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Paper 9
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ARISTA NETWORKS, INC.,
Petitioner,

v.

CISCO SYSTEMS, INC.,
Patent Owner.

Case IPR2016-00119
Patent 7,047,526 B1

Before BRYAN F. MOORE, PETER P. CHEN, and ROBERT J. WEINSCHENK, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

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

I. INTRODUCTION

Petitioner, Arista Networks, Inc., filed a Corrected Petition for *inter partes* review of claims 1–26 of U.S. Patent No. 7,047,526 B1 (Ex. 1001, "the '526 patent"). Paper 4 ("Pet."). Patent Owner, Cisco Systems, Inc., filed a Preliminary Response. Paper 8 ("Prelim. Resp."). Institution of an *inter partes* review is authorized by statute when "the information presented

in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a); *see* 37 C.F.R. § 42.108. Upon consideration of the Petition and the Preliminary Response, we conclude the information presented does not show there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of any of claims 1–26 of the '526 patent.

A. Related Matters

The parties state that the '526 patent is the subject of *Cisco Systems, Inc. v. Arista Networks, Inc*., No. 5:14-cv-05344 (N.D. Cal.). Pet. 3; Paper 6 (Patent Owner's Mandatory Notice). Petitioner has also filed a number of other petitions requesting *inter partes* review of other patents owned by Patent Owner.

B. The '526 Patent

The '526 patent describes an improvement for controlling complex administration and/or diagnostic software tools in processor-based systems. Ex. 1001, 1:11–14. It explains that, typically, each of these administration and diagnostic tools has its own command format, which system administrators must remember. *Id.* at 1:31–34. Moreover, system administrators may find it difficult "to determine which tool is the best tool (and/or which is the best syntax) to use for a given problem." *Id.* at 3:16–20.

To address these problems, the patent proposes a set of "generic commands" that a user can input into a parser-translator system, which will

issue a corresponding "prescribed command" to a management program in that program's command format. *See id.* at Abstract. As the patent explains, "the new syntax provides a generic instruction set that provides an abstraction of the tool-specific command formats and syntax, enabling the user to issue command[s] based on the relative functions, as opposed to the specific syntax for a corresponding tool . . . ." *Id.* at 3:31–35; *see also id.* at 7:1–9:16 (listing "Generic Command Examples").

The generic command is validated by the system in relation to what the patent calls a "command parse tree." (*Id.* at 1:48-51.) Figure 2, which is reproduced below, depicts the command parse tree (structure 22) of the preferred embodiment:

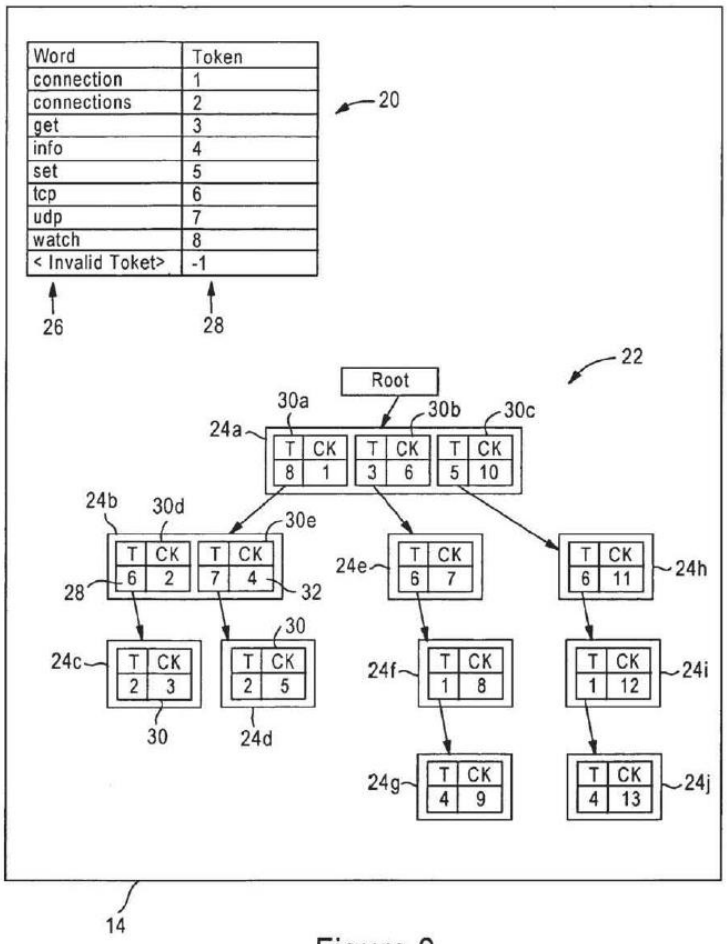


Figure 2

Figure 2 shows a hierarchical data representation that includes multiple elements (structures 24a-j). Each element contains at least one "token" (abbreviated "T") and a corresponding "command key" (abbreviated "CK"). *Id.* at 3:51–53. Figure 2 also depicts a "command word translation table" (structure 20) that matches words within generic commands to tokens, which are shown as numerical values – for example, the generic-command word "watch" corresponds to the token "8." *Id.* at 3:38–46, Fig. 2. These

tokens are used to traverse the command parse tree and identify the element that is the "best match" for the received generic command. *Id.* at 3:47–51.

Tokens are matched with command-parse-tree elements based on the order of the words in the received generic command. *Id.* at 4:3–7, 4:14–16. Beginning at the highest level of the tree, the parser determines if the token corresponding to the first generic-command word is valid. *Id.* at 4:3–13, Fig. 3. If so, the parser traverses the next level of elements that depend from the already validated token to determine if the next token in sequence is valid at that level. *Id.* at 4:13–16, 4: 19–27. Thus, for example, referring to Figure 2, if the first two words in the received generic command are "watch tcp," the parser determines if the token corresponding to "watch" (the number "8") is valid in element 24a, then determines if the token corresponding to "tcp" (the number "6") is valid in element 24b, which depends from token "8" in element 24a.

This process repeats until either no tokens remain, in which case the element corresponding to the final token is identified as the "best match," or the next token in the sequence is found to be invalid, in which case the element corresponding to the last valid token is identified as the "best match." *Id.* at 4:27–36, 4:46–49. The parser then uses the "command key" that corresponds to the "best match" element to identify a "prescribed command" to issue to a selected management program. *Id.* at 3:51–54, 4:31–36, 4:49–51. For example, referring to Figure 2, if the parser receives the generic command "watch tcp connections," it will identify element 24c as the "best match," and use the command key "3" to identify a "prescribed command" to issue to a selected management program.

C. Illustrative Claim

Of the challenged claims, claims 1, 10, 14, and 23 are the independent claims.

Claim 1, reproduced below, is illustrative.

> 1. A method in a processor-based system configured for executing a plurality of management programs according to respective command formats, the method comprising:
>
> receiving a generic command from the user;
>
> validating the generic command based on a command parse tree that specifies valid generic commands relative to a prescribed generic command format, the command parse tree having elements each specifying at least one corresponding generic command component and a corresponding at least one command action value, the validating step including identifying one of the elements as a best match relative to the generic command; and
>
> issuing a prescribed command of a selected one of the management programs according to the corresponding command format, based on the identified one element.

Ex. 1001, 9:19–34.

D. Prior Art Relied Upon

Petitioner relies upon the following prior art reference:

Martinez-Guerra	US 6,523,172	Feb. 18, 2003	(Ex. 1002)

E. Asserted Grounds of Unpatentability

Petitioner asserts the following ground of unpatentability:

Challenged Claims	Basis	Reference
1–26	§ 103	Martinez-Guerra

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278–79 (Fed. Cir. 2015) ("Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA," and "the standard was properly adopted by PTO regulation."), *cert. granted sub nom. Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 890 (2016) (mem.) ("Congress implicitly adopted the broadest reasonable interpretation standard in enacting the AIA," and "the standard was properly adopted by PTO regulation."). Under the broadest reasonable interpretation standard, claim terms are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

For the purposes of this Decision, and on this record, most of the claim terms do not require an express construction. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc*., 200 F.3d 795, 803 (Fed. Cir. 1999) (only those terms

which are in controversy need to be construed and only to the extent necessary to resolve the controversy).

An understanding of the term "command action value," which appears in all the challenged claims, is necessary for this decision. Petitioner does not explicitly propose a construction for this term in the Petition or through its declarant. Patent Owner also does not explicitly construe this term.

Petitioner states that in the cited prior art, "[t]he instruction to return an error that results from inputting an invalid word or incomplete sequence (e.g., inputting 'delete' without a target pathname), or the translation function that results from inputting a complete and valid sequence of tokens (e.g., 'delete /usr/extract/testing'), is what the '526 patent refers to as a 'command action value.'" Pet. 26. Additionally, Petitioner states that the error or translation function "lead[] ultimately to the satisfaction of a phrase structure rule, thus resulting in a translation according to the corresponding translation rule." Petitioner does not elaborate on how these functions read on "command action value." *Id.* Petitioner appears to construe command action value as an instruction or function that leads to a translation either being issued or not issued.

Patent Owner asserts that command action value corresponds to the command key described in the Specification. Patent Owner presents the following annotated version of Figure 2:

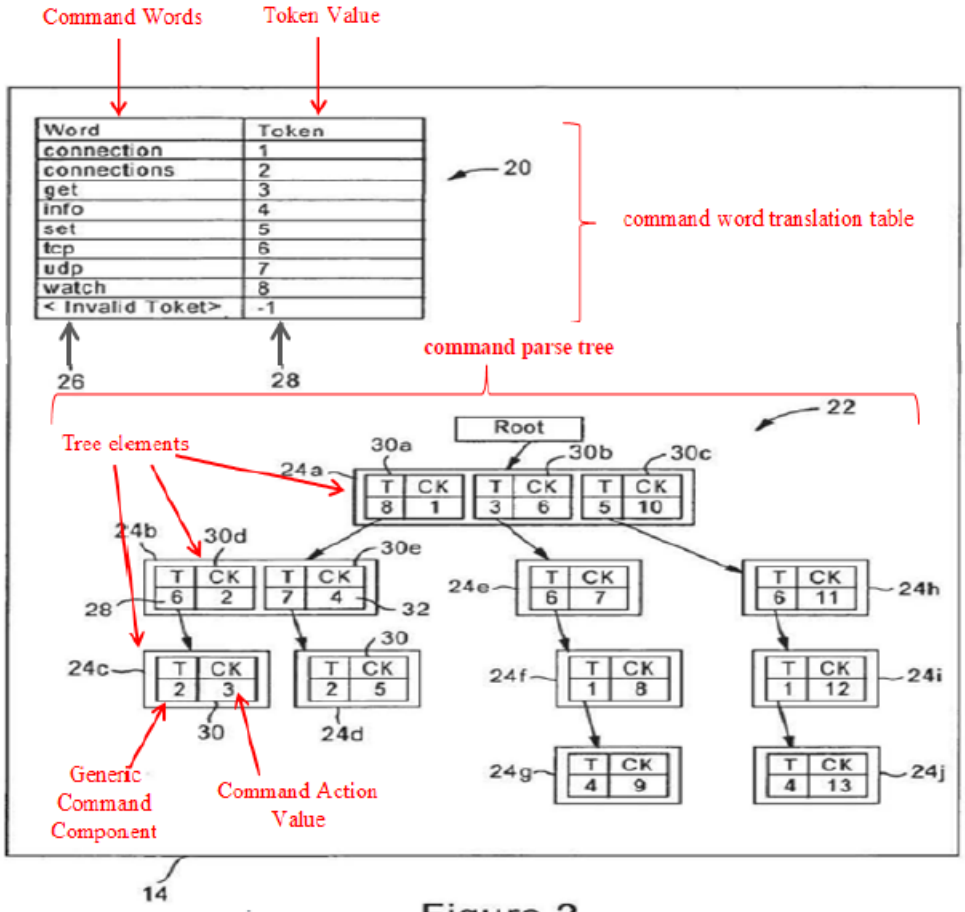


Figure 2

Prelim. Resp. 7. The annotated version of Figure 2, above, shows a command parse tree and a token/command word table. *Id.* Patent Owner indicates on the annotated Figure 2 that command key 30 of Figure 2 corresponds to a command action value. Patent Owner argues, "in contrast to the '526 patent, each token ingested by Martinez-Guerra's parser does not have a corresponding translation function." Prelim Resp. 28. In other words, Patent Owner argues the command action value must be on each branch of the parse tree.

The parties have not argued and we do not find that "command action value" has an ordinary meaning in the context of the invention. When a claim term "does not have an ordinary meaning, and its meaning is not clear from a plain reading of the claim, we turn to the remaining intrinsic evidence, including the written description, to aid in our construction of that term." *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1326 (Fed. Cir. 2001) (*citing Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582–83, 39 USPQ2d 1573, 1576–77 (Fed. Cir. 1996); *Hockerson–Halberstadt, Inc. v. Avia Group Int'l, Inc.*, 222 F.3d 951, 955, 55 USPQ2d 1487, 1490 (Fed. Cir. 2000).) If the applicants for a patent desire to be their own lexicographer, the purported definition must be set forth in either the specification or prosecution history. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). Such a definition must be set forth with reasonable clarity, deliberateness, and precision. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998); *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Intrinsic evidence supports a construction of command action value as corresponding to the command key's function. The Specification states that the issuance of a prescribed command can be based on the command action value, in particular, "[t]he parser, upon identifying a best match among the elements, issues a prescribed command for a selected one of the management programs according to the corresponding command format based on the selected command action value." Pet. 2. (citing Ex. 1001, 1:54–58). As to command key, the Specification states, "[e]ach tree element 24 includes at least one token-command key pair 30 that specifies a token

(T) 28 and a corresponding command key (CK) 32, enabling the parser 14 to identify the appropriate prescribed command based on the command key specified for the matching token." Ex. 1001, 3:50–54. The Specification further states, "[t]he parser 14 identifies in step 54 the prescribed command for a selected one of the translators 16 based on the value of the command key 32 within the matching token-command key pair 30 (e.g., 'CK=3') of the last valid command word, which maps to a translation table that specifies a specific command for a specified translator 16." *Id.* at 4:31–37. Thus, the Specification states that parser identifies the appropriate prescribed command based on the command key. As noted above, the claims and Specification describe the command key and the command action value as performing the same function, namely indicating the appropriate prescribed command.

The patentee states in the prosecution history that "a match is identified (e.g., a tree element 24), and the corresponding action value (e.g., command key 30) is issued for an identified one of the protocol-specific translators 16, for protocol-specific translation for a corresponding management program 18." Ex. 3001. Thus, we find that the Specification and prosecution history define, with a reasonable clarity, deliberateness, and precision, command action value as being commensurate with the command key.

Additionally, the independent claims specify that each element of the parse tree must have a generic command component and corresponding command action value—for example, independent claims 1, 10, 14, and 23 recite "elements each specifying at least one corresponding generic

command component and a corresponding at least one command action value."

Dependent claims 4, 5, 17, and 18 recite "issuing the prescribed command based on a corresponding *command key* specified for the matching token within the identified one element." As noted above, there appears to be overlap in the patentee's usage of "command key" and "command action value." Claim 1, however, recites issuing a prescribed command based on an element containing both a command action value and a generic command, while claim 4 is narrower because it requires issuing the prescribed command based specifically and only on a command key. Thus, the claim differentiation doctrine does not apply. *See Kraft Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362, 1368 (Fed.Cir.2000) (internal quotations omitted) (the doctrine of claim differentiation "only creates a presumption that each claim in a patent has a different scope; it is not a hard and fast rule of construction.").

Given the discussion above, we construe "command action value" to mean "a value that can be used to identify a prescribed command and is contained in each element of the parse tree."

B. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of four

underlying factual determinations: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

In that regard, an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418; *see also Translogic*, 504 F.3d at 1259. A prima facie case of obviousness is established when the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976).

The level of ordinary skill in the art may be reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). We analyzed the asserted grounds of patentability with these principles in mind.

C. Obviousness of Claims over Martinez-Guerra

Petitioner asserts that claims 1–26 are unpatentable under 35 U.S.C. § 103(a) as obvious over Martinez-Guerra. Pet. 3. To support its contentions, Petitioner provides detailed explanations as to how Martinez-Guerra teaches or suggests each claim limitation. *Id.* at 19–60. Petitioner also relies upon a Declaration of Dr. Douglas W. Clark, who has been retained as a declarant by Petitioner for the instant proceeding. Ex. 1014.

Martinez-Guerra discloses a parser-translator system that receives a command in a first format, e.g. "in a high-level language," and transforms the command into a second format, e.g. "directives appropriate to a particular data processing application." Ex. 1002, Abstract, 4:56–59, Fig. 1. As explained by Martinez-Guerra, its system allows a user to "focus on the semantics of the desired operations and … not be concerned with the proper syntax of a language for a particular system. *Id.* at Abstract.

Figure 1 depicts Martinez-Guerra's parser-translator 10, which includes three sub-components: token recognizer 11, parser 12, and translator 13. Token recognizer 11 examines an input stream command (e.g., "delete pathname-expert") and determines if tokens are "legal" based on grammar 17. *Id.* at 10:42–45; 15:57. Parser 12 accepts tokens from token recognizer 11 and builds an internal representation of the translation to be performed (e.g., rm <pathname-expert>). *Id.* at 10:49–53, 15:62. Once it is determined that the internal representation is complete (i.e., phrase is complete), translator 13 translates the entire input stream. *Id.* at 9:40–43. The parser-translator then supplies a translated output stream that defines the particular data transformations to be performed, thereby transforming the command from a first format ("delete pathname-expert") to a second format (rm <pathname-expert>). *Id.* at 9:45–62.

Claim 1 requires a "command parse tree having elements each specifying at least one corresponding generic command component and a corresponding at least one command action value." As noted above, Petitioner asserts that "[t]he instruction to return an error that results from inputting an invalid word or incomplete sequence (e.g., inputting "delete"

without a target pathname), or the translation function that results from inputting a complete and valid sequence of tokens (e.g., "delete /usr/extract/testing"), is what the '526 patent refers to as a "command action value." Pet. 26.

Regarding error reporting as a command action value, Patent Owner asserts that

> Martinez-Guerra's error instruction does not constitute a command action value. Martinez-Guerra provides only a minimal disclosure regarding its error reporting mechanisms: "if an input is invalid, an error may be reported via the user interface or by other mechanism such as a log file." (Martinez-Guerra, 19:3–4.) The analysis that determines whether an input is invalid (i.e., the error triggering event) occurs separately from Martinez Guerra's processing using its phrase structure rules. Martinez-Guerra's phrase structure rules only take into account the legal sequences of tokens allowed by the language. (Martinez-Guerra, 8:24–25.) As a consequence, Martinez-Guerra's system does not associate any error reported with its phrase structure rule processing. Indeed, Martinez-Guerra never establishes any link between its error reporting and phrase structure rules. Accordingly, Martinez-Guerra's phrase structure rules (the alleged command parse tree) do not include the error reporting (the alleged command action value), as required by the claims.

Prelim. Resp. 27–28. We find that the error reporting aspect of Martinez-Guerra is not a value used to identify a prescribed command, as required by our claim construction. The error does not indicate a prescribed command. Additionally, the error is not contained in each element of the parse tree; rather, it is only at the particular branch of the tree that causes an error.

To the extent that Petitioner relies on a sequence in which an error occurs and then a correct translation is made, as shown on page 19 of the

Petition, that sequence is not described in the Specification and appears only in the Petitioner's declarant's testimony, without citation to the record, at paragraphs 38 and 39. We give such testimony little weight. *See* 37 C.F.R. § 42.65(a) ("[e]xpert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."). It is within our discretion to assign the appropriate weight to the testimony offered by a declarant. *See, e.g.*, *Yorkey v. Diab*, 601 F.3d 1279, 1284 (Fed. Cir. 2010) (holding the Board has discretion to give more weight to one item of evidence over another "unless no reasonable trier of fact could have done so"); *In re Am. Acad. of Sci. Tech. Ctr*., 367 F.3d 1359, 1368 (Fed. Cir. 2004) ("[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations."). Thus, Petitioner has not provided sufficient evidence that in the case in which an error occurs there is a command action value at each element of the parse tree.

As to the translation function, Patent Owner notes, "in contrast to the '526 patent, each token ingested by Martinez-Guerra's parser does not have a corresponding translation function. Instead, Martinez-Guerra's translation functions are only applied once Martinez-Guerra's system determines that it has received the entirety of a complete valid sequence of tokens. (Martinez-Guerra, 9:40–43; 15:25–27.)" Prelim. Resp. 28. We agree. Thus, Petitioner has not provided sufficient evidence that in the case of a valid translation there is a command action value at each element of the parse tree.

To the extent that Petitioner may argue that the "translation function identifier" in Martinez-Guerra teaches or suggests the recited "command

action value," we disagree. Petitioner states the "translation function identifier" in Martinez-Guerrra corresponds to the claimed "command key" of claim 4 because

> Martinez-Guerra discloses issuing the prescribed command based on a 'translation function identifier' specified for *the element that completes a phrase structure rule*, such as the 'pathname-expert' element of 'RULE1.' (Clark Decl. ¶ 70; Ex. 1002 at 15:50-62, 16:11-16.) When the input stream contains a legal ordering of words according to a phrase structure rule, the translation function corresponding to that phrase structure rule is used to determine the translation. (Ex. 1002 at 16:15-16, 17:47-52, 20:61-64.)" . . . The 'translation function identifier' specifies where a translation function corresponding to a matched phrase structure rule can be located. (Clark Decl. ¶ 70; Ex. 1002at16:11-16, 20:61-64.) It is thus a 'command key,' as claimed in the '526 patent. (Clark Decl. ¶ 70.)

Pet. 34. As stated by Petitioner, the translation function specifier is associated with the element that completes the phrase structure rule rather than each element of the phrase structure rule. Thus, it does not teach or suggest command action value.

The remaining independent claims 10, 14, and 23 each contain the same limitations at issue in claim 1 and thus, all of the challenged claims contain the command action value limitation that Petitioner has not shown to be taught or suggested by Martinez-Guerra. We have reviewed the proposed ground of obviousness over Martinez-Guerra against claims 1–26, and we are not persuaded that Petitioner has established a reasonable likelihood that it would prevail in its challenge to claims 1–26 on this ground.

III. CONCLUSION

The information presented does not show that there is a reasonable likelihood that Petitioner would prevail at trial with respect to at least one claim of the ’526 patent, based on any grounds presented in the Petition. On this record, we deny the petition for *inter partes* review of claims 1–26.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is *denied* as to all challenged claims, and no trial is instituted.

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