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Paper 7
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BLUE COAT SYSTEMS LLC,
Petitioner,

v.

FINJAN, INC.,
Patent Owner.

Case IPR2017-00997
Patent 9,219,755 B2

Before, THOMAS L. GIANNETTI, MIRIAM L. QUINN, and SHEILA F. McSHANE *Administrative Patent Judges.*

QUINN, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

Blue Coat Systems LLC ("Petitioner") filed a Petition to institute *inter partes* review of claims 1–8 of U.S. Patent No. 9,219,755 B2 ("the '755 patent") pursuant to 35 U.S.C. §§ 311–319. Paper 2 ("Pet."). Finjan, Inc. ("Patent Owner") timely filed a Preliminary Response. Paper 6 ("Prelim. Resp."). We have authority under 35 U.S.C. § 314.

For the reasons that follow, we deny *inter partes* review.

I. BACKGROUND

A. RELATED MATTERS

Petitioner identifies the '755 patent as the subject matter of the district court case pending in the U.S. District Court for the Northern District of California (Case No. 5:15-cv-03295-BLF). Pet. 19; Paper 4, 1.

B. THE '755 PATENT (EX. 1001)

The '755 patent is titled "Malicious Mobile Code Runtime Monitoring Systems and Methods." Ex. 1001, [54]. The '755 patent is related to many filed applications (*id.* at [60]) and incorporates by reference U.S. Patent No. 6,480,962. *Id.* at 1:54–59; Ex. 1013 ("the '962 patent"). The '962 patent describes a security system, for protecting a client during runtime from hostile downloadables, as follows:

> A system protects a client from hostile Downloadables. The system includes security rules defining suspicious actions and security policies defining the appropriate responsive actions to rule violations. The system includes an interface for receiving incoming Downloadable and requests made by the Downloadable. The system still further includes a comparator coupled to the interface for examining the Downloadable, requests made by the Downloadable and runtime events to determine whether a

> security policy has been violated, and a response engine coupled to the comparator for performing a violation-based responsive action.

Ex. 1013, Abs. More particularly, the '962 patent illustrates an embodiment of the security system in Figure 3, reproduced below.

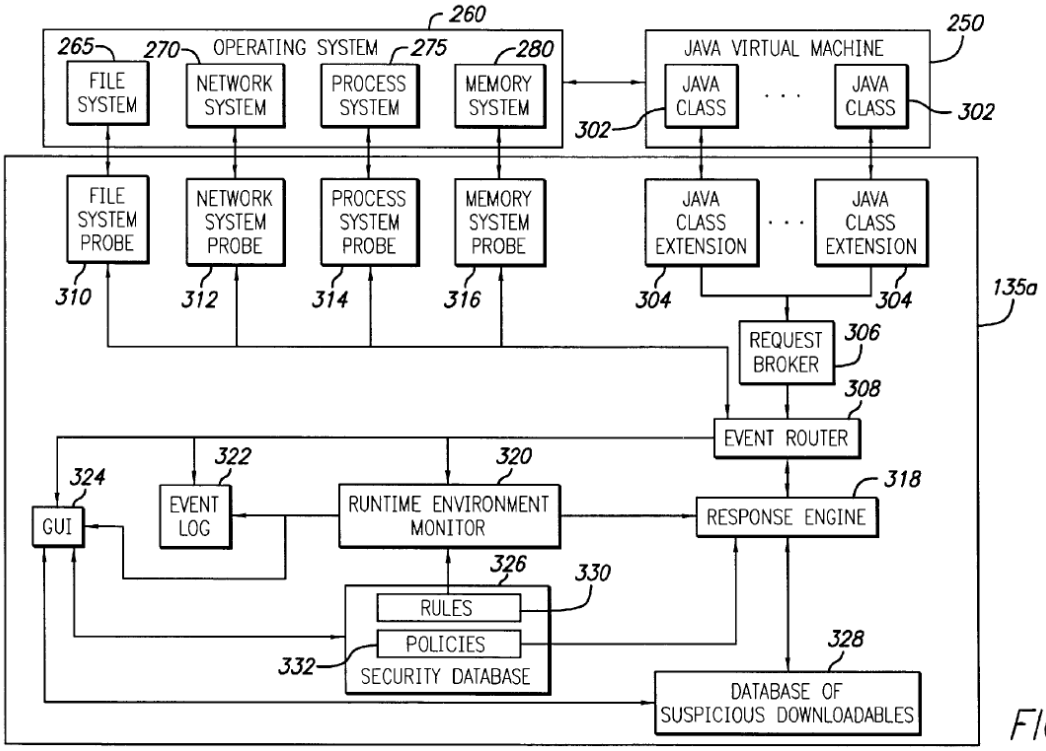

FIG. 3

Figure 3 illustrates security system 135a including Java class extensions 304, each managing a respective Java class 302, and further including operating system probes 310, 312, 314, and 316, each recognizing applet instructions sent to the various operating subsystems: file system 265, network system 270, process system 275, and memory system 280. *Id.* at 3:52–4:31. For example, a file system probe 310 recognizes an applet instruction sent to file system 265 and sends a message to inform event router 308. *Id.* Event router 308 forwards the message to the user via a Graphical User Interface (GUI), to event log 322 for recording the message

for analysis, and to runtime environment monitor 320 for determining whether the request violates security rule 330 stored in security database 326. *Id.* at 4:20–38. Runtime environment monitor 320, upon recognition of a violation, informs the response engine 318 of the violation. *Id.* at 4:50–54. Response engine 318 determines the appropriate responsive action to the rule 330 violation, which action may include terminating the applet. *Id.* at 4:54–59.

C. ILLUSTRATIVE CLAIM

Challenged claims 1 and 3 of the '755 patent are independent. Illustrative claim 1 is reproduced below.

> 1. A system for reviewing an operating system call issued by a downloadable, comprising:
>
> at least one processor for accessing elements stored in at least one memory associated with the at least one processor and for executing instructions associated with the elements, the elements including:
>
> an operating system probe associated with an operating system function for intercepting an operating system call being issued by a downloadable to an operating system and associated with the operating system function;
>
> a runtime environment monitor for comparing the operating system call against a predetermined security policy including multiple security rules to determine if execution of the operating system call violates one or more of the multiple security rules before allowing the operating system to process the operating system call and for forwarding a message to a response engine when the comparison by the runtime environment monitor indicates a violation of one or more of the multiple security rules;

a response engine for compiling each rule violation indicated in the messages forwarded by the runtime environment monitor, for blocking execution of operating system calls that are forbidden according to the security policy when execution of the operating system calls would result in a violation of a predetermined combination of multiple security rules of the predetermined security policy and for allowing execution of operating system calls that are permitted according to the security policy;

a downloadable engine for intercepting a request message being issued by a downloadable to an operating system, wherein the request message includes an extension call;

a request broker for receiving a notification message from the downloadable engine regarding the extension call;

a file system probe and a network system probe each being associated with an operating system function for receiving the request message from the downloadable engine and intercepting an operating system call being issued by the downloadable to an operating system and associated with the operating system function;

an event router for receiving the notification message from the request broker regarding the extension call and an event message from one of the file system probe and the network system probe regarding the operating system call;

the runtime environment monitor for receiving the notification message and the event message from the event router and comparing the extension call and the operating system call against a predetermined security policy before allowing the operating system to process the extension call and the operating system call; and

the response engine for receiving a violation message from the runtime environment monitor when one of the extension call and the operating system call violate one or more rules of the predetermined security policy and blocking extension calls and operating system calls that are forbidden according to the predetermined security policy, and for

allowing extension calls and operating system calls that are permitted according to the predetermined security policy.

Ex. 1001, 21:33–22:26

D. ASSERTED REFERENCES AND GROUNDS OF UNPATENTABILITY

Petitioner asserts three grounds of unpatentability based on the following references:

1) *Jaeger*: Trent Jaeger et al., *Building Systems that Flexibly Control Downloaded Executable Content*, Proceedings of the Sixth USENIX UNIX Security Symposium (1996) (Exhibit 1005) ("Jaeger");
2) *CORBA*: "The Common Object Request Broker: Architecture and Specification," Object Management Group (Rev. 1.2, Dec. 29, 1993) (Exhibit. 1011) ("CORBA");
3) *TBAV*: ThunderBYTE Anti-Virus, User Manual (copyright date 1995) (Exhibit 1006) ("TBAV"); and
4) *Arnold*: U.S. Patent No. 5,440,723 (Exhibit 1007) ("Arnold").

The grounds identified in the Petition are as listed below (Pet. 20).

Claims	Basis	Reference(s)
1–4	§ 103	Jaeger and CORBA
5	§ 103	Jaeger, CORBA, and TBAV
6–8	§ 103	Jaeger, CORBA, and Arnold

Petitioner further relies on the Declaration of Azer Bestavros, Ph.D., in support of the asserted grounds. Ex. 1002 ("Bestavros Declaration").

II. ANALYSIS

A. CLAIM CONSTRUCTION

The parties concur that the '755 patent has expired. Pet. 5, 21; Prelim. Resp. 10. For claims of an expired patent, the Board's claim interpretation analysis is similar to that of a district court. *See In re Rambus Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). Claim terms are given their ordinary and customary meaning, as they would be understood by one of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). Although we construe the claims in light of the specification, limitations discussed in the specification may not be read into the claims. *Intervet Inc. v. Merial Ltd.*, 617 F.3d 1282, 1287 (Fed. Cir. 2010); *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009).

Petitioner proposes construction for three claim terms: "downloadable," "extension call," and "downloadable engine." Pet. 21–23. For "downloadable," Petitioner proposes the following: "an executable application program, which is downloaded from a source computer and run on a destination computer." Pet. 21. Patent Owner proposes the same construction. *See* Prelim. Resp. 11.

For "extension call," the parties disagree on the proper scope of the term. Pet. 22 (proposing "a request corresponding to a class of program objects"); Prelim. Resp. 12 (proposing the plain and ordinary meaning: "an extension call is a call [that] makes a request for the service of a Java class that is managed by an extension"). For "downloadable engine," Petitioner

proposes one construction ("software for managing and executing downloadables"), while Patent Owner argues that Petitioner's proposed construction does not "affect Patent Owner's analysis." Pet. 22–23; Prelim. Resp. 13.

Finally, Patent Owner argues that the following terms, recited in the challenged independent claims, need construction: "operating system probe," "file system probe," and "network system probe." Prelim. Resp. 13–17. In particular, Patent Owner argues that the respective phrases should be construed as requiring that each probe monitor a "corresponding" subsystem of the operating system during runtime. *Id.* at 13. For the reasons that follow, we do not agree with Patent Owner's proposed constructions, on the record before us.

Patent Owner's argument involves reading into the claims limitations from the specification. Particularly, the claims are silent concerning any correspondence between a probe and a subsystem of the operating system. It is improper to read limitations from a preferred embodiment into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004). At this juncture, Patent Owner has proffered no evidence in the intrinsic record that persuades us to adopt its proposed claim construction. Furthermore, we note that, in connection with district court litigation, Patent Owner has agreed to a construction for the term "operating system probe" as "an interface for receiving and recognizing requests before allowing the operating system to execute the requests." Ex. 2001, 4; Prelim. Resp. 17.

We are not persuaded by Patent Owner's argument that the district court construction is consistent with its contention that each probe monitors a "corresponding" subsystem. Prelim. Resp. 12–13. There is no persuasive explanation as to how the term "operating system probe," as described in the '962 patent, and claimed therein, is different than the "operating system probe" claimed in the '755 patent. The '755 patent does not describe the "operating system probe," but incorporates by reference the '962 patent, which does describe probes, as summarized above. Thus, the '962 patent specification explicitly describes and claims the same operating system probes recited in the '755 patent claims. The district court's construction does not refer to any subsystem of the operating system. Furthermore, no language in either claim 1 or 3 requires that the recited probes monitor a "corresponding" subsystem of the operating system. Finally, the claim language recites an association between each probe and an operating system function. Therefore, the plain language of the claim appears to describe sufficiently the relationship between the operating system probe and the operating system function, without referring to an extraneous subsystem.

Consequently, we adopt for purposes of this Decision the claim construction of "operating system probe" agreed to in district court by Patent Owner, and the undisputed construction of "downloadable," and Petitioner's proposed construction of "downloadable engine," which is not contested by

Patent Owner, at this time. We do not construe expressly any other claim term.[1]

Claim Term	Construction for Purposes of this Decision
downloadable	an executable application program, which is downloaded from a source computer and run on a destination computer
operating system probe	an interface for receiving and recognizing requests before allowing the operating system to execute the requests
Downloadable engine	software for managing and executing downloadables

B. DETERMINATION OF REASONABLE LIKELIHOOD THRESHOLD

We have reviewed Petitioner's contentions in light of Patent Owner's arguments. We focus our discussion below on three claim elements that exemplify our reasoning for denying the Petition.

i. Downloadable Engine

Claims 1 and 3 recite a "downloadable engine for intercepting a request message being issued by a downloadable to an operating system, wherein the request message includes an extension call."

Petitioner contends that Jaeger discloses the recited downloadable engine. Pet. 44. In particular, Petitioner states that "[b]y controlling execution of downloaded content, Jaeger's system manages and executes

[1] *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) ("[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.").

downloadables." *Id.* Further, relying on Figure 5 of Jaeger, Petitioner argues that the "downloadable engine intercepts request messages from downloadables to handle access requests." *Id.* Finally, Petitioner points out that the "access request messages" would include extension calls because Jaeger "suggests including components to handle requests corresponding to classes of program objects." *Id.* (citing Ex. 1005 at 16 and Ex. 1002 ¶¶ 84, 112).

Patent Owner argues that Petitioner has failed to show how Jaeger discloses the downloadable engine. Specifically, according to Patent Owner, reliance on Figure 5 of Jaeger does not show the downloadable engine "separate and apart from the browser and application-specific interpreter." Prelim. Resp. 22.

ii. A File System Probe and a Network System Probe

Claim 1 recites "a file system probe and a network system probe each being associated with an operating system function for receiving the request message from the downloadable engine and intercepting an operating system call being issued by the downloadable to an operating system and associated with the operating system function." Claim 3 includes a similar recitation, and adds that the probes "provid[e] an event message regarding the operating system call."

Petitioner contends that Jaeger discloses "O[perating] S[ystem] probes as part of its interpreters." Pet. 49–50. Petitioner also argues that among the operating system calls to be intercepted by "Jaeger's system would be an extension call from an object corresponding to a class (such as Java object)." *Id.* at 50 (citing Ex. 1005, 3, 5; and Ex. 1002 ¶¶ 96, 125). Petitioner asserts that "[s]uch a call is handled by sending a message to the appropriate

network or file system probe of Jaeger's browser, as shown in Figure 5." *Id.* According to Petitioner, "[t]he probes of Jaeger that handle file and network access requests are the recited file and network probes." *Id.*

Patent Owner argues that Jaeger does not disclose "any notification from the downloadable engine regarding the extension call." Prelim. Resp. 30. Specifically, Patent Owner points out that "aside from failing to identify file and network system probes, Petitioner can identify no request message that is received at such a probe from the downloadable engine." *Id.* According to Patent Owner, the browser "itself" authorizes any requests from system resources and it does not receive any request message because such messages are checked within the browser. *Id.* (citing Ex. 1005, 16 ("Since these commands are only available in the browser and are protected by the authorization operation, only authorized accesses to system objects are possible.")).

iii. Request Broker

Claims 1 and 3 recite a "request broker for receiving a notification message from the downloadable engine regarding the extension call."

First, Petitioner contends this feature "would have been obvious in light of Jaeger alone" because Jaeger "sends messages from its downloadable engine to a browser, as well as to application-specific interpreters, as appropriate." Pet. 45–47 (citing Ex. 1005, Fig. 5). Second, Petitioner relies on CORBA as disclosing the limitation. *Id.* at 47–48. In particular, Petitioner points out CORBA's disclosure of an "object request broker" that "is responsible for all of the mechanisms required to find the object implementation for the request, to prepare the object implementation to receive the request, and to communicate the data making up the request."

Id. at 47 (citing Ex. 1011, 30). Petitioner also asserts that it would have been obvious to use CORBA'S broker in Jaeger's system because it would "represent a combination of prior art elements according to known methods to yield predictable results." *Id.* at 48 (relying on Ex. 1002 ¶¶ 90–91, 119–20).

Patent Owner challenges Petitioner's proffered motivation to combine CORBA and Jaeger. Prelim. Resp. 38–41. Specifically, according to Patent Owner "CORBA is simply not necessary in the environment disclosed in Jaeger" because Jaeger's system, once executable content is downloaded, runs entirely on the client, and all requests are handled "within the same environment that runs the content." *Id.* at 39. According to Patent Owner, "Petitioner provides no explanation as to why [] CORBA, which is used to provide 'interoperability between applications on different machines in heterogeneous distributed environments and seamlessly interconnect[] multiple object systems' would be used in Jaeger's client-based, homogeneous interpreter environment." *Id.* at 40.

iv. Discussion

The three limitations discussed above have intertwined features. One of those is the request message. According to the claims, a downloadable issues a *request message* (including an extension call), which the downloadable engine intercepts. Ex. 1001, 21:63–65. The downloadable engine then sends two messages: a notification message to a request broker regarding the extension call, and the intercepted request message to the file system probe and network system probe. *Id.* at 21:66–22:6. The request message (and thus the extension call) is distinct from the recited operating system call. For example, the claims require that the file and network

system probes receive request messages and intercept an operating system call. *Id.* at 22:1–6. Further, the request broker is not involved in the operating system call operations, but is involved in the extension call operations via handling the notification message. Accordingly, the obviousness challenge must explain how the prior art allegedly renders the claims obvious considering these distinct limitations. *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970) ("All words in a claim must be considered in judging the patentability of that claim against the prior art.").

We require that the Petition "must specify where each element of the claim is found in the prior art patents or printed publications relied upon." 37 C.F.R. § 42.104(b)(4). Here, the Petition does not provide an adequate mapping of these limitations. The downloadable engine and the file/network system probes perform distinct functions. The downloadable engine intercepts the request message with an extension call, while the file/network system probes intercept operating system calls. And the downloadable engine sends the request message to the file/network system probes. Notwithstanding the distinct functionalities of these claim limitations, the Petition maps the downloadable engine broadly to "Jaeger's system" and to the "browser and interpreters" (according to Dr. Bestavros, Ex. 1002 ¶¶ 82–83) and maps the file and network system probes to, again, "Jaeger's system" and Jaeger's browser and interpreters. *See* Pet. 44 (stating that "[b]y controlling execution of downloaded content, Jaeger's system manages and executes downloadables"); *id*. at 49–50 (stating that "Jaeger discloses OS probes as part of its interpreters," "'Browser' (probe),"and that "[a]mong the sources of OS calls to be intercepted by Jaeger's system would be an extension call"). That is, the software that manages and executes the

downloadable (downloadable engine) and the interface for receiving and recognizing requests before allowing the operating system to execute the requests (operating system probes) are both mapped to Jaeger's browser and interpreters. The Petition's mapping concerning the interaction between the components of Jaeger lacks the specificity that our rules require.[2] *See* 37 C.F.R § 42.104(b)(4). As Patent Owner notes, and we agree, the claims require that the probes receive the request message from the downloadable engine, something that the Petition does not explain adequately. Prelim. Resp. 30.

We are also troubled by the vagueness of Petitioner's assertions regarding the downloadable engine "intercepting a request message," as required by the claim. Pet. 44; Ex. 1002 ¶ 83. On this point, the Petition points generally to Figure 5 of Jaeger, which is the same disclosure relied upon for how Jaeger's file and network system probes allegedly intercept operating system calls. Pet. 50. The claims recite these two elements with particularity and distinct functions, and such vague assertions of how the prior art discloses the claim limitations do not comply with our rules regarding the content of the Petition and fail to show that Petitioner's challenge has merit. Therefore, after consideration of the Petition's content

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[2] The Petition asserts that an extension call "is handled by sending a message to the appropriate network or file system probe of Jaeger's browser, as shown in Fig. 5." Pet. 50. Dr. Bestavros testifies that "Jaeger's system could receive an extension call" and repeats the statement above. Ex. 1002 ¶ 96. Both the statement and testimony are conclusory and provide no explanation or insight as to how Petitioner contends that Jaeger teaches or suggests that the Jaeger browser, or some component thereof, sends a request message to itself or some other component thereof.

regarding the mapping of the "downloadable engine" and the "file system probe"/"network system probe elements," together with Patent Owner's persuasive arguments in this regard, we find the Petition deficient.

Furthermore, we are persuaded by Patent Owner's arguments that the proffered rationale for the combination of Jaeger and CORBA is not adequate. For instance, we are persuaded by Patent Owner's argument that Petitioner fails to explain why a person of ordinary skill would have been motivated to use CORBA's broker with Jaeger's teachings. Prelim. Resp. 37–40. Petitioner argues that it would have been obvious to include a request broker in Jaeger's architecture to receive and forward notification messages as taught in CORBA. Pet. 47. But, even if CORBA teaches the technology of a broker for sending and receiving messages, Petitioner's argument merely shows that the broker technology was known.

Petitioner's characterization of Jaeger and CORBA broadly to assert an alleged commonality in the teachings does not persuade us that there is a reasonable rationale for making the combination. *See* Pet. 48 (stating that disclosures of CORBA parallel the system of Jaeger). The *why* in the obviousness inquiry is missing. As the Supreme Court explained in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), an invention "composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." 550 U.S. at 418. Rather, "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *Id.* In other words, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.* (quoting

In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)). Accordingly, the Federal Circuit has made clear that a petitioner in an *inter partes* review proceeding cannot "satisfy its burden of proving obviousness" by "employ[ing] mere conclusory statements" and "must instead articulate specific reasoning, based on evidence of record" to support an obviousness determination. *In re Magnum Oil Tools Int'l*, 829 F.3d 1364, 1380–81 (Fed. Cir. 2016).

The missing evidence and argument is crucial because in this case, we are persuaded by Patent Owner's arguments that Jaeger and CORBA are very different in their implementation of their solutions. While Jaeger's programs run entirely on the browser at the client, CORBA's broker is needed to provide interoperability across applications running on different platforms. *See* Prelim. Resp. 39–40. Patent Owner has persuasively pointed out that the objectives and solutions of these two references are dissimilar. *Id.* The fact that Jaeger may disclose using "classes of objects" is unrelated to CORBA's solution of sending messages to objects across a heterogeneous system. Rather, we find that the Petition unreasonably characterizes Jaeger's "object" classes to paint CORBA's broker teachings as a solution to Jaeger. *See Insite Vision Inc. v. Sandoz, Inc.*, 783 F.3d 853, 859 (Fed. Cir. 2015) ("[d]efining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness.") (internal quotes and citation omitted); *see also Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1334 (Fed. Cir. 2013) (prior art references that address different problems may not support an inference that the skilled artisan would consult both of them simultaneously). Accordingly, we determine the Petition has failed to set forth adequate rationale for making the combination of Jaeger and CORBA.

III. CONCLUSION

The Petition fails to demonstrate a reasonable likelihood of prevailing in the contention that claims 1–8 of the '755 patent are unpatentable as asserted in its grounds of unpatentability. Accordingly, we do not institute *inter partes* review.

IV. ORDER

It is ORDERED that the Petition is *denied* and no *inter partes* review is instituted.

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