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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/733,605	04/10/2007	Robert Morris Dressler	465-034US	8495
22897	7590	03/05/2015	EXAMINER	
Kaplan Breyer Schwarz & Ottesen, LLP 100 Matawan Road, Suite 120 Matawan, NJ 07747			GEORGEWILL, OPIRIBO	
			ART UNIT	PAPER NUMBER
			2643	
			NOTIFICATION DATE	DELIVERY MODE
			03/05/2015	ELECTRONIC

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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* ROBERT MORRIS DRESSLER, JAMES VINCENT  
STEELE, ROBERT LEWIS MARTIN, MANLIO ALLEGRA,  
and MARK DOUGLAS REUDINK

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Appeal 2012-011087  
Application 11/733,605  
Technology Center 2600

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Before CARL W. WHITEHEAD JR., JEFFREY S. SMITH, and  
JON M. JURGOVAN, *Administrative Patent Judges*.

JURGOVAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from a rejection of  
claims 1-44. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.<sup>2</sup>

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<sup>1</sup> The real party in interest is Polaris Wireless, Inc. and DeMont & Breyer, LLC.

<sup>2</sup> Our Decision refers to the Appeal Brief filed Apr. 9, 2012 (“App. Br.”), the Examiner’s Answer mailed June 25, 2012 (“Ans.”), the Reply Brief filed July 25, 2012 (“Reply Br.”), and the Specification filed Apr. 10, 2007 (“Spec.”).

## CLAIMS SUMMARY

The claims are directed to efficient deployment of mobile test units to gather location-dependent radio-frequency data. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method comprising:  
generating by a data-processing system a drive-test plan to satisfy a request for empirical data for an electromagnetic signal in a geographic region, wherein the drive-test plan proposes a measurement of the electromagnetic signal at each of a non-empty set of locations *L*;  
wherein the drive-test plan is generated based on an economic cost-benefit analysis that comprises:
  - (i) an economic value resulting from implementing the drive-test plan, and
  - (ii) an economic cost of implementing the drive-test plan.

Claims 2-8 depend from claim 1.

Independent claim 9 generates an estimate of economic cost benefit at a location *Z* for measurement of signal strength along a route of locations *L* for a drive-test plan. If the estimate of economic benefit exceeds the estimate of economic cost, location *Z* is added to the drive-test plan. Claims 10-18 depend from claim 9.

Independent claim 19 is the converse of claim 9. Claim 19 recites determining economic cost and benefit of a drive-test plan without a location *P*, and removing the location *P* from the drive-test plan when the estimate of the economic benefit exceeds the economic cost. Claims 20-28 depend from claim 19.

Independent claim 29 is directed to generating estimates of cost and benefit for two drive-test plans. Claims 30-44 depend from claim 29.

## REJECTIONS

1. Claims 1-44 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Ans. 6.
2. Claims 1-5, 9-41, and 46 stand rejected under 35 U.S.C. § 103(a) based on Somoza (US 6,336,035 B1 issued Jan. 1, 2002) and Bauer (US 5,793,934 issued Aug. 11, 1998). Ans. 7.
3. Claims 6-8 and 42-44 stand rejected under 35 U.S.C. § 103(a) based on Somoza, Bauer, and Arpee (US 5,926,762 issued July 20, 1999). Ans. 19.

## ANALYSIS

### *Rejection under 35 U.S.C. § 101*

The Examiner and Appellants dispute the subject matter eligibility of claims 1-44 under 35 U.S.C. § 101. There have been updates in the law and examiner guidelines concerning patent eligibility after the briefings in this case. Specifically, *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347 (2014) was decided after conclusion of briefings, and the United States Patent and Trademark Office published the *2014 Interim Guidance on Patent Subject Matter Eligibility*. 79 Fed. Reg. 74,619, 74,633 (Dec. 16, 2014) (“*2014 Interim Guidance*”).

The *2014 Interim Guidance* sets forth a procedure for examination starting with determining whether a claim is directed to one of the statutory categories of subject matter, i.e., process, machine, manufacture, or composition of matter, and is not wholly directed to a judicial exception to patentability, namely, a law of nature, physical phenomenon, or an abstract idea. See Manual of Patent Examining Procedure (“MPEP”) § 2106(I). In

this case, the claims satisfy this initial determination as they are nominally directed to methods which are statutory processes, and they do not wholly preempt the abstract ideas, namely, economic cost-benefit analyses, that are recited therein.

Next, the *2014 Interim Guidance* applies the two-step test for determining subject matter eligibility as set forth in *Mayo Collaborative Serv. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289 (2012) (“*Mayo*”). The first step of *Mayo* is to determine whether the claim recites a law of nature, a natural phenomenon, or an abstract idea. The Examiner found the claims all recite economic cost-benefit analyses, which are mental processes, and are thus directed to abstract ideas. (Ans. 18, 21). There is no doubt in this case the claims recite an abstraction, namely, an economic cost-benefit analysis.

The next step under *Mayo* is to determine if the claim recites additional elements that amount to significantly more than the judicial exception. Appellants argue a data-processing system is not a human; that a general-purpose computer can perform patentable operations, that Section 101 only rarely excludes subject matter from patentability, that the claims are directed to functional and palpable applications, and that the Examiner performed no weighing of pros and cons under the *2014 Interim Guidance*. (App. Br. 11–13; Reply Br. 4–5).

The Examiner finds that the methods can be performed mentally or manually (Ans. 18, 20, 21); that the nominal recitation of a data processing server is not enough to tie the method to a particular machine (Ans. 18, 19, 22), there is no transformation in the claims (Ans. 18, 20-22), that the claims merely recite a field in which method is to be applied (Ans. 20, 22), that the machine is merely an object on which the method operates (Ans. 20, 22),

that the claims are merely a statement of general concept (Ans. 20, 22), and that known and unknown use of the concept is covered by the claims (Ans. 18, 20– 22). Weighing these factors against those advanced by Appellants, the Examiner concludes all claims are directed to patent-ineligible subject matter (Ans. 22).

On this record, we are not persuaded the Examiner erred in the rejection of claims 1-44 under 35 U.S.C. § 101. Claims directed to economic practices or theories are generally not directed to patentable subject matter. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347 (2014) (claims directed to mitigating settlement risk found patent-ineligible); *Bilski v. Kappos*, 561 U.S. 593 (2010) (“*Bilski*”) (claims directed to hedging found patent-ineligible). Although the claims at issue in this case recite economic cost-benefit analysis in the context of generating a drive-test plan for performance of RF measurements in a geographic region using a data-processing system, the basic thrust of the claims is nonetheless performance of cost-benefit analysis. Similar to the *Bilski* case, economic cost-benefit analysis is a fundamental concept long prevalent in our system of commerce. Computerizing cost-benefit analysis in the claimed context does not amount to “significantly more” than the abstract idea of cost-benefit analysis itself. Adding conventional elements to an abstract idea does not render it patent-eligible. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289 (2012). Accordingly, we sustain the Examiner’s rejection on this ground.

*Rejections under 35 U.S.C. § 103(a)*

Appellants argue the prior art fails to teach generating a drive-test plan based on economic cost-benefit analysis according to claims 1-44. (App. Br. 18-25). Specifically, Appellants argue Somoza fails to disclose an economic basis for selecting its “optimal drive test route,” stating Somoza’s route is based instead on the proximity of a street to an antenna at a cell site and may take into account possible architectural clutter interference and potential high traffic areas within the cell. (App. Br. 18-19 *citing* Somoza col. 9, ll. 2-9). Appellants argue Bauer analyzes no economic value or benefit at all, but rather has the objective to provide as short a distance as possible from a starting point to a destination without regard to economic cost benefit of a route or candidate location. (App. Br. 19 *citing* Bauer col. 2, ll. 22-23).

Regarding claims 1–8, Appellants argue the prior art discloses no data-processing system generating a drive-test plan based on economic cost-benefit analysis, and that comprises an economic value and economic cost resulting from implementing the drive-test plan. (App. Br. 19–20). Regarding claims 9-18, Appellants argue the prior art teaches no economic cost-benefit analysis to add a location to a drive-test plan, or regarding claims 19-28, to subtract a location from a drive-test plan, or regarding claims 29-41 to generate multiple drive-test plans based on economic cost-benefit analysis. Appellants further argue the Examiner is estopped by a statement in related application, serial no. 11/733,603, Office Action dated January 19, 2012, in which the Examiner allegedly stated Somoza is silent on factors relating to economic cost-benefit analysis. (App. Br. 20-21).

The Examiner states Somoza teaches reducing economic cost when compared to traditional methods to determine RF propagation. (Ans. 24 (*citing* Somoza col. 8, l. 1)). The Examiner states when this teaching is combined with the cost-benefit analysis optimization route of Bauer, one of ordinary skill in the art would look to saving economic cost as taught by Somoza (*id.*). The Examiner further states Appellants are considering the references individually, and not in combination as required in the obviousness analysis, and that the costs described in Bauer are only exemplary, implying costs of other kinds may be implicated by Bauer (*id.*). Regarding the Examiner estoppel issue, the Examiner contends Appellants mischaracterize the Examiner's statement regarding Somoza.

As noted, Somoza teaches traditional methods to determine RF propagation have been time consuming and often very costly, and its software tool allows technicians to generate a simulated, optimal drive test route within the cell to best determine actual RF propagation. (Somoza col. 7, l. 67 - col. 8, l. 6). We agree with the Examiner, this teaching connotes to the person of ordinary skill in the art the generation of a drive test route based on economic cost.

Turning to whether Somoza teaches calculating the drive test route based on economic benefit, Appellants' Specification states the benefit of implementing a candidate test-drive plan equals the sum of many factors, including characterizations of the electromagnetic clutter, terrain, and population density at each location visited by a mobile test unit. (Spec. 22-23). Similarly, Somoza teaches graphical representation of drive test routes on a computer system using cell information including topographical data, user location data, and RF coverage interference data. (Somoza col. 8,



ll. 7-19). Although Somoza does not explicitly state such cell information amounts to economic benefits, they are nonetheless some of the same data described in Appellants' Specification as factors summed to determine economic benefit. In addition, in the commercial context in which Somoza's teachings are clearly intended to be used, it is inconceivable that cost-benefit analysis on some level would not be performed during planning where RF measurements are to be taken to determine cell coverage. Therefore, we conclude Somoza teaches determination of drive test routes based on economic benefit as well as economic cost.

Bauer explicitly teaches estimation of costs and benefits along a route. (Col. 12, ll. 17-32). Although Appellants argue these are not economic costs and benefits, as the Examiner noted, the disclosed costs and benefits mentioned are exemplary. (Ans. 24, 26 citing Bauer col. 12, ll. 17-32). In addition, path length of a route is inherently or implicitly related to economic cost via the consumption of energy required to move Bauer's autonomous mobile unit along the route. With regard to claims 9-28, we note that a cost-benefit analysis for a drive-test plan for a candidate route as taught by the combined prior art necessarily includes cost-benefit analysis for the points or locations included in or subtracted from the route. With regard to claims 29-41, as the Examiner noted, the prior art teaches selection of an optimal drive test route, which implies multiple candidate routes. (Somoza col. 9, ll. 2-4). Accordingly, considering the references "as a whole" for what they would connote to a person of ordinary skill, we are not persuaded the Examiner erred in the prior art rejections. *See In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971) ("the test for combining references is not what the individual references themselves suggest but

rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art.”).

We find no authority supporting any legal theory of Examiner estoppel by statements made in a related case, and Appellants have cited none. Although ideally the Examiner’s position would remain consistent throughout prosecution, assuming *arguendo* the Examiner did change position in this case, the Examiner is permitted to do so as prosecution progresses as warranted by the evidence. See *In re Ruschig*, 379 F.2d 990, 992-993 (CCPA 1967); *In re Ellis*, 86 F.2d 412 (CCPA 1936), *In re Becker*, 101 F.2d 557 (CCPA 1939). Accordingly, we are not persuaded that the Examiner is estopped in this case by statements made in another.

#### DECISION

For the foregoing reasons, we sustain the rejection of claims 1–44 under 35 U.S.C. § 101. We also sustain the rejections of claims 1–44 under 35 U.S.C. § 103(a).

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) (2009).

AFFIRMED

gvw