IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

KOVE IO, INC.,	)	
Plaintiff,	)	
	)	
v.	)	
	)	Civil Action No. 1:18-cv-08175
AMAZON WEB SERVICES, INC.,	)	
	)	Hon. Judge Rebecca R. Pallmeyer
Defendant.	)	
	)	
	)	

MEMORANDUM IN SUPPORT OF MOTION TO DISMISS

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Pursuant to Federal Rule of Civil Procedure 12(b)(6), this action should be dismissed. The asserted patent claims are directed to abstract ideas, and hence are invalid under 35 U.S.C. § 101.

BACKGROUND

Plaintiff Kove IO, Inc. accuses Defendant Amazon Web Services, Inc. of infringing three patent claims: claim 17 of U.S. Patent No. 7,233,978; claim 1 of U.S. Patent No. 7,814,170; and claim 18 of U.S. Patent No. 7,103,640. Compl. ¶¶ 35, 57, 72.[1]

The three patents, all of which are similar and claim relation back to the same application, recite systems and methods for managing information on a computer network. The '170 and '640 patent abstracts disclose a "network distributed tracking wire transfer protocol for storing and retrieving data across a distributed network." The '978 patent abstract, likewise, discloses "storing and retrieving location information across a network," which involves a "transfer protocol configured to transport an identifier/location relationship."

The specifications of each patent describe technical implementations of the proposed protocol: for instance, they include figures disclosing the exact formatting of digital messages. Kove's asserted claims, however, are much broader. As described more fully below, all of the asserted claims recite data-manipulation steps, such as "receiving" or "storing" information. None, however, recites any particular technical implementation of these steps. Rather, the steps are conducted on generic "servers" and generic "networks."

ARGUMENT

It is a bedrock of our patent system that abstract ideas are not patent-eligible subject matter under 35 U.S.C. § 101. Abstract ideas are not patentable because they are the basic tools of

[1] For the Court's convenience, the three asserted claims are in Appendix A. The '170, '978, and '640 patents are in Appendices B, C, and D, respectively.

scientific work. Allowing a patentee to monopolize an idea would "improperly [tie] up the future use of these building blocks of human ingenuity." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (internal quotation marks omitted).

In *Alice*, the Supreme Court established a two-step test for determining whether a claim is invalid under § 101. First, the court determines whether the claim is directed to an abstract idea. *Id.* at 2355. Second, if it is, the court determines whether the claim contains any elements which transform it into a concrete application of that idea—*i.e.*, a patentable invention. *Id.* In this case, all three claims-in-suit are invalid under *Alice*'s two-step test. [2]

I. AT *ALICE* STEP ONE, THE CLAIMS ARE DIRECTED TO ABSTRACT IDEAS.

All three claims-in-suit are directed to abstract ideas. They recite systems and methods of storing, organizing, and retrieving information—activities humans have engaged in since the dawn of time. While the patents recite generic computer components such as "server" and "network," the claimed systems and methods could just as easily be applied to a library's pre-Internet scheme of organizing its library books and card catalogues. The systems and methods are not "necessarily rooted in computer technology," and are therefore not directed to patent-eligible subject matter. *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1286 (Fed. Cir. 2018).

The inquiry under *Alice*'s first step presents a question of law that can be resolved on the pleadings. *See, e.g.*, *Two-Way Media Ltd. v. Comcast Cable Comm's, LLC*, 874 F.3d 1329, 1336

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[2] The complaint alleges that "at least" the three asserted claims are infringed, but it does not identify any others. Compl. ¶ 35, 57, 72. The complaint does not state a claim with respect to other, unidentified claims. *See Oil-Dri Corp. of America v. Nestle Purina Petcare Co.*, No. 15-cv-1067, 2017 WL 1197096, at *11 (N.D. Ill. Mar. 31, 2017) ("*Twombly* and *Iqbal* require plaintiffs to plead sufficient facts supporting their infringement allegations with respect to each asserted patent claim."). In any event, even if Kove properly pleaded infringement with respect to other claims, the legal analysis would not change. All of the claims are invalid because they are abstract data-manipulation claims implemented on generic "servers" and "networks."

(Fed. Cir. 2017); *In re TLI Comm's LLC Patent Litig.*, 823 F.3d 607, 610 (Fed. Cir. 2016); *Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1346 (Fed. Cir. 2014).

A. Claims directed to systems and methods of storing, organizing, and retrieving information are directed to abstract ideas.

This case is a variation on a recurrent theme. In a line of several recent cases, the Federal Circuit has invalidated patents reciting systems and methods of storing, organizing, and retrieving information on generic computer systems. In every case, the specification has asserted that the patent improves the operation of computer systems because it allows for processing of large volumes of information. In every case, the Federal Circuit has invalidated the claim, reasoning that abstract data-manipulation steps cannot be patented—even if the specification recites that those steps make computers work better.

For instance, in *BSG*, the Federal Circuit invalidated claims that were "directed to a 'self-evolving generic index' for organizing information stored in a database." 899 F.3d at 1283. The court held that "the asserted claims are directed to the abstract idea of considering historical usage information while inputting data." *Id.* at 1286. Because this idea was not "necessarily rooted in computer technology," but instead could be implemented "in the human mind," it did not reflect a genuine improvement to *computer* technology. *Id.* (quotation marks omitted). The specification's assertion that the claimed invention "allows users to quickly and efficiently access hundreds of thousands or even millions of records," *id.* at 1288, was not enough to render it non-abstract: the court held that "benefits that flow from performing an abstract idea in conjunction with a well-known database structure" cannot be the basis for conferring a patent. *Id.*

Likewise, in *Two-Way*, the Federal Circuit invalidated claims reciting methods of processing, routing, and monitoring digital information over a network. 874 F.3d at 1340-41. The specification described the invention as "an improved scalable architecture for delivering real-time

information," and the patentee claimed that it solved "various technical problems, including excessive loads on a source server, network congestion, unwelcome variations in delivery times, scalability of networks, and lack of precise recordkeeping." *Id*. at 1333, 1339. The Federal Circuit found the claims invalid, explaining that they merely "manipulate[] data." *Id.* at 1338; *see id.* at 1340. It stated that "the use of generic computer components to carry out the recited abstract idea" was "not sufficient" to confer patentability. *Id.* at 1338.

Another example is *TLI*, in which the Federal Circuit invalidated claims directed to recording images on a cell phone, and then transmitting and organizing those images on a storage device. 823 F.3d at 609. The specification explained that the patent sought to solve the problem that arose when "a large number of digital images are recorded and are to be archived in a central computer unit," causing "the problems of locating the data of an image data file [to] increase." *Id.* The Federal Circuit found the claims unpatentable because they "pertain[ed] to methods of organizing human activity"—namely, "classifying and storing digital images in an organized manner." *Id.* at 613. And although the claims recited "tangible components such as 'a telephone unit' and a 'server,'" those components "merely provide a generic environment in which to carry out the abstract idea of classifying and storing digital images in an organized manner." *Id.* at 611.

Yet another example is *Cloud Satchel, LLC v. Amazon.com, Inc.*, 76 F. Supp. 3d 553 (D. Del. 2014), *summarily aff'd*, No. 15-1251 (Fed. Cir. Dec. 17, 2015). The patents related to "enabling the transmission and storage of document references or 'tokens,' each of which is associated with an electronic document stored in a database." *Id.* at 556-57. According to the specification, the claimed invention "enables mobile users to access all of their electronic documents without being limited by the memory available on a mobile device." *Id.* at 557. The district court—later summarily affirmed by the Federal Circuit—invalidated the claims, deeming

them "the implementation of the abstract idea of cataloguing documents to facilitate their retrieval from storage in the field of remote computing." *Id.* at 562-63.

This Court's decision in *Joao Control & Monitoring Systems, LLC v. Telular Corp.*, 173 F. Supp. 3d 717 (N.D. Ill. 2016), took a similar view. The Court invalidated patents "directed to the abstract idea of monitoring and controlling property and communicating this information through generic computer functions." *Id.* at 726. It explained that the claims' recitations of generic "devices" that "merely perform basic computing functions of receiving, processing, and transmitting information" did not make the claims any less abstract. *Id.* at 730.

B. The asserted claims are directed to abstract ideas.

These authorities establish that the asserted claims are directed to abstract ideas. They are pure data-manipulation claims, implemented on generic computers.

Every limitation in all three claims-in-suit involves abstract data manipulation—storing, processing, and retrieving data. *See* Appendix A. Although the claims recite a generic "location server," a generic "processor," and a generic "distributed network," they are not directed to a new type of server, processor, or network. Rather, they are directed to the manipulation of information *on* the generic network—an abstract idea that cannot be patented.

Although the specifications tout that the patents disclose improvements to computer networks, those assertions are insufficient to confer patentability—as the Federal Circuit has held regarding patents claiming very similar improvements. For instance, the '978 patent asserts that the patent discloses a "method and system for managing data location information in a network . . . having an easily scaleable architecture." '978 patent, col. 24:59-63. In *Two-Way*, the patent described the invention as "an improved scalable architecture for delivering real-time information," and the patent was invalidated. 874 F.3d at 1333. Similarly, the '978 patent describes an "aspect of the invention" as a method for "storing and retrieving location information

over a network," '978 patent, col. 2:53-57—virtually identical to the subject matter in *Cloud Satchel*, where the patent was invalidated. 76 F. Supp. 3d at 562-63 (patent disclosed "cataloguing documents to facilitate their retrieval from storage in the field of remote computing").

As these cases show, obtaining a patent requires more than merely reciting that the invention will improve computers. The patentee must show not only that the claimed invention can be *implemented* on a computer, but that it is "*necessarily* rooted in computer technology in order to overcome a problem specifically arising in the realm of" computer networks. *BSG*, 899 F.3d at 1286 (emphasis added). These patents are not. As shown below, the claims could be rewritten, in almost identical form, as claims directed to a method of organizing card catalogues specifying locations of library books. The fact that a claim can be rewritten without any reference to technology is a hallmark of an abstract idea. *Joao*, 173 F. Supp. 3d at 726 (functions that "could be carried out by human memory, by hand, or by conventional equipment" were abstract ideas).

1. Claim 17 of the '978 patent is directed to an abstract idea.

Claim 17 of the '978 patent is directed to the abstract idea of receiving and storing location information, and transferring some location information to a different location based on predetermined criteria. This abstract idea is not rooted in computer technology; it could just as easily be applied to a university's pre-Internet method of receiving information about new books, and putting cards into old-fashioned card catalogues corresponding to those books.

Consider a university that operates a system of libraries, spread out over a city. It also operates a series of card catalogues on campus. Each card identifies an author and lists all books in the library system corresponding to that author. The university devises a method of updating the card catalogues when the libraries receive new books, which works as follows. When a library receives a new book, it notifies the university, using a particular protocol—such as filling in the blanks in a standardized form, with information written in a standardized format. When the

librarian receives this standardized form, she updates the card catalogue. But when information about too many books is stored in a single card catalogue, students have to wait in line to use it. Thus, when some predetermined condition is met—for instance, when one catalogue contains location information for so many books that only a particular number of students can use it per hour— the librarian transfers some cards into a different card catalogue.

That method is substantively identical to claim 17 of the '978 patent.

Claim 17 of '978 patent	**Element of library method**
A method of scaling at least one of capacity and transaction rate capability in a **location server** in a system having a plurality of **location servers** for storing and retrieving location information, wherein each of the plurality of **location servers** stores unique set of location information of an aggregate set of location information, the method comprising:	A method of scaling at least one of capacity and transaction rate capability in a **card catalogue** in a system having a plurality of **card catalogues** for storing and retrieving location information, wherein each of the plurality of **card catalogues** stores unique set of location information of an aggregate set of location information, the method comprising:
Providing a transfer protocol **configured to transport identifier** and location information, the location information specifying the location of **information related to the identifier**;	Providing a transfer protocol **allowing for the transportation of author** and location information, the location information specifying the location of the **book**;
Storing location information formatted according to the transfer protocol at a first **location server**;	Storing location information formatted according to the transfer protocol at a first **card catalogue**;
Receiving an **identifier** and a location relevant to the **identifier** at the first **location server**;	Receiving an **author** and a location relevant to the **author** at the first **card catalogue**;
Storing the received location in a **location store** at the first data **location server**,	Storing the received location in a **drawer** at the first **card catalogue (*i.e.*, on a card)**;
The **location store** comprising a plurality of **identifiers**, each **identifier** associated with at least one location,	The **drawer** comprising a plurality of **authors**, each **author** associated with at least one location (***i.e.*, cards listing authors and locations**)
Wherein the received location is associated with the received **identifier** in the **location store**;	Wherein the received location is associated with the received **author** in the **drawer;**
Transferring a portion of **the identifiers and associated locations** to a second **data location server** when a performance criterion of the first **location server** reaches a predetermined performance limit.	Transferring a portion of the **cards in the card catalogue** to a second **card catalogue** when a performance criterion of the first **card catalogue** reaches a predetermined performance limit.

As this chart demonstrates, there are no substantive differences between the claim and the university's proposed method of organizing its books. The claim's references to a generic "location server" and "location store" map perfectly to a card catalogue and drawer within that catalogue. Likewise, the claim's references to an "identifier" with an "associated location" map perfectly to the authors and associated locations that appear on the cards. Just as each "identifier" is associated with "at least one location" (and potentially more), each author is associated with at least one location in the library system (and potentially more, if she wrote multiple books). Like the claim-in-suit, the university's storage method is a method of scaling the "capacity and transaction rate capability in a system with a plurality of location servers"—*i.e.*, the number of cards that can be stored in the card catalogues, and the rate of students using them. The university's storage method provides a "transfer protocol"—a protocol by which libraries submit new book information to librarians. When one card catalogue "reaches a predetermined performance limit," some cards are transferred to a different catalogue. In sum, this is a classic data manipulation claim that is not rooted in computer technology—and is therefore abstract under *Alice*'s first step, regardless of whether it is implemented on a generic "server."

2. Claim 1 of the '170 patent is directed to an abstract idea.

Claim 1 of the '170 patent is directed to the abstract idea of storing data and location information in different places, and using a "hash function" on an identifier to determine where the location information can be found. The claim is not rooted in computer technology; it, too, could just as easily be applied to a university's pre-Internet library system.

Consider, again, a university with libraries scattered across a city, and card catalogues on campus. The university uses multiple card catalogues to store all the cards. This means that librarians now face the problem of determining which card catalogue stores the card corresponding to the book they are looking for. To address this problem, each of the card catalogues has, stapled

to it, a chart that allows the librarians to deduce the card catalogue from the author. For instance, if there are three card catalogues, the following chart might appear:

First letter of author's last name	**Card catalogue**
A-I	1
J-R	2
S-Z	3

Thus, if a student or librarian goes to any card catalogue, she can immediately deduce which card catalogue contains the location information she is looking for.

That system is substantively identical to claim 1 of the '170 patent.

Claim 1 of '170 patent	**Element of library system**
A system for managing **data stored in a distributed network**, the system comprising	A system for managing **books stored in multiple libraries**, the system comprising
A **data repository** configured to store a **data entity**, wherein an **identifier string** identifies the **data entity**	A **library** that stores **a book**, wherein an **author** identifies the **book**
A **data location server network** comprising a plurality of **data location servers**	A **group of card catalogues** comprising a plurality of **card catalogues**
Wherein **data** location information for a plurality of **data entities** is stored in the **data location server network**	Wherein **book** location information for a plurality of **books** is stored in the **group of card catalogues**
At least one of the plurality of **data location servers** includes location information associated with the **identifier string**	At least one of the plurality of **card catalogues** includes location information associated with the **author**
Each one of the plurality of **data location servers** comprises a processor and a portion of the **data** location information	Each one of the plurality of **card catalogues** comprises a **chart** and a portion of the **book** location information
The portion of the **data** location information included in a corresponding one of the **data location servers** is based on a hash function used to organize the **data** location information across the plurality of **data location servers**	The portion of the **book** location information included in a corresponding one of the **card catalogues** is based on a hash function used to organize the **book** location information across the plurality of **card catalogues**
Each one of the **data location servers is configured to** determine the at least one of the plurality of **data location servers** based on the hash function applied to the **identifier string.**	Each one of the **card catalogues' charts allows someone to** determine the at least one of the plurality of **card catalogues** based on the hash function applied to the **author**.

One term in the claim may be unfamiliar. The claim uses the term "hash function." A hash function is not a piece of technology. It is a type of abstract mathematical function which maps

an input of arbitrary size to an output of fixed, typically small size. *See Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 989 (Fed. Cir. 2017) (hash functions are "mathematical algorithms" that "use contents of [a] file to generate a comparatively small-size identifier for the file"); *Symantec Corp. v. Zscaler, Inc.*, No. 17-cv-04426-JST, 2018 WL 1456678, at *7 (N.D. Cal. March 23, 2018) (characterizing "[h]ashes, also called hash functions" as "generic and basic mathematical or algorithmic functions that do not make a patent inventive"). The specification states that the hash function "preferably applied" is a "well-known" function in a computer science treatise. '170 patent, col. 15:12-18. In the above example, the chart on each card catalogue describes a hash function: it maps an author's last name, which may have any length, to a one-digit output.

Every other claim limitation also has an exact analog in the library system. The claim's references to "data," "identifier strings," and "location servers" map perfectly to books, authors, and card catalogues in the university's storage scheme. The claim's "location server network" is simply the group of all of the card catalogues. The "data repository" which stores "data" with "identifier strings" is a library which stores books that have authors. In the claim, each "data location server" has a "processor" and is "configured to determine" the appropriate server "based on the hash function"; likewise, in the library system, each card catalogue has a chart, and a human is capable of using the chart to determine the book's location. Thus, this is not an improvement to a computer; it is a system for organizing human activity implemented on generic computer parts.

3. Claim 18 of the '640 patent is directed to an abstract idea

Finally, claim 18 of the '640 patent is directed to the abstract idea of storing location information in multiple places, with information at each place directing the user to the right place.

Claim 18 of the '640 patent is a minor variation on claim 1 of the '170 patent. Consider, again, a university library system. Cards are stored in three card catalogues. Students may ask a librarian to determine a book's location, and the librarian then looks for the card. Each card

catalogue has a chart allowing the librarian to determine which card catalogue contains the appropriate card. Card Catalogue 1 has the following chart stapled to it:

Card Catalogue 1 **If the first letter of the author's last name is A-I, you're in the right place! If not, you are hereby redirected as follows:**	
First letter of author's last name	**Card catalogue**
J-R	2
S-Z	3

Card Catalogues 2 and 3 have analogous charts stapled to them.

That system is substantively identical to claim 18 of the '640 patent.

Claim limitation of claim 18 of '640 patent	**Element of library system**
A system for retrieving **data** location information for **data stored in a distributed network**, the system comprising:	A system for retrieving **book** location information for **books stored in multiple libraries**, the system comprising:
a **data repository** configured to store **data**, wherein the **data** is associated with an **identifier string**;	A **library** configured to store **books**, wherein a **book** is associated with an **author**;
a **client** responsive to a **data** query to query a data **location server** for location information associated with the **identifier string**;	A **librarian** responsive to a **book** query to query a **card catalogue** for location information associated with the **author**;
a **data location server network** comprising a plurality of **data location servers**, at least one of the plurality of **data location servers** containing location information associated with the **identifier string**,	A **group of card catalogues** comprising a plurality of **card catalogues**, at least one of the plurality of **card catalogues** containing location information associated with the **author**,
wherein each of the plurality of **data location servers** comprises **computer executable code configured to execute** the following steps in response to receiving a **data** location request from the **client**:	Wherein each of the plurality of **card catalogues** comprises **instructions for the librarian to take** the following steps in response to receiving a **book** location request from the **librarian**:
if the **data location server** contains the location string associated with the **identification string** provided in the **data** location request, the **data location server** transmits location information for use by the **client** to calculate a location of the **data** associated with the **identification string**;	If the **card catalogue** contains the location string associated with the **author** provided in the **book** location request, the **card catalogue** transmits location information for use by the **librarian** to determine the location of the **book** associated with the **author**;
if the **data location server** does not contain the location string associated with the **identification string**, the **location server** transmits a redirect message to the	If the **card catalogue** does not contain the location string associated with the **author**, the **card catalogue** transmits a redirect message to the **librarian**, wherein the

Claim limitation of claim 18 of '640 patent	Element of library system
client, wherein the redirect message contains redirect information for use by the **client** to calculate a location of a different **data location server** in the plurality of **data location servers,** wherein the different **data location server** contains the location string.	redirect message contains redirect information for use by the **librarian** to calculate a location of a different **card catalogue** in the plurality of **card catalogues**, wherein the different **card catalogue** contains the location string.

Once again, every element of the claim has an analog in the library system. The "data repository" is the library; the "client" is the librarian; the "location servers" are the card catalogues; the "location information" or "location string" is the location information on the card; and the "identification string" is the author. If a card catalogue contains a book's location, the librarian collects it. If not, the chart on the card catalogue redirects the librarian to the right catalogue. This, too, is a system of organizing human activity, and hence an abstract idea.

II. AT *ALICE* STEP TWO, NONE OF THE CLAIMS HAS AN INVENTIVE CONCEPT THAT TRANSFORMS THEM INTO PATENTABLE INVENTIONS.

Alice's second step turns on whether the claim recites an "inventive concept" that ensures that the patent "amounts to significantly more than a patent upon the ineligible concept itself." *Alice*, 134 S. Ct. at 2355 (quotation marks and brackets omitted). *Alice* held, and the Federal Circuit has repeatedly reiterated, that the use of "well-understood, routine, conventional activities"—such as a "generic computer"—is insufficient to establish an inventive concept. *Id.* at 2359 (quotation marks omitted); *accord Two-Way*, 874 F.3d at 1339 ("conventional computer and network components" could not "transform the abstract idea into something more"); *TLI*, 823 F.3d at 614 (generic "telephone unit" and generic "server" did not render the claim non-abstract because those steps fell "squarely within [its] precedent finding generic computer components insufficient to add an inventive concept to an otherwise abstract idea").

Identical reasoning applies here. Every limitation in the claims is an abstract data-manipulation step with an exact analog in a method of storing books at libraries. The fact that the claims recite generic "servers" on a generic "network" does not render them non-abstract.

Plaintiff cannot avoid this conclusion by alleging that the data manipulation steps *themselves* are "inventive," or that a skilled librarian would not have considered such a way of organizing card catalogues to be "routine." In *BSG*, the Federal Circuit explained that "a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention 'significantly more' than that ineligible concept." *Id.* at 1290. Thus, the court rejected the patentee's argument that the patent's "requirement that users are guided by summary comparison usage information or relative historical usage information" was "unconventional" for purposes of *Alice*'s second step. *Id.* at 1291. It explained that this supposedly inventive concept "simply restates what we have already determined is an abstract idea." *Id.* Therefore, it was "irrelevant" whether this feature was "routine or unconventional as a factual matter." *Id.* at 1291. The relevant question is whether the "the claim limitations other than the invention's use of the ineligible concept to which it was directed" are inventive. *Id.* at 1290.

Here, too, the mere assertion that the data-manipulation steps are inventive cannot render the claims patentable. Plaintiff must point to something beyond those steps—and because there is nothing beyond those steps other than generic computer parts, the patent is invalid.

In *BSG*, *Two-Way*, and *TLC*, the Federal Circuit resolved *Alice*'s second step as a matter of law. This Court should do the same here. While the Federal Circuit has identified a narrow set of circumstances in which fact-finding may be relevant to *Alice*'s second step, those circumstances are not present here. The Federal Circuit has stated that *Alice*'s second step presents a "question of law," but "[u]nderlying factual determinations may inform this legal determination." *BSG*, 899

F.3d at 1290. Thus, "in cases where the only issue at step two is whether claim limitations are well-understood, routine, and conventional, a genuine dispute over that issue will preclude summary judgment that a claim is ineligible under § 101." *Id.* There is no such dispute here. Setting aside the unpatentable data-manipulation steps, there is nothing left in the claims other than a generic "server" and "network." As a matter of law, these generic components are not inventive.

III. THE CLAIMS' USE OF BROAD, RESULTS-ORIENTED LANGUAGE FURTHER CONFIRMS THAT THEY ARE UNPATENTABLE ABSTRACT IDEAS.

Kove's claims have another "frequent feature of claims held ineligible under § 101": they are "so result-focused, so functional, as to effectively cover any solution to an identified problem." *Electric Power Group, LLC v. Alstom SA*, 830 F.3d 1350, 1356 (Fed. Cir. 2016). Although the specifications are studded with technical details, the claims purport to reach far more broadly.

All three specifications recite technical details. The '978 patent specification is illustrative: it explains a particular format for encoding messages, going as far as to offer details such as the "ss_it_t type … is a 32-bit integer on Intel (IA32) platforms, and a 64-bit integer on UltraSPARC platforms." '978 patent, col. 6:20-7:9. It explains the "preferred data structure" for the "fixed-size, 12-octet header" to digital messages. *Id.* at 8:48-9:49. It offers precise "message formats" for encoded messages, accompanied by figures and computer code. *Id.* at 10:24-13:4 & Figs. 8-16. It offers a lengthy explanation on "NDTP redirection" techniques, with computer code. *Id.* at 15:46-18:36. It discusses techniques for "splitting & coalescing data sets." *Id.* at 19:50-21:23.

Yet none of this is recited in the claims, which are written in broad, results-oriented language. For instance, claim 17 of the '978 patent recites a generic "transport protocol configured to transport identifier and location information." All of the figures and descriptions in the specification describing particular message formats and data structures are absent from the claim language. Likewise, it purports to cover *any* technical implementation of the generic steps of

"storing" and "receiving" information on generic "servers." It recites the step of "transferring a portion of the identifiers and associated locations to a second data location server when a performance criterion of the first location server reaches a predetermined performance limit," a step that purports to be broad enough to encompass *any* method of determining the "portion" of identifiers to be transferred, *any* method of identifying the other server, *any* "predetermined performance limit," and *any* way of calculating whether that limit is satisfied.

Two-Way establishes that such claims are not patentable. In *Two-Way*, the specification "describe[d] a system architecture as a technological innovation," but the claims themselves recited abstract data manipulation steps. 874 F.3d at 1338. The Federal Circuit found the claim invalid, explaining that "the specification may describe a purported innovative 'scalable architecture,'" but "the *claim*—as opposed to something purportedly described in the specification—is missing an inventive concept." *Id.* at 1338-39. Those words could have been written for this case. The specification purports to disclose "a method and system for managing data location information in a network has been disclosed having an easily scaleable architecture." '978 patent, col. 24:59-63. But that supposed "architecture" does not show up in the claims, which merely "manipulate[] data but fail[] to do so in a non-abstract way." *Two-Way*, 874 F.3d at 1338. They are therefore invalid.

CONCLUSION

For the reasons set forth above, the Court should dismiss this action because the asserted patent claims are ineligible to be patented under 35 U.S.C. § 101.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Michael Werner, an attorney at the law firm of Jenner & Block LLP, certify that on April 5, 2019, the foregoing Memorandum In Support of Motion to Dismiss was electronically served on counsel of record via the Court's ECF system.

/s/ Michael T. Werner
Michael T. Werner