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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HANS THILDERKVIST, THOMAS PAULY,
and
JEFF HARDING

Appeal 2017-004755
Application 14/061,517¹
Technology Center 2400

Before CARLA M. KRIVAK, HUNG H. BUI, and JON M. JURGOVAN,
Administrative Patent Judges.

BUI, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) from the Examiner’s Final Rejection of claims 1–16, which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.²

¹ According to Appellants, the real party in interest is ABB Technology AG. App. Br. 2.

² Our Decision refers to Appellants’ Appeal Brief (“App. Br.”) filed September 15, 2016; Reply Brief (“Reply Br.”) filed January 27, 2017; Examiner’s Answer (“Ans.”) mailed December 14, 2016; Final Office Action (“Final Act.”) mailed March 28, 2016; and original Specification (“Spec.”), filed October 23, 2013.

STATEMENT OF THE CASE

Appellants' Invention

Appellants' invention relates to secure joining of a new computer as a node in a process control system. Title; Spec. ¶¶ 1, 15. The method and node configuration setup arrangement of Appellants' invention are operable to activate a setup control unit, via a computer that is to become a node in the process control system, the activation being initiated by a setup tool being brought to the computer. Spec. ¶ 1; Abstract. The computer is then joined as a node in the process control system based on a setup tool identifier investigation. Abstract; Title. Appellants' invention enables safely adding new computers to a process control system without pre-installing specific software on the new computers. Spec. ¶ 46.

Claims 1, 7, 12, 14, and 16 are independent. Representative claim 1 is reproduced below with disputed limitations in *italics*:

1. A method for secure joining of a computer as a node in a process control system, the method being performed by a setup control unit of a setup tool having been created in the process control system and comprising a setup tool identifier providing a unique identity of the setup tool, the method comprising the steps of:

getting the setup control unit activated via a first computer, which computer is to become a node in the process control system, which activation is initiated by the setup tool being brought to the first computer,

contacting a configuration control computer in the process control system,

supplying the setup tool identifier to the configuration control computer, in order for the configuration control computer to perform a setup tool identifier investigation,

receiving node parameter data associated with the selected system node from said configuration control computer, said node parameter data being received based on an operator

selection of a system node for the first computer and after *a successful setup tool identifier investigation has been performed in the configuration control computer*, and providing the first computer with said node parameter data for making the first computer into the selected system node.

App. Br. 18–24 (Claims App’x).

Examiner’s Rejection & References

Claims 1–16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Braun et al. (US 2007/0093921 A1; published Apr. 26, 2007; “Braun”) and O’Neil et al. (US 7,188,161 B1; issued Mar. 6, 2007; “O’Neil”). Final Act. 3–14.

Issue on Appeal

Based on Appellants’ arguments, the dispositive issue on appeal is whether the combination of Braun and O’Neil teaches or suggests:

- (i) the disputed “setup tool activation” limitation (“getting the setup control unit activated via a first computer, which computer is to become a node in the process control system, which activation is initiated by the setup tool being brought to the first computer”), as recited in Appellants’ independent claim 1, and similarly recited in independent claim 7, and
- (ii) the disputed “setup tool investigation” limitation (a “setup tool identifier investigation [that] has been performed in the configuration control computer” upon “supplying the setup tool identifier to the configuration control computer, in order for the configuration control computer to perform [the] setup tool identifier investigation”), as recited in Appellants’ independent claim 1, and similarly recited in independent claims 7, 12, 14, and 16.

App. Br. 7–13; Reply Br. 2–5.

ANALYSIS

Independent claim 1 recites, *inter alia*,

method being performed by a setup control unit of a setup tool having been created in the process control system and comprising a setup tool identifier providing a unique identity of the setup tool, the method comprising the steps of:

getting the setup control unit activated via a first computer, which computer is to become a node in the process control system, which activation is initiated by the setup tool being brought to the first computer, . . .

supplying the setup tool identifier to the configuration control computer, in order for the configuration control computer to perform a setup tool identifier investigation,

receiving node parameter data associated with the selected system node . . . said node parameter data being received . . . after a successful setup tool identifier investigation has been performed in the configuration control computer.

App. Br. 18 (Claims App'x).

With respect to claim 1, the Examiner finds: (1) Braun teaches the claim limitations of (i) “getting the setup control unit activated via a first computer” where the “activation is initiated by the setup tool being brought to the first computer,” (ii) “supplying the setup tool identifier to the configuration control computer, in order for the configuration control computer to perform a setup tool identifier investigation,” and (iii) “an operator selection of a system node”; and (2) O’Neil teaches the claim limitations reciting (iv) “a successful setup tool identifier investigation [that] has been performed in the configuration control computer,” (v) “receiving node parameter data associated with the selected system node from said configuration control computer,” and (vi) “providing the first computer with said node parameter data for making the first computer into the selected

system node.” Final Act. 3–4 (citing Braun ¶¶ 30, 44–45, 50, Figs. 2, 5, 8; O’Neil, 3:55–59, 4:8–13); Ans. 2–3 (citing Braun ¶¶ 27, 37).

Appellants contend the combination of Braun and O’Neil does not teach a “setup tool . . . comprising a setup tool identifier . . . activated via a first computer . . . which activation is initiated by the setup tool being brought to the first computer” (the “setup tool activation” limitation), and “an investigation [that] has been performed by the configuration control computer using the [supplied] setup tool identifier” (the “setup tool investigation” limitation). Reply Br. 4; App. Br. 12–13; *see also* Reply Br. 3, 5; App. Br. 10–11. We agree.

Specifically, we agree with Appellants that the cited portions of Braun and O’Neil fail to teach or suggest a setup tool control unit activated via a first computer that has not yet been joined as a node in a control system, the activation being initiated using the first computer, as required by claim 1. Rather, Braun discloses a configuration tool 225 “is a user interface already executing on its programming terminal.” App. Br. 11. Thus, Braun’s configuration tool (a setup tool) has been *activated before* the motor drive and wireless user interface computer (first computers) *are joined as nodes* in the control system. *See* Braun ¶¶ 30, 36–37, 44–45, Fig. 5; App. Br. 10–11; Reply Br. 3–4. O’Neil does not remedy the deficiencies of Braun because O’Neil, like Braun, *completes the activation* of a setup tool (a Trusted Configuration Device TCD) *before* a first computer (a Network Element) *is joined as a node* in a system. *See* O’Neil, 2:40, 3:4–6, 55–59, 4:8–13. We also agree with Appellants that the cited portions of Braun and O’Neil fail to teach or suggest that a first computer is joined as a node in a control system

after a setup tool identifier investigation, as required by claim 1. App. Br. 10, 12–13; Reply Br. 4–5.

The Examiner responds that the claimed “setup tool [is interpreted] as a configuration tool of the prior art of Braun . . . [, which] is used to identify the joining computer,” and which “configur[es] the wireless user interface.” Ans. 2 (citing Braun ¶¶ 27, 30, 44–45, 50). The Examiner further finds Braun’s setup tool is brought to the first computer as required by claim 1 because “the motor drive establishes a connection using [the] wireless user interface, allowing access to the industrial control system.” Ans. 2. Braun does not disclose, however, that its setup tool (configuration tool) is activated, via the wireless user interface, or via the motor drive (first computer), as claim 1 requires. App. Br. 10–11; Reply Br. 3–4. Rather, Braun’s setup tool itself activates the wireless user interface, and the wireless user interface then joins the motor drive as a node in the system. *See* Braun ¶¶ 30, 36–37, 44–45. That is, Braun does not disclose that the configuration tool is activated, via the motor drive, or via the wireless user interface, or that the wireless user interface is activated via the motor drive. Thus, Braun does not teach the “setup tool activation” limitation of claim 1. App. Br. 10–11.

O’Neil does not remedy this deficiency of Braun because O’Neil, like Braun, *completes the activation* of a setup tool *before* a first computer is *joined as a node* in the system. In particular, O’Neil’s Provisioning Server (PS)—an existing node in the system—*completes the activation* of the TCD (a setup tool) *before* a Network Element (a first computer) is *joined as a node* in the system. *See* O’Neil col. 3, ll. 4–6, 55–59, col. 4, ll. 8–13, Figs.

2A–2C. Thus, O’Neil does not teach the “setup tool activation” limitation, either.

The Examiner also has not shown how the cited portions of Braun and O’Neil teach or suggest the claimed “setup tool investigation” limitation. The Examiner asserts the combination of Braun and O’Neil teaches the claimed investigation because O’Neil’s “network element will receive the information when the server configures the trusted configuration device,” and, when Braun’s or O’Neil’s device is connected to the control system, “it is understood that the device is identified as the one used for joining the system.” Ans. 3 (citing O’Neil col. 3, ll. 55–59, col. 4, ll. 8–13); Final Act. 3–4 (citing Braun ¶¶ 45, 50, Figs. 5, 8). However, we disagree with the Examiner.

In particular, although O’Neil’s server PS configures the TCD (setup tool) with a “configuration [that] includes authentication data, a shared secret, NE [Network Element] serial number, and PS network address/port,” the authentication data, shared secret, NE serial number, and PS network address/port *are not used to investigate the Trusted Configuration Device (TCD)*; rather, the authentication data, shared secret, NE serial number, and PS network address/port are used *to authenticate the customer, investigate the serial number of the customer’s Network Element (first computer), and connect the Network Element to the server.* See O’Neil col. 3, ll. 4–6, 55–59, 66–col.4, ll. 13, 15–16, Fig. 2B; App. Br. 13–14; Reply Br. 6. Thus, O’Neil does not teach the “setup tool investigation” limitation of claim 1.

Braun does not remedy this deficiency of O’Neil. Braun merely discloses “execut[ing] a configuration tool 225 for configuring the wireless user interface 70 prior to its use in the field,” but does not disclose

investigating a configuration tool's identifier. *See* Braun ¶ 44; App. Br. 10, 12; Reply Br. 4–5. Thus, Braun does not teach the “setup tool investigation” limitation, either.

Thus, the Examiner has not identified sufficient evidence to support the Examiner's findings that the combination of Braun and O'Neil teaches or suggests (1) “getting the setup control unit activated via a first computer, which computer is to become a node in the process control system, which activation is initiated by the setup tool being brought to the first computer” (“setup tool activation” limitation), and (2) a “setup tool identifier investigation [that] has been performed in the configuration control computer” upon “supplying the setup tool identifier to the configuration control computer” (“setup tool investigation” limitation), as recited in claim 1.

Because the Examiner has not shown the combination of Braun and O'Neil teaches or suggests all the limitations of claim 1, we do not sustain the Examiner's obviousness rejection of independent claim 1, independent claim 7, which similarly recites the disputed “setup tool activation” and “setup tool investigation” limitations, and independent claims 12, 14, and 16, which recite the disputed “setup tool investigation” limitation. *See* claim 7 (“a setup control unit” that “gets the setup control unit activated via a first computer, which first computer is to become a node in the process control system, which activation is initiated by the setup tool being brought to the first computer” and “supplies the setup tool identifier to the configuration control computer,” and a “setup tool identifier investigation [that] has been performed in the configuration control computer” for “making the first computer into the selected system node”); claim 12 (“method of controlling

the joining of a new computer to a process control system” using “a setup tool identifier providing a unique identity of the setup tool, said setup control unit [of the setup tool] being operated by a first computer to be joined to the process control system,” the method comprising “receiving the setup tool identifier from the setup control unit, [and] performing a setup tool identifier investigation” in order to “register[] . . . the first computer as a system node”); claim 14 (“a setup tool identifier [of a setup tool] providing a unique identity of the setup tool, said setup control unit [of the setup tool] being operated by a first computer to be joined to the process control system,” and a configuration control unit that “receives the setup tool identifier from the setup control unit, [and] performs a setup tool identifier investigation” to “register[] . . . the first computer as a system node”); and claim 16 (“a setup tool identifier providing a unique identity of the setup tool, said setup control unit [of the setup tool] being operated by a first computer to be joined to the process control system,” and a configuration control unit that “receives the setup tool identifier from the setup control unit, [and] performs a setup tool identifier investigation” to “register[] . . . the first computer as a system node”). App. Br. 20–24 (Claims App’x).

We also do not sustain the Examiner’s rejection of dependent claims 2–6, 8–11, 13, and 15. We do not address Appellants’ remaining arguments because the issues discussed *supra* are dispositive as to all pending claims on appeal.

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CONCLUSION

On the record before us, we conclude Appellants have demonstrated the Examiner erred in rejecting claims 1–16 under 35 U.S.C. § 103(a).

DECISION

As such, we REVERSE the Examiner’s final rejection of claims 1–16.

REVERSED