

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KINAXIS INC. AND KINAXIS CORP.,
Petitioner,

v.

BLUE YONDER GROUP, INC.,
Patent Owner.

IPR2021-01247
Patent 7,574,383 B1

Before NATHAN A. ENGELS, PAUL J. KORNICZKY, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

ENGELS, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Kinaxis Inc. and Kinaxis Corp. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–30 of U.S. Patent No. 7,574,383 B1 (Ex. 1001, “the ’383 patent”). Patent Owner Blue Yonder Group, Inc. filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). The Board issued a Decision Granting Institution. Paper 15.

After institution, Patent Owner filed a Response (Paper 19, “PO Resp.”), Petitioner filed a Reply (Paper 21, “Reply”), and Patent Owner filed a Sur-Reply (Paper 28, “Sur-Reply”). Also, Patent Owner filed Objections to Petitioner’s Evidence (Paper 16) and a Motion to Exclude (Paper 31), Petitioner filed an Opposition to Patent Owner’s Motion to Exclude (Paper 33), and Patent Owner filed a Reply to Petitioner’s Opposition (Paper 34). Oral arguments were held, a transcript of which is in the record. Paper 39.

For the reasons below, we determine that Petitioner has not proven by a preponderance of the evidence that claims 1–30 of the ’383 patent are unpatentable.

A. *Related Matters*

The parties state that the ’383 patent is the subject of *Blue Yonder Group, Inc. v. Kinaxis Inc.*, No. 3:20-cv-03636 (N.D. Tex.). Pet. 76; Paper 14, 1.

B. *The ’383 Patent*

Titled “System and Method for Providing Distributed Inventory Management,” the ’383 patent describes a distributed inventory management system (“DIMS”) for managing the inventory of one or more participants in a value chain. Ex. 1001, 2:61–63, code (54). According to the ’383 patent, the DIMS couples inventory data resources of different participants in the value chain with one or more planning and/or executing engines that use the

inventory data to plan and execute inventory-related business decisions.

Ex. 1001, 2:63–67. The ’383 patent states that a value chain may include participants such as suppliers of components used to manufacture products, sellers that manufacture products such as an original equipment manufacturer (“OEM”), buyers that buy products from sellers, as well as intermediaries such as logistics providers, contract sellers, or distributors. Ex. 1001, 2:67–3:11.

C. Illustrative Claims

Petitioner challenges claims 1–30 of the ’383 patent. Claims 1 and 17 are independent claims. Claim 1, reproduced below with bracketed labels added corresponding to the numbering in the Petition, is illustrative of the claimed invention.

1. A distributed inventory management system, the system comprising one or more components collectively operable to:

[1a-1] receive information regarding a plurality of distributed participants in one or more tiers of a value chain,

[1a-2] wherein each tier of the one or more tiers of the value chain comprise a different replenishment process associated with one or more of the plurality of distributed participants, and

[1a-3] [receive]¹ information regarding one or more items in the one or more tiers of the value chain;

[1b] model relationships between at least two of the plurality of distributed participants in the different tiers of the one or more tiers of the value chain based on the received information;

[1c] model the one or more items based on the received information;

¹ Claim elements [1a-2] and [1a-3] are part of element [1a-1]; this editing is added for readability.

[1d] receive inventory data from one or more of the plurality of distributed participants relating to the one or more items;

[1e] process the inventory data based on the models of the relationships and the items to generate inventory information related to one or more of the distributed participants; and

[1f] communicate the generated inventory information to one or more of the plurality of distributed participants in a different tier of the value chain, the inventory information including at least inventory data of participants other than those participants to which the inventory information is communicated.

D. Alleged Grounds of Unpatentability

Petitioner asserts that claims 1–30 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–8, 10, 11, 14–24, 26, 27	103 ²	Perry ³
1–30	103	Perry, Bellini ⁴
1–11, 15–27	103	Perry, Harmony ⁵
12–14, 28–30	103	Perry, Harmony, Bellini

A. Summary of Perry

All of Petitioner’s grounds rely on Perry. Titled “Method and System for Monitoring a Supply-Chain,” Perry describes extracting and monitoring supply-chain data from different participants in a supply chain. Ex. 1004, codes (54), (57). Among other things, Perry states that a typical manufacturing supply chain includes an original equipment manufacturer

² Based on the April 10, 2002 filing date of the ’383 patent, the pre-AIA version of § 103(a) applies. Our decision would not change if the AIA version of § 103 applies.

³ U.S. Patent No. 6,947,903 B1, filed April 7, 2000, issued September 20, 2005 (Ex. 1004).

⁴ U.S. Patent No. 5,974,395, issued October 26, 1999 (Ex. 1005).

⁵ WO 2000/42553, published July 20, 2000 (Ex. 1006).

(OEM), contract manufacturers that supply components of products to the OEM, and distributors or vendors that supply parts to the contract manufacturers. Ex. 1004, 1:15–25.

Perry states that each OEM, contract manufacturer, and vendor in a supply chain typically maintains its own private database system to track and control inventory, place orders, receive orders, enterprise resource planning, and materials requirements planning with data typically maintained in incompatible formats in legacy database systems. Ex. 1004, 1:33–39. Perry states that its invention installs a data transfer engine at each participants’ site while leaving the participants’ legacy systems intact. Ex. 1004, 1:61–64. According to Perry, its data transfer engines monitors and collects data at each site and formats the data into a common format acceptable at a central data collection site, preferably at a distributor or an OEM. Ex. 1004, 1:64–2:6.

II. ANALYSIS

A. *Petitioner’s Burden*

A petition for *inter partes* review must identify “with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 312(a)(3). As stated by the Court of Appeals for the Federal Circuit, “[i]n an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (emphasis added) (citing 35 U.S.C. § 312(a)(3)); *see also* *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with

particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’”) (quoting 35 U.S.C. § 312(a)(3)). The Board’s *Trial Practice Guide* further advises that a petitioner should “focus on concise, well-organized, easy-to-follow arguments supported by readily identifiable evidence of record.” Patent Trial and Appeal Board Consolidated Trial Practice Guide, 39 (Nov. 2019).⁶ Moreover, a petitioner “may not submit new evidence or argument in reply that it could have presented earlier, e.g. to make out a prima facie case of unpatentability” (*id.* at 73), and “[i]t is also improper for a reply to present new evidence (including new expert testimony) that could have been presented in a prior filing” (*id.* at 74).

B. Level of Ordinary Skill in the Art

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The person of ordinary skill in the art (“POSITA”) is a hypothetical person presumed to have known the relevant art at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors we consider in determining the level of skill in the art include (1) the educational level of the inventor; (2) the type of problems encountered in the art; (3) prior art solutions to those problems; (4) the rapidity with which innovations are made; (5) the sophistication of the technology; and (6) the educational level of active workers in the field. *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

As discussed below, Petitioner presents different and unclear levels of skill for a POSITA in its Petition and Reply.

⁶Available at
<https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>

1. *The Petition's POSITA*

Petitioner contends in the Petition that a POSITA at the time of the invention would have had “at least a Bachelor’s degree in an academic area emphasizing operations or supply chain management, or a similar discipline, and at least five years of experience in the field working with supply chains.” Pet. 6 (citing Ex. 1003 ¶¶ 18–19). The Declaration of Dr. Robert Handfield, filed in support of the Petition, states the same definition. Ex. 1003 ¶ 18 (additionally stating “[s]uperior education could compensate for a deficiency in work experience, and vice versa”).

Our Decision Granting Institution applies this definition but questions whether and how a POSITA, as defined by Petitioner, would have modified and combined existing the systems described in the prior art. Decision, 18. Addressing Petitioner’s proposed combination of Perry and Bellini as an example, the Decision questions whether and how a POSITA “would have integrated a new supply chain planning engine into the ‘existing software componentry’ of Perry.” Decision, 18 (quoting Pet. 53).

After institution, Patent Owner states that, “Patent Owner accepts Petitioner’s definition of a [POSITA].” PO Resp. 14; *accord* Ex. 2009 ¶ 15. Patent Owner also contends that a POSITA, as defined by Petitioner, lacks meaningful computer science knowledge, and Patent Owner argues the cited prior art would not have enabled this POSITA to practice the claimed invention. PO Resp. 15–24.

Notably, though, in the parties’ district-court litigation, Patent Owner filed the Declaration of Dr. Joseph Robert Carter in Support of [Patent Owner]’s Opening Claim Construction Brief. Ex. 1101. That Declaration states a POSITA “would have held at least a Bachelor’s degree in *computer engineering, computer science, information technology*, operations research,

supply chain or logistics management, or a similar discipline, with at least three years of experience working with supply chains.” Ex. 1101 ¶ 18 (emphasis added).

2. *The Reply’s POSITA*

In its Reply, Petitioner recasts the skill level of a POSITA. *See* Reply 4–5, 10. First, Petitioner argues it is irrelevant whether a POSITA has programming knowledge because the challenged claims “do not include *any* limitations relating to computer programming.” Reply 4. Next, though, Petitioner argues that a POSITA as defined in the Petition could have had “educational backgrounds and work experience that would provide programming skills.” Reply 4–5, n.1 (citing Ex. 1028, 45:12–15, 61:21–63:12; Ex. 1029 ¶ 55; Ex. 1101 ¶ 18). Further, citing the Supplemental Declaration of Dr. Robert Handfield (Ex. 1029), Petitioner argues “the skill level of a POSITA would have included individuals with exposure to computer programming through educational background and/or work experience.” Reply 10 (citing Ex. 1029 ¶¶ 44–47). Similarly, Petitioner argues “even a POSITA with a supply-chain-focused background would have been familiar with computer system architecture, data formats, and programming.” Reply 10 (citing Ex. 1029 ¶¶ 48–55). Petitioner, however, also argues that a POSITA would not have been expected to write computer code and would have instead hired computer programmers or simply purchased commercially available software. Reply 11–13; *but see* Reply 4 (characterizing Dr. Carter’s POSITA as including “educational backgrounds with significant programming abilities”), 10 (same).

3. *Discussion*

As an initial matter, we note that the inventions described in the ’383 patent and the cited prior art are plainly computer-implemented

systems and methods. *E.g.* Ex. 1001, 3:63–64, 5:31–35; Ex. 1004, 6:24–25. Notwithstanding Petitioner’s argument that the challenged claims do not include limitations “relating to computer programming” (Reply 4), Petitioner acknowledges that practicing the claimed invention requires computer systems and appropriate software (*see* Reply 12–13 (arguing professional programmers could create a new supply chain management system or that commercial products were available on the market)).

Perry is instructive of the relevant level of software skill. Among other things, Perry describes some traditional difficulties in supply chain management, stating that each link in a supply chain typically maintains its own private database to track and control inventory, place and receive orders, etc., and “[w]hile these supply chain sites share some data, the data is typically maintained in incompatible formats in legacy databases.” Ex. 1004 1:33–39. Perry also states that in the prior art, “[o]ften, teams of programmers are utilized to implement custom design changes to these legacy databases that become overwhelmingly complex.” Ex. 1004, 1:51–54. Further, Perry states that “[w]hile some custom programming is required to extract the proper information and clean it up, no change to the existing business process is required” and “[t]he programming that is required for extracting and cleaning the data is minimal compared to the major rewriting or restructuring necessary for previous known methods.” Ex. 1004, 2:7–12. Thus, Perry evidences that computer programming skills were necessary to implement its teachings. Although the ’383 patent does not specifically mention computer programming, the ’383 patent states that its system can be implemented “as any appropriate combination of software and/or hardware” and describes data processing functions generally similar to those of Perry.

Ex. 1001 5:34–35, 5:49–6:41 (describing data communications with legacy systems and the need for “translation of data” between systems).

Thus, we disagree with Petitioner’s definition of a POSITA in the Petition as a person having “at least a Bachelor’s degree in an academic area emphasizing operations or supply chain management, or a similar discipline, and at least five years of experience in the field working with supply chains.” Pet. 6. Although knowledge of operations or supply chain management is relevant, the evidence of record indicates that implementing the claimed invention would have required significant computer-programming skills.

Further, contrary to Petitioner’s arguments (Reply 10–13), the evidence of record does not show that a person of ordinary skill having a bachelor’s degree in operations or supply chain management and five years of experience working with supply chains would have had the requisite level of computer-programming skills. There is insufficient evidence to show that Petitioner’s POSITA, even with familiarity and use of database systems, has the type of computer programming experience or knowhow suggested by Perry.

We note that neither party directly advances, in this proceeding, the level of skill advocated in Dr. Carter’s district-court declaration (Ex. 1101 ¶ 18). Dr. Handfield states in his Supplemental Declaration that he agrees with Dr. Carter’s expression of a POSITA (Ex. 1029 ¶ 45), but Petitioner’s Reply stops short of suggesting that the Board can apply Dr. Carter’s POSITA instead of the Petition’s POSITA.

We do not decide whether Dr. Carter’s POSITA is an appropriate articulation of the level of ordinary skill. Even if we were to determine that Dr. Carter’s POSITA is correct or that some other level of skill is

appropriate, the record in this case would not allow us to assess obviousness from the perspective of that POSITA. Among other problems, Petitioner does not apply Dr. Carter's POSITA in its Grounds and we would be required to speculate regarding which arguments and testimony might still apply. Similarly, though Dr. Handfield agrees with Dr. Carter's expression of a POSITA (Ex. 1029 ¶ 45), he does not provide testimony concerning obviousness based on Dr. Carter's POSITA (*see generally*, Ex. 1029). These problems apply to each of Petitioner's asserted grounds, each of which requires assessing obviousness from the perspective of a POSITA. Accordingly, Petitioner has not carried its burden of proving by a preponderance of the evidence that any of claims 1–30 of the '383 patent is unpatentable.

C. Petitioner Does Not Show that Perry Enables a POSITA to Practice the Challenged Claims

“Although published subject matter is ‘prior art’ for all that it discloses, in order to render an invention unpatentable for obviousness, the prior art must enable a person of ordinary skill to make and use the invention.” *In re Kumar*, 418 F.3d 1361, 1368 (Fed. Cir. 2005). “In general, a prior art reference asserted under § 103 does not necessarily have to enable its own disclosure,” but “a standalone § 103 reference must enable the portions of its disclosure being relied upon.” *Raytheon Techs. Corp. v. Gen. Elec. Co.*, 993 F.3d 1374, 1380–81 (Fed. Cir. 2021). Here, to prevail on its four Grounds, which rely on Perry, Petitioner must show that Perry enables the portions of its disclosure relied upon in Petitioner's mapping of Perry to the challenged claims and based on Petitioner's definition of a POSITA.

In addition to the discussion above, we determine Petitioner has not shown that Perry enables Petitioner's POSITA to practice the claimed invention. Comparing Perry to the challenged claims, Petitioner contends Perry discloses a supply chain that includes an original equipment manufacturer, contract manufacturers, one or more distributors, and vendors. Pet. 12 (addressing claim 1; citing Ex. 1004, 4:40–5:8), 45 (addressing claim 17 with reference to claim 1; “Claims 17–24, 26–27 are substantially identical to Claims 1–8, 10–11.”). Among other things, in the Petition, Petitioner cites Perry's teachings of data transfer engines installed at different organizations or sites in the supply chain that “take[] data in any size or format” collected at one site and “correct[], translate[] and format[] the data into ‘clean’ data” and then upload the data to a center hub. Pet. 12 (quoting Ex. 1004, 5:52–67), 14–15 (addressing limitation 1a, arguing Perry describes a central hub that receives data extracted by transfer engines installed at each of the participant sites), 18 (addressing limitation 1b, arguing Perry's center hub receives data extracted by data transfer engines installed at each distributed participant site), 27 (addressing limitation 1d, arguing Perry's center hub receives data extracted by data transfer engines installed at each participant site).

Patent Owner argues Perry does not enable the portions of its disclosure relied upon by Petitioner. PO Resp. 16 (citing *In re Wands*, 858 F.2d 731, 736–37 (Fed. Cir. 1988)). As one example, Patent Owner states that “Petitioner relies on Perry's disclosure of extracting data from various inventory sites, organizing (reformatting) the data, and republishing that data . . . [b]ut Perry does not explain how its system extracts, translates or republishes the data to a supply chain site.” PO Resp. 16 (citing Pet. 12–15, 20–22, 27–31). Patent Owner contends “Perry's teachings on extraction,

translation, and republication do not enable a [POSITA] to make a system that receives and processes data, and communicates information,” as claimed. PO Resp. 22. Further, Patent Owner argues “Perry expressly discloses that these aspects require computer programming or coding knowledge.” PO Resp. 22.

Analyzing the factors discussed in *Wands*, Petitioner replies that Perry’s disclosures enable a POSITA to make Perry’s system with only routine efforts and without undue experimentation. Reply 2–13. According to Petitioner, “[e]ven if Perry did not provide guidance for making his supply chain management system; even if Perry’s disclosure solved a long-standing problem in a novel way; and even if a POSITA lacked computer programming skills, none of these allegations speak to the quality or quantity of experimentation required to make the aspects of Perry’s system applied to the ’383 patent’s functional claims.” Reply 2 (citing PO Resp. 16–24). These arguments miss the mark.

As explained in *Wands*, a reference is not enabled if undue experimentation is required to practice the invention. 858 F.2d at 736–37. As explained above, Petitioner’s POSITA does not possess the computer programming skills required to implement Perry to arrive at the claimed invention. Even the programming that Perry describes as “minimal” for extracting and cleaning data is beyond the skillset of Petitioner’s POSITA. Moreover, it is not clear on this record what level of education and programming ability might have allowed a POSITA to apply Perry’s teachings to arrive at the claimed invention. Perry identifies the collection of incompatible data formats from legacy systems as a problem in the prior art that is solved by Perry’s data transfer engine with “some custom programming,” but Perry provides no guidance regarding how a POSITA

can implement Perry's solution. *See* Ex. 1004, 1–33–2:22. Petitioner and Dr. Handfield likewise do not adequately explain how a POSITA would implement Perry's solution. *See* Reply 11–12 (stating that a POSITA could have hired programmers or selected a commercially available product without explaining how these options would have been implemented to arrive at the claimed invention); Ex. 1029 ¶¶ 65–68 (stating a POSITA would have hired professional programmers to create a supply chain system without explaining how such a system would have arrived at the claimed invention), 69 (stating that a POSITA would have used commercially-available products to implement Perry's system without explaining how such implementation would have arrived at the claimed invention). As such, on this record, no amount of experimentation would have permitted Petitioner's POSITA to implement Perry to arrive at the claimed invention.

Finally, we note that Petitioner's Reply also presents additional arguments that deviate from the Petition and the proper scope of a reply. Petitioner, for example, argues for the first time in the Reply that "anyone seeking to make Perry's supply chain management system would simply employ professional computer programmers to do so." Reply 12 (citing Ex. 1029 ¶¶ 65–67). Petitioner also contends for the first time in the Reply that "[p]rocurring a commercial product on the market with Perry's described functionality would have been just as viable and far simpler." Reply 13 (citing Ex. 1029 ¶¶ 22–20, 31–43, 56–69). We agree with Patent Owner (Sur-Reply 1, 8–9) that these arguments are untimely and that these arguments are not adequately supported by evidence of record; the record does not establish that Petitioner's POSITA could have directed a team of programmers to practice Perry much less modify Perry to arrive at the claimed invention or that commercially available products could have been

implemented to arrive at the claimed invention. *Cf.* Ex. 1029 ¶¶ 65–68 (stating a POSITA would have hired professional programmers to create a supply chain system without explaining how such a system would have arrived at the claimed invention), 69 (stating that a POSITA would have used commercially-available products to implement Perry’s system without explaining how such implementation would have arrived at the claimed invention).

Accordingly, we agree with Patent Owner that Petitioner has not established that Perry enables a POSITA to practice the challenged claims. Thus, this is another reason that Petitioner has not shown by a preponderance of the evidence that claims 1–30 of the ’383 patent are unpatentable.

D. Patent Owner’s Motion to Exclude

In view of the discussion above, we deny Patent Owner’s Motion to Exclude (Paper 31) as moot.

III. CONCLUSION

For the reasons set forth above, we determine that Petitioner has not proven by a preponderance of the evidence that any of claims 1–30 is unpatentable.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has not shown by a preponderance of the evidence that claims 1–30 of the ’383 patent are unpatentable;

FURTHER ORDERED that Patent Owner’s Motion to Exclude is denied as moot;

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–8, 10, 11, 14– 24, 26, 27	103	Perry		1–8, 10, 11, 14–24, 26, 27
1–30	103	Perry, Bellini		1–30
1–11, 15–27	103	Perry, Harmony		1–11, 15–27
12–14, 28–30	103	Perry, Harmony, Bellini		12–14, 28–30
Overall Outcome				1–30

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