

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SERVICENOW, INC.,
Petitioner,

v.

BMC SOFTWARE, INC.,
Patent Owner.

Case CBM2015-00107
Patent 7,062,683 B2

Before JUSTIN T. ARBES, JENNIFER MEYER CHAGNON, and
TIMOTHY J. GOODSON, *Administrative Patent Judges*.

GOODSON, *Administrative Patent Judge*.

DECISION

Denying Institution of Covered Business Method Patent Review
37 C.F.R. § 42.208

I. INTRODUCTION

Petitioner ServiceNow, Inc. filed a Corrected Petition (Paper 4, “Pet.”) requesting covered business method patent review of claims 1–3, 12, 14, 21, 22, 24–26, 35, 37, 44, 45, 56–58, 67, 69, 76, 77, 79, 80, 83, 85, and 88–90 of U.S. Patent No. 7,062,683 B2 (Ex. 1001, “the ’683 patent”). Patent Owner BMC Software, Inc. filed a Preliminary Response (Paper 11, “Prelim. Resp.”).

We have jurisdiction under 35 U.S.C. § 324. Pursuant to 35 U.S.C. § 324(a), the Director may not authorize a covered business method patent review unless the information in the petition, if unrebutted, “would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” As explained below, we do not institute a covered business method patent review because the information presented in the Petition does not establish that the ’683 patent qualifies as a covered business method patent.

A. *The ’683 Patent*

The ’683 patent relates to a method of using fault models to analyze error conditions in an enterprise computing system. Ex. 1001, 1:5–10.

The ’683 patent explains that the reliability of complex enterprises depends in large part on detecting and managing operational problems, such as hardware or software failures. *Id.* at 1:21–27. As an enterprise incorporates more monitored components, the occurrence of observable events greatly increases. *Id.* at 1:30–35. Many of these are “sympathetic events” that are generated as a result of the underlying problem. *Id.* at 1:35–38. The ’683 patent explains:

For example, a router failure may generate a “router down” event and a large number of “lost connectivity” events for

components that communicate through the failed router. In this scenario, the router failure is the fundamental or “root cause” of the problem and the lost connectivity events are “sympathetic” events.

Id. at 1:42–47. These sympathetic events complicate the task of identifying the cause of a problem. *Id.* at 1:35–38. According to the ’683 patent, “up to 80% of a network’s down-time is spent analyzing event data to identify the underlying problem(s).” *Id.* at 1:48–50.

The approach described in the ’683 patent uses a combination of up-stream analysis and down-stream analysis on an impact graph to identify root cause faults separately from other notifications, many of which may be sympathetic. *Id.* at 4:33–40. Figure 1 is reproduced below:

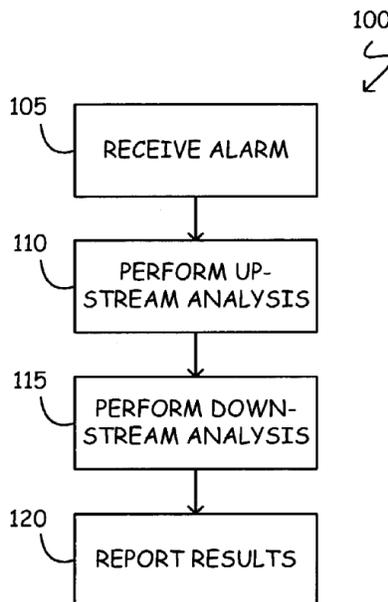


FIG. 1

Figure 1 is a flowchart showing the steps of model based reasoning (MBR) approach 100. *Id.* at 3:12–14, 4:31–33. As depicted by block 105 in Figure 1, the process begins when an alarm is received that provides notification of an event. *Id.* at 4:40–41.

In block 110, an up-stream analysis of the impact graph is performed beginning with the node that received the event notification, the effect of which may be to modify the “status value” of up-stream nodes. *Id.* at 4:43–

46. Up-stream analysis

proceeds, in an iterative fashion, up the graph until (1) there are no more up-stream nodes; or (2) a node’s status value does not change as a result of the node’s inference policy; or (3) the inferred status value for a node is different from the node’s measured status value.

Id. at 6:3–7.

Next, in block 115, down-stream analysis is performed beginning with the furthest up-stream node whose status value was modified in the up-stream analysis. *Id.* at 4:46–50. The effect of the down-stream analysis may be to modify the “impact value” of nodes down-stream of the starting node. *Id.* at 4:50–53. In the down-stream analysis, the “starting node’s impact policy, and each successive immediately down-stream node’s impact policy[,] are then evaluated until (1) there are no more down-stream nodes or (2) a down-stream node’s impact value does not change as a result of the evaluation.” *Id.* at 6:56–60.

In block 120, identification of root-cause failures and sympathetic event notifications can be reported. *Id.* at 4:60–63. Generally, the root-causes are the furthest up-stream nodes having a status value indicative of failure. *Id.* at 4:63–67. Nodes down-stream from the root cause and whose impact values indicate that they were impacted by the root-cause failure can also be shown, but it may be beneficial for these event notifications of impacted nodes to be masked or displayed in a different manner than the root causes. *Id.* at 5:3–8.

The '683 patent illustrates the method of Figure 1 by applying it to an exemplary enterprise. *See id.* at 9:7–11. In particular, Figure 7, which is reproduced below, depicts an impact graph for an enterprise consisting of automatic teller machines (ATMs) coupled to a central banking facility through a satellite communications system. *Id.* at 7:31–34, 8:43–45.

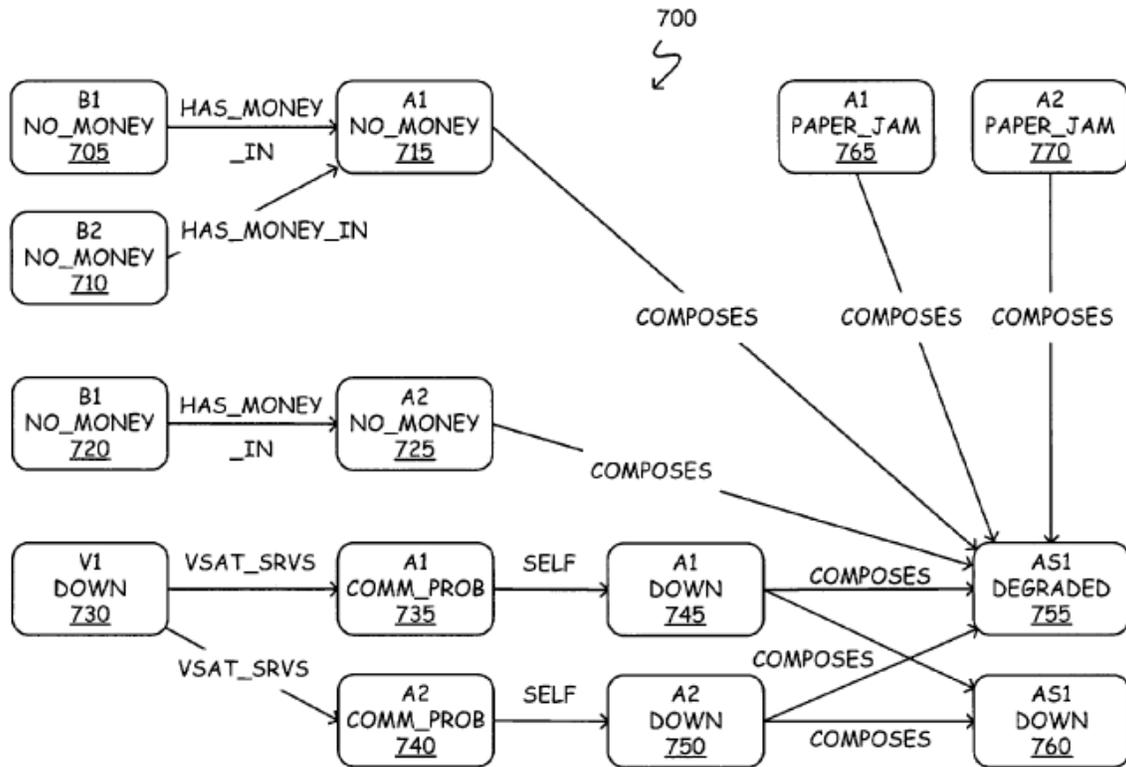


FIG. 7

The illustrative example begins when, in accordance with block 105 of Figure 1, an alarm event associated with node 715 is received. *Id.* at 9:10–11. The event notification causes the status value of node 715 to be measured “true,” which indicates a failed status. *Id.* at 9:50–54.

In the up-stream processing of block 110, the inference policies of nodes 705, 710 are evaluated. *Id.* at 9:12–45. In this example, the status values of nodes 705, 710 are inferred to be “true” because the immediately

downstream node, node 715, has a status indicative of a “NO_MONEY” condition. *Id.* at 9:29–54.

Next, down-stream processing is performed, as in block 115. “To begin, a starting node is selected that (1) has had its status value changed during the up-stream analysis of block 110 and (2) is maximally up-stream from the node receiving the original event notification (that is, node 715).” *Id.* at 9:56–60. Because both nodes 705, 710 meet those criteria, one of those is selected arbitrarily as the starting node. *Id.* at 9:61–62. During down-stream processing, the impact policies of down-stream nodes 715 and 755 are evaluated and, applying the results of those evaluations, the impact values of nodes 715 and 755 are modified to “true” to indicate that they are impacted. *Id.* at 10:1–31. The impact values of nodes 705 and 710 are also modified to “true.” *Id.* at 10:29–31.

In accordance with block 120, the results are then reported. *Id.* at 10:32–34. Nodes 705 and 710 are identified as the root cause because they are the most up-stream nodes having a status value indicative of failure. *Id.* at 10:34–40. Nodes 715 and 755 are indicated as impacted. *Id.* at 10:40–41.

Thus, while node 715 was initially in alarm, enterprise analysis in accordance with FIG. 1 allows nodes 705 and 710 to be identified as the true culprits behind the alarm while also allowing other alarms (e.g., those associated with nodes 715 and 755) to be masked, thereby reducing or eliminating the effect of alarm storms in highly interconnected enterprises.

Id. at 10:46–52.

Claim 79, reproduced below, is illustrative of the challenged claims for the purposes of this Decision:

79. A fault analysis method, wherein at least a portion of a system is represented by a fault model having a plurality of nodes, comprising:

receiving an event notification associated with a first node in the fault model;

performing an up-stream analysis of the fault model beginning at the first node;

identifying a second node having a status value that was modified during the up-stream analysis to indicate a failed status;

performing a down-stream analysis of the fault model beginning at the second node;

identifying nodes in a contiguous path between the second node and the first node in the fault model whose impact values indicate an impacted performance condition in accordance with the down-stream analysis;

indicating the second node as a root cause of the received event notification.

B. Challenges

Petitioner challenges claims 1–3, 12, 14, 21, 22, 24–26, 35, 37, 44, 45, 56–58, 67, 69, 76, 77, 79, 80, 83, 85, and 88–90 as reciting patent-ineligible subject matter under 35 U.S.C. § 101. Pet. 23, 52–78.

C. Related Proceedings

The '683 patent has been asserted against Petitioner in *BMC Software, Inc. v. ServiceNow, Inc.*, Case No. 2:14-cv-903 (E.D. Tex.). Ex. 1007 ¶¶ 46–50; Pet. 3; Paper 5, 1.

II. ANALYSIS

Section 18 of the AIA¹ governs the transitional program for covered business method patent reviews. A “covered business method patent” is “a patent that *claims* a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions.” AIA § 18(d)(1) (emphasis added); *see* 37 C.F.R. § 42.301(a). To determine whether a patent is eligible for a covered business method patent review, the focus is on “what the patent claims.” *See* Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method Patent and Technological Invention, 77 Fed. Reg. 48,734, 48,736 (Aug. 14, 2012) (Final Rule). A patent need have only one claim directed to a covered business method to be eligible for review. *Id.*; *see Versata Dev. Grp., Inc. v. SAP Am., Inc.*, No. 2014-1194, 2015 WL 4113722, at *18 (Fed. Cir. July 9, 2015) (accepting the Board’s use of a single claim to determine whether a patent is eligible for covered business method patent review). Petitioner bears the burden of demonstrating that the ’683 patent is a covered business method patent. *See* 37 C.F.R. § 42.304(a).

Petitioner argues that the ’683 patent is a covered business method patent because “the claimed invention is directed at a technique for managing a financial product or service—in particular, diagnosing and identifying error conditions associated with a bank’s automatic teller machines (ATMs).” Pet. 4. Petitioner asserts that the claims “generally

¹ Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”).

relate to a technique for identifying the ‘root cause’ of a failure and its impacts,” and that the sole embodiment in the Specification uses the claimed invention to diagnose problems with a bank’s ATMs. *Id.* at 5.

Focusing on claim 79 as a representative claim, Petitioner explains how claim 79 covers the ATM embodiment in the Specification. *Id.* at 9–13. Petitioner also describes how other challenged claims cover the ATM embodiment. *Id.* at 13–16. According to Petitioner, “because the specification makes clear that the techniques covered by [the challenged claims] encompass management of a financial product or service, or claim activities that are incidental and complementary to a financial activity,” the ’683 patent is a covered business method patent. *Id.* at 16 (citing *Salesforce.com v. VirtualAgility, Inc.*, Case CBM2013-00024, slip op. at 9 (PTAB Sept. 16, 2014) (Paper 47)).

Patent Owner responds that Petitioner “does not identify a single claim limitation that requires, or is particular to, a ‘financial product or service.’” Prelim. Resp. 5–6. According to Patent Owner, the ’683 patent is not financial in nature, as is demonstrated by its classification in Class 714 covering processes “for detecting and recovering from faults in electrical computers and digital data processing systems, as well as logic level based systems.” *Id.* at 6 (quoting *Class Definition for Class 714*, <http://www.uspto.gov/web/patents/classification/uspc714/defs714.htm> (Ex. 2001)). Patent Owner contends that, although the ’683 patent “discloses an embodiment with ATMs, the claimed invention is not directed to ATMs or any particular system for that matter.” *Id.* at 6–7.

Patent Owner analogizes the ’683 patent to other cases in which the Board denied CBM review when the claims were directed to computer

systems or methods of general utility. *Id.* at 7–9 (citing *Par Pharm., Inc. v. Jazz Pharm., Inc.*, Case CBM2014-00149, slip op. at 9 (PTAB Jan. 13, 2015) (Paper 12) (“*Par Pharmaceutical*”); *Salesforce.com v. Applications in Internet Time LLC*, Case CBM2014-00162, slip op. at 7 (PTAB Feb. 2, 2015) (Paper 11) (“*Internet Time*”); *PNC Fin. Servs. Grp., Inc. v. Intellectual Ventures I LLC*, Case CBM2014-00032, slip op. at 5 (PTAB May 22, 2014) (Paper 13)).

We agree with Patent Owner that Petitioner has not shown that the ’683 patent claims a method or apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service. As noted above, the statutory test for whether a patent is a covered business method patent focuses on the claims. AIA § 18(d)(1); 37 C.F.R. § 42.301(a). Thus, we begin our analysis by considering the language of the claims of the ’683 patent. The claims recite methods or devices for fault analysis. For example, claim 79 recites a fault analysis method that uses a fault model having a plurality of nodes, and that includes steps of receiving an event notification associated with a first node, performing an up-stream analysis of the fault model, identifying a second node up-stream of the first node with a failed status, performing a down-stream analysis, identifying nodes with an impacted performance condition, and indicating the second node as a root cause of the received event notification. Ex. 1001, 17:28–45. In considering this claim, we note that none of these steps involve a financial activity. We also note that no claim limitation is tied specifically to a financial product or service. Although Petitioner explains how claim 79 encompasses the ATM embodiment described in the Specification, Petitioner does not identify any limitation of

claim 79 that is specific to ATMs or any other financial product or service. We agree with Patent Owner that claim 79 is not specific to any particular type of network, but is instead a method of general applicability for fault analysis. Likewise, none of the other claims of the '683 patent are specific to ATMs or any other finance-related product, service, or activity.

Looking beyond the language of the claims themselves, the Specification also describes the invention as a technique of general utility for enterprises.² The problem with which the '683 patent is concerned is the diagnosis of error conditions in computing systems. Ex. 1001, 1:5–10. The patent describes this as a problem facing large and complex enterprises generally:

As enterprises have become larger and more complex, their reliability has become ever more dependent upon the successful detection and management of problems that arise during their operation. . . . It has been observed that as an enterprise grows (i.e., incorporates more monitored components—hardware and software), the rate at which observable events occur increases dramatically. . . . Quickly and decisively identifying the cause of any given problem can be further complicated because of the large number of sympathetic events that may be generated Studies have estimated that up to 80% of a network's down-time is spent analyzing event data to identify the underlying problem(s). This down-time represents enormous operational losses for organizations that rely on their enterprises to deliver products and services.

² The Specification explains that “[c]ontemporary corporate computer networks comprise a plurality of different computer platforms and software applications interconnected through a number of different paths and various hardware devices such as routers, gateways and switches, workstations, dedicated file, application and mail servers and mainframe computer systems.” Ex. 1001, 1:11–16. “The collection of such entities—hardware and software—is often referred to as an ‘enterprise.’” *Id.* at 1:18–20.

Id. at 1:21–52.

The first half of the Detailed Description provides a step-by-step discussion of the method, including a description of the flow charts in Figures 2 and 3, which illustrate the up-stream and down-stream analysis. *See id.* at 3:34–7:30, Figs. 1–3.

Next, the Detailed Description applies the method to an exemplary enterprise of ATMs coupled to a bank. *See id.* at 7:31–10:52, Figs. 4–7. The Specification repeatedly emphasizes that the ATM enterprise of Figures 4–7 is simply an illustration of how the method of Figure 1 is applied. *See id.* at 9:7–10 (“For the purpose of illustrating how enterprise fault monitoring and analysis in accordance with FIG. 1 may be applied to the illustrative enterprise represented by Impact Graph 700, consider an alarm event associated with ATM A1 NO_MONEY condition node 715”); *id.* at 11:11–14 (“[T]he enterprise illustrated in FIGS. 4–7 was introduced merely for explanatory purposes and is not intended to limit, in any way, the generality of the method of FIG. 1.”); *id.* at 7:31–34 (“By way of example, consider an enterprise consisting of a plurality of Automatic Teller Machines (ATMs) that are coupled to a central banking facility via a satellite communications system[.]”); *id.* at 11:41–46 (“the invention has been disclosed with respect to a limited number of embodiments”).

As a further indication of the invention’s general utility, the Specification also discloses that the technique has applications outside of computer networks:

For example, a mechanical system comprising pumps, valves and motors may benefit from the claimed fault analysis method. One of ordinary skill in the art will recognize that if a “system” comprises at least some components that are monitored and these monitored components communicate (in any desired

fashion) to a module that performs the analysis, such a system can benefit from the claimed invention.

Id. at 11:33–40.

Notably, the Specification does not attribute any significance to the choice of an ATM network as the illustrative enterprise. For example, the Specification does not suggest that the method is particularly suited to ATM networks, or that ATM networks are more vulnerable to the problem with which the invention is concerned. Petitioner does not point to, and we do not find, any indication in the Specification that the invention has particular usefulness in financial products, services, or activities. Rather, as outlined above, the description in the Specification indicates that the invention is a technique of general utility for quickly diagnosing problems in complex enterprises.

The Board previously has denied institution of covered business method patent review for patents claiming methods of general utility, notwithstanding the presence of some exemplary disclosure in the Specification of finance-related activity. For example, in *Par Pharmaceutical*, the patent claimed a method of distributing a prescription drug. Slip op. at 10. The specification included figures showing steps of verifying insurance coverage and ability to pay, but the petition did not show “why the claimed method steps recite or require verifying insurance coverage or a patient’s ability to pay.” *Id.* at 13. After determining that “[t]he claimed method . . . has no particular relation to the financial services industry and does not relate to just a financial product or service rather than to an enterprise, i.e., a conventional business organization,” the Board concluded that the patent was not a CBM patent under AIA § 18(d)(1). *Id.* at 19–20.

The patent in *Internet Time* was directed to a system for managing changes in regulatory and non-regulatory requirements for business activities. Slip op. at 3. The Board determined that “the claims on their face are directed to technology ‘common in business environments across sectors’ with ‘no particular relation to the financial services sector,’ which the legislative history [of AIA § 18(d)(1)] indicates is outside the scope of covered business method patent review.” *Id.* at 9 (quoting 157 Cong. Rec. S5441 (daily ed. Sept. 8, 2011) (statement of Sen. Leahy)). The Board noted that, although the written description included references to financial activities, these passages were merely exemplary of uses that could benefit from the invention, and the petitioner had not demonstrated a relationship between the references to finance in the written description and the claimed system. *Id.* at 9–10.

In *Google Inc. v. SimpleAir, Inc.*, the Board concluded that a patent claiming a system for transmitting “data” was not shown to be a CBM patent, despite disclosure in the specification that data feeds could include stock quotes, because the claim recited only generic, context-neutral “data,” without any language relating to a financial product or service. Case CBM2015-00019, slip op. at 11–12 (PTAB May 19, 2015) (Paper 11). *See also FedEx Corp. v. Ronald A. Katz Tech. Licensing, L.P.*, Case CBM2015-00053, slip op. at 9–11 (PTAB June 29, 2015) (Paper 9) (claims on their face were directed to technology common in business environments across sectors and disclosure from specification relating to use of system to automate mail-order operation was insufficient to show that any claim was directed to an activity that is financial in nature).

We recognize that the description of the exemplary ATM embodiment in the '683 patent is more extensive than the finance-related disclosures in these earlier decisions, making this a closer case for CBM eligibility. Yet, ultimately, the focus of the analysis must remain on the claims. Here, the absence of any finance-related limitation in the claims is the primary driver of our determination that the '683 patent is not a covered business method patent under AIA § 18(d)(1). Additionally weighing in favor of that determination is the overarching message of the Specification that the technique is one of general applicability, with no particular applicability to financial products or services. As detailed above, the Specification describes the problem being solved as one of general utility for diagnosing errors in enterprises, and provides a lengthy description of the overall method before turning to an exemplary ATM network. The Specification repeatedly states that the ATM network of Figures 4–7 is offered as an example to illustrate how the method of Figure 1 may be applied, and does not suggest that the invention is particularly suited to ATM networks or any other financial product or service. Against this backdrop, Petitioner's reliance on the Specification's exemplary ATM embodiment does not persuade us that the patent *claims* a method used in the practice, administration, or management of a financial product or service.

III. CONCLUSION

For the foregoing reasons, based on the present record and particular facts of this proceeding, we determine that the information presented in the Petition does not establish that the '683 patent qualifies as a “covered business method patent” under § 18(d)(1) of the AIA. Therefore, we do not

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institute a covered business method patent review as to any of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is denied as to all challenged claims of the '683 patent.

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