recited “service network.”

Lawlor does not explicitly describe that the service network is atop the World Wide Web, where “atop the World Wide Web” is construed to mean “over or involving the World Wide Web, for example involving Web client or Web server software.” However, Lawlor does describe the use of a packet switched network. One of ordinary skill in the art would recognize the World Wide Web as operating on the Internet, a digital packet network. (Sirbu Decl., ¶ 45). Moreover, Computerworld describes point-of-service applications operating in a service network (e.g., hardware and/or software) between two or more computers over the World Wide Web, specifically describing Security First Network Bank that provides “a full range of banking services, including the ability to make money

transfers or bill payments or access checking account balances over the Internet.” (Computerworld, p. 80). One of ordinary skill in the art would understand Security First Network Bank’s Web site or Wells Fargo’s Web site to operate using a Web server, and that users would access the Web site using Web client (i.e. browser) software. (Sirbu Decl., ¶ 45).

Thus, Lawlor and Computerworld teach providing a point-of-service application as a selection within the Web page, wherein the point-of-service application provides access to both a checking and savings account, the point-of-service application operating in a service network atop the Word Wide Web. (Sirbu Decl., ¶¶ 41-45).

(4) Lawlor teaches “accepting a first signal from the Web user input device to select the point-of-service application”

As explained above, the term “the Web user input device” is construed as the earlier-recited “input device”. Lawlor teaches accepting a signal from an input device to select the point-of-service application. With respect to the menu described above, Lawlor states, “[t]he user is then expected to press one of the select keys 108 to select one of the four displayed options...” (Lawlor, 41:45-50). Lawlor further states, “User selections are received using the TIOT routine and decoded with main menu routine 388 (decision blocks 391, 393, 395, 397).” (Lawlor, 41:50-53). Decision block 393 is the funds transfer selection. “If the user

requests funds transfer (as tested for by decision block 393), the routine called TRANSFD is called...” (Lawlor, 49:50-54). Thus, Lawlor teaches accepting a first signal to select the point-of-service application. (Sirbu Decl., ¶ 46).

(5) Lawlor teaches “accepting subsequent signals from the Web user input device.”

After the user selects the transfer function, Lawlor states that “terminal 54...display[s] a listing of the user’s bank accounts....the user may then select one of the displayed accounts by depressing the corresponding selection keys.” (Lawlor, 49:55-61).

Lawlor then explains that “[i]f the user selects one of the displayed accounts, central computer 52 controls terminal display 102 to display a screen format identifying the account and the account balance...and prompting the user to enter the amount to be transferred...the user is then expected to enter a dollar amount....” (Lawlor, 50:1-10). Lawlor further states if “the transfer amount is less than the account balance, a list of user accounts...is displayed (block 818) and the user selects a further account to which the funds are to be transferred.” (Lawlor, 50:16-22). Thus, Lawlor teaches this limitation. (Sirbu Decl., ¶¶ 47-48).

(6) Lawlor and Computerworld render obvious “transferring funds from the checking account to the savings account in real-time utilizing a routed transactional data structure that is both complete and non-deferred, in addition to being specific to the point-of-service application, the routing occurring in response to the subsequent signals” as recited.

(a) Lawlor teaches “transferring funds from the checking account to the savings account in real time”

As noted above, Lawlor discusses a home banking system that allows users to perform a number of different transactions, including transferring funds among accounts. (Lawlor, 10:34-41). Lawlor further states that transactions are performed on a real-time basis. (Lawlor, 22:28-52; Sirbu Decl., ¶ 49). For example, Lawlor states that “[i]f the user requests an immediate transfer...the confirmation message is transmitted to remote terminal 54...the real-time transaction is to: (a) debit the user’s first bank account and credit the services provider’s account; and (b) credit the user’s second bank account and debit the service provider’s account (the net result being a funds transfer.” (Lawlor, 50:44-59).

Thus, Lawlor teaches transferring funds from a first account to a second account in real time. As noted above in Section V.B.1.a).(3), one of ordinary skill in the art would have understood the funds transferring of Lawlor to be applicable to a checking and savings account, as these types of accounts were commonly offered by banks. (Sirbu Decl., ¶ 49). Moreover, Computerworld also describes

Wells Fargo Bank, which “[a]llows customers inquiries into account balances using Netscape’s Navigator secured browsers. The bank also offers transaction histories for checking and savings accounts over the Internet.” (Computerworld, p. 80; Sirbu Decl., ¶ 50).

(b) Lawlor teaches “utilizing a routed transactional data structure that is both complete and non-deferred, in addition to being specific to the point-of-service application, the routing occurring in response to the subsequent signals.”

Once the user has input the desired source and destination accounts, Lawlor explains that “a transfer confirmation message is displayed on the terminal screen after entry of the necessary information indicating that the transfer has been accepted by the central processor.” (Lawlor, 34:60-63). Lawlor also states, “the central processor then transmits through the interchange a debit to the source account and then transmits a credit to the receiving account.” (Lawlor, 34:67-35:2). Lawlor further explains that “Central computer 52 then generates a pair of messages to be applied to the ATM network 66: A POS debit to the account to *transfer money from* and POS credit to the account to *transfer money into*...In effect, the real-time transaction is to: (a) debit the user’s first bank account and credit the services provider’s account; and (b) credit the user’s second bank account and debit the service provider’s account (the net result being a funds transfer).” (Lawlor, 50:55-59; emphasis added). The “pair of messages” generated

by Lawlor fall under the broadest reasonable interpretation of a “routed transactional data structure” as such pair of messages is sent to a destination (the “from” bank and the “to” bank) to complete the funds transfer. (Sirbu Decl., ¶ 52). Lawlor further discloses a “routing module 80C” which “permits efficient routing of transactions to the appropriate module for servicing.” (Lawlor, 20:27-28). Thus, Lawlor teaches the “routed transactional data structure.”

Further, Lawlor discloses that its pair of messages are complete, as they are used to complete the funds transfer transaction. (Sirbu Decl., ¶ 53).

Lawlor further teaches that the pair of messages are non-deferred, because the transfer transaction is disclosed as being performed in real time without any delay. (Sirbu Decl., ¶ 53). The pair of messages are also “specific to the point-of-service application” of funds transfer, as Lawlor specifically states that the messages are used to transfer the funds. (*Id.*)

Finally, Lawlor teaches “the routing occurring in response to the subsequent signals,” as the transfer from the user’s first bank account to the user’s second bank account occurs in response to the subsequent signals described above. (Sirbu Decl., ¶ 53).

b) Lawlor and Computerworld render claim 2 obvious.

Claim 2 depends from claim 1, and adds the limitation “wherein an exchange over the Web is used to complete the transfer of funds in a Web

application.” As explained by Lawlor, an exchange of messages is used to transfer the funds in the point-of-service application. (Lawlor, 50:55-59; Sirbu Decl., ¶ 54). However, Lawlor does not explicitly teach that the exchange is “over the Web” or “in a Web application” as recited in claim 2.

Computerworld teaches these features. In particular, the Computerworld article describes Web sites that access bank accounts and perform bank transactions. (Computerworld, p. 80). One of ordinary skill in the art would understand that these transactions involve a transfer of messages or data over the Web. (Sirbu Decl., ¶ 55).

Computerworld also teaches that the exchange of messages is used to complete the transfer of funds in a Web application. Specifically, one of ordinary skill in the art would understand the Security First Network Bank Web site to be implemented by, for example, a Web application such as Web server software executing on a computing device, particularly since Computerworld provided the Security First Network Bank Web site address. (Computerworld, p. 80; Sirbu Decl., ¶ 56). Further, a user wishing to transfer funds using the Security First Network Bank would use a Web application such as a Web browser. (*Id.*). Accordingly, Lawlor in combination with Computerworld teaches the features of this claim. (Sirbu Decl., ¶¶ 54-56).

c) Lawlor and Computerworld render claim 3 obvious

Claim 3 depends from claim 1, and adds the limitation, “wherein a management agent is used to complete the transfer of funds in a Web application.” Lawlor teaches the use of a management agent as recited in claim 3. For example, Lawlor’s central computer 52 includes manager 80A, which “schedules and coordinates the flow of transactions through the various system modules. As flow control it sends the transactions to the appropriate modules for processing and control of interactions with the external environment.” (Lawlor, 20:11-15; Sirbu Decl., ¶ 57).

Lawlor does not teach that the central computer is “in a Web application” as recited in claim 3. However, Computerworld teaches this feature. In particular, the Computerworld article describes Web sites that access bank accounts and perform bank transactions over the World Wide Web. (Computerworld, p. 80). For example, one of ordinary skill in the art would understand the Security First Network Bank Web site to be implemented by, for example, a Web application such as Web server software executing on a computing device. Further, a user wishing to transfer funds using the Security First Network Bank would use a Web application such as a Web browser. (Sirbu Decl., ¶ 58). Accordingly, Lawlor in combination with Computerworld teaches the features of this claim. (Sirbu Decl., ¶¶ 57-58).

d) Lawlor and Computerworld render claim 4 obvious

Claim 4 depends from claim 1, and adds the limitation, “wherein object routing is used to complete the transfer of funds in a Web application.” Lawlor teaches the use of object routing to complete the transfer of funds. For example, Lawlor describes the routing module 80C of the central computer, which “permits efficient routing of transactions to the appropriate module for servicing.” (Lawlor, 20:26-27). Lawlor further states that the “preferred embodiment uses...standard messages...to facilitate electronic billpaying and other financial transactions. For example, a funds transfer from an account in bank A to an account in bank B may be accomplished by generating a POS debit message directed to the bank A account and a POS credit message directed to the bank B account and by then applying both of these messages to the ATM network.” (Lawlor, 22:47-52). Lawlor also describes an interchange interface module that “converts internal system transaction information to a format that is compatible with the network” so that the computer system can interface with the interchange network. (Lawlor, 21:6-10). Accordingly, Lawlor teaches the use of object routing, or routing of messages, to complete the transfer funds transaction. (Sirbu Decl., ¶ 59).

Lawlor does not teach that the central computer is “in a Web application” as recited in claim 4. However, Computerworld teaches these features. In particular, the Computerworld article describes Web sites that access bank accounts and

perform bank transactions. (Computerworld, p. 80). One of ordinary skill in the art would understand the Security First Network Bank Web site is implemented using, for example, a Web application such as Web server software executing on a computing device. Further, a user wishing to transfer funds using the Security First Network Bank would use a Web application such as a Web browser. (Sirbu Decl., ¶ 58). Accordingly, Lawlor in combination with Computerworld teaches the features of this claim.

e) Lawlor and Computerworld render claim 5 obvious.

Claim 5 depends from claim 4, and further recites that “the object routing includes the use of a distributed on-line service information bases.” As noted above, Lawlor teaches routing of messages to facilitate financial transactions. (Lawlor, 22:47-52; Sirbu Decl., ¶ 59).

Lawlor further states that a distributed on-line service information bases, or a data store available over a network, is used to route the messages. For example, in describing the bill paying transactions, Lawlor explains that entries and attributes such as “the amount and date, identification information account, destination bank descriptor information and transaction codes are obtained from database 84 files and reformatted by the interchange module for transmission to the customers bank through the ATM interchange preferably in the form of a POS debit message...” (Lawlor, 32:28-34; Sirbu Decl., ¶ 60). Though Lawlor states the

data is obtained from the database for the bill paying transaction, one of ordinary skill in the art would understand it to be applicable to object routing as well, as the routing module of Lawlor would have access to the database 74 for account information used in the transfer of funds. (Sirbu Decl., ¶ 60).

Thus, Lawlor's routing of messages uses information from the database 84. Further, Lawlor's database 84 is connected to central computer 52, which is available over a network. (Lawlor, 17:43-53; Sirbu Decl., ¶ 61).

Accordingly, Lawlor teaches this feature. (Sirbu Decl., ¶¶ 60-61).

a) Lawlor and Computerworld render claim 6 obvious.

Claim 6 depends from claim 1, and further recites that "a virtual information store is used to complete the transfer of funds." As described above, Lawlor's central computer, which is connected to one or more databases, is used to complete the transfer of funds. (Sirbu Decl., ¶ 62). Accordingly, Lawlor teaches using a virtual information store to complete the transfer of funds.

b) Lawlor and Computerworld render claim 11 obvious

Lawlor does not explicitly describe accessing an account across the Web from a Web application. However, Computerworld discloses a Web transaction that accesses an account across the Web, as recited in claim 11. For example, Computerworld explains that Security First Network Bank allowed "access [to] checking account balances over the Internet" and specifically lists the Security

First Network Bank Web site address. (Computerworld, p. 80). Thus, Computerworld teaches accessing an account across the World Wide Web. Moreover, Computerworld discloses the use of a Web application, such as the Netscape Navigator browser, to access Wells Fargo accounts. (*Id.*) Accordingly, Computerworld teaches accessing an account across the Web from a Web application. (Sirbu Decl., ¶ 63).

c) Rationale for Combining Lawlor and Computerworld

The combination of Lawlor and Computerworld teaches every limitation of claims 1-6 and 11. Combining Lawlor and Computerworld would have been obvious to a person of ordinary skill in the art.

(1) Nature of the Problem to be Solved

Lawlor and Computerworld address the same problem as the '158 patent – providing real-time transactional capabilities. (Sirbu Decl., ¶ 64).

Lawlor teaches techniques for providing the remote delivery of retail banking services, including the performance of real-time, two-way transactions, although it does not explicitly teach that those techniques are applicable to the Web. (Lawlor, Abstract). However, applying such a system to the Web was well-known. (Sirbu Decl., ¶¶ 29-32). Further, Computerworld describes two banks that offered real-time banking transactional capabilities over the World Wide Web, including funds transfers over the World Wide Web. (Computerworld, p. 80).

Because Lawlor and Computerworld address the problems of providing real-time transactional capabilities, a person of ordinary skill in the art seeking to address these problems would have consulted these references and combined their teachings. (Sirbu Decl., ¶¶ 64-65).

(2) *Combination of Prior Art Elements*

The combination of Lawlor and Computerworld is nothing more than combining the remote banking services of Lawlor, which teaches many of the features of claim 1, with the World Wide Web banking Web sites described in Computerworld. No modification of either reference or system is required, and as such, the results of the combination are no more than one would expect. (Sirbu Decl., ¶ 66).

Lawlor teaches how transfers of funds were accomplished using a remote terminal, but does not explicitly describe that these transfers were performed over the Internet or World Wide Web. Computerworld teaches banks that offered the transfer of funds over the World Wide Web. A person of skill in the art would recognize that Lawlor's teachings could be combined with and used in the Computerworld systems, as both describe remote delivery of banking services. (Sirbu Decl., ¶ 66).

For example, both references discuss home banking systems: the disclosed Computerworld systems operate on the World Wide Web, while Lawlor operates

over standard phone networks. One of ordinary skill in the art would have found it obvious to adapt the Lawlor system to the World Wide Web, as Computerworld discusses banks that were performing money transfers over the World Wide Web. (Sirbu Decl., ¶ 67). Moreover, adapting the Lawlor system to the World Wide Web would have been obvious to one of skill in the art as only involving the substitution of the Internet for the standard phone networks and packet data networks disclosed by Lawlor. (Sirbu Decl., ¶ 67). Lawlor states the need for an easy to use, familiar interface for online banking. (Lawlor, 2:5-22). Web browsers and the World Wide Web provide such interfaces. (Sirbu Decl., ¶ 67).

As such, the combination would have been obvious to one of skill in the art. (Sirbu Decl., ¶¶ 64-67).

C. Grounds Based on Electronic Banking

1. Ground 3: Electronic Banking in view of AAPA renders claims 1-6 and 11 obvious.

The Electronic Banking book discusses a number of retail electronic banking services, including video home banking systems and automated teller machines. (Electronic Banking, pp. 1-6). The '158 patent admits that these technologies were known, but distinguished these systems as not allowing a "*Web user*" to perform real-time transactions with a bank. ('158 patent, 5:36-38). However, applying Electronic Banking's teachings to the World Wide Web would have been obvious, as further explained below. Additionally, as explained above, the Applicant

admitted that many, if not all, of the features of the claims were known in the art prior to the invention of the '158 patent.

In the *ex parte* reexamination context, the use of an Applicant's own admissions is explicitly permitted when the admissions are combined with a patent or printed publication. *See e.g.* MPEP § 2258, *see also* MPEP § 2129. Although proceedings under Section 18 are not subject to the MPEP, Petitioner believes that the admitted prior art can be used in a post-grant proceeding under the current framework. Accordingly, the Electronic Banking reference, in combination with the Applicant's Admitted Prior Art (AAPA or Background section), renders claims 1-6 and 11 obvious.

a) Electronic Banking and AAPA render claim 1 obvious

(1) Electronic Banking and AAPA teach "a method for performing a real time Web transaction."

Electronic Banking describes video home banking (VHB) systems that transmit information to customers "over telephone lines (using modems to convert the analog transmission into digital form for display) or a cable TV system." (Electronic Banking, p. 124). Accordingly, Electronic Banking teaches at least "performing a real time [] transaction [] over a digital network." (Sirbu Decl., ¶ 70).

Moreover, the AAPA admits "[a]n Internet user today can browse on the Web via the use of a Web browser." ('158 patent, 1:31-32). The AAPA further

admits that a user may access a bank's Web server to perform bank transactions on a checking account and make a payment on a loan account on the Web. ('158 patent, 2:6-9). Accordingly, the AAPA teaches performing a Web banking transaction over the Web using a Web browser. (Sirbu Decl., ¶ 72). Thus, Electronic Banking and AAPA teach this element. (Sirbu Decl., ¶¶ 70-72).

(2) Electronic Banking and AAPA teach "providing a Web page for display on a computer system coupled to an input device."

Electronic Banking discloses that videotex systems use a "decoder connected to the display unit (modified television, personal computer) [that] receives the information, translates it, and constructs it on the screen for display." (Electronic Banking, p. 124). Electronic Banking further discloses that terminals for videotex systems include "Display and input mechanisms for consumers..." (Electronic Banking, p. 125). Electronic Banking further describes one method of providing video home banking services in which a bank arranges a communications supplier to be a network controller. Electronic Banking explains that "when a customer initially accesses the system...the customer may access the *many different services* that the network controller offers by selecting from among *categories listed on an index menu.*" (Electronic Banking, p. 129; emphasis added). The index menu is a page displayed on the computer system coupled to the

input device, and accordingly, Electronic Banking teaches “providing a [] page for display on a computer system coupled to an input device.” (Sirbu Decl., ¶¶ 73-74).

Electronic Banking does not explicitly teach that the page is a Web page, but AAPA teaches this limitation. In particular, FIG. 1B of the ‘158 patent, admitted and designated as Prior Art, shows user 100 using web browser 102 to access bank web server 150. (‘158 patent, FIG. 1B; Sirbu Decl., ¶ 75). Accordingly, Electronic Banking and AAPA teach this element. (Sirbu Decl., ¶¶ 73-75).

(3) Electronic Banking and AAPA teach “providing a point-of-service application as a selection within the Web page, wherein the point-of-service application provides access to both a checking and savings account, the point-of-service application operating in a service network atop the World Wide Web.”

As described above, Electronic Banking states that “when a customer initially accesses the system...the customer may access the many different services that the network controller offers by selecting from among categories listed on an index menu. One of these categories is the bank’s home banking service...” (Electronic Banking, p. 129). Electronic Banking’s home banking application is the recited “point-of-service application.” (Sirbu Decl., ¶ 76). Electronic Banking further states that the customer may access the services by selecting among categories, one of which includes the home banking service. Thus, Electronic Banking teaches that the home banking service is provided as a selection within the index menu or page. (Sirbu Decl., ¶ 76).

Electronic Banking further states, “When the customer indicates to the network controller that he or she wishes to engage in home banking (by pushing the button on the keypad [])...the network controller sets up a direct connection between the financial switch (FS) bank and the customer.” (Electronic Banking, p. 129).

Electronic Banking also explains that VHB systems provide access to various transactions, including “[b]ill payment, check ordering, instrument purchases” as well as “funds transfer” and “balance inquiry.” (Electronic Banking, p. 125). Thus, Electronic Banking’s home banking application -- the recited “point-of-service application” -- provides access to multiple bank accounts. (Sirbu Decl., ¶ 77). One of ordinary skill in the art would appreciate that checking and savings accounts are two of the most common types of accounts a bank or other financial institution can provide access to. (Sirbu Decl., ¶ 77).

Electronic Banking further states that VHB systems “will provide the means for linking ATM services...into an *integrated method* for service delivery.” (Electronic Banking, p. 6; emphasis added). Thus, one of ordinary skill in the art would understand that the services provided by automated teller machines could also be provided by video home banking services. (Sirbu Decl., ¶ 78). In the chapter discussing Automated Teller Machines, Electronic Banking notes one function of ATMs as the “Transfer money function,” which includes the ability to

transfer from “checking to savings.” (Electronic Banking, p. 16). Based on this teaching, and also because checking and savings are well known bank accounts, one of ordinary skill would appreciate that Electronic Banking’s home banking application -- the recited “point-of-service application” -- provides access to a checking and savings account. (Sirbu Decl., ¶¶ 77-78).

Electronic Banking further describes that the point-of-service application operates in a service network. As explained above, a service network is a network (e.g., hardware and/or software) that provides a service between two or more computers. Electronic Banking describes that a “communications network” is part of the standards that define how the various elements of a basic videotex system or home banking system are linked together. (Electronic Banking, p. 125). The elements of the basic videotex system include, for example, the consumer’s terminal or personal computer in communication with the operating center, which is described as a combination of equipment and software. (*Id.*) As discussed above, services are performed between these computers, such as funds transfers. Thus, Electronic Banking describes the home banking application operating in a service network. (Sirbu Decl., ¶ 79).

Electronic Banking does not explicitly disclose the “service network atop the World Wide Web.” Electronic Banking does describe providing video home banking services over packet-switched networks. (Electronic Banking, p. 127).

One of ordinary skill in the art would have understood that the World Wide Web operates using the Internet, another packet-switched network. (Sirbu Decl., ¶ 79).

Moreover, AAPA provides this teaching. In particular, FIG. 1B (labeled “Prior Art”) of the AAPA shows how a user 100 at a first computer (i.e. Web browser 102) can access a checking and loan account using a second computer (i.e. bank web server 150). (‘158 patent, FIG. 1B). Both the first and second computers operate over the Web. Accordingly, AAPA teaches “the point of service application operating in a service network atop the World Wide Web.” (Sirbu Decl., ¶ 80). Thus, Electronic Banking, in combination with the AAPA, teaches providing a point-of-service application as a selection within the Web page, wherein the point-of-service application provides access to a checking account. (Sirbu Decl., ¶¶ 76-80).

Additionally, the AAPA discloses that the point-of-service application operates in a service network atop the World Wide Web. FIG. 1B and the accompanying text of the AAPA explicitly state that the user’s access to the checking account is provided by bank web server 150. (‘158 patent, 2:6-8). One of ordinary skill in the art would understand that the web server 150 operates using standard HTTP protocols, or rather, “atop the World Wide Web” as recited. (Sirbu Decl. ¶ 80).

(4) Electronic Banking teaches “accepting a first signal from the Web user input device to select the point-of-service application”

As explained above, the term “the Web user input device” is construed as the earlier-recited “input device”. Electronic Banking teaches accepting a signal from a keypad to select the home banking application; thus Electronic Banking teaches “accepting a first signal from the Web user input device to select the point-of-service application” as recited. Specifically, Electronic Banking states, “When the customer indicates to the network controller that he or she wishes to engage in home banking (by pushing the button on the keypad [])...the network controller sets up a direct connection between the financial switch (FS) bank and the customer.” (Electronic Banking, p. 129). Thus, Electronic Banking teaches accepting a signal from the customer to select the home banking application – the recited “point-of-service application.” (Sirbu Decl., ¶ 81).

(5) Electronic Banking renders obvious “accepting subsequent signals from the Web user input device”

Electronic Banking also teaches “accepting subsequent signals.” Electronic Banking states “the FS bank’s computers prompt the customer through the home banking functions by means of menus. The menus ask the customer to input an account number and password, indicate what category of banking service he or she desires...” (Electronic Banking, p. 129). Electronic Banking also describes an example of a bill pay service, in which the menus ask the customer to

“indicate...the vendor and amount of payment.” (*Id.*) Electronic Banking further describes “transactions... which require an additional flow of information back through the system composed of transaction instructions and processing.” (Electronic Banking, p. 125). Additionally, one of ordinary skill in the art would understand that to perform the transactions offered by the VHB systems, such as a funds transfer transaction, a user would input the information required for the transaction, such as a source account, destination account, and amount of transfer. (Sirbu Decl., ¶ 82).

Electronic Banking also states that “[a]ll terminals must fulfill the functions of input and receipt of information.” (Electronic Banking, p. 126). Further, Electronic Banking states “VHB is encompassed with the term videotex, a two way (interactive) system in which consumers access information/services from a data base and may, in turn, send messages to the computer...Videotex information is formed and edited through a terminal keyboard and stored in a computer data base. The data base is designed to facilitate rapid user access to specific information in the system.” (Electronic Banking, p. 5).

Accordingly, Electronic banking teaches accepting subsequent signals from the user’s input device. (Sirbu Decl., ¶ 82).

(6) Electronic Banking and AAPA renders obvious “transferring funds from the checking account to the savings account in real-time utilizing a routed transactional data structure that is both complete and

non-deferred, in addition to being specific to the point-of-service application, the routing occurring in response to the subsequent signals” as recited

(a) Electronic Banking and AAPA teach “transferring funds from the checking account to the savings account in real time”

As noted above in Section V.C.1.a).(3), Electronic Banking teaches transferring funds from checking to savings. Electronic Banking also teaches that such transfer is performed in real-time, as Electronic Banking notes that customer accounts can be updated “during...the session.” (Electronic Banking, p. 134; Sirbu Decl., ¶ 83).

(b) Electronic Banking teaches “utilizing a routed transactional data structure that is both complete and non-deferred, in addition to being specific to the point-of-service application, the routing occurring in response to the subsequent signals.”

Electronic Banking further teaches utilizing a “routed transactional data structure that is both complete and non-deferred” for transferring the funds. For example, Electronic Banking discusses the Federal Reserve’s Fed Wire system, and discusses messages – the recited “routed transactional data structure” -- that are used for transfers of funds from one financial institution to another. (Electronic Banking, p. 165). One of ordinary skill in the art would appreciate that the Fed Wire messages used for transfers of funds from one financial institution to another could have been used to transfer funds between a checking account at a first

financial institution and a savings account at a second financial institution. (Sirbu Decl., ¶ 84).

Electronic Banking also states, “[t]hree types of messages are handled on the network: (1) transfers of reserve accounts...from one financial institution to another” and further states “[i]f the institution maintains balances at the same Federal Reserve Bank, each reserve balance is debited and credited accordingly...the dollar amounts of the transfers will immediately affect the level of member banks reserve balances.” (Electronic Banking, p. 165; Sirbu Decl., ¶ 85). Thus, Electronic Banking teaches the recited “transactional data structure.”

Electronic Banking further teaches that the message is routed, or sent to a destination, as it states that the “FRCS-80 transport network will move data from one district to another...” (*Id.*) Thus, Electronic Banking teaches the recited “*routed* transactional data structure.” (Sirbu Decl., ¶ 86).

Electronic Banking further states, “[s]ettlement in the Fed Wire system is bilateral; that is, the Fed debits the account of the sender and credits the account of the receiver with regard to the same message.” (Electronic Banking, p. 165). One of ordinary skill in the art would recognize that the messages – corresponding to the recited “routed transactional data structure” – are thus “complete,” as they contain the information needed to perform the transaction. (Sirbu Decl., ¶ 87).

As noted above, Electronic Banking further states that the dollar amounts of the transfers will immediately affect the level of member banks reserve balances. (Electronic Banking, p. 165). Thus, the messages are non-deferred, as they immediately (i.e. without delay) effect the funds transfer. (Sirbu Decl., ¶ 87).

Electronic Banking also teaches that the messages are specific to the point-of-service (home banking) application. As stated above, one of ordinary skill in the art would have recognized that the messages used for transfers of funds from one financial institution to another could be used to transfer funds between a checking account at one bank and a savings account at another bank. (Sirbu Decl., ¶ 88). Thus, the messages, or routed transactional data structure, are specific to the home banking point-of-service application.

Finally, Electronic Banking teaches that the transferring, or routing, occurs in response to the subsequent signals. For example, with respect to bill payment transactions, Electronic Banking states that video home banking systems “ask the customer to input an account number and password, indicate what category of banking services he or she desires...[t]he financial switch captures these customer-oriented transactions.” (Electronic Banking, p. 129). Electronic Banking further describes that customer accounts can be updated during a video home banking session. (Electronic Banking, p. 134). Thus, Electronic Banking teaches that the transferring occurs in response to the subsequent signals. (Sirbu Decl., ¶ 89).

Accordingly, Electronic Banking teaches this element.

b) Electronic Banking and AAPA render claim 2 obvious.

Claim 2 depends from claim 1, and adds the limitation “wherein an exchange over the Web is used to complete the transfer of funds in a Web application.” As discussed above, Electronic Banking teaches an exchange of data used to complete a transaction, such as a transfer of funds. For example, Electronic Banking describes “transactions... which require an additional flow of information back through the system composed of transaction instructions and processing.” (Electronic Banking, p. 125; Sirbu Decl., ¶ 90).

Electronic Banking does not teach that the exchange of data is “over the Web” or “in a Web application” as recited in claim 2. However, AAPA teaches these features. In particular, the AAPA describes the user accessing a checking account and loan account over the Web, using CGI scripts. (‘158 patent, 2:9-11). Bank web server 150 accesses bank accounts and performs bank transactions. (‘158 patent, FIG. 1B, 2:6-11). Bank web server 150 is a Web application that operates over the Web. (Sirbu Decl., ¶ 91). Accordingly, Electronic Banking in combination with AAPA teaches the features of this claim.

c) Electronic Banking and AAPA render claim 3 obvious.

Claim 3 depends from claim 1, and adds the limitation, “wherein a management agent is used to complete the transfer of funds in a Web application.” Electronic Banking teaches the use of a management agent as recited in claim 3. The management agent provides functionality to complete the transfer of funds. For example, Electronic Banking describes how banks process VHB transactions. One option discussed by Electronic Banking involves the bank’s participation as a financial switch – corresponding to the recited “management agent” -- in which the bank “performs the session management function...the customer may access the many different services...by selecting among categories...One of these categories is the bank’s home banking service.” (Electronic Banking, p. 129; Sirbu Decl., ¶ 92).

Electronic Banking also describes that the bank can operate as “the system operator responsible for all of the functions: network control as well as session management...” (Electronic Banking, p. 131). Accordingly, Electronic Banking teaches the recited “management agent.” (Sirbu Decl., ¶¶ 92-93).

Electronic Banking does not teach that the bank’s financial switch or system operator is “in a Web application” as recited in claim 3. However, AAPA teaches these features. In particular, the AAPA describes Bank web server 150 that accesses bank accounts and performs bank transactions. (‘158 patent, FIG. 1B,

2:6-11). Bank web server 150 is a Web application. (Sirbu Decl., ¶ 94). Accordingly, Electronic Banking in combination with AAPA teaches the features of this claim.

d) Electronic Banking and AAPA render claim 4 obvious.

Claim 4 depends from claim 1, and adds the limitation, “wherein object routing is used to complete the transfer of funds in a Web application.” Electronic Banking teaches that object routing is used to complete the transfer of funds as recited in claim 4. With reference to the Fed Wire system, Electronic Banking describes the FRCS-80 interdistrict network, a “general purpose communication system.” (Electronic Banking, p. 168). According to Electronic Banking, the purpose of the network is “to transport standard *packets of data* whether that data represent individual item data or bulk data, over the same network. It will provide data transfer services for the operations of the Federal Reserve.” (*Id.*; emphasis added). Moreover, Electronic Banking teaches that the “FRCS-80 transport network will move data from one district to another.” (*Id.*).

Thus, the Fed Wire system and the FRCS-80 transport network send and route messages (i.e., objects) to transfer funds. (Sirbu Decl., ¶¶ 95-96). Accordingly, Electronic Banking teaches “wherein object routing is used to complete the transfer of funds” as recited in this claim.

Electronic Banking does not teach “in a Web application.” However, AAPA teaches that Bank web server 150 is a Web application. Accordingly, Electronic Banking in combination with AAPA teaches the features of this claim. (Sirbu Decl., ¶¶ 95-96).

e) Electronic Banking and AAPA render claim 5 obvious.

Claim 5 depends from claim 4, and further recites that “the object routing includes the use of a distributed on-line service information bases.” Electronic Banking states that the FRCS-80 interdistrict network “provide[s] data transfer services for the operations of the Federal Reserve System” and that it “consists of state-of-the-art communications software and hardware.” (Electronic Banking, p. 168). Electronic Banking specifically states that the FRCS-80 network is “distributed,” in that “switching is distributed among the nodes of the network.” (*Id.*). One of ordinary skill in the art would understand that the hardware of the nodes of the network includes a memory, or a data store, for routing tables mapping destination addresses to the appropriate outgoing port. The memory could also be used to help convert aliases to physical addresses for example, or to record system activity for audit purposes. (Sirbu Decl., ¶ 97). Thus, Electronic Banking teaches that the object routing includes the use of distributed on-line service information bases, as the object routing uses the distributed switching nodes of the FRCS-80 network. (Sirbu Decl., ¶ 97).

f) Electronic Banking and AAPA render claim 6 obvious.

Claim 6 depends from claim 1, and further recites that “a virtual information store is used to complete the transfer of funds.” Electronic Banking states that one element of a basic videotex system is a database which “may be contained within operating center or resident with [the] information provider.” (Electronic Banking, p. 125). Further, Exhibit 30 of Electronic Banking shows two databases resident in a bank for storing information and attributes such as captured transactions and customer information. (Electronic Banking, p. 133). One of ordinary skill in the art would understand that these databases are used to complete the transfer of funds. (Sirbu Decl., ¶ 98). Thus, Electronic Banking teaches the use of a data store, or virtual information store, to complete the transfer of funds. (Sirbu Decl., ¶ 98).

g) Electronic Banking and AAPA render claim 11 obvious.

Claim 11 depends from claim 1, and further recites that “the Web transaction is accessing an account across the Web from a Web application.” Both Electronic Banking and the AAPA teach accessing an account. AAPA teaches accessing an account across the Web from a Web application, such as a Web browser. (‘158 patent, FIGS. 1A and 1B; Sirbu Decl., ¶ 99). Accordingly, Electronic Banking and AAPA render this claim obvious.

h) Rationale for Combining Electronic Banking and AAPA

The combination of Electronic Banking and the AAPA teaches every limitation of claims 1-6 and 11. Combining Electronic Banking and the AAPA would have been obvious to a person of ordinary skill in the art.

(1) Nature of the Problem to be Solved

Electronic Banking addresses the same problem as the '158 patent – providing real-time transactional capabilities. (Sirbu Decl., ¶ 100).

While the AAPA asserts that the “ability to complete robust real-time, two-way transactions is thus not truly available on the Web today,” the AAPA concedes that certain financial transactions (e.g. accessing bank accounts, applying a loan payment) are possible over the web. ('158 patent, 2:34-36). Electronic Banking teaches techniques for performing real-time, two-way bank transactions over a network, but not over the Internet or World Wide Web. (Sirbu Decl., ¶ 100). However, applying such techniques to the Web was well-known. (Sirbu Decl., ¶¶ 29-32).

Because Electronic Banking and the AAPA both address the problems of providing real-time transactional capabilities over a network, a person of ordinary skill in the art seeking to address these problems would have consulted these references and combined their teachings. (Sirbu Decl., ¶ 100).

(2) Combination of Prior Art Elements

The combination of Electronic Banking and the AAPA is nothing more than combining the VHB systems of Electronic Banking, which teach most of the features of claim 1, with the teachings of the AAPA of performing transactions on the Web. No modification of either reference or system is required, and as such, the results of the combination are no more than one would expect. (Sirbu Decl., ¶ 101).

Electronic Banking teaches that VHB systems were capable of transferring funds over various networks, but does not explicitly disclose the use of the World Wide Web for these transfers. (*See e.g.* Electronic Banking, p. 125). The AAPA teaches that banking transactions could be performed using the World Wide Web, thereby filling the gap of Electronic Banking's disclosure. ('158 patent, 2:6-8). A person of skill in the art would recognize that Electronic Banking's VHB teachings could be adapted to the Internet and World Wide Web with predictable results, and would have found it obvious to modify the VHB systems to achieve real-time transfers on the World Wide Web. At the time of the invention, it was known in the art to migrate such systems to the World Wide Web. (Sirbu Decl. ¶¶ 101-102). As such, the combination would have been obvious to one of skill in the art. *See e.g. Soverain Software.*

D. Grounds Based on Stanford Federal Credit Union (SFCU)

1. Ground 4: SFCU in view of Electronic Banking renders claims 1-6 and 11 obvious.

SFCU is an article published in Business Wire which discusses the Internet banking system provided by the Stanford Federal Credit Union in Palo Alto, California. According to the article, in 1994, the Stanford Federal Credit Union became the first financial institution to offer online banking transactions on the Internet. (SFCU, p. 1). SFCU also mentions the World Wide Web page of the credit union. (*Id.*)

As discussed above, Electronic Banking discloses various electronic banking technologies in the 1980s, including automated teller machines and home banking systems. The combination of SFCU and Electronic Banking renders obvious claims 1-6 and 11.

a) SFCU and Electronic Banking renders claim 1 obvious.

(1) SFCU teaches “a method for performing a real time Web transaction from a Web application over a digital network atop the Web”

SFCU states, “[I]ast year, the Stanford Federal Credit Union (SFCU) became the first financial institution in the United States to perform transactions on the Internet.” (SFCU, p. 1). SFCU further describes the credit union’s World Wide Web home page, which “[a]llows members even more high tech convenience” including various credit union services. (SFCU, p. 1). Accordingly, SFCU teaches

a method for performing a real-time Web transaction as recited. (Sirbu Decl., ¶ 105).

(2) SFCU teaches “providing a Web page for display on a computer system coupled to an input device.”

SFCU states, “SFCU’s home page on the World Wide Web allows members even more high tech convenience” and further states “[m]embers must enter a password of up to 14 characters.” (SFCU, pp. 1-2). One of ordinary skill in the art would understand that entering a password requires an input device coupled to a computer system. (Sirbu Decl., ¶ 106). Accordingly, SFCU teaches “providing a Web page for display on a computer system coupled to an input device.”

(3) SFCU renders obvious “providing a point-of-service application as a selection within the Web page, wherein the point-of-service application provides access to both a checking and savings account, the point-of-service application operating in a service network atop the World Wide Web.”

SFCU explains, “SFCU remains the only institution that offers its members the ability to withdraw or *transfer funds*, pay loans, check up to a year’s worth of transaction history, and *conduct other day-to-day business online*” and further, that “[a]side from *using the Internet* to check their account histories and *transfer money from one account to another...*” (SFCU, p. 1; emphasis added). SFCU thus provides applications for executing banking transactions of interest to users over the World Wide Web (i.e., “point-of-service applications”), such as transferring

money between accounts. (Sirbu Decl., ¶ 107). It is clear that SFCU operates over the Web, since SFCU provides the bank's web URL: "To access SFCU's World Wide Web page: URL: <http://www.sfcu.org>." (SFCU, p. 2; Sirbu Decl., ¶ 109).

A person of ordinary skill would appreciate that the point-of-service applications taught by SFCU would be provided as selections within a web page, such as SFCU's Web home page. (Sirbu Decl., ¶ 107). Accordingly, SFCU teaches "providing a point-of-service application as a selection within the Web page, wherein the point-of-service application provides access to [multiple accounts]."

SFCU also teaches "the point-of-service application operating in a service network atop the World Wide Web." As discussed above, a "service network atop the World Wide Web" is construed as a network (e.g., hardware and/or software) that provides a service between two or more computers over or involving the World Wide Web. SFCU teaches performing online banking transaction (such as a funds transfer between accounts) between a user computer and the bank's computer over the Internet and World Wide Web. Thus, SFCU teaches this limitation. (Sirbu Decl., ¶ 109).

SFCU does not explicitly state that it provides access to a checking and savings account. However, this feature would have been obvious to one of ordinary skill. SFCU describes the on-line features of a bank, and checking and savings

accounts are two of the most common types of accounts a bank can provide. (Sirbu Decl., ¶ 108).

(4) SFCU renders obvious “accepting a first signal from the Web user input device to select the point-of-service application”

SFCU states, “To access SFCU’s World Wide Web page: URL: <http://www.sfcu.org>.” (SFCU, p. 2). Additionally, SFCU states that “[m]embers must enter a password of up to 14 characters.” (*Id.*) One of ordinary skill in the art would understand entering a password to require an input device, such as a keyboard. (Sirbu Decl., ¶ 110). Moreover, SFCU states that “[m]embers may also dial the credit union’s CU Online system via modem; however, three-quarters of the members currently choose to log on via the Internet.” (*Id.*) Thus, SFCU teaches accepting signals from a “Web user input device.”

SFCU also teaches offering a plurality of point-of-service applications to users. “SFCU remains the only institution that offers its members the ability to withdraw or transfer funds, pay loans, check up to a year’s worth of transaction history, and conduct other day-to-day business online.” (SFCU, p. 1)

Although SFCU does not explicitly teach accepting a signal to select a point-of-service application, one of ordinary skill would have found that feature to be obvious in light of SFCU’s teachings. As noted above, SFCU teaches accepting signals from users, and also teaches providing a plurality of point-of-service

applications to users. Selecting one of those point-of-service applications by accepting a signal from an input device would have been obvious to one of ordinary skill in the art. (Sirbu Decl., ¶ 110).

(5) SFCU renders obvious “accepting subsequent signals from the Web user input device.”

SFCU also teaches “accepting subsequent signals” as recited. For example, SFCU states, “[a]side from using the Internet to check their account histories and transfer money from one account to another, members also make loan payments and download account histories...” (SFCU, p. 1). One of ordinary skill in the art would understand that performing these transactions using the Internet or World Wide Web would require accepting subsequent signals from a user’s input device. For example, transferring money from one account to another would require a user to select a source and destination account, and enter in the amount to be transferred. (Sirbu Decl., ¶ 111).

(6) SFCU and Electronic Banking teaches “transferring funds from the checking account to the savings account in real-time utilizing a routed transactional data structure that is both complete and non-deferred, in addition to being specific to the point-of-service application, the routing occurring in response to the subsequent signals” as recited.

(a) SFCU teaches “transferring funds from the checking account to the savings account.”

SFCU teaches transferring funds from one account to another. Specifically, SFCU states, “SFCU remains the only institution that offers its members the ability

to withdraw or transfer funds (SFCU, p. 1). Also, as further discussed above, persons of ordinary skill would appreciate that checking and savings accounts are two well-known types of bank accounts. (Sirbu Decl., ¶ 112).

Also, as noted above in Section V.C.1.a).(3), Electronic Banking teaches transferring funds from checking to savings. Electronic Banking also teaches that such transfer is performed in real-time, as Electronic Banking notes that customer accounts can be updated during a home banking session. (Electronic Banking, p. 134).

(b) SFCU and Electronic Banking teach “utilizing a routed transactional data structure that is both complete and non-deferred, in addition to being specific to the point-of-service application, the routing occurring in response to the subsequent signals.”

SFCU does not explicitly teach this element. However, Electronic Banking teaches utilizing a “routed transactional data structure that is both complete and non-deferred” for transferring the funds. For example, Electronic Banking discusses the Federal Reserve’s Fed Wire system, and discusses messages – the recited “routed transactional data structure” -- that are used for transfers of funds from one financial institution to another. (Electronic Banking, p. 165). One of ordinary skill in the art would appreciate that the messages used for transfers of funds from one financial institution to another could have been used to transfer

funds between a checking account and a savings account. (Sirbu Decl., ¶¶ 114-115).

Electronic Banking also states, “[t]hree types of messages are handled on the network: (1) transfers of reserve accounts...from one financial institution to another” and further states “[i]f the institution maintains balances at the same Federal Reserve Bank, each reserve balance is debited and credited accordingly...the dollar amounts of the transfers will immediately affect the level of member banks reserve balances.” (Electronic Banking, p. 165). Thus, Electronic Banking teaches the recited "transactional data structure."

Electronic Banking further teaches that the message is routed, or sent to a destination, as it states that the “FRCS-80 transport network will move data from one district to another...” (*Id.*) Thus, Electronic Banking teaches the recited “**routed** transactional data structure.” (Sirbu Decl., ¶ 116).

Electronic Banking further states, “[s]ettlement in the Fed Wire system is bilateral; that is, the Fed debits the account of the sender and credits the account of the receiver with regard to the same message.” (Electronic Banking, p. 165). One of ordinary skill in the art would recognize that the messages – corresponding to the recited "routed transactional data structure" -- are thus “complete,” as they contain the information needed to perform the transaction. (Sirbu Decl., ¶ 117).

Electronic Banking further states that the dollar amounts of the transfers will immediately affect the level of member banks reserve balances. (Electronic Banking, p. 165). Thus, the messages are non-deferred, as they immediately (i.e. without delay) effect the funds transfer. (Sirbu Decl., ¶ 117).

Electronic Banking also teaches that the messages are specific to the point-of-service (transfer of funds) application. As stated above, one of ordinary skill in the art would have recognized that the messages used for transfers of funds from one financial institution to another could be used to transfer funds between a checking account and a savings account. (Sirbu Decl., ¶ 118). Thus, the messages, or routed transactional data structure, are specific to the home banking point-of-service application.

Finally, Electronic Banking teaches that the transferring, or routing, occurs in response to the subsequent signals. For example, with respect to bill payment transactions, Electronic Banking states that video home banking systems “ask the customer to input an account number and password, indicate what category of banking services he or she desires...[t]he financial switch captures these customer-oriented transactions.” (Electronic Banking, p. 129). Electronic Banking further describes that customer accounts can be updated during a video home banking session. (Electronic Banking, p. 134). Thus, Electronic Banking teaches that the transferring occurs in response to the subsequent signals. (Sirbu Decl., ¶ 119).

Accordingly, SFCU and Electronic Banking teach this element, and the combination of SFCU and Electronic Banking thus renders each and every feature of claim 1 obvious.

(7) SFCU renders claim 2 obvious.

Claim 2 depends from claim 1, and adds the limitation “wherein an exchange over the Web is used to complete the transfer of funds in a Web application.” SFCU teaches that an exchange of data over the Web is used to complete the transfer of funds in a Web application. SFCU states, for example, “SFCU remains the only institution that offers its members the ability to withdraw or transfer funds...and conduct other day-to-day business online.” (SFCU, p. 1). One of ordinary skill in the art would understand these transactions to involve an exchange of data over the World Wide Web, for example, an interaction between a user’s browser and the World Wide Web server, as SFCU describes how to access the credit union’s Web page. (Sirbu Decl., ¶ 120). SFCU also states, “the University requested that we install a World Wide Web server...” (SFCU, p. 2). One of ordinary skill in the art would understand that the World Wide Web server is a Web application. (Sirbu Decl., ¶ 120). Accordingly, SFCU teaches the limitations of this claim.

(8) SFCU renders claim 3 obvious.

Claim 3 depends from claim 1, and adds the limitation, “wherein a management agent is used to complete the transfer of funds in a Web application.” SFCU teaches the use of a management agent, such as a web server, to complete the transfer of funds, as recited in claim 3. SFCU states, for example, “we asked the University if they would allow access from their system to a credit union remote transaction program if we provided one. They agreed, provided that the server was reachable through the Internet...Last year the University requested that *we install a World Wide Web server* so we could maintain and update all of our own information.” (SFCU, p. 2; emphasis added). SFCU also states, “SFCU’s home page on the World Wide Web allows members even more high tech convenience.” (SFCU, p. 1). One of ordinary skill in the art would understand that the World Wide Web server described in SFCU – corresponding to the recited “management agent” -- is used to complete the transfer the funds. (Sirbu Decl., ¶ 121). Accordingly, SFCU teaches the limitations of this claim.

(9) SFCU and Electronic Banking render claim 4 obvious.

Claim 4 depends from claim 1, and adds the limitation, “wherein object routing is used to complete the transfer of funds in a Web application.” SFCU does not explicitly teach that the transfer of funds is completed using object routing as recited in claim 4. However, as described above in Section V.C.1.d), the Fed Wire

system and the FRCS-80 transport network described in Electronic Banking send messages (objects) to complete the transfer of funds. (*See also* Sirbu Decl., ¶ 122). Accordingly, SFCU in view of Electronic Banking teaches using object routing to transport data from a source to a destination over a network to transfer funds, and thus renders claim 4 obvious. (Sirbu Decl. ¶ 123).

(10) SFCU and Electronic Banking render claim 5 obvious

Claim 5 depends from claim 4, and further recites that “the object routing includes the use of a distributed on-line service information bases.” SFCU does not explicitly teach this limitation. However, as described above in Section V.C.1.e), Electronic Banking teaches that the object routing includes the use of distributed on-line service information bases, as the object routing uses the distributed switching nodes of the FRCS-80 network (*See also* Sirbu Decl., ¶ 124).

(11) SFCU and Electronic Banking render claim 6 obvious.

Claim 6 depends from claim 1, and further recites that “a virtual information store is used to complete the transfer of funds.” SFCU does not explicitly teach this limitation. However, Electronic Banking states that one element of a basic videotex system (i.e., a system used for funds transfer) is a database which “may be contained within operating center or resident with [the] information provider.” (Electronic Banking, p. 125). Further, Exhibit 30 of Electronic Banking shows two

databases resident in a bank for storing captured transactions and customer information. (Electronic Banking, p. 133). One of ordinary skill in the art would understand that these databases are used to complete the transfer of funds. (Sirbu Decl., ¶ 125). Thus, Electronic Banking teaches the use of a data store, or virtual information store, to complete the transfer of funds.

(12) SFCU renders claim 11 obvious.

Claim 11 depends from claim 1, and specifies that “the Web transaction is accessing an account across the Web from a Web application.” SFCU teaches the features of this claim. For example, SFCU discloses that users can use the credit union’s *Web site* to “check their account histories and transfer money from one account to another,” and also discloses “[a]side from *using the Internet* to check their account histories and transfer money from one account to another, members also make loan payments and download account histories...” (SFCU, p. 1; emphasis added). Accordingly, SFCU teaches accessing an account across the Web. (Sirbu Decl., ¶ 126).

b) Rationale for Combining SFCU and Electronic Banking

The combination of SFCU and Electronic Banking teaches every limitation of claims 1-6 and 11. Combining SFCU and Electronic Banking would have been obvious to a person of ordinary skill in the art.

(1) Nature of the Problem to be Solved

SFCU and Electronic Banking address the same problem as the '158 patent – providing real-time transactional capabilities.

The Background section of the '158 patent explains that the “ability to complete robust real-time, two-way transactions is thus not truly available on the Web today.” ('158 patent, 2:34-36). Both SFCU and Electronic Banking teach techniques for performing real-time, two-way transactions, with SFCU explicitly teaching these capabilities on the Web. (Sirbu Decl., ¶ 127). Though Electronic Banking does not specifically mention banking systems on the Web, applying such systems to the Web was well-known. (Sirbu Decl., ¶¶ 29-32).

For example, SFCU states “SFCU remains the only institution that offers its members the ability to withdraw or transfer funds...and conduct other day-to-day business online.” (SFCU, p. 1). Likewise, Electronic Banking teaches how electronic banking consumers “benefit from increased convenience and, in many cases, greater accuracy and timeliness of payment...” (Electronic Banking, p. vii).

Because SFCU and Electronic Banking address the problems of providing real-time transactional capabilities, a person of ordinary skill in the art seeking to address these problems would have consulted these references and combined their teachings. (Sirbu Decl., ¶ 127).

(2) Combination of Prior Art Elements

The combination of SFCU and Electronic Banking is nothing more than combining the system of SFCU, a Web based online banking system, with the specificity of the funds transferring function provided by Electronic Banking. The elements perform the same functions in the combination that they had been known to perform individually, and as such, the results of the combination are no more than one would expect. (Sirbu Decl., ¶ 128).

SFCU teaches that transferring funds was performed on the World Wide Web. Electronic Banking teaches one method of using Fed Wire messages to transfer funds between accounts. A person of ordinary skill in the art would recognize that Electronic Banking's teachings are applicable to the Web banking services of SFCU and would have found it obvious to combine the two to achieve real-time transfers. As such, the combination would have been obvious to one of ordinary skill in the art. (Sirbu Decl. ¶¶ 129-130).

VI. PROPOSED GROUNDS UNDER SECTION 112 (37 C.F.R. § 42.304(b))³

As discussed below, Claims 1-6 and 11 are invalid under 35 U.S.C. § 112(b).

³ This section discusses terms that are vague and indefinite under Section 112(b) (previously Section 112, 2nd paragraph). In the sections above, Petitioner has construed and analyzed these terms as best understood.

A. Ground 5: Claims 1-6 and 11 are invalid under 35 U.S.C. § 112(b).

1. “routed transactional data structure”

Claim 1 of the ‘158 patent recites, *inter alia*, “transferring funds from the checking account to the savings account in real-time utilizing a *routed transactional data structure...*” The recited “routed transactional data structure” fails to particularly point out and distinctly claim the subject matter which the inventor regards as the invention, and therefore, claim 1 is unpatentable under 35 U.S.C. § 112(b).

The term “routed transactional data structure” does not appear in the written description, is not identified in any figure, and is not discussed in the prosecution history. Similarly, the term is not defined, clarified, or explained in any of the dependent claims of the ‘158 patent. One of ordinary skill in the art, having read the ‘158 patent, would have no guidance as to the definition of the alleged “routed transactional data structure.” (Sirbu Decl., ¶ 23). No extrinsic sources known to Petitioner offer any insight into what is meant by a “routed transactional data structure.” Internet search results for the term consist only of the ‘158 patent and various complaints for infringement of the ‘158 patent.

Nor does the prosecution history of the ‘158 patent provide a definition of the “routed transactional data structure.” The term was added to prosecution claim 72 (which became claim 1 of the ‘158 patent) in an Amendment and Reply dated

June 7, 2010 (*see* SAP1002 at 419). At no time during the prosecution of the '158 patent did the Patentee define the term "routed transactional data structure," or clarify the scope of the phrase when distinguishing the applied prior art references. On page 11 of the Amendment and Reply dated June 7, 2010, the Applicant identified column 8, line 35 and FIG. 5D of U.S. Patent No. 5,778,178 as allegedly corresponding to "routing of a transactional data structure." This portion of the '178 patent states, "Encoding of objects defines how the object is represented by the object type syntax while being transmitted over the network." ('178 patent, 8:35-37). None of this text elucidates the meaning of a "routed transactional data structure."

Similarly, in response to the Examiner's challenge of the alleged effective filing date, the Applicant submitted a chart identifying the support for various claim terms in the provisional application filed November 13, 1995 (*see* SAP 1002). While the chart identifies support for terms such as "routing," "transactional," and "data structure," none of the citations for the individual terms coincide in location. Thus, for example, the term "transactional" is allegedly supported on pages 3, 6, and 7 of the provisional application, while the term "data structure" is allegedly supported on pages 4, 11, and 56 of the provisional application. But the term "routed transactional data structure" does not appear in the chart or the provisional application.

Finally, Petitioner's technical expert Dr. Sirbu has noted that the term "routed transactional data structure" was not known in the art at the time of the filing of the '158 patent, and a person of ordinary skill in the art would not be able to understand the bounds of the term given the Specification and claim language. (Sirbu Decl., ¶ 23). Moreover, the term has no well-understood meaning to a person of ordinary skill in the art. (*Id.*).

Because the claim term "routed transactional data structure" is ambiguous and indefinite, claim 1 is unpatentable under 35 U.S.C. § 112(b). Each of claims 2-6 and 11 depend from claim 1, and are thus similarly deficient and invalid under 35 U.S.C. § 112(b).

2. "non-deferred"

Claim 1 also recites that the routed transactional data structure is "non-deferred." As noted above in the claim construction section, the term "non-deferred" does not appear in the Specification. The Background section of the '158 patent describes e-mail messages as "deferred transactions" because a consumer's request using e-mail capabilities is not processed until the e-mail is received, read, and the person or system reading the e-mail executes the transaction. ('158 patent, 1:37-43).

However, the Specification does not describe what a "non-deferred" routed transactional data structure is. The Specification also does not indicate which of

these actions (receiving, reading, or executing) makes a transaction “deferred.” Thus, the Specification does not convey to one of ordinary skill in the art what constitutes a “non-deferred” routed transactional data structure. For example, is an e-mail transaction “deferred” because it requires receiving and reading? If so, then a “non-deferred” transaction might refer to any transaction or data structure that does not require receiving and reading. But what would the value be of a transactional data structure that is neither received nor read? Thus, the bounds of what it means to be “non-deferred” are not clear, and do not convey to one of ordinary skill in the art what the inventor regards as the invention. (Sirbu Decl., ¶ 25). For at least this additional reason, independent claim 1, and dependent claims 2-6 and 11, are unpatentable under 35 U.S.C. § 112(b).

3. “complete”

Claim 1 further recites that the routed transactional data structure is “complete.” As noted above in the claim construction section, the word “complete” is never used in the Specification as an adjective to describe anything, let alone a “routed transactional data structure”. The Specification uses the word “complete” when referring to the ability to, *inter alia*, “complete robust, real-time transactions” or “complete the purchase of the car”, or when describing a “merchant capable of providing complete transactional services”. (‘158 patent, 2:34-36, 5:25-28, 5:40-45). However, the Specification fails to describe what a “complete” data structure

is or could be. The Specification does not even describe the negative, i.e., an incomplete data structure. One of ordinary skill in the art would not understand what a “complete” data structure would be given the Specification. (Sirbu Decl., ¶ 24). For at least this additional reason, independent claim 1, and dependent claims 2-6 and 11, are unpatentable under 35 U.S.C. § 112(b).

4. “service network atop the World Wide Web”

Claim 1 recites that the point-of-service application operates “in a service network atop the World Wide Web.” As noted above in the claim construction section, the Specification notes that one embodiment includes “a service network running on top of a facilities network, namely the Internet, the Web or e-mail networks.” (‘158 patent, 5:49-51).

However, the Specification contains no further detail on how a service network operates on top or atop the World Wide Web. Also, the phrase “network atop the World Wide Web” is not a term of art. (Sirbu Decl., ¶ 22). Given the Specification and claim language, one of ordinary skill in the art would not be able to understand the term “service network atop the World Wide Web.” (Sirbu Decl., ¶ 22).

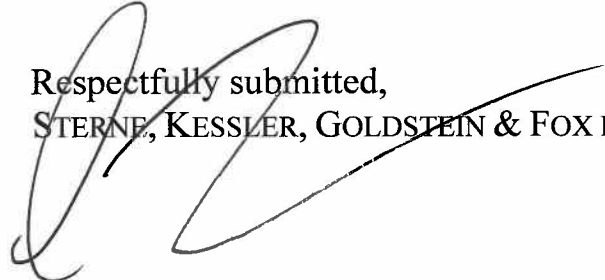
Accordingly, the definition of a “service network atop the World Wide Web” is not clear, and the intrinsic evidence does not convey to one of ordinary skill in the art what the inventor regards as the invention. (Sirbu Decl., ¶ 22). For at

least this additional reason, independent claim 1, and dependent claims 2-6 and 11, are unpatentable under 35 U.S.C. § 112(b).

VII. Conclusion

For the reasons provided above, post-grant review of claims 1-6 and 11 of U.S. Patent No. 8,037,158 is requested.

Respectfully submitted,
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APPENDIX A – EXHIBIT LIST

SAP 1001	U.S. Patent No. 8,037,158 to Lakshmi Arunachalam
SAP 1002	Prosecution History of U.S. Patent No. 8,037,158
SAP 1003	Declaration of Dr. Marvin Sirbu
SAP 1004	Electronic Banking, Lipis et al.
SAP 1005	Stanford Federal Credit Union Pioneers Online Financial Services
SAP 1006	U.S. Patent No. 5,220,501 to Lawlor et al.
SAP 1007	Computerworld, June 26, 1995
SAP 1008	Citizens Bank and Financial Fusion – Professional Development and Services Agreement (redacted)

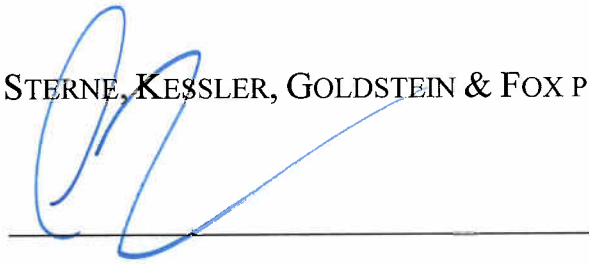
CERTIFICATION OF SERVICE (37 C.F.R. §§ 42.6(e), 42.205(a))

The undersigned hereby certifies that the above-captioned "Petition for Post-Grant (Covered Business Method) Review of U.S. Patent No. 8,037,158," including its supporting evidence (SAP Exhibits SAP 1001 through 1008) and Exhibit List, was served in its entirety on March 22, 2013, upon the following parties via FedEx®:

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