No. 22-822

In the Supreme Court of the United States

AVERY DENNISON CORPORATION,
Petitioner,

v.

ADASA, INC.,
Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF FOR THE NATIONAL RETAIL FEDERATION AND THE ALLIANCE FOR AUTOMOTIVE INNOVATION AS *AMICI CURIAE* IN SUPPORT OF PETITIONER

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QUESTION PRESENTED

Whether a system for displaying, organizing, or selecting information for the content that it communicates to humans is patent-eligible subject matter under 35 U.S.C. § 101.

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INTEREST OF *AMICI*

The National Retail Federation ("NRF") is the world's largest retail trade association.[1] Retail is by far the largest private-sector employer in the United States, supporting one in four U.S. jobs—approximately 52 million American workers—and contributing $3.9 trillion to the annual GDP.

Retailers and other service-oriented businesses rely on 35 U.S.C. § 101 to protect them against patents that claim ineligible subject matter. Of particular importance to these industries is the law's bar on the patenting of "method[s] of organizing human activity." *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 220 (2014).

Sales and service businesses are people-oriented businesses. Success in these enterprises depends on the ability to influence, manage, and communicate with people and to anticipate what customers want.

But no technique or strategy for serving customers is ever equally effective with all groups. People's tastes and their mental responses to a message will vary. Knowing a particular method is thus insufficient—knowing your customers and the market is always critical to human-oriented enterprises.

This makes it inappropriate and unfair for one to obtain patent rights over another's success in methods of organizing human activity—and gives NRF a strong interest in the proper enforcement of § 101's limits on subject matter eligibility.

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[1] Counsel for the parties have received the notice required by Rule 37.2. NRF and its counsel are the sole authors of this brief. No party or person other than NRF and its fellow *amici* contributed funding in relation to the brief.

The Alliance for Automotive Innovation's members include the manufactures of nearly 98% of all new cars and light trucks that are sold in the United States. Other members include original equipment suppliers, technology and other automotive-related companies, and other trade associations. Automakers invest billions of dollars each year in new technologies, including fuel-saving technologies such as electrification to transition to a low-carbon transportation future. A robust patent system—supported by high-quality patents that spur, not block, innovation—is essential to support and maintain America's leadership in automotive innovation. At the same time, auto companies are increasingly subject to attacks from bad actors who allege patent infringement using low-quality patents that should never have issued.

SUMMARY OF THE ARGUMENT

Alice Corp. held that "fundamental economic practices" are among the "methods of organizing human activity" that are not eligible for patenting, but the Court otherwise declined "to delimit the precise contours" of the categories of ineligible subject matter. *Alice*, 573 U.S. at 220-21. This case raises the question of another method of organizing human activity: organizing and displaying information for the content that it communicates to people. Whether such subject matter is patent eligible has been a source of deep and persistent division at the Federal Circuit.

The invention claimed in U.S. Patent No. 9,798,967 ("the '967 patent") is a system for organizing an inventory database. The patent improves on prior-art systems that relied on a central authority to assign a unique serial number to each item in a company's

inventory. In essence, the patent delegates part of the process of assigning serial number to employees in the field.

Relying on a central authority to assign serial numbers has the drawback that the stock clerk who is tagging items with serial numbers must maintain a continuous network connection with the central authority. *See ADASA Inc. v. Avery Dennison Corp.*, 55 F.4th 900, 904-05 (2022). Such connections can be subject to technical disruptions and delays. *See* '967 patent at 3:64-4:12; *ADASA*, 55 F.4th at 905 ("[A] continuous [network] connection is not always possible and, even when it is, may be plagued by network delays that slow down the commissioning process."). These network interruptions can prevent the warehouse's "manual labor" from "operat[ing] at maximum efficiency." '967 patent at 4:9-10.

The '967 patent's solution to this problem is to allow a "unique" portion of the serial number to be independently generated by a field employee. The patent designates the first portion of the serial number as an "object class" identifier and the remaining portion as a "unique serial number." '967 patent, claim 1. A central issuing authority continues to assign the object class identifiers. The same object class identifier applies to all items in a class of items and can be identified by a stock clerk via a bar code label affixed to the item. *See id.* at 3:57-63; 7:12-18. The remaining portion of the overall serial number is generated by a low-level employee from an allocated block of unique serial numbers. The uniqueness of each overall serial number is ensured by combining the object class identifier with an allocated unique serial number. *See id.* at 8:4-36; 9:13-15.

Critically for purposes of the '967 patent, because the "unique serial number" is generated and added to the object class identifier by an employee in the field, there is no need to communicate with a central authority when applying overall serial numbers. *See ADASA*, 55 F.4th at 905.

Finally, the '967 patent relies on off-the-shelf technology to implement its claimed system of encoding serial numbers. Claim 1 recites "[a]n RFID [radio frequency identification] transponder" with an "antenna structure" and an "integrated circuit chip." Nothing in the patent describes how to make such an RFID transponder, however. Instead, the patent specification notes that a "suitable RFID transponder" can be purchased "from Avery Dennison of Brea, Calif." (24:41-43)—*i.e.*, the defendant in this case.

ARGUMENT

Lower courts have long recognized that information and the content that it communicates to humans is not patentable subject matter. Information itself is not among § 101's subject-matter categories, and tailoring information to help people understand it or find what they want is ultimately drawn to human mental processes—it is a quintessential human activity rather than an advance in technology.

The rule against patenting information has deep roots in American jurisprudence; it has been recognized by the courts of appeals since the early twentieth century.

Despite this long-standing bar, the Federal Circuit is deeply divided as to whether selecting and displaying information for human mental processing is patentable subject matter. While many panels have

recognized that information cannot be patented for its content, a conflicting line of Federal Circuit cases treats methods of tailoring information for human consumption as an advance in technology.

The patent in this case is directed to a system of organizing and displaying information for its content. Its claimed advance is to assign data fields in a serial number a way that facilitates the human work of building an inventory database; it is not directed to any improvement in technology.

This Court's review is needed to resolve the court's split—and to prevent the manifest injustice of forcing Avery Dennison to pay tens of millions of dollars for a patent that claims a human-activities system for using the company's own technology.

A. Information Cannot be Patented for Its Communicative Content

The Patent Act limits the categories of eligible subject matter to a "process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. Information does not fall into any of these categories.

Even before this Court's reaffirmance of limits on patent eligibility in *Bilski v. Kappos*, 561 U.S. 593 (2010), the Federal Circuit recognized that a signal defined only by its informational content is not patentable subject matter. *See In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007). Since *Alice*, the Federal Circuit has reaffirmed that "a collection of information" does not "fall within any of the categories of eligible subject

matter." *Digitech Image Techs., LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1349 (Fed. Cir. 2014).

The Federal Circuit has further explained that "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." *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016).

In recent years, the Federal Circuit has robustly applied this rule to bar the patenting of information for its communicative content. The court has held ineligible:

- Methods of displaying information to people, such as to help a person to understand data more quickly[2] or to absorb more information.[3]

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[2] *See Trading Techs. Int'l v. IBG LLC*, 921 F.3d 1084, 1092 (Fed. Cir. 2019) (a graphical user interface that presents market information in a way that helps a trader to understand market developments more quickly); *id.* at 1090 ("[the] invention makes the *trader* faster and more efficient, not the computer."); *Trading Techs. Int'l v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019) (claimed interface is ineligible because it is "focused on providing information to traders in a way that helps them process information more quickly, not on improving computers or technology.").

[3] *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335 (Fed. Cir. 2018) (presenting information in the background of a screen without disrupting a user's primary activity on a computer); *id.* at 1345 ("the collection, organization, and display of two sets of information on a generic display device is abstract absent a specific improvement to the way computer or other technologies operate."); *Hawk Tech. Sys., LLC v. Castle Retail, LLC*, No. 2022-

- The use of indexes or other ways of organizing information that help a person to find the information that he or she wants.[4]

1222 (Fed. Cir. Feb. 17, 2023) (simultaneously displaying multiple images from a surveillance system on a remote viewing device); *see also Elec. Power Grp.*, 830 F.3d at 1355 ("Merely requiring the selection and manipulation of information—to provide a human comprehensible amount of information useful for users—by itself does not transform the otherwise abstract processes of information collection and analysis.").

[4] *See BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1284 (Fed. Cir. 2018) (product database that proposes search parameters most often used by previous users); *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315 (Fed. Cir. 2017) (system for allowing more rapid and accurate retrieval of information in a database by using XML tags to index the information according to "domains and categories.") (U.S. Patent No. 6,510,434 B1, abstract); *id.* at 1328 ("the heart of the claimed invention lies in creating and using an index to search for and retrieve data," which is "an abstract concept."); *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 609, 611 (Fed. Cir. 2016) (classifying and storing digital images in an organized manner, such as by the time or date when a photo was taken); *In re Smith*, No. 2022-1310 (Fed. Cir. Sep. 9, 2022) (vendor/customer database that links the customer's identifying information to information about items the customer has purchased); *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 F.App'x 988, 991-92 (Fed. Cir. 2014) (collecting data from a telephone transmission, categorizing it, and storing it).

- Targeting advertising to potential customers[5] or selecting media content for a viewer.[6]
- Systems of codes, symbols, or signals for communicating information to a person.[7]

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[5] *See Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355 (Fed. Cir. 2021) (targeting advertising or other data to a mobile phone based on user's television viewing habits); *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1267 (Fed. Cir. 2016) (selecting advertisements for a user based on demographic information); *In re Morsa*, 809 F.App'x 913, 915 (Fed. Cir. 2020) (targeting advertisements based on geographic, demographic, and "psychographic" data about the viewer); *id.* at 917 ("Customizing information based on . . . information known about the user is an abstract idea.").

[6] *See Affinity Labs of Texas, LLC v. DIRECTV, LLC.*, 838 F.3d 1253, 1256 (Fed. Cir. 2016) (streaming regional television broadcasts to mobile devices outside the region); *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1268 (Fed. Cir. 2016) (providing user-selected media content to the user on a mobile device); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (tailoring web pages presented to a user based on the user's website navigation data and personal characteristics); *British Telecomms. PLC v. IAC/InterActiveCorp.*, 813 F.App'x 584 (Fed. Cir. 2020) (selecting content to send to a mobile phone based on the user's location); *id.* at 587 ("We have previously held that tailoring the provision of information to a user's characteristics, such as location, is an abstract idea."); *Bridge and Post, Inc. v. Verizon Commc'ns, Inc.*, 778 F.App'x 882, 889 (Fed. Cir. 2019) (delivering targeted media based on the user's computer network activity).

[7] *See In re Wang*, 737 F.App'x 534, 536 (Fed. Cir. 2018) (new phonetic alphabet that uses only combinations of Latin letters); *Maxon, LLC v. Funai Corp., Inc.*, 726 F.App'x 797, 798 (Fed. Cir. 2018) (system of using "signaling words" to change the content displayed on a mobile device); *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 907-08, 910-911 (Fed. Cir.

The common thread running through all these inventions is that they are grounded in insights into how humans mentally process information. Data-display inventions look to how people learn and comprehend data. The content selection methods seek to anticipate what types of information different people will want to see. The index and database inventions reflect an understanding of the mental associations that people make between information and what kind of information they are likely to seek. And codes and signals for people directly convey information to the human mind.

These types of insights and discoveries belong to the social sciences and the humanities rather than to the physical sciences or engineering. They focus on human mental processes and reactions. Such insights can be useful in transacting human activities, but they do not reflect an advance in technology. Methods of displaying, organizing, or selecting information for the content that it communicates to humans are firmly within the realm of "human activities"—and outside the categories of patent-eligible subject matter.

1. The Bar on Information-Based Patents Has Deep Roots in American Law

The rule that systems of displaying and organizing data are not patentable subject matter has an old and distinguished lineage. Nearly a century ago, the Second Circuit applied this principle to invalidate a

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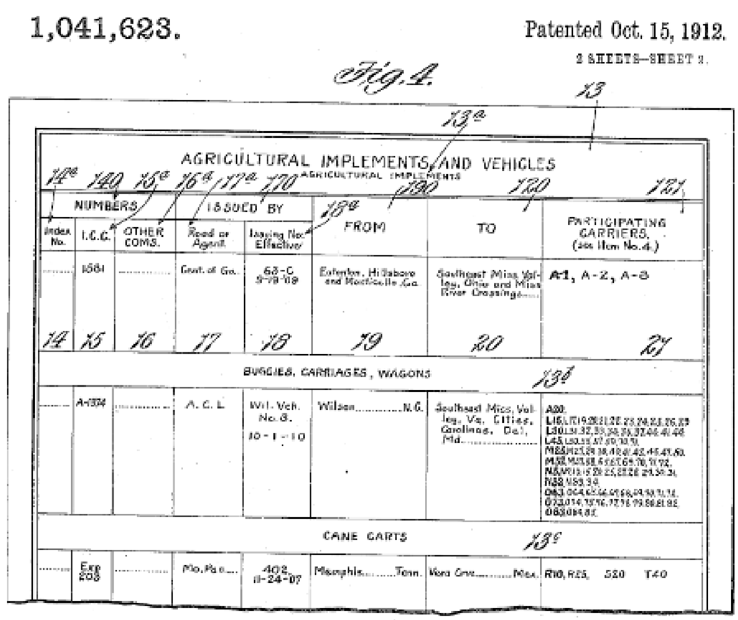
2017) (using bar codes to communicate information about a mailed letter or package).

patent for a consolidated railroad tariff index. *See Guthrie v. Curlett*, 10 F.2d 725 (2d Cir. 1926).

The Guthrie patent addressed the problem that the nation's then-1300 railroads each printed its own tariff schedule. The patent's consolidated index condensed this information and organized it by the types of goods being transported, allowing a shipper to find relevant tariffs more quickly and to readily compare rates.[8]

Figure 4 of the patent, for example, shows how a person planning to ship agricultural tools and tractors, or buggies, carriages, and wagons, need only look at one page to find all available rail lines:



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[8] *See* U.S. Patent No. 1,041,623, at 1:24-27; 1:101-2:7.

The Second Circuit found that the patent was directed to organizing and displaying data for human consumption—*i.e.*, "how to compress into a small space a lot of information." 10 F.2d at 726. The court compared the patent to "dictionaries or directories," and ultimately concluded that this "is not the kind of art protected by the patent acts." *Id.*

Similarly, *Berardini v. Tocci*, 190 F. 329 (2d Cir. 1911), held that the use of codes, symbols, or signals to communicate information to people is ineligible subject matter. The court concluded that such a patent is "for an art only in the sense that one speaks of the art of painting, or the art of curving the thrown baseball," *id.* at 333—and that "[s]uch arts, however ingenious, difficult, or amusing, are not patentable within any statute of the United States." *Id*.

The famous decision in *Hotel Security Checking Co. v. Lorraine Co.*, 160 F. 467, 469 (2d Cir. 1908), is also instructive. The patent in that case claimed a method of recording and communicating customer-order information.[9] By reassigning who submitted particular information, the system limited opportunities for employee fraud. *See id.* at 468. The Second Circuit deemed this "[a] system of transacting business," and concluded that such subject matter "is not, within the most liberal interpretation of the term, an art."[10] *Id.* at 469.

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[9] U.S. Patent No. 500,071, at 1:21-28.

[10] Between 1793 and 1952, the Patent Act limited eligible subject matter to an "*art*, machine, manufacture or composition of matter." Patent Act of 1793, § 1 (emphasis added). The 1952 Act's replacement of the word "art" with "process" does not appear to have changed the meaning of the law. The courts had previously understood the term "art" to embrace a "process," *see*

A system of business record keeping was also held invalid in *Hocke v. New York Cent. & H.R.R. Co.*, 122 F. 467 (2d Cir. 1903). The patent at issue claimed "an improved method of preventing and rectifying mistakes in the transaction" of "the business of shipping and transportation." *Id.* at 469. The Second Circuit, finding it "difficult to classify the subject of the patent," concluded that it "does not rise to the level of invention." *Id.*

For over a century, U.S. courts have thus recognized that the use of databases and codes or symbols to communicate information to people is not patentable subject matter. This is especially so when a record-keeping system is directed to a human organizational problem, such as preventing fraud (*Hotel Security Checking*) or monitoring the location of inventory (*Hocke v. New York Central*).[11]

Diamond v. Diehr, 450 U.S. 175, 182-83 (1981), and the 1952 Act expressly defines a "process" as a "process, art or method." 35 U.S.C. § 100(b); *see also* H.R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952) (noting that "art" had been "interpreted by the courts to be practically synonymous with process or method").

[11] The Solicitor General's Invitational Brief in *Interactive Wearables, LLC v. Polar Electro Oy* states that a system of "providing information" to people "is not an abstract idea at all." *See* U.S. Brief in No. 21-1281 at 15. NRF concedes that if this were a correct statement of the law, this case was correctly decided by the Federal Circuit—and all the Court of Appeals decisions spanning the last 120 years that are cited in the preceding sections of this brief were wrongly decided. The fact that the Solicitor General embraces such a view further highlights that there is a real and tangible controversy as to whether displaying information for the content that it communicates to people is patent eligible subject matter.

B. The Federal Circuit Erred in Concluding that the Claimed "Data Structure" and Delegation of Authority to Low-Level Employees Is an Improvement to Technology

The Federal Circuit correctly understood what the '967 patent does. It found that the claimed invention "focuses on a data structure" that assigns a "data field within the serial number space" to identify blocks of available serial numbers. *ADASA*, 55 F.4th at 908, 909.

The Court also understood that by "assign[ing] . . . allocated blocks to lower levels in the commissioning hierarchy . . . , unique serial numbers can be" created by individual encoders "without the need for a continuous connection to a central database." *Id.* at 909. Unlike "conventional data structures," the claimed system "allows tags to be commissioned on-demand." *Id.*

The Federal Circuit thus recognized that the '967 patent is directed to assigning a meaning to the claimed serial number's data fields. The court also recognized that the patent improves the process of building an inventory database by applying the age-old human-management technique of delegating authority to lower levels.

Where the Federal Circuit erred was in concluding that such features create "technological consequences." *Id.* at 909. The "data structure" simply communicates business-records information to people—it does not have a technological effect. And delegating authority to employees in the field is a

method of organizing human activity, not an improvement to technology.

The '967 patent is analogous to the system for controlling employee fraud in *Hotel Security Checking*, 160 F. 467, or for keeping track of inventory in *Hocke v. New York Central*, 122 F. 467. Like those patents, the '967 patent communicates and stores business information in a way that addresses human administrative problems.

The Federal Circuit also relied for its eligibility holding on its conclusion the claimed data is "physically encoded" and that the claimed system is a "hardware-based data structure" that improves "the technological process by which data is encoded." *Id.* at 909.

The '967 patent, however, does not describe or claim any improvement to the technology that enables RFID encoding. Indeed, to implement the claimed system, the patent recommends purchasing prior-art RFID transponders from the defendant in this case. *See* '967 Patent, 24:41-43. Although the system is indeed "hardware-based," that hardware is supplied by someone else—it is not the claimed advance. Nor is the fact that information has been "physically encoded" in a transponder change its nature as information.

The '967 patent is not directed to an improvement in any "technological process." It is directed to displaying data and organizing human activities. The Federal Circuit erred in concluding that the claims are patent eligible.

C. The Federal Circuit Remains Deeply Divided as to the Eligibility of Information-Based Inventions

Although the Federal Circuit has mostly recognized that information cannot be patented for its content, a few early post-*Alice* decisions held that methods of displaying information for human mental processing are a technological feature. Those early precedential decisions continue to create inconsistent results today.

Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc., 880 F.3d 1356 (Fed. Cir. 2018), upheld claims to a system of displaying information that sought to anticipate what information a user would want to see. The patent claimed a smartphone home screen that displays and summarizes a list of commonly used functions so that the user can access desired content more quickly. *See id.* at 1359, 1363. *Core Wireless* held that "a specific manner of displaying a limited set of information" to save the user the trouble of having to "scroll around and switch views," *id.* at 1363, was a patent-eligible technical advance.

Later that year, *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999 (Fed. Cir. 2018), upheld claims to "a highly intuitive, user friendly interface with familiar notebook tabs" that enhance the "user's ability to find or access . . . commands and features" and reduce the "complexity of . . . navigating between multiple spreadsheets." *Id.* at 1008. *Data Engine* relied on *Core Wireless* for its holding. *See id.* at 1009.

The patents in both *Core Wireless* and *Data Engine* were directed to the human mental processing of information. These cases are irreconcilable with the

many other Federal Circuit decisions holding that methods of displaying information to help people find what they want or that anticipate what they want are ineligible subject matter.

Core Wireless and *Data Engine* both relied on *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed Cir. 2016). The *Enfish* patent claimed a data table that allows a user to add a new column by defining it in a row and linking the columns to the rows. *See id.* at 1336, 1338; U.S. Patent No. 6,151,604, 2:60-65. *Enfish* was vague as to its reasoning, but it has been frequently cited for its statement that a "specific" way of displaying and organizing information on a computer can be patent eligible. *Id.* at 1337, 1339.

The contradictory rules embraced by these decisions continue to generate chaos at the Federal Circuit. Last October, for example, the court issued two conflicting decisions on the eligibility of information-based inventions within the same week.

International Business Machines Corp. v. Zillow Grp., Inc., 50 F.4th 1371 (Fed. Cir. 2022), invalidated claims to two different data-display inventions. One patent claimed the idea of allowing a user to select an area on an electronic map and display data only from the selected area. *See id.* at 1378. The other patent claimed "displaying objects in visually distinct layers" and allowing the objects in a selected layer to be brought to the top so that they can be more readily perceived. *Id.* at 1375. The court held that "presenting data to a user" to provide a "humanly comprehensible amount of information" is not eligible subject matter. *Id.* at 1378 (citation omitted); *see also id.* at 1380

(methods of "organizing and displaying visual information" are not patentable).

IBM v. Zillow reflects the nearly century of caselaw since *Guthrie v. Curlett*, 10 F.2d 725, holding that displaying data in a way that helps people find what they want "is not the kind of art protected by the patent acts." *Id.* at 726.

Just four days before *IBM v. Zillow* was decided, however, the Federal Circuit *upheld* claims to a patent that tailored internet search results based on the user's geographic location.

Weisner v. Google LLC, 51 F.4th 1073 (Fed. Cir. 2022), acknowledged that the patents at issue employed prior-art search-engine algorithms. *See id.* at 1085. Yet the court concluded that using a person's "location history" helps overcome the problem of web searches that return "voluminous, generic, non-personalized search results" rather than information tailored to "the unique characteristics and tastes of the search person." *Id.* at 1085, 1087. Echoing *Enfish*, the court repeatedly emphasized that the patent claimed a "specific implementation" of the concept of selecting data based on the user's anticipated preferences. *Id.* at 1086.

The contradiction between these outcomes was not lost on the court. The judge who wrote for the majority in *IBM v. Zillow* dissented in *Weisner*, and the author of the *Weisner* opinion dissented in *IBM v. Zillow*.

And each judge's mirror-opposite legal approach could find support in circuit precedent. *IBM v. Zillow* relied on *Electric Power Group*'s rejection of eligibility for claims to selecting a "humanly comprehensible amount of information useful for users," 50 F.4th at

1378, and on decisions distinguishing between making the computer faster and making the person faster. *See id.* at 1380-81 (citing *Trading Techs.*, 921 F.3d at 1093).

Meanwhile, the judge who found that the same claims were patent eligible relied on *Core Wireless*, *Data Engine*, and *Enfish, see IBM v. Zillow*, 50 F.4th at 1385 (dissent); *Weisner*, 51 F.4th at 1082—just as the court of appeals in this case relied on *Enfish*'s statement that a "specific" way of organizing and displaying data is patent eligible. *ADASA*, 55 F.4th at 909.

Finally, NRF is not the first party to note that *Core Wireless*, *Data Engine*, and *Enfish* create a split within the Federal Circuit's data-display jurisprudence. Other parties have complained to this Court that "[t]he Federal Circuit is hopelessly divided on the patent eligibility" of information-based inventions. Pet. in *Trading Techs. Int'l., Inc. v. IBG, LLC*, No. 19-522, at 18. That petition noted that while some Federal Circuit decisions require computer-implemented inventions to claim an improvement in technology, other decisions allow eligibility to be predicated on "functionality provided to users"—"irrespective of whether th[e] inventions improve the computer's basic functions." *Id.* at 22. The petition's principal examples of the latter decisions were *Core Wireless* and *Data Engine*. *See id.* at 23-24, 25.

Other petitions to this Court have identified the same division in the Federal Circuit's data-display jurisprudence. *See* Pet. in *Spireon, Inc. v. Procon Analytics, LLC*, No. 21-1370, at 21 (citing *Core Wireless* as "irreconcilably inconsistent" with other eligibility decisions); Pet. in *PersonalWeb Techs. LLC*

v. Google LLC, No. 21-1093, at 31 (citing *Enfish* as inconsistent with other decisions); Brief of Chicago Patent Attorneys in Support of Petitioner in *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, No. 20-891, at 19 & n. 9 (citing *Core Wireless* as among the "contradictory panel decisions that are impossible to reconcile with one another"); Pet. in *TS Patents LLC v. Yahoo! Inc.*, No. 18-1114, at 15 (citing *Core Wireless*, *Data Engine*, and *Enfish* as illustrating one side of the Federal Circuit's "conflicting mix of outcomes" for "very similar patent claims").

D. This Case is a Strong Vehicle

The Petition's fact-specific question presented—whether assigning meaning to the sections of a serial number is patent eligible—inherently raises the categorical question highlighted in this brief and dividing the Federal Circuit: whether methods of displaying and organizing data are patent eligible. Answering the question posed by this case would cure the division at the Federal Circuit.

In addition, the invention claimed in this case, though in NRF's view patent ineligible, is nevertheless a specific invention that is implemented via technology. This case thus presents an opportunity to resolve whether § 101 prohibits claiming information for its content—or if a sufficiently "specific" way of tailoring information for human mental processing is patent eligible. This case can also resolve whether "hardware-based" implementation of a data invention via prior-art technology is sufficient for eligibility—or if a patent must claim an improvement to the technology.

By contrast, the Petition in *Interactive Wearables v. Polar Electric Oy*, No. 21-1281, in which this Court recently requested and received the views of the Solicitor General, involves an insubstantial invention. The patent broadly claims the idea of playing media content while a "remote control" displays "information associated the content." U.S. Patent No. 9,668,016, claim 1. The patent would be infringed, for example, by displaying the title of a song while the song is played. *Id.* at 1:51-58; 2:66-3:24.[12]

Even a decision from this Court affirming the Federal Circuit's summary affirmance in *Interactive Wearables* would not resolve the split at that court. The '016 patent's claims are so broad and vague that

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[12] The Solicitor General has suggested that the '016 patent reflects an advance in the recited "content player" and "remote control that displays information about the content." *See* U.S. Invitational Brief in No. 21-1281 at 14-15. The '016 patent, however, disavows any such notion; the specification makes clear that the patent relies on generic, pre-existing technology to implement its claimed information-display system. This is so with respected to the claimed content player, *see* '016 patent at 3:53-55 ("Any number of media-playing devices can be utilized in conjunction with the apparatus of the present invention."); the remote control, for which the patent's *sole* source of written description support is its mention of "a remote control device, for inputting information and/or commands into the media-playing device," *id.* 13-2-4; and the means for communicating between the content player and the remote control. *See id.* 3:56-59 ("The apparatus of the present invention can operate and/or can be utilized on, over, and/or in conjunction with, any suitable communication network."); *see also* District Court Op. at n. 6 (quoting these and other passages in support of its conclusion that the patent's "specification goes to great lengths to avoid any specifics in describing the components [of the claimed invention]"). The '016 patent cannot colorably be characterized as reflecting an advance in its recited technological components.

they could be found invalid even under *Core Wireless* and *Enfish*'s rule that data-based inventions must at least claim a "specific" way of tailoring information for human mental processing.

This case also distinctly raises the issue of the parasitic nature of non-technological inventions that claim the use of others' technology. The '967 patent describes no improvements to actual RFID transponders or encoders. It simply claims a system of assigning meaning to the data that is encoded and of organizing the human work of encoding. Yet if the Federal Circuit's eligibility ruling is sustained, ADASA—which itself does not appear to develop or make any products—will likely command over $50 million in damages from the manufacturer of the claimed RFID transponders, all without making any improvements to the technology. This Court should resolve whether the patent system is intended to operate this way.

E. A Note on Language

Although this case has been articulated in terms of "mental processes," and the "mental steps" doctrine is enjoying a revival at the Federal Circuit, *see In re Killian*, 45 F.4th 1373 (Fed. Cir. 2022); *CardioNet, LLC v. InfoBionic*, Inc., 816 F.App'x 471 (Fed. Cir. 2020), NRF does not advocate reliance on that doctrine.

The mid-20th century mental-steps doctrine held that any invention whose innovative step is analogous to a human mental process—such as solving a mathematical equation—is ineligible for patenting. *See In re Abrams*, 188 F.2d 165 (CCPA 1951); *In re*

Yuan, 188 F.2d 377 (CCPA 1951).[13] Because computers operate via math, all operations executed on a computer were deemed to be ineligible subject matter as the doctrine was originally understood. *See*, *e.g.*, *In re Benson*, 441 F.2d 682, 687 (CCPA 1971) (noting USPTO view); *In re Phillips*, 608 F.2d 879, 881 (CCPA 1979) (same).

NRF believes that the proper focus of § 101 is whether an invention is directed to a technical advance rather than to human activities. The defining feature of human-focused inventions is that they rely on insights into human mental processes, and in this sense, it is fair to say that mental processes are excluded from eligibility. *See Elec. Power Grp.*, 830 F.3d at 1355. But there is no sound basis in the law for excluding from eligibility all inventions that are expressed in a mathematical formula or executed on a computer.

NRF recommends *Alice Corp.*'s focus on "methods of organizing human activity," rather than "mental steps," as the better framework for analyzing questions of patent subject matter eligibility.

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[13] The mental steps doctrine first appeared in this Court's jurisprudence via Justice Douglas's opinion for the Court in *Gottschalk v. Benson*, 409 U.S. 63 (1972), which was effectively overruled by *Diamond v. Diehr*, 450 U.S. 175 (1981).

CONCLUSION

The petition for a writ of certiorari should be granted.

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