UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/756,064	05/31/2007	Thomas A. Cogswell	07-0427 (24691-136)	1208

60476   7590   04/24/2018
PATENT DOCKET DEPARTMENT
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EXAMINER
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ART UNIT	PAPER NUMBER
3683	

NOTIFICATION DATE	DELIVERY MODE
04/24/2018	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS A. COGSWELL and CHAD WARRINGTON[1]

Appeal 2017-001574
Application 11/756,064
Technology Center 3600

Before ROBERT E. NAPPI, CATHERINE SHIANG, and
JASON M. REPKO, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the

Examiner's final rejection of claims 1, 3, 6 through 8, 12 through 14, 16, 17,

and 20 through 26. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] According to Appellants, the real party in interest is The Boeing Company.
App. Br. 1.

INVENTION

Appellants' disclosed invention is directed to interfacing computer modeled design and manufacture data from a Manufacturing Process Planning (MPP) system to peripheral computer systems, via an integration server interface, that resolves data transfer format conflicts between the MPP system and the peripheral systems. *Abstract.* Claim 1 is representative of the invention and reproduced below.

> 1. A method for distributing electronic data comprising model-based data of a product from a manufacturing process planning (MPP) system in a service oriented architecture to a manufacturing execution system separately supplied from the MPP system, the method comprising:
>
> receiving, at an integration server, a shop order creation request for manufacture of the product over the service oriented architecture;
>
> requesting, with the integration server, a new shop order instance from the MPP system for the shop order creation request;
>
> receiving, at the integration server, the new shop order instance from the MPP system in a first model-based data arrangement, the new shop order instance including data for manufacturing the product, the first model-based data arrangement being a model-based data input and output format recognized by the MPP system and not recognized by the manufacturing execution system;
>
> adapting, by the integration server using an application programming interface (API), the new shop order instance from the first model-based data arrangement into a second data arrangement that includes a plurality of work instructions for use on a shop floor, wherein the second data arrangement is compatible with the manufacturing execution system and not compatible with the MPP system;
>
> supplying, with the integration server, the new shop order instance to the manufacturing execution system in the

second data arrangement to commence physical manufacture
of the product using the work instructions from the new shop
order instance;

after the physical manufacture of the product has
commenced, receiving, by the integration server, a revision to
one of the work instructions in the new shop order instance,
the revision being received in a third data arrangement;

adapting, by the integration server, the revision from
the third arrangement to the first model-based arrangement;
and requesting, by the integration server, a revised shop order
instance from the MPP system based on the revision.

REJECTIONS AT ISSUE[2]

The Examiner has rejected claims 1, 3, 6 through 8, 12 through 14, 16,
17, and 20 through 26 under 35 U.S.C. § 101 for being directed to patent-
ineligible subject matter. Final Act. 9–10.

The Examiner has rejected claims 1, 3, 6 through 8, 12 through 14, 16,
17, and 20 through 25 under 35 U.S.C. § 103 being unpatentable over
Landers (US 2006/0106485 A1, published May 18, 2006), Jayaram (US
2002/0120920 A1, published Aug. 29, 2002) and Beasley (US 4,827,423,
issued May 2, 1989). Final Act. 11–38.

The Examiner has rejected claim 26 under 35 U.S.C. § 103 being
unpatentable over Landers, Jayaram, Beasley, and Mifsud (US
2007/0256391 A1, published Nov. 8, 2007).

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[2] Throughout this Decision we refer to the Appeal Brief filed February 22,
2016, Reply Brief filed November 9, 2016, Final Office Action mailed July
17, 2015, Appellants' Specification submitted May 31, 2007, and the
Examiner's Answer mailed September 9, 2016.

Rejection under 35 U.S.C. § 101

PRINCIPLES OF LAW

Patent-eligible subject matter is defined in § 101 of the Patent Act, which recites:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

There are, however, three judicially created exceptions to the broad categories of patent-eligible subject matter in § 101: laws of nature, natural phenomena, and abstract ideas. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012). Although an abstract idea, itself, is patent-ineligible, an application of the abstract idea may be patent-eligible. *Alice*, 134 S. Ct. at 2355. Thus, we must consider "the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id.* (citing *Mayo*, 566 U.S. at 78–80). The claim must contain elements or a combination of elements that are "'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract idea] itself.'" *Id.* (citing *Mayo*, 566 U.S. at 72–73).

The Supreme Court sets forth a two-part "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Id.* at 2355.

> First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. [*Mayo*, 566 U.S. at 76–

77]. If so, we then ask, "[w]hat else is there in the claims before us?" *Id.*, at [77–78]. To answer that question, we consider the elements of each claim both individually and "as an ordered combination" to determine whether the additional elements "transform the nature of the claim" into a patent-eligible application. *Id.*, at [77–78]. We have described step two of this analysis as a search for an "'inventive concept'"— *i.e.*, an element or combination of elements that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Id.*, at [71–73].

Id.

ANALYSIS

We have reviewed Appellants' arguments in the Briefs, the Examiner's rejections, and the Examiner's response to Appellants' arguments. Appellants' arguments have persuaded us of error in the Examiner's determination that the claims are directed to an abstract concept. However, we are unpersuaded of error in the Examiner's rejection under 35 U.S.C. § 103.

Appellants argue on pages 6 through 8 of the Appeal Brief and pages 2 through 4 of the Reply Brief that the Examiner has not established the claims are directed to an abstract idea. Appellants argue that while independent claims 1, 12, and 20 are not directed to the abstract idea of "organizing human activities" as found by the Examiner, but rather the claims recites steps of adapting a shop order from a first model based data to a second arrangement that is compatible with a manufacturing execution system. App. Br. 7. Further, Appellants assert the claims recite manufacturing a product. App. Br. 7.

The Examiner has found that the claims are directed to an abstract idea stating the claims are directed to the abstract idea of organizing human

activities (specifically, "concepts relating to managing relationships or transactions between people") and the additional elements are merely generic computer instructions/structure or use of the computer to implement the idea. Final Act., 9, Answer 39–40 (stating that the steps of receiving a shop order creation of a request, requesting a new shop order instance, and supplying the new shop order instance to the manufacturing execution system, are all directed to organizing human activity). Additionally, the Examiner equates the claims to the abstract concept of using categories to organize and transmit data. Answer 38 (considering the claim to recite categories such as first and second model-based data arrangements to store information and supply shop order instances).

We have reviewed independent claims 1, 12, and 20 and do not find that the Examiner has sufficiently shown that the claims recite an abstract idea of either organizing human activities (specifically, "concepts relating to managing relationships or transactions between people") or using categories to organize and transmit data. As discussed above, Appellants argue the claims recite adapting a shop order from a first model based data to a second arrangement, the Examiner has not shown how this feature is organizing human activities (specifically, "concepts relating to managing relationships or transactions between people"), rather the limitation of each of the claims recites that the data model based data from a manufacturing process planning system, is adapted to a format compatible with a manufacturing execution system. We do not consider the Examiner's rejection or response to arguments to have explained how this step relates to an abstract concept of human activity (specifically, "concepts relating to managing relationships or transactions between people") or organizing data. Further, claim 1,

recites a limitation directed to supplying the new data to commence physical manufacture of the product, claims 12 and 20 recite steps of re-commencing the physical manufacture of the product. Similarly, the Examiner has not explained how these steps relate to an abstract concept of organizing human activity (specifically, "concepts relating to managing relationships or transactions between people") or organizing data. Thus, we do not find that the Examiner has shown the claims are directed to an abstract concept and we do not reach the second part of the *Alice* test.

Rejection under 35 U.S.C. § 103

Appellants argue on pages 11 through 15 of the Appeal Brief, that the Examiner's obviousness rejection is in error. Appellants argue

> Landers fails to describe an adaptation from a model-based arrangement to a shop floor instruction-based arrangement. The Action asserts the CAD/CAM software package described by Landers teaches this element. This assertion ignores that in the present application the model-based arrangement is recognized by the MPP system, but not at the shop floor. Further, in the present application the shop floor instruction-based arrangement is not recognized by the MPP system. Landers describes a unified system that readily transitions between models and CNC code. While a CNC machine may not recognize a CAD model, the CAD system described by Landers recognizes both formats.

App. Br. 12. Further Appellants argue:

> Jayaram does not describe nor suggest adapting a new shop order instance from a first model-based data arrangement into a second data arrangement that includes a plurality of work instructions for use on a shop floor, wherein the second data arrangement is compatible with a manufacturing execution system and not compatible with a manufacturing process planning system.

App. Br. 13.

Finally, Appellants argue that the skilled artisan would not combine the Beasley, which describes a fully integrated system, with Landers and Jayaram to arrive at the claimed invention. App. Br. 15.

We are not persuaded of error by these arguments. The Examiner has provided a comprehensive respond to Appellants' augments on pages 45 through 50 of the Answer. We have reviewed the Examiner's response and we concur with the Examiner's findings. Specifically, the Examiner finds and we concur that Landers teaches adapting a new shop order from a first model based data arrangement to another for use on the shop floor. Answer 46–48 (citing Landers teaching of converting CAD/CAM software models to geometry to be used by CNC machines, *see* paragraphs 124, 128 and 143). The Examiner finds that as Landers teaches that these model arrangements must be translated in order to execute, they are unrecognizable or incompatible with the other system. Answer 47–48. Similarly, the Examiner finds that Beasley teaches a system to convert product definition files into instructions for operating each machine on the factory floor, thus, teaching converting information that is not recognized into instructions that are recognized by the factory machines. Answer 48 (citing Beasley Col. 11, 33–50). We concur with the Examiner's analysis and note that Appellants' arguments merely assert the Examiner's finding is erroneous without pointing to teachings of Landers that support Appellants' assertions. With respect to Appellants' argument regarding the combination of Beasley, with Landers and Jayaram we are not persuaded of error. The Examiner has provided a rationale to combine the references on pages 19 and 22 of the Final Action, to provide a more integrated system, and Appellants have not

explained why this is in error. Accordingly, we are not persuaded of error in the Examiner's obviousness rejection of representative claim 1 and we sustain the Examiner's obviousness rejection of claim 1 and claims 3, 6 through 8, 12 through 14, 16, 17, and 20 through 25 grouped with claim 1.

Appellants have not presented separate arguments directed to the Examiner's obviousness rejection of claim 26, accordingly, we sustain the Examiner's rejection of claim 26 for the same reasons as claim 1.

DECISION

We reverse the Examiner's rejections of claims 1, 3, 6 through 8, 12 through 14, 16, 17, and 20 through 26 under 35 U.S.C. § 101.

We affirm the Examiner's rejections of claims 1, 3, 6 through 8, 12 through 14, 16, 17, and 20 through 26 under 35 U.S.C. § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED