UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte JOACHIM H. FRANK

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Appeal 2019-005705
Application 11/695,151
Technology Center 3600

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Before ANTON W. FETTING, NINA L. MEDLOCK, and
BETH Z. SHAW, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's
final rejection of claims 1–5, 16–20, and 23. We have jurisdiction under
35 U.S.C. § 6(b).

We REVERSE.

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[1] We use the term "Appellant" to refer to "applicant" as defined in 37 C.F.R.
§ 1.42. Our decision references Appellant's Appeal Brief ("Appeal Br.,"
filed January 15, 2019) and Reply Brief ("Reply Br.," filed July 16, 2019),
and the Examiner's Answer ("Ans.," mailed May 16, 2019), and Final
Office Action ("Final Act.," mailed July 27, 2018). Appellant identifies
International Business Machines Corporation as the real party in interest
(Appeal Br. 2).

CLAIMED INVENTION

The claimed invention "relates to the field of conversation protocol validation in e-business" and, more particularly, to "business-to-business (B2B) conversation protocol validation" (Spec. ¶ 1).

Claims 1, 16, and 23 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A computer-implemented method for testing protocol compatibility between roles in a business-to-business (B2B) conversation, the method comprising:
> selecting at least two roles with known interaction behavior for each participant to a B2B conversation over a computer communications network;
> deriving local protocols for each of the selected roles each in a form of a protocol state machine;
> constructing a single conversation protocol in a corresponding state machine from the local protocols by computing a product of the local protocols through forming an initial state of the single conversation protocol as a product of each initial state of each of the local protocols augmented by a message count comprising a tuple of non-negative integers, one for each defined message that indicates a number of message instances that are in flight in the initial state of the local protocols, with a position of each of the non-negative integers in the tuple corresponding to one or more different message types able to be exchanged so that sent messages sent to a participant increment a corresponding count in the tuple, and messages sent from the participant decrement the corresponding count in the tuple, constructing outbound send and receive transitions for each state in the single conversation protocol and marking states whose constituents are solely final states of the local protocols as final conversation states;
> determining if the state machine of the constructed single conversation protocol has a dead end state; and
> identifying protocol incompatibility when it is determined that a dead end state exists in the state machine of the constructed single conversation protocol, while identifying protocol

compatibility in the absence of dead-end states in the state machine of the constructed single conversation protocol.

REJECTIONS[2]

Claims 1–5, 16–20, and 23 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claim 23 is rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter that Appellant regards as the invention.

Claims 1, 2, 16, and 17 are rejected under 35 U.S.C. § 103(a) as unpatentable over Stewart et al. (US 2002/0013759 A1, published Jan. 31, 2002) ("Stewart"), Flores et al. (US 5,208,748, issued May 4, 1993) ("Flores"), OASIS ebXML Collaboration Protocol Profile and Agreement Technical Committee, "Collaboration-Protocol Profile and Agreement Specification Version 2.0," September 23, 2002, available at www.ebxml.org/specs/index.htm#whitepapers ("OASIS"), Kemp, II et al., (US 7,124,110 B1, issued Oct. 17, 2006) ("Kemp"), and Kraft, (US 2005/0027738 A1, published Feb. 3, 2005).

Claims 3–5 and 18–20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Stewart, Flores, OASIS, Kemp, Kraft, and Boigelot et al., (US 5,768,498, issued June 16, 1998) ("Boigelot").

Claim 23 is rejected under 35 U.S.C. § 103(a) as unpatentable over Stewart, Boigelot, Kraft, and Kemp.

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[2] The Examiner has withdrawn the rejection of the pending claims under 35 U.S.C. § 101 (Ans. 4).

ANALYSIS

Written Description

Whether a specification complies with the written description requirement of 35 U.S.C. § 112, first paragraph, is a question of fact and is assessed on a case-by-case basis. *See, e.g.*, *Purdue Pharma L.P. v. Faulding, Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000) (citing *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561 (Fed. Cir. 1991)). The disclosure, as originally filed, need not literally describe the claimed subject matter (i.e., using the same terms or *in haec verba*) in order to satisfy the written description requirement. But, the specification must convey with reasonable clarity to those skilled in the art that, as of the filing date, the inventors were in possession of the claimed invention. *See id.*

The Examiner notes here that each of independent claims 1, 16, and 23 recites

> with a position of each of the non-negative integers in the tuple corresponding to one or more different message types able to be exchanged so that sent messages sent to a participant increment a corresponding count in the tuple, and messages sent from the participant decrement the corresponding count in the tuple

(Final Act. 6 (emphasis omitted)). And the Examiner ostensibly takes the position that the Specification fails to provide adequate written description support because "[i]t does not describe the position(s) of non-negative integers in the tuple" (*id.* (emphasis omitted)).[3] Therefore, the Examiner

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[3] We understand the written description rejection to relate to the "message count" limitation. However, to the extent the Examiner maintains that the claims fail to comply with the written description requirement because Appellant's Specification "provides no description of sufficiently definite structure that performs the claimed function for constructing a state machine as recited in the limitations" (Final Act. 6), we note that independent

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concludes, "[t]he claim(s) define the invention in functional language specifying a desired result but the [S]pecification does not sufficiently identify how the inventor has devised the function to be performed or result achieved" (*id.* at 6–7), and Appellant "has failed to provide adequate disclosure in [the] [S]pecification reciting such a feature" (*id.* at 7).

We agree with Appellant that the requisite written description support is provided at least in paragraph 29 of the Specification (Appeal Br. 11). There, as the Examiner acknowledges (Final Act. 6), the Specification explicitly discloses that the positions of each of the integers in the tuple correspond to the different message types that participants may exchange, and that messages sent to a participant increment a corresponding count in the tuple, whereas messages sent from the participant decrement the corresponding count in the tuple.

We find that the Specification provides sufficient evidence that the inventors were in possession of the claimed invention, as recited in independent claims 1, 16, and 23, including the cited limitation, at the time the present application was filed. Therefore, we do not sustain the Examiner's rejection of claims 1–5, 16–20, and 23 under 35 U.S.C. § 112,

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claims 1 and 16 do not recite "constructing a state machine." Instead, claim 1 recites "constructing a single conversation protocol in a corresponding state machine from the local protocols by computing a product of the local protocols," and claim 16 includes substantially similar language. Independent claim 23 does recite "constructing a state machine." It also recites how the state machine is constructed, i.e., "by forming an initial state of the state machine as a product of each initial state of each of the local protocols augmented by a message count comprising a tuple of non-negative integers." A detailed discussion of the construction of the conversation protocol also is provided in paragraphs 28–32 of the Specification, with reference to Figure 4.

first paragraph, as failing to comply with the written description requirement.

Indefiniteness

In rejecting claim 23 under 35 U.S.C. § 112, second paragraph, the Examiner notes that claim 23 recites

> constructing a state machine corresponding to the state execution graph by forming an initial state of the state machine as a product of each initial state of each of the local protocols augmented by a message count comprising a tuple of non-negative integers, one for each defined message that indicates a number of message instances that are in flight in the initial state of the local protocols, with a position of each of the non-negative integers in the tuple corresponding to one or more different message types able to be exchanged so that sent messages sent to a participant increment a corresponding count in the tuple, and messages sent from the participant decrement the corresponding count in the tuple, constructing outbound send and receive transitions for each state in the state machine and marking states whose constituents are solely final states of the local protocols as final conversation states

(Final Act. 7–8 (emphasis omitted)). The Examiner opines, "Examiner is unable to determine the metes and bounds of this limitation," and asks "[w]hat exactly is applicant claiming regarding the construction of a state machine?" (*id.* at 8; *see also* Ans. 8 ("Appellant claims several steps for constructing a state machine in this lengthy limitation, however it is unclear to the Examiner what exactly appellant is claiming to be the inventive concept(s) in this limitation for constructing a state machine.")). But, the Examiner provides no substantive analysis or reasoning to support this position; nor does the Examiner otherwise explain why a person of ordinary skill in the art would not understand what is claimed when claim 23 is read in light of the Specification.

We agree with Appellant that the Examiner has failed to establish a prima facie case of indefiniteness (Appeal Br. 5–7). Therefore, we do not sustain the Examiner's rejection of claim 23 under 35 U.S.C. § 112, second paragraph.

Obviousness

Independent Claims 1 and 16 and Dependent Claims 2 and 17

We are persuaded by Appellant's argument that the Examiner erred in rejecting independent claims 1 and 16 under 35 U.S.C. § 103(a) at least because Kemp, on which the Examiner relies, does not disclose or suggest "a message count comprising a tuple of non-negative integers . . . a position of each of the non-negative integers in the tuple corresponding to one or more different message types able to be exchanged," as recited in claim 1, and similarly recited in claim 16 (Appeal Br. 12–16).

The Examiner cites column 7, lines 46–62; column 9, lines 16–25 and 40–45; Figures 4C and 4D; column 13, lines 8–14; and Table 2 of Kemp as disclosing the argued limitation (Final Act. 16–17). However, we agree with Appellant that although Kemp is concerned with ensuring that the number or frequency of transmission messages transmitted to an exchange does not exceed message thresholds, and discloses "a 'limiting event' for 'in-flight transactions' that may include the transmission of a transaction to an exchange which causes an increment, or the receipt of an order acknowledgement from the exchange which causes a decrement" (Appeal Br. 16), there is nothing in the cited portion of Kemp that discloses or suggests that "a position of each of the non-negative integers in the tuple correspond[s] to one or more different message types," as called for in claims 1 and 16.

Responding to Appellant's argument in the Answer, the Examiner further describes the Kemp system and method (Ans. 10–14). But, the Examiner does not point to any portion of Kemp that discloses or suggests the argued limitation.

In view of the foregoing, we do not sustain the Examiner's rejection of independent claims 1 and 16 under 35 U.S.C. § 103(a). For the same reasons, we also do not sustain the Examiner's rejection of dependent claims 2 and 17. *Cf. In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) ("dependent claims are nonobvious if the independent claims from which they depend are nonobvious").

Dependent Claims 3–5 and 18–20

Claims 3–5 and 18–20 depend, directly or indirectly, from one of independent claims 1 and 16. The rejection of these dependent claims does not cure the deficiency in the Examiner's rejection of claims 1 and 16. Therefore, we do not sustain the Examiner's rejection of dependent claims 3–5 and 18–20 for the same reasons set forth above with respect to independent claims 1 and 16.

Independent Claim 23

Independent claim 23 includes language substantially similar to the language of claims 1 and 16, and stands rejected based on the same rationale (regarding Kemp) applied with respect to claims 1 and 16 (Final Act. 33–34). Therefore, we do not sustain the Examiner's rejection of independent claim 23 for the same reasons set forth above with respect to independent claims 1 and 16.

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CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1–5, 16–20, 23	112, first paragraph	Written Description		1–5, 16–20, 23
23	112, second paragraph	Indefiniteness		23
1, 2, 16, 17	103(a)	Stewart, Flores, OASIS, Kemp, Kraft		1, 2, 16, 17
3–5, 18–20	103(a)	Stewart, Flores, OASIS, Kemp, Kraft, Boigelot		3–5, 18–20
23	103(a)	Stewart, Boigelot, Kraft, Kemp		23
Overall Outcome				1–5, 16–20, 23

REVERSED