

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BLUE COAT SYSTEMS, INC.,
Petitioner,

v.

FINJAN, INC.,
Patent Owner.

Case IPR2016-01444
Patent 8,079,086 B1

Before JAMES B. ARPIN, PATRICK M. BOUCHER, and
ZHENYU YANG, *Administrative Patent Judges*.

Opinion of the Board filed by Administrative Patent Judge BOUCHER.

Opinion Concurring filed by Administrative Patent Judge ARPIN.

DECISION
Granting Request for Rehearing
Institution of *Inter Partes* Review
37 C.F.R. §§ 42.71(d), 42.108

Petitioner requests rehearing (Paper 10, “Rehearing Request” or “Req. Reh’g”) of our Decision (Paper 9, “Prior Decision” or “Dec.”) denying institution of an *inter partes* review of U.S. Patent No. 8,079,086 B1 (Ex. 1001, “the ’086 patent”). When rehearing a decision on whether to institute a trial, the Board reviews the decision for an abuse of discretion. *See* 37 C.F.R. § 42.71(c). An abuse of discretion may be indicated if a decision is based on an erroneous interpretation of law, if a factual finding is not supported by substantial evidence, or if the decision represents an unreasonable judgment in weighing relevant factors. *See Star Fruits S.N.C. v. U.S.*, 393 F.3d 1277, 1281 (Fed. Cir. 2005); *Arnold P’ship v. Dudas*, 362 F.3d 1338, 1340 (Fed. Cir. 2004); *In re Gartside*, 203 F.3d 1305, 1315–16 (Fed. Cir. 2000). The burden of showing that our Prior Decision should be modified lies with Petitioner, the party challenging the decision. *See* 37 C.F.R. § 42.71(d). In addition, “[t]he request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed.” *Id.*

For the reasons set forth below, we grant the Rehearing Request and institute an *inter partes* review of claims 1, 4–6, 9, 12–14, 17, 24, 35, and 37 of the ’086 patent.

I. BACKGROUND

On July 15, 2016, Blue Coat Systems, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1, 4–6, 9, 12–14, 17, 24, 35, 37, and 42 of the ’086 patent. Finjan, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 6) on November 18, 2016.

A. The '086 Patent

The '086 patent is directed to systems and methods capable of protecting personal computers and other network-accessible devices from “harmful, undesirable, suspicious or other ‘malicious’ operations that might otherwise be effectuated by remotely operable code.” Ex. 1001, col. 2, ll. 30–35. The '086 patent incorporates a number of other patents and patent applications by reference, including U.S. Patent No. 6,092,194 (Ex. 1012, “the '194 patent”). *Id.* at col. 1, ll. 8–35. Figure 3 of the '194 patent is reproduced below.

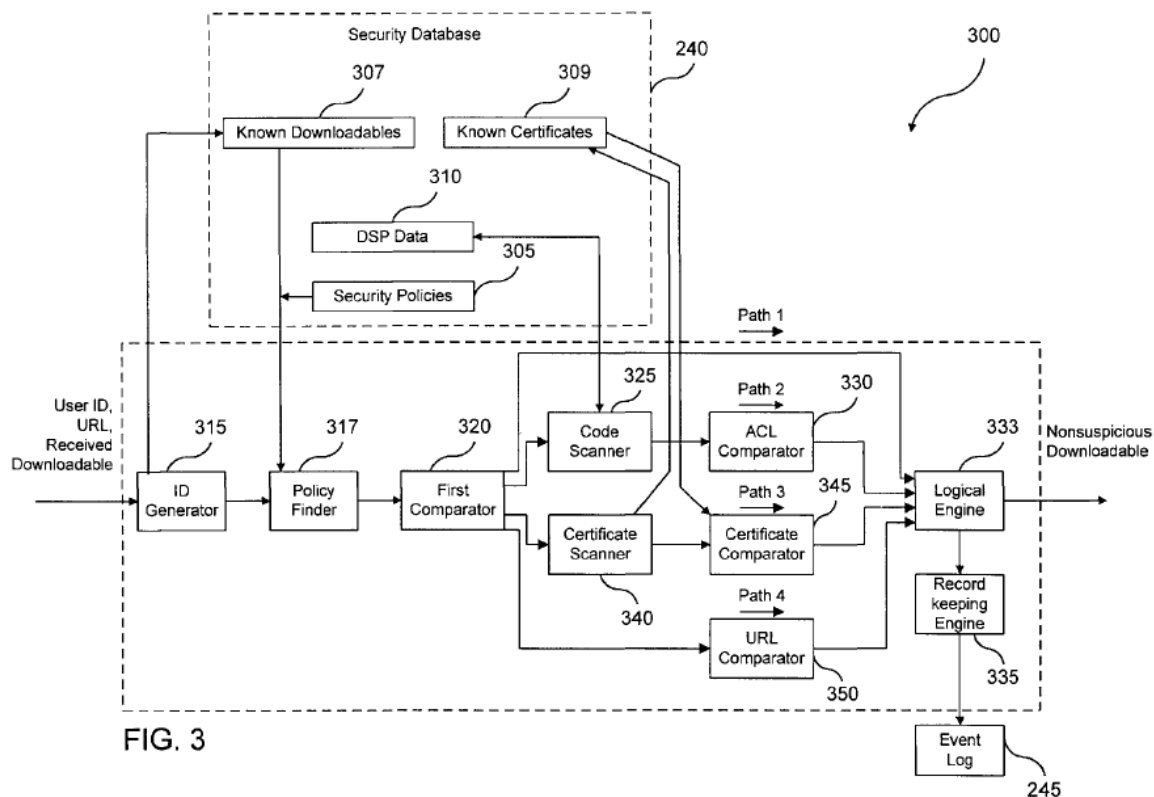


FIG. 3

Figure 3 is a block diagram that illustrates a security program (lower dashed box) and security database 240 (upper dashed box). Ex. 1012, col. 3, ll. 62–63. The security program operates in conjunction with security database 240, “which includes security policies 305, known Downloadables 307,

known certificates 309 and Downloadable Security Profile (DSP) data 310 corresponding to the known Downloadables 307.” *Id.* at col. 4, ll. 14–18.

Security policies 305, which include policies specific to particular users and generic policies for determining whether to block an incoming Downloadable, “may identify specific Downloadables to block, specific Downloadables to allow, or necessary criteria for allowing an unknown Downloadable.” *Id.* at col. 4, ll. 18–24. DSP data 310 “includes the list of all potentially hostile or suspicious computer operations that may be attempted by each known Downloadable 307, and may also include the respective arguments of these operations.” *Id.* at col. 4, ll. 33–37.

Emphasizing that DSP data 310 are stored in a database (security database 240), Patent Owner characterizes use of DSP data 310 as follows:

Accordingly, DSP data can be readily retrieved when a known Downloadable is received, thereby allowing security decisions to be made without generating security profiles for all incoming Downloadables. Indeed, the storage of the DSP in a database is one of the key features that distinguishes the ‘086 Patent over the prior art.
Prelim. Resp. 3–4.

B. Illustrative Claim

Independent claim 1 of the ‘086 patent is illustrative of the claims at issue:

1. A computer-based method, comprising the steps of:
 - receiving an incoming Downloadable;
 - deriving security profile data for the Downloadable, including a list of suspicious computer operations that may be attempted by the Downloadable;

appending a representation of the Downloadable security profile data to the Downloadable, to generate an appended Downloadable; and

transmitting the appended Downloadable to a destination computer.

Ex. 1001, col. 20, l. 60–col. 21, l. 2.

C. References

Petitioner relies on the following references. Pet. 16–18, 49, 52.

Morton Swimmer, Baudouin Le Charlier, and Abdelaziz Mounji, *Dynamic Detection and Classification of Computer Viruses Using General Behaviour Patterns*, PROC. FIFTH INT’L VIRUS BULL. CONF. 75 (Virus Bulletin Ltd. 1995) (Ex. 1003) (“Swimmer”).

George C. Necula, *Proof-Carrying Code*, PROC. 24TH ACM SIGPLAN-SIGACT SYMP. ON PRINCIPLES OF PROGRAMMING LANGUAGES 106 (ACM 1997) (Ex. 1004) (“Necula”).

M. Douglas McIlroy, *Virology 101*, 2 COMP. SYS. 173 (1989) (Ex. 1005) (“McIlroy”).

Ari Luotonen and Kevin Altis, *World-Wide Web proxies*, 27 COMP. NETWORKS AND ISDN SYS. 147 (1994) (Ex. 1006) (“Luotonen”).

D. Asserted Grounds of Unpatentability

Petitioner challenges claims 1, 4–6, 9, 12–14, 17, 24, 35, 37, and 42 under 35 U.S.C. § 103(a) over the following combinations of references. Pet. 14–15.

References	Claims
Swimmer and Necula	1, 5, 9, 13, 17, 24, and 42
Swimmer, Necula, and McIlroy	4 and 12
Swimmer, Necula, and Luotonen	6, 14, 35, and 37

E. Related Proceedings

Both parties identify *Finjan, Inc. v. Blue Coat, Inc.*, No. 5:15-cv-03295 (N.D. Cal.) as involving the '086 patent. Pet. 13; Paper 3, 1. Petitioner also identifies the following matters as involving the '086 patent: *Finjan, Inc. v. Symantec Corp.*, No. 3:14-cv-02998 (N.D. Cal.); *Finjan, Inc. v. Sophos Inc.*, No. 3:14-cv-01197 (N.D. Cal.); and *Finjan, Inc. v. Palo Alto Networks, Inc.*, No. 3:14-cv-04908 (N.D. Cal.). Pet. 13–14. Patent Owner additionally identifies the following matters as involving the '086 patent: *Finjan, Inc. v. ESET, LLC*, No. 3:16-cv-03731 (N.D. Cal.) and *Finjan, Inc. v. FireEye, Inc.*, No. 4:13-cv-03133 (N.D. Cal.). Paper 3, 1.

Patent Owner also identifies Control No. 09/013,654 as an *ex parte* reexamination of the '086 patent. *Id.* at 1.

U.S. Patent No. 8,677,494 B2 is a continuation of the '086 patent, and has been the subject of seven petitions for *inter partes* reviews, i.e. IPR2015-01022, IPR2015-01892, IPR2015-01897, IPR2016-00159, IPR2016-00890, IPR2016-01174, and IPR2016-01443. Among these, as a result of the denial of certain petitions and the grant of joinder motions, the Board has produced two final written decisions. *Symantec Corp. v. Finjan, Inc.*, Case IPR2015-01892, slip op. (PTAB Mar. 15, 2017) (Paper 58) (“1892 Dec.”); *Palo Alto Networks, Inc. v. Finjan, Inc.*, Case IPR2016-00159, slip op. (PTAB Apr. 11, 2017) (Paper 50).

F. Real Parties in Interest

On January 20, 2017, Petitioner filed a notice identifying Symantec Corporation as a real party in interest, in addition to identification of itself in the Petition. Paper 8, 2; Pet. 13.

Patent Owner only identifies itself as a real party in interest. Paper 3, 1.

II. ANALYSIS

A. Rehearing Request

On December 9, 2015, i.e., before the Petition was filed, a request for *ex parte* reexamination of the '086 patent was filed by a third party requester ("the reexamination proceeding"). Dec. 3 (citing Ex. 3001). In its Mandatory Notices filed in this proceeding on August 5, 2016, Patent Owner complied with the regulation that requires parties to "[i]dentify any . . . administrative matter *that would affect*, or be affected by, a decision in th[is] proceeding" by providing notification of the pending reexamination. 37 C.F.R. § 42.8(b)(2) (emphasis added); Paper 3, 1. Although Patent Owner thus notified both Petitioner and the Board of a proceeding that could affect a decision in this proceeding, Petitioner took no steps to address the potential impact of the reexamination proceeding on this proceeding, such as by requesting that we stay the reexamination proceeding. *See* 37 C.F.R. § 42.122(a) ("Where another matter involving the patent is before the Office, the Board may during the pendency of the *inter partes* review enter any appropriate order regarding the additional matter including providing for the stay, transfer, consolidation, or termination of any such matter.").

While the Petition was pending, developments occurred in the reexamination proceeding. Of particular relevance, the reexamination concluded with a Reexamination Certificate issued on November 28, 2016, including a claim for the benefit of the November 8, 1996 filing date of U.S. Provisional Appl. No. 60/030,639 (“the ’639 provisional application”). Ex. 3006 at [60]. In denying the Petition, the Prior Decision noted that “Petitioner has taken no steps to explain or respond to the effect of these developments on its argument.” Dec. 7. This remains true.

Nevertheless, we agree with Petitioner that our Prior Decision gave insufficient consideration to the Petition’s assertion that “U.S. Patent No. 7,613,926 [(“the ’926 patent”), i.e., an intermediate patent in the priority chain of the ’086 patent] fails to claim priority to the ’639 provisional application and instead the earliest priority document cited in the ’926 patent is [the ’194 patent].” Pet. 5 (citing Ex. 1012, col. 1, ll. 8–32); see Req. Reh’g 4–5, 6 n.4, 7–9. For a claim of a patent to be entitled to the effective filing date of an earlier filed application, each application in the priority chain must refer to the earlier filed application. *Encyclopaedia Britannica, Inc. v. Alpine Elecs. of Am., Inc.*, 609 F.3d 1345, 1350–52 (Fed. Cir. 2010).

Accordingly, we grant Petitioner’s Rehearing Request and proceed to the merits of the Petition.

B. Effective Filing Date

Petitioner concedes that “[t]he ’086 patent identifies a chain of related U.S. Applications extending back to Application No. 08/964,388, filed on November 6, 1997.” Pet. 5. Based on this conceded claim, Petitioner contends that the effective filing date of the challenged claims is “no earlier than” November 6, 1997. *Id.* For purposes of this Decision, based on the

record before us, we accord the claims an effective filing date of November 6, 1997.¹

C. Identification of All Real Parties in Interest

Patent Owner contends that “[t]he Petition is incomplete and cannot be considered under 35 U.S.C. § 312 because Petitioner has failed to name all real parties in interest, as required by the statute.” Prelim. Resp. 9. The parties agree that, on June 12, 2016, Symantec Corporation (“Symantec”) announced that it was acquiring Petitioner. Pet. 13; Prelim. Resp. 9. The Petition discloses that “[t]he transaction is expected to close in the third quarter of 2016,” and that “[a]s of the filing date of this petition the transaction has not been executed.” Pet. 13. The Petition further represents that “Symantec has not controlled or had the ability to control the filing of this petition, whether through funding or strategy.” *Id.* As noted above, Petitioner expressly identified Symantec as a real party in interest before any decision on institution of an *inter partes* review was made. Paper 8, 2.

Patent Owner contends that “Symantec had control over the filing of the Petition during the period between the announcement of the acquisition and the closing of the acquisition,” which it asserts occurred on August 1, 2016. Prelim. Resp. 9. Patent Owner also contends that it “understands from the underlying litigation that ‘Blue Coat Systems, Inc.’ no longer exists

¹ A petition to accept an unintentionally delayed claim of priority for the ’926 patent, claiming the benefit of U.S. Patent Appl. No. 08/790,097 which was filed January 29, 1997, was dismissed by the Office on June 13, 2017. Exs. 1027, 3007. A renewed petition was filed on June 16, 2017. Ex. 3008. At this time, the Office has not ruled on the renewed petition, and that pending petition accordingly does not affect our determination of the challenged claims’ effective filing date for purposes of this Decision.

as an entity, or at least goes by ‘Blue Coat Systems LLC’ for at least the last two months.” *Id.* at 10. We have reviewed the evidence provided by Patent Owner and find it insufficient to support Patent Owner’s allegation that Petitioner has failed to comply with 35 U.S.C. § 312(a) or 37 C.F.R. § 42.8(a)(3). That evidence is, at best, suggestive regarding an issue that is not jurisdictional. *Lumentum Holdings, Inc. v. Capella Photonics, Inc.*, Case IPR2015-00739, slip op. (PTAB Mar. 4, 2016) (Paper 38) (precedential).

D. Claim Construction

The Board interprets claims of an unexpired patent using the broadest reasonable interpretation in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b). An inventor may provide a meaning for a term that is different from its ordinary meaning by defining the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

1. “Downloadable”

Every challenged independent claim recites a “Downloadable,” and Petitioner contends that “[t]he broadest reasonable interpretation of the term ‘downloadable’ includes ‘an executable application program, which is downloaded from a source computer and run on a destination computer.’” Pet. 15. Petitioner’s proposed construction parallels a statement made in the Specification of the ’194 patent. Ex. 1012, col. 1, ll. 44–47. Patent Owner “does not dispute” this proposed construction, which we adopt for purposes of this Decision. Prelim. Resp. 5.

2. “database”

Challenged independent claim 42 recites “a database of Downloadable security profiles.” Petitioner contends that “[t]he broadest reasonable interpretation of the term ‘database’ includes ‘a collection of interrelated data organized according to a database schema to serve one or more applications.’” Pet. 15. Patent Owner also “does not dispute” this proposed construction, but argues that “the practical import of Petitioner’s proposed construction for the term ‘database,’ is that log files, such as Swimmer’s audit trail, do not fall within the scope of the claims.” Prelim. Resp. 5–6. That is, Patent Owner contends that “logging functionality is distinct from storing in a database, which allows DSP to be efficiently retrieved from the database,” as compared with the “record-keeping” functionality of an “event log.” *Id.* at 7.

Patent Owner’s argument was considered by the panel in IPR2015-01892, which concluded that, “[t]o the extent that construction would exclude a log file consisting of an ‘unstructured collection of data on a computer,’ . . . [an] unstructured log file would not be a database,” but the construction does not “necessarily exclude[] *all* log files from being databases.” 1892 Dec. 16 (emphasis in original). We agree with the reasoning expressed in the Final Written Decision of IPR2015-01892. *Id.* at 12–17.

For purposes of this Decision, we adopt Petitioner’s proposed construction.

3. “*list of suspicious computer operations*”

Each of the challenged independent claims recites “a list of suspicious computer operations.” Patent Owner contends that a person of ordinary skill in the art “would understand that, in the context of the ‘086 Patent, a ‘list of suspicious computer operations’ means ‘a list of computer operations deemed suspicious.’” Prelim. Resp. 13. Patent Owner supports this contention with testimony by Nenad Medvidovic, Ph.D., who opines that “[s]imply listing every operation, regardless of whether it is suspicious, does not create a list of suspicious computer operations without the additional step of deeming certain operations as suspicious.” Ex. 2007 ¶ 47.

Patent Owner’s argument was considered by the panel in IPR2015-01892, which concluded that “Patent Owner’s proposed construction is unhelpful to an understanding of the scope of the challenged claims insofar as it ‘merely rearranges the claim language and inserts the word “deemed.””” 1892 Dec. 11 (quoting IPR2015-01892, Paper 31, 6). There the panel found “[m]ore helpful” specific discussion in the Specification of the ’194 patent that Downloadable security profile data may be generated “as a list of all operations in the Downloadable code *which could ever be deemed* potentially hostile.” *Id.* at 11; Ex. 1012, col. 5, ll. 51–53 (emphasis added). “The inclusion of the phraseology ‘all operations . . . which could ever be deemed potentially hostile’ in that passage renders it more objective, and ‘potentially hostile’ captures our understanding of the meaning of ‘suspicious’ in the context of the claims.” 1892 Dec. 11. We agree with the reasoning expressed in the Final Written Decision of IPR2015-01892, particularly its determination that column 5, line 50, to column 6, line 4, of

the '194 patent “provides the most probative evidence on the record before us as to the meaning of ‘list of suspicious computer operations.’” *Id.* at 12.

Accordingly, for purposes of this Decision, we adopt the construction of the Final Written Decision in IPR2015-01892, and construe a “list of suspicious computer operations” as a “‘list of all operations that could ever be deemed potentially hostile,’ non-limiting examples of which include[] file operations; network operations; registry operations; operating systems operations; resource usage threshold operations, memory operations, CPU operations, and graphics operations.” *Id.* (citing Ex. 1012, col. 5, l. 50–col. 6, l. 4).²

4. “append”

Independent claims 1 and 9 recite “appending a representation of the Downloadable security profile data to the Downloadable, to generate an appended Downloadable” and “transmitting the appended Downloadable to a destination computer.” Ex. 1001, col. 20, l. 65–col. 21, l. 2, col. 21, ll. 28–34. Independent claim 9 further recites “a file appender.” *Id.* at col. 21, l. 27. Neither party proposes a construction of “append” or the grammatical variants that appear in the claims.

The Specifications of the '086 and '194 patents do not include the word “append” (nor any grammatical variant) outside of the claims of the

² In IPR2015-01892, the patent at issue had expired at the time the Final Written Decision was issued. Accordingly, the panel construed the terms “database” and “list of suspicious computer operations” according to the standard applied by district courts, i.e., according to the principles set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc). 1892 Dec. 7. The reasoning for both terms applies equally under the broadest-reasonable-interpretation standard.

'086 patent. A general purpose dictionary defines “append” as “[t]o add as a supplement or appendix,” or “[t]o fix to; attach.” Ex. 3009 (*American Heritage Dictionary of the English Language, Fifth Edition* (2017)). A technical dictionary defines “append” as “to add data to an existing file or record” or “to add a file or data to the end of an existing file.” Ex. 3010 (*Dictionary of Computing* (6th ed.)). Because neither the general definition nor the technical definition requires attachment as part of its broadest definition, and in light of the Specification’s silence, we construe “append” under the broadest reasonable interpretation, for purposes of this Decision, as “add to an existing file or record.”

E. Obviousness

1. Swimmer

Swimmer describes “a prototype for an automatic analysis system for computer viruses,” in which sets of rules are used to detect viruses and to extract details of their behavior. Ex. 1003, abst, 1–7. A model of virus attack strategy generates virus-specific rules and translates them into a rule-based language. *Id.* at 4–7. For example, based on assumptions about the behavior of disk operating system viruses, Swimmer identifies two potential infection strategies: (1) writing to the beginning of a file without a previous read to the same location; and (2) reading to the beginning of a file, followed by writing to the beginning of the file, with or without intervening reads and writes. *Id.* at 5–6.

Swimmer discloses that its system may collect activity data and create a set of audit records having a specified format for analysis by an expert system, using the rule-based language, to identify the virus attack. *Id.* at 1, 4, 10–13. The audit records identify, among other things, operating-system

functions requested by the analyzed program, register/memory values used in calls to the functions, and register/memory values returned by the function calls. *Id.* at 1, 7, 9. Each audit record has the format *<code segment, RecTypt, StartTime, EndTime, function number, arg (...), ret(...)>*, where *code segment* is the address in memory of the executable image of the program; *function number* is the number of the operating-system function requested by the program; *arg(...)* is a list of register/memory values used in the function call; *ret(...)* is a list of register/memory values returned by the function call; *RecType* is the type of record; and *StartTime* and *EndTime* are time stamps of action start and end, respectively. *Id.* at 9.

Figure 3 of Swimmer is reproduced below.

```
<CS=3911 Type=0 Fn=30 arg() ret( AX=5)>
<CS=3911 Type=0 Fn=29 arg() ret( BX=128 ES=3911)>
<CS=3911 Type=0 Fn=64 arg( AL=61 CL=3 str1=*.COM) ret( AL=0 CF=0)>
<CS=3911 Type=0 Fn=51 arg( AL=0 str1=COMMAND.COM) ret( AL=0 CX=32 CF=0)>
<CS=3911 Type=0 Fn=51 arg( AL=1 str1=COMMAND.COM) ret( AL=0 CX=32 CF=0)>
<CS=3911 Type=0 Fn=45 arg( AL=2 CL=32 str1=COMMAND.COM) ret( AL=0 AX=5 CF=0)>
<CS=3911 Type=0 Fn=73 arg( BX=5) ret( CX=10241 DX=6206 CF=0)>
<CS=3911 Type=0 Fn=27 arg() ret( CX=5121 DX=8032)>
<CS=3911 Type=0 Fn=47 arg( BX=5 CX=3 DX=828 DS=3911) ret( AX=3 CF=0)>
<CS=3911 Type=0 Fn=50 arg( AL=2 BX=5 CX=0 DX=0) ret( AL=0 AX=50031 DX= CF=0)>
<CS=3911 Type=0 Fn=48 arg( BX=5 CX=648 DX=313 DS=3911) ret( AX=648 CF=0)>
<CS=3911 Type=0 Fn=50 arg( AL=0 BX=5 CX=0 DX=0) ret( AL=0 AX=0 DX=0 CF=0)>
<CS=3911 Type=0 Fn=48 arg( BX=5 CX=3 DX=831 DS=3911) ret( AX=3 CF=0)>
<CS=3911 Type=0 Fn=74 arg( BX=5 CX=10271 DX=6206) ret( CF=0)>
<CS=3911 Type=0 Fn=46 arg( BX=5) ret( CF=0)>
<CS=3911 Type=0 Fn=51 arg( AL=1 str1=COMMAND.COM) ret( AL=0 CX=32 CF=0)>
```

Figure 3 is an excerpt from an audit trail for the Vienna virus, provided as a human-readable representation and omitting certain fields, such as *StartTime* and *EndTime*, for clarity and brevity. *Id.* at 9–10.

Petitioner provides a Declaration by John Hawes, Chief of Operations at Virus Bulletin, who attests that, “[a]ccording to Virus Bulletin’s business records, . . . Swimmer was *published* by Virus Bulletin to all 163 attendees of the Virus Bulletin International Conference . . . in September 1995.”

Ex. 1014 ¶¶ 2, 3 (emphasis added). In addition. Petitioner provides a Declaration of Sylvia Hall-Ellis, Ph.D., Director of Grants and Resource Development for the Colorado Community College System and Adjunct Professor in the School of Information at San Jose State University.

Ex. 1015. In her Declaration, Dr. Hall-Ellis testifies that certain cataloging records support a conclusion that “the Virus Bulleting [sic] Proceedings, including Swimmer, would have been accessible to the public as of December 1, 1995.” *Id.* ¶¶ 6–12, 20. Based on the effective filing date of November 6, 1997, that we accord the claims for purposes of this Decision, Petitioner provides sufficient evidence that Swimmer is prior art.

2. *Necula*

Necula describes “proof-carrying code,” which provides “a mechanism by which a host system can determine with certainty that it is safe to execute a program supplied (possibly in binary form) by an untrusted source.” Ex. 1004, 106. This is achieved by the code producer creating a “*safety proof* that attests to the fact that the code respects a formally defined safety policy,” so that a code consumer “is able to use a simple and fast *proof validator* to check, with certainty, that the proof is valid and hence the foreign code is safe to execute.” *Id.* at 107.

Figure 1 of Necula is reproduced below.

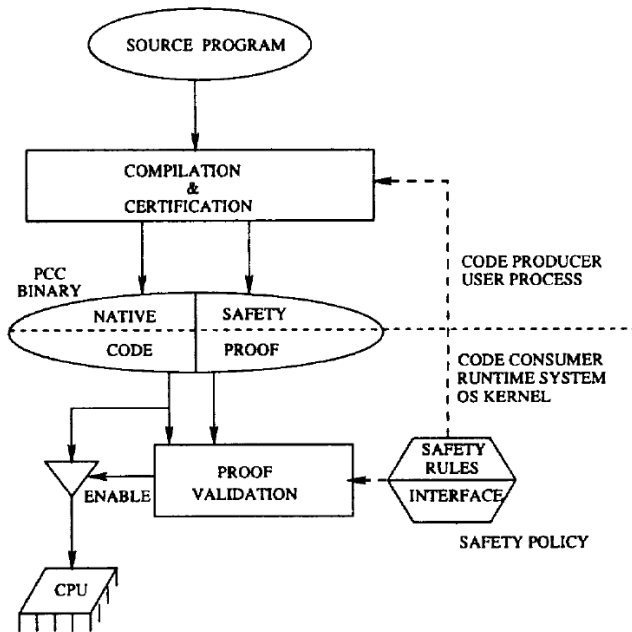


Figure 1 provides an overview of proof-carrying code. *Id.* The life of proof-carrying code spans three stages: (1) “certification,” in which the code producer generates a proof that adheres to the safety policy; (2) “validation,” in which a code consumer validates the proof part of the code and loads the native code component for execution; and (3) execution of the machine-code program, possibly many times. *Id.* at 107–08.

In addressing the publication date of Necula, Petitioner asserts that “Necula was *published* in January 1997 in the Proceedings of the 24th ACM SIGPLAN-SIGACT symposium on Principles of programming languages,” noting that the author “presented in Session 3 on January 15th, 1997 and the Necula paper was distributed as part of the conference materials.” Pet. 17 (emphasis added; citing Ex. 1004; Ex. 1002 ¶¶ 58–59; Ex. 1020, v, 106–19). Petitioner also provides a copy of a website from the Internet Archive Wayback Machine that appears to be dated May 12, 1997, and appears to include a link to Necula. Ex. 1025. Petitioner also offers testimony of Azer Bestavros, Ph.D., who attests that he “recalls Necula circulating in the

technical community in early 1997 and personally recalls reading the paper.” Pet. 17 (citing Ex. 1002 ¶¶ 58–59).³ In addition, Petitioner provides various examples of articles published before November 6, 1997, that appear to cite Necula. *Id.* at 17–18 (citing Exs. 1017–1019, 1021, 1022, 1024). Patent Owner does not, at this time, contest Petitioner’s contention that Necula is prior art.

Based on the effective filing date of November 6, 1997, that we accord the claims for purposes of this Decision, Petitioner provides sufficient evidence that Necula is prior art under the “reasonable likelihood” standard that we apply at this stage.

3. Independent Claims 1 and 9

Independent claim 9 is a system claim with limitations that generally track those of independent method claim 1. Petitioner contends that each of Swimmer and Necula discloses a “computer-based method,” as recited in claim 1, and a “system for managing Downloadables,” as recited in claim 9, in which an incoming Downloadable is received. Pet. 21–25. In particular, according to Petitioner, because Swimmer suggests using its system “as part of a firewall to detect viruses in programs entering a protected network,” it explicitly discloses that an incoming Downloadable is received; similarly,

³ In a footnote, Petitioner remarks that Dr. Bestavros testifies that the “content of Necula” also is found in another reference that bears a date of “September 1996” and includes a date stamp of February 19, 1997. Pet. 17–18 n.1 (citing Ex. 1016; Ex. 1002 ¶¶ 58–59). We accord this remark no weight. The Petition neither relies on Exhibit 1016 to support its challenges nor presents any argument that the “September 1996” date that it bears is a publication date or other evidence of public accessibility.

according to Petitioner, Necula discloses receipt of a source program for compilation, with Petitioner drawing a correspondence between the source code and the compiler. *Id.* at 24 (citing, *inter alia*, Ex. 1003, 75; Ex. 1004, 108, Fig. 1). Petitioner makes a sufficient showing for this element.

Petitioner also contends that both Swimmer and Necula disclose that security profile data be derived for the Downloadable, “including a list of suspicious computer operations that may be attempted by the Downloadable.” *Id.* at 25–30. Petitioner points out that Swimmer’s audit trail includes a “function number” field that identifies and lists numbers corresponding to operating system functions requested by an analyzed program. *Id.* at 27–28 (citing, *inter alia*, Ex. 1003, 82, 83, Fig. 3). Petitioner provides evidence that such function numbers were known in the art to correspond to, among other functions, the same four types of operations that are recited as “suspicious computer operations” in challenged dependent claims 5 and 13. *Id.* at 27–29 (citing Ex. 1002 ¶¶ 96–98; Ex. 1007, 6–11); *see infra*. In light of this evidence, Petitioner makes a sufficient showing that Swimmer discloses this limitation.

We are not persuaded that Petitioner makes a sufficient showing with its alternative reliance on Necula for this limitation. Although Petitioner contends that “Necula also discloses deriving DSP data in the form of a ‘safety proof,’” Petitioner’s cursory argument insufficiently addresses the requirement that the security profile data include a list of suspicious computer operations. Pet. 29–30; *see* Prelim. Resp. 21–22.

We are also not persuaded, at this stage, by Patent Owner’s argument that Swimmer does not disclose security profile data that includes a list of suspicious computer operations that may be attempted by the Downloadable.

See Prelim. Resp. 13–21. That argument rests fundamentally on Patent Owner’s proposed construction for “list of suspicious computer operations,” which we have not adopted based on the record before us for purposes of this Decision.

Petitioner contends that the remaining limitations requiring appending a representation of the Downloadable security profile data to generate an appended Downloadable, and transmitting the appended Downloadable to a destination computer, are disclosed by the combined teachings of Swimmer and Necula. Pet. 30–37. Petitioner reasons that, because Swimmer discloses outputting an audit record in a “canonical format,” “[a] representation of the DSP is generated when a copy of the audit report is received from storage, or when an audit record is converted from a native format to a binary [Normalized Audit Data Format] file,” which is an “example of a representation of the DSP data.” *Id.* at 31–32 (citing Ex. 1003, 81, 84, 86; Ex. 1002 ¶¶ 104, 121).

Based on Swimmer’s teaching of a “linkage” between the representation of the DSP data and the Downloadable, Petitioner contends that it would have been obvious to “append” the representation to the Downloadable because “it would provide increased flexibility and control [and] would allow each destination computer to individually assess the DSP data and treat the Downloadable in accordance with the assigned security policy for that computer.” *Id.* at 32. In addition, Petitioner reasons that appending the representation to the Downloadable “could provide validation at the destination computer that the Downloadable was scanned for suspicious code prior to transmitting it to the destination,” with Necula

acknowledging this validation aspect. *Id.* at 32–33. Petitioner supports its reasoning with testimony by Dr. Bestavros. Ex. 1002 ¶ 106.

Patent Owner counters this reasoning with testimony of its own declarant, Dr. Medvidovic, arguing that Petitioner’s proposed combination is a product of hindsight because each of Petitioner’s reasons for effecting the combination is “disclosed in the ‘086 Patent, not the prior art.” Prelim. Resp. 23–25 (emphasis omitted); Ex. 2007 ¶¶ 88–90. Although we have considered Patent Owner’s argument, we are not persuaded, on the current record, that Petitioner’s reasoning is a product of improper hindsight, particularly in light of our preliminary construction of “append.”

Necula’s proof-carrying code “attests to the fact that the code respects a formally defined safety policy” and allows checking “with certainty, that the proof is valid and hence the foreign code is safe to execute.” Ex. 1004, 107. Thus, Petitioner argues that one of ordinary skill in the art would reasonably understand Necula to teach that its proof-carrying code adds to the foreign code, consistent with the construction of “append” that we apply herein, and Petitioner articulates sufficient reasoning with rational underpinning to apply that teaching to Swimmer’s representation of DSP data. *See* Pet. 46–49. This is not an instance, for example, in which Petitioner relies on a characterization of the problem provided by the patent to derive its reasoning. *Cf., e.g., Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372 (Fed. Cir. 2012). Indeed, Patent Owner’s contention that “the storage of the DSP in a database is one of the key features that distinguishes the ‘086 Patent over the prior art” dilutes the strength of its argument. The contrary positions of the parties’ declarants in their testimonial evidence creates a

genuine issue of material fact, which we resolve in the light most favorable to Petitioner for purposes of this Decision. 37 C.F.R. § 42.108(c).

Accordingly, we conclude that Petitioner has made a sufficient showing also with respect to these elements, and that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of claims 1 and 9. *See infra* Section II.E.10 (discussing limits in our weighing of Patent Owner’s Secondary Considerations evidence in this Preliminary Proceeding).

4. *Independent Claims 17 and 24*

Independent claim 17 is similar to claim 1, but does not recite an “appending” step. Ex. 1001, col. 21, ll. 52–59. Instead, it requires that the Downloadable and a representation of the DSP data be transmitted to a destination computer via a transport protocol transmission. *Id.* Similarly, independent claim 24 differs from claim 9 by omitting the recitation of a “file appender” for transmitting the appended Downloadable and, instead, reciting transmission of the Downloadable and representation of the DSP data by the recited transmitter. *Id.* at col. 22, ll. 9–20.

The parties respectively present similar arguments to those advanced for claims 1 and 9, with Petitioner contending that “[t]ransmitting the appended Downloadable involves transmitting its components: the Downloadable and the representation of the DSP data.” Pet. 37–38 (citing Ex. 1002 ¶ 146); *see id.* at 38–40. We agree with this assertion, and, therefore, determine that Petitioner has made a sufficient showing for these claims. Patent Owner’s response that “Petitioner does not provide any additional arguments as to whether it would have been obvious to transmit the Downloadable and a representation of the DSP data to a destination computer without first generating an appended Downloadable” provides no

counterargument distinct from the ones it makes in addressing claim 1.
Prelim. Resp. 26–27.

We conclude that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of claims 17 and 24.

5. Independent claim 42

Independent claim 42 is a system claim that recites steps similar to those of claim 24, differing primarily in its recitation of “a database manager for retrieving security profile data for the incoming Downloadable from a database of Downloadable security profiles indexed according to Downloadable IDs, based on an ID of the incoming Downloadable.” Ex. 1001, col. 24, ll. 30–34. In addressing this limitation, Petitioner provides insufficient reasoning to support its contention that Swimmer discloses indexing of DSPs “according to Downloadable IDs.”

Petitioner and Dr. Bestavros observe that the first column of Figure 3 of Swimmer (reproduced above) consists of code segments that identify the address in memory of the executable image of the Downloadable. Pet. 42–42 (citing Ex. 1003, 83). Because “[e]ach line entry includes the same code segment identifiers, indicating that the entries of the audit records correspond to the image of the Downloadable with which they are associated,” Petitioner and Dr. Bestavros conclude that “[t]hus, a skilled artisan would have appreciated that the DSPs are indexed at least according to Downloadable IDs.” *Id.* (citing Ex. 1002 ¶ 166). This conclusory reasoning is insufficient to support Petitioner’s assertions.

As Patent Owner’s declarant, Dr. Medvidovic, explains, the code segments identified by Petitioner “only represent[] the place in memory that a particular program was located while being emulated” and the DSP data

for an incoming Downloadable “would almost certainly be located at a different address in memory.” Ex. 2007 ¶ 94. Dr. Medvidovic opines that the code segments would be “worthless” as Downloadable IDs because they do not identify a *Downloadable*, so that any correspondence between a code segment and the audit records indexed according to that code segments “would arise purely by chance and would more likely point to unrelated audit records or no audit records whatsoever.” *Id.*

Even viewing the testimony of Dr. Bestavros in the light most favorable to Petitioner, we find insufficient basis to credit his testimony over that of Dr. Medvidovic. See 37 C.F.R. § 42.108(c). Dr. Medvidovic provides detailed reasons to support his opinion, which we find persuasive, in contrast to the conclusory statements offered by Dr. Bestavros.

Accordingly, we conclude that Petitioner does not demonstrate a reasonable likelihood of prevailing on its challenge of claim 42.

6. *Dependent Claims 5 and 13*

Claims 5 and 13 depend respectively from claims 1 and 9, and recite that “suspicious computer operations include calls made to an operating system, a file system, a network system, and to memory.” Ex. 1001, col. 21, ll. 9–11, col. 21, ll. 41–43. In supporting its contention that Swimmer discloses this limitation, Petitioner observes that Swimmer’s “list of suspicious operations in the audit record includes DOS function numbers,” and provides evidence of how to interpret such DOS function numbers. Pet. 44–45 (citing Ex. 1003, Fig. 3; Ex. 1002 ¶ 116; Ex. 1007, 337–40). Patent Owner does not address separately dependent claims 5 and 13 apart from its arguments for the independent claims. We have reviewed Petitioner’s

evidence and determine that it provides sufficient support for Petitioner's contention.

We conclude that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of claims 5 and 13.

7. Dependent Claims 4 and 12

Claims 4 and 12 depend respectively from claims 1 and 9, and recite that "the Downloadable includes program script." Ex. 1001, col. 21, ll. 7–8, col. 21, ll. 39–40. Petitioner challenges claims 4 and 12 as unpatentable under 35 U.S.C. § 103(a) over Swimmer, Necula, and McIlroy. Pet. 49–52. McIlroy provides examples of computer viruses, and discloses that viruses can contain program script such as Unix scripts. Ex. 1005, 175. Petitioner contends that, in light of this disclosure, a person of ordinary skill in the art would have recognized that Downloadables in the combined teachings of Swimmer and Necula, as described above, in further combination with the teachings of McIlroy, would include program script. Pet. 49. Patent Owner does not address separately dependent claims 4 and 12 apart from its arguments for the independent claims. *See* Prelim. Resp. 39–40.

We have reviewed Petitioner's claim chart at page 50 of its Petition, as well its argument and the supporting testimony of Dr. Bestavros, and determine that Petitioner makes a sufficient showing regarding the additional limitation of claims 4 and 12. *See id.* at 50–52; Ex. 1002 ¶¶ 177–85.

We conclude that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of claims 4 and 12.

8. Dependent Claims 6 and 14

Claims 6 and 14 depend respectively from claims 1 and 9, and recite that “the Downloadable security profile data includes a URL from where the Downloadable originated.” Ex. 1001, col. 21, ll. 13–15, col. 21, ll. 44–46. Petitioner challenges claims 6 and 14 as unpatentable over 35 U.S.C. § 103(a) over Swimmer, Nacula, and Luotonen. Pet. 52–58. Luotonen discloses a web server configured to act as a caching proxy firewall, including the recording of URLs. Ex. 1006, 147. Petitioner contends that “it would have been obvious to record this information when operating a firewall with a virus scanner to protect a network,” and that “[a] skilled artisan would have recognized the benefits of including in the DSP data, e.g., Swimmer’s audit records, the URL associated with a file.” Pet. 52, 55. Patent Owner does not address separately dependent claims 6 and 14 apart from its arguments directed at the independent claims. Prelim. Resp. 40.

We have reviewed Petitioner’s claim chart at pages 53–54 of its Petition, as well its argument and the supporting testimony of Dr. Bestavros, and determine that Petitioner makes a sufficient showing regarding the additional limitation of claims 6 and 14. See *id.* at 54–58; Ex. 1002 ¶¶ 186–198.

We conclude that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of claims 6 and 14.

9. Independent Claims 35 and 37

Independent claim 37 is a system claim with limitations that generally track those of independent computer-based method claim 35. These claims are also similar to method claim 17 and system claim 24, but require

“receiving” DSP data for an incoming Downloadable rather than “deriving” DSP data for an incoming Downloadable. Ex. 1001, col. 23, ll. 1–9, col. 23, ll. 13–22. Petitioner challenges claims 35 and 37 as unpatentable under 35 U.S.C. § 103(a) over Swimmer, Necula, and Luotonen. Pet. 58–63. Petitioner contends that “[i]t would have been obvious to use Luotonen’s proxy server to (1) receive the Downloadable and appended security profiles from the system disclosed in Swimmer and Necula, and (2) transmit the Downloadable and attached security profile to code consumers using Luotonen’s proxy server via a transport such as HTTP.” *Id.* at 58–59. Petitioner supports these contentions with testimony by Dr. Bestavros, which we credit for purposes of this Decision. Ex. 1002 ¶ 201.

In its Preliminary Response, Patent Owner latches onto an apparent inconsistency or ambiguity when Petitioner asserts that “Luotonen’s firewall would reasonably be the destination computer for the firewall taught by Swimmer in view of Necula.” Pet. 58; Prelim. Resp. 41. Although we agree that Petitioner’s statement is ambiguous or inconsistent with its argument, we have reviewed the claim charts at pages 59–61 of the Petition, and determine that they include sufficiently clear expression of Petitioner’s position.

We conclude that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of claims 35 and 37.

10. Secondary Considerations

Patent Owner produces evidence and argument related to secondary considerations of nonobviousness in forms that include commercial success, praise by others, and copying by competitors. Prelim. Resp. 44–48; Exs. 2012, 2013. While such evidence is relevant to the determination of

obviousness, we limit the weight we accord it in the obviousness analysis at this stage because Petitioner bears the ultimate burden of demonstrating unpatentability, but has not yet had an opportunity to cross-examine Patent Owner's declarants and consider and respond to Patent Owner's evidence or argument.

III. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that *inter partes* review is *instituted* with respect to the following grounds of unpatentability:

(1) claims 1, 5, 9, 13, 17, and 24 as unpatentable under 35 U.S.C. § 103(a) over Swimmer and Necula;

(2) claims 4 and 12 as unpatentable under 35 U.S.C. § 103(a) over Swimmer, Necula, and McIlroy; and

(3) claims 6, 14, 35, and 37 as unpatentable under 35 U.S.C. § 103(a) over Swimmer, Necula, and Luotonen;

FURTHER ORDERED that *inter partes* review is *not instituted* with respect to any other ground of unpatentability;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '086 patent is hereby instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BLUE COAT SYSTEMS, INC.,
Petitioner,

v.

FINJAN, INC.,
Patent Owner.

Case IPR2016-01444
Patent 8,079,086 B1

Before JAMES B. ARPIN, PATRICK M. BOUCHER, and
ZHENYU YANG, *Administrative Patent Judges*.

ARPIN, Administrative Patent Judge, concurring.

I join the opinion as it relates to (1) Petitioner having met its burden to show that it is entitled to the grant of its Rehearing Request and (2) the institution of *inter partes* review of claims 1, 4–6, 9, 12–14, 17, 24, 35, and 37 of the '086 patent. I write separately to emphasize the possible ramifications of the Office's grant of Patent Owner's petition to accept an unintentionally delayed claim of priority for the '926 patent, claiming the

benefit of U.S. Patent Appl. No. 08/790,097, filed January 29, 1997.
Exs. 1027, 3007, 3008.

For purposes of this Institution Decision and based on the record before us, we accord the challenged claims of the '086 patent an effective filing date of November 6, 1997. Moreover, on this record and for the reasons set forth by the Institution Decision, we are persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that Necula was publically accessible prior to that date.

Nevertheless, if the Office grants Patent Owner's petition, Patent Owner may be entitled to claim the benefit of an earlier, effective filing date (i.e., January 29, 1997) for the '086 patent. In that case, it may be appropriate for us to reconsider our Decision instituting *inter partes* review, either at the request of one or both parties or *sua sponte*. On this record, it is uncertain whether Petitioner could demonstrate a reasonable likelihood of prevailing in showing that Necula was publically accessible prior to an earlier, effective filing date (i.e., January 29, 1997) for the '086 patent. To the extent that Petitioner may wish to supplement the record *after institution* as to Necula's public accessibility prior to an earlier, effective filing date, it also is uncertain what basis Petitioner would have to do so. Petitioner was aware of the gap in the priority chain in the '926 patent at the time that it filed its Petition (Pet. 5, Req. 5 n.3, 10), and Patent Owner's petition to accept an unintentionally delayed claim of priority for the '926 patent was filed after the filing of its Petition, but before the issuance of our decision denying institution (Paper 9 (dated Feb. 16, 2017); *see* Ex. 1027, 2 (petition filed Sept. 1, 2016)); yet Petitioner presented limited evidence of Necula's public accessibility prior to January 29, 1997 (*see* Pet. 17 n.1), and no

evidence that the '086 patent would not be entitled to an earlier effective filing date (Pet. 5 (“Accordingly, the priority date of the '086 patent is no earlier than the November 6, 1997 filing date of U.S. patent application No. 08/964,388.”)). The Petition represents Petitioner’s case-in-chief, and, under our Rules, Petitioner’s ability to supplement that case after institution is necessarily limited. 37 C.F.R. § 42.123; *see Redline Detection, LLC, v. Star Envirotech, Inc.*, 811 F.3d 435, 445 (Fed. Cir. 2015) (“The guiding principle for the PTAB in making any determination is to ‘ensure efficient administration of the Office and the ability of the Office to complete IPR proceedings in a timely manner.’ Requiring admission of supplemental information so long as it was timely submitted and relevant to the IPR proceeding would cut against this mandate and alter the intended purpose of IPR proceedings.”); *see also* 37 C.F.R. § 42.23(b) (“A reply may only respond to arguments raised in the corresponding . . . patent owner response”).

As noted in the Institution Decision, the Office has not yet ruled on Patent Owner’s petition. Further, Petitioner took no steps seeking our intervention in the reexamination proceeding for the '086 patent, and, similarly, Petitioner has not sought our involvement in the consideration of Patent Owner’s petition in the '926 patent. Although we may exercise exclusive jurisdiction within the Office over the '086 patent, our authority to exercise exclusive jurisdiction may or may not extend to the Patent Owner’s petition in the '926 patent. *See* 37 C.F.R. §§ 42.3(a); 42.122(a). Moreover, given that the Office’s decision in the Patent Owner’s petition is potentially dispositive of the issues in this proceeding, I believe that Petitioner would bear a significant burden of showing that we should attempt to exercise

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jurisdiction over the consideration of Patent Owner's petition in the '926 patent.

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