United States Court of Appeals for the Federal Circuit

ELECTRIC POWER GROUP, LLC,
Plaintiff-Appellant

v.

ALSTOM S.A., ALSTOM GRID, INC., PSYMETRIX, LTD., ALSTOM LIMITED,
Defendants-Appellees

2015-1778

Appeal from the United States District Court for the Central District of California in No. 2:12-cv-06365-JGB-RZ, Judge Jesus G. Bernal.

Decided: August 1, 2016

SYED A. HASAN, Lewis Roca Rothgerber Christie LLP, Glendale, CA, argued for plaintiff-appellant. Also represented by DAVID A. DILLARD, KYLE WAYNE KELLAR.

ANGELA DAWN MITCHELL, Shook, Hardy & Bacon, LLP, Kansas City, MO, argued for defendants-appellees. Also represented by PETER EMANUEL STRAND, CHRISTINE A. GUASTELLO; JAMIE KITANO, San Francisco, CA.

Before TARANTO, BRYSON, and STOLL, *Circuit Judges.*

TARANTO, *Circuit Judge.*

This case involves the eligibility for patenting, under 35 U.S.C. § 101, of certain claims of three of Electric Power Group, LLC's patents, U.S. Patent Nos. 7,233,843; 8,060,259; and 8,401,710. Those patents describe and claim systems and methods for performing real-time performance monitoring of an electric power grid by collecting data from multiple data sources, analyzing the data, and displaying the results. *See* '710 patent, col. 1, lines 27–30; *id.*, col. 2, lines 43–49. Electric Power Group sued Alstom S.A., Alstom Grid, Inc., Psymetrix Limited, and Alstom Limited (collectively, Alstom) in the Central District of California, alleging infringement of various claims of the three patents. The district court granted Alstom summary judgment that the subject matter of Electric Power Group's asserted patent claims fails the tests for patent eligibility under governing precedent.

We affirm. Though lengthy and numerous, the claims do not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology. The claims, defining a desirable information-based result and not limited to inventive means of achieving the result, fail under § 101.

I

Claim 12 of the '710 patent is representative of the asserted claims.[1] It reads:

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[1] The claims asserted are claims 4, 7, 9, 12, 19, and 24 of the '843 patent; claims 1, 5, 18, 21, 38, 49, and 53 of the '259 patent; and claims 9, 12, and 17 of the '710 patent. *See* J.A. 32–39 (setting out claims).

12. A method of detecting events on an interconnected electric power grid in real time over a wide area and automatically analyzing the events on the interconnected electric power grid, the method comprising:

receiving a plurality of data streams, each of the data streams comprising sub-second, time stamped synchronized phasor measurements wherein the measurements in each stream are collected in real time at geographically distinct points over the wide area of the interconnected electric power grid, the wide area comprising at least two elements from among control areas, transmission companies, utilities, regional reliability coordinators, and reliability jurisdictions;

receiving data from other power system data sources, the other power system data sources comprising at least one of transmission maps, power plant locations, EMS/SCADA systems;

receiving data from a plurality of non-grid data sources;

detecting and analyzing events in real-time from the plurality of data streams from the wide area based on at least one of limits, sensitivities and rates of change for one or more measurements from the data streams and dynamic stability metrics derived from analysis of the measurements from the data streams including at least one of frequency instability, voltages, power flows, phase angles, damping, and oscillation modes, derived from the phasor measurements and the other power system data sources in which the metrics are indicative of events, grid stress, and/or grid instability, over the wide area;

> displaying the event analysis results and diagnoses of events and associated ones of the metrics from different categories of data and the derived metrics in visuals, tables, charts, or combinations thereof, the data comprising at least one of monitoring data, tracking data, historical data, prediction data, and summary data;
>
> displaying concurrent visualization of measurements from the data streams and the dynamic stability metrics directed to the wide area of the interconnected electric power grid;
>
> accumulating and updating the measurements from the data streams and the dynamic stability metrics, grid data, and non-grid data in real time as to wide area and local area portions of the interconnected electric power grid; and
>
> deriving a composite indicator of reliability that is an indicator of power grid vulnerability and is derived from a combination of one or more real time measurements or computations of measurements from the data streams and the dynamic stability metrics covering the wide area as well as non-power grid data received from the non-grid data source.

'710 patent, col. 30, line 66, through col. 31, line 50. The district court treated claim 12 as representative, and so may we. On appeal, Electric Power Group's opening brief neither argues for the validity of any other claim if claim 12 is invalid nor presents any meaningful argument for the distinctive significance of any claim limitations other than those included in claim 12.

On Alstom's motion for summary judgment, the district court held that the asserted claims do not define subject matter that is eligible for patenting under § 101.

The court concluded that the claims are directed to "the abstract idea of monitoring and analyzing data from disparate sources." J.A. 27. The court then determined that the asserted claims lack an inventive concept in the application of that abstract idea, observing in particular that the "most significant additional limitations . . . are those that limit the claim[s] to monitoring and analyzing data in the context of electric power grids." J.A. 28.

We have jurisdiction over this appeal under 28 U.S.C. § 1295(a)(1). We review the district court's grant of summary judgment of ineligibility de novo. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016).

II

Section 101 provides that "[w]hoever 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." 35 U.S.C. § 101. The provision, however, "contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014). The Supreme Court, setting up a two-stage framework, has held that a claim falls outside § 101 where (1) it is "directed to" a patent-ineligible concept, *i.e.*, a law of nature, natural phenomenon, or abstract idea, and (2), if so, the particular elements of the claim, considered "both individually and 'as an ordered combination,'" do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Id.* at 2355; *see Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1297–98 (2012).

The Supreme Court's formulation makes clear that the first-stage filter is a meaningful one, sometimes ending the § 101 inquiry. *Alice*, 134 S. Ct. at 2355; *see Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, No. 2015-

1570, 2016 WL 3606624, at *6 (Fed. Cir. July 5, 2016); *Enfish*, 822 F.3d at 1335. At the same time, the two stages are plainly related: not only do many of our opinions make clear that the two stages involve overlapping scrutiny of the content of the claims, *e.g.*, *TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611–15 (Fed. Cir. 2016); *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1375 (Fed. Cir. 2016), but we have noted that there can be close questions about when the inquiry should proceed from the first stage to the second, *Enfish*, 822 F.3d at 1339; *see Rapid Litig.*, 2016 WL 3606624, at *6–7 (explaining that stage-two analysis would reach same conclusion as reached at stage one); *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, No. 2015-1763, 2016 WL 3514158, at *5 (Fed. Cir. June 27, 2016). Reflecting those points, we have described the first-stage inquiry as looking at the "focus" of the claims, their "'character as a whole,'" and the second-stage inquiry (where reached) as looking more precisely at what the claim elements add—specifically, whether, in the Supreme Court's terms, they identify an "'inventive concept'" in the application of the ineligible matter to which (by assumption at stage two) the claim is directed. *See Enfish*, 822 F.3d at 1335–36; *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015); *cf. Bascom*, 2016 WL 3514158, at *5 ("basic thrust").

A

The claims in this case fall into a familiar class of claims "directed to" a patent-ineligible concept. The focus of the asserted claims, as illustrated by claim 12 quoted above, is on collecting information, analyzing it, and displaying certain results of the collection and analysis. We need not define the outer limits of "abstract idea," or at this stage exclude the possibility that any particular inventive means are to be found somewhere in the claims, to conclude that these claims focus on an abstract idea—and hence require stage-two analysis under § 101.

Information as such is an intangible. *See Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 451 n.12 (2007); *Bayer AG v. Housey Pharm., Inc.*, 340 F.3d 1367, 1372 (Fed. Cir. 2003). Accordingly, we have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas. *See*, *e.g.*, *Internet Patents*, 790 F.3d at 1349; *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011). In a similar vein, we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category. *See*, *e.g.*, *TLI Commc'ns*, 823 F.3d at 613; *Digitech*, 758 F.3d at 1351; *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App'x 950, 955 (Fed. Cir. 2014); *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011); *SiRF Tech., Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010); *see also Mayo*, 132 S. Ct. at 1301; *Parker v. Flook*, 437 U.S. 584, 589–90 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972). And we have recognized that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis. *See*, *e.g.*, *Content Extraction*, 776 F.3d at 1347; *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014).

Here, the claims are clearly focused on the combination of those abstract-idea processes. The advance they purport to make is a process of gathering and analyzing

information of a specified content, then displaying the results, and not any particular assertedly inventive technology for performing those functions. They are therefore directed to an abstract idea.

The claims here are unlike the claims in *Enfish*. There, we relied on the distinction made in *Alice* between, on one hand, computer-functionality improvements and, on the other, uses of existing computers as tools in aid of processes focused on "abstract ideas" (in *Alice*, as in so many other § 101 cases, the abstract ideas being the creation and manipulation of legal obligations such as contracts involved in fundamental economic practices). *Enfish*, 822 F.3d at 1335–36; *see Alice*, 134 S. Ct. at 2358–59. That distinction, the Supreme Court recognized, has common-sense force even if it may present line-drawing challenges because of the programmable nature of ordinary existing computers. In *Enfish*, we applied the distinction to reject the § 101 challenge at stage one because the claims at issue focused not on asserted advances in uses to which existing computer capabilities could be put, but on a specific improvement—a particular database technique—in how computers could carry out one of their basic functions of storage and retrieval of data. *Enfish*, 822 F.3d at 1335–36; *see Bascom*, 2016 WL 3514158, at *5; *cf. Alice*, 134 S. Ct. at 2360 (noting basic storage function of generic computer). The present case is different: the focus of the claims is not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools.

B

When we turn to stage two of the *Alice* analysis and scrutinize the claim elements more microscopically, we find nothing sufficient to remove the claims from the class of subject matter ineligible for patenting. Most obviously, limiting the claims to the particular technological environment of power-grid monitoring is, without more,

insufficient to transform them into patent-eligible applications of the abstract idea at their core. *See Alice*, 134 S. Ct. at 2358; *Mayo*, 132 S. Ct. at 1294; *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010); *Diamond v. Diehr*, 450 U.S. 175, 191 (1981); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014). More particularly, a large portion of the lengthy claims is devoted to enumerating types of information and information sources available within the power-grid environment. But merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.

The claims in this case do not even require a new source or type of information, or new techniques for analyzing it. *See*, *e.g.*, '710 patent, col. 8, lines 51–62 (referring to existing phasor data sources); J.A. 6969–71 (describing workings and history of phasor data use); Electric Power Group Br. at 21–22; Reply Br. at 5 (new algorithms not claimed). As a result, they do not require an arguably inventive set of components or methods, such as measurement devices or techniques, that would generate new data. They do not invoke any assertedly inventive programming. Merely requiring the selection and manipulation of information—to provide a "humanly comprehensible" amount of information useful for users, Reply Br. at 6; Electric Power Group Br. at 14–15—by itself does not transform the otherwise-abstract processes of information collection and analysis.

Inquiry therefore must turn to any requirements for *how* the desired result is achieved. But in this case the claims' invocation of computers, networks, and displays does not transform the claimed subject matter into patent-eligible applications. The claims at issue do not require any nonconventional computer, network, or display components, or even a "non-conventional and non-

generic arrangement of known, conventional pieces," but merely call for performance of the claimed information collection, analysis, and display functions "on a set of generic computer components" and display devices. *Bascom*, 2016 WL 3514158, at *6–7.

Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information. That is so even as to the claim requirement of "displaying concurrent visualization" of two or more types of information, '710 patent, col. 31, line 37, even if understood to require time-synchronized display: nothing in the patent contains any suggestion that the displays needed for that purpose are anything but readily available. We have repeatedly held that such invocations of computers and networks that are not even arguably inventive are "insufficient to pass the test of an inventive concept in the application" of an abstract idea. *buySAFE*, 765 F.3d at 1353, 1355; *see*, *e.g.*, *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015); *Internet Patents*, 790 F.3d at 1348–49; *Content Extraction*, 776 F.3d at 1347–48.

Two of our decisions that rejected § 101 challenges are materially different from this case. The claims at issue here do not require an arguably inventive device or technique for displaying information, unlike the claims at issue in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (at JMOL stage finding inventive concept in modification of conventional mechanics behind website display to produce dual-source integrated hybrid display). Nor do the claims here require an arguably inventive distribution of functionality within a network, thus distinguishing the claims at issue from those in *Bascom*, 2016 WL 3514158, at *6 (at pleading stage finding sufficient inventive concept in "the installation of

a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user"). The claims in this case specify what information in the power-grid field it is desirable to gather, analyze, and display, including in "real time"; but they do not include any requirement for performing the claimed functions of gathering, analyzing, and displaying in real time by use of anything but entirely conventional, generic technology. The claims therefore do not state an arguably inventive concept in the realm of application of the information-based abstract ideas.

The district court in this case wrapped up its application of the Supreme Court's framework by invoking an important common-sense distinction between ends sought and particular means of achieving them, between desired results (functions) and particular ways of achieving (performing) them. The court identified the problem addressed by the patents: "Here, the problem is the need to monitor and analyze data from multiple distinct parts of a power grid." J.A. 30. But, the court reasoned, "there is a critical difference between patenting a particular concrete solution to a problem and attempting to patent the abstract idea of a solution to the problem in general." *Id.* Electric Power Group's asserted claims, the court observed, do the latter: rather than claiming "some specific way of enabling a computer to monitor data from multiple sources across an electric power grid," some "particular implementation," they "purport to monopolize every potential solution to the problem"—any way of effectively monitoring multiple sources on a power grid. *Id.* Whereas patenting a particular solution "would incentivize further innovation in the form of alternative methods for achieving the same result," the court concluded, allowing claims like Electric Power Group's claims here would "inhibit[] innovation by prohibiting other inventors from developing their own solutions to the problem without first licensing the abstract idea." *Id.*

The district court did not set forth that description as a freestanding basis for its ineligibility holding, independent of the framework for analysis established under the Supreme Court's authority. Moreover, the district court phrased its point only by reference to claims so result-focused, so functional, as to effectively cover any solution to an identified problem. The court's description is one helpful way of double-checking the application of the Supreme Court's framework to particular claims—specifically, when determining whether the claims meet the requirement of an inventive concept *in application*. Indeed, the essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101, especially in the area of using generic computer and network technology to carry out economic transactions. *See Loyalty Conversion Sys. Corp. v. American Airlines, Inc.*, 66 F. Supp. 3d 829, 837–38, 840, 843, 845 (E.D. Tex. 2014). In this case, the district court's wrap-up description confirms its, and our, conclusion that the claims at issue fail to meet the standard for patent eligibility under § 101.

CONCLUSION

For the foregoing reasons, we affirm the judgment of the district court.

AFFIRMED