ARE Patent Law Alert:
USPTO Updates Guidance on Patent Subject Matter Eligibility With New Examples Of Patent-Eligible Subject Matter

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As we reported last November, the U.S. Patent and Trademark Office ("PTO") has continued to update its guidance to examiners on patent-eligibility under 35 U.S.C. § 101 as the Federal Circuit continues to issue decisions providing examples of patent-eligible subject matter.

In December, the PTO issued additional guidance including:

·   **Subject Matter Eligibility Examples: Business Methods** (December 15, 2016)

·   **December 2016: Interim Eligibility Guidance Quick Reference Sheet** (December 15, 2016)

·   **Subject Matter Eligibility Court Decisions Through December 15, 2016**

·   **Index of Eligibility Examples** (December 21, 2016)

These new guidance materials provide an additional arsenal for patent holders arguing patent eligibility with examiners before the PTO.

We provide a brief summary of each of these materials as follows:

Examples 34-36

In the December 15, 2016, "Subject Matter Eligibility Examples: Business Methods," the PTO sets forth Examples 34-36 which demonstrate the difference between patent-ineligible and patent-eligible subject matter for three classes of "business method" patent claims. An updated list of all the examples including the new Examples 34-36 is provided at https://www.uspto.gov/sites/default/files/documents/ieg-dec-2016-ex_index.pdf.

Example 34 is directed to a **System for Filtering Internet Content,** based on the Federal Circuit's decision in *BASCOM Global Internet v. AT&T Mobility, LLC.*

In this Example, the PTO sets forth an example of a claim which is considered patent eligible under Step 2B of the Alice framework.

In particular, the Example indicates that while filtering content is considered an abstract idea of "a method of organizing human activity" under Step 2A, the claimed "combination" of known

elements were nonetheless "unconventional and non-generic" so as to constitute "something more" to make the claim patent eligible. In particular, the analysis of Claim 1 of Example 34 explains in pertinent part:

Here, an inventive concept can be found in the unconventional and non‑generic **combination** of known elements, and more specifically "the installation of a filtering tool at a specific location, remote from the end‑users, with customizable filtering features specific to each end user" where the filtering tool at the ISP is able to "identify individual accounts that communicate with the ISP server, and to associate a request for Internet content with a specific individual account." The Federal Circuit also determined that the claimed arrangement of elements in the system results in an improvement in the technology of filtering content on the Internet, because it offers "both the benefits of a filter on the local computer, and the benefits of a filter on the ISP server."

(*Id.* at 3-4 (emphasis in original)).

The Guidance also points out that the specification explained that "this combination was not well-understood, routine or conventional activity" as additional support for the patent-eligibility conclusion. (*Id.* at 4). The Guidance also points to the conclusion that "the claim recites a "technology‑based solution" of filtering content on the Internet that overcomes the disadvantages of prior art filtering systems. Thus, when viewed as an ordered combination, the claim limitations amount to significantly more than the abstract idea of content filtering." (*Id.*).

The Guidance recognizes that reasons for allowance could provide "that the claim recites the abstract idea of filtering content. However, the claim is eligible because analyzing the claim limitations as an ordered combination demonstrates that the claim is a particular application of and an improvement to the technology of filtering content on the Internet, rather than well‑understood, routine, conventional activity or a simple instruction to apply the abstract idea of filtering content on the Internet or to perform the abstract idea on a generic set of computers." (*Id.*).

The Guidance also contrasts *BASCOM's* holding to prior Federal Circuit decisions in *Intellectual Ventures I*, *Content Extraction*, *Ultramercial* and *Accenture*, by drawing the following distinction:

Unlike the claims in *Intellectual Ventures I*, *Content Extraction*, *Ultramercial*, and *Accenture*

, claim 1 of *BASCOM* is not simply directed to the abstract idea of filtering content on the Internet or on generic computer components performing conventional activities. Instead, claim 1 "carve[s] out a specific location for the filtering system (a remote ISP server) and require the filtering system to give users the ability to customize filtering for their individual network accounts."

(*Id.* at 5). Thus, the PTO is recommending that examiners to draw similar distinctions to find claims patent-eligible even when they use generic computer components, as long as such components are used in non-conventional ways.

Example 35 sets forth three claims directed to **Verifying A Bank Customer's Identity to Permit An ATM Transaction**. The example draws a distinction between Claim 1, which is ineligible as being "directed to an abstract idea" and Claims 2 and 3 which are also directed to the same abstract idea but have additional elements that amount to significantly more than the abstract idea "because they implement the abstract idea with specific meaningful limitations." (*Id.* at 5).

All three claims are directed to the same basic subject matter of "a method of conducting a secure automated teller transaction with a financial institution by authenticating a customer's identity." Claim 1, which is described as not eligible, merely claims three broad steps of "obtaining" customer-specific information, "comparing" that information with other information to "verify the customer's identity" and "determining" whether the transaction should go forward.

Claims 2 and 3, which are described as eligible, differ from Claim 1 in that both Claims 2 and 3 include detailed steps of "how" the comparing step is performed, and Claim 3, also provides details of "how" a "control signal" is used to provide access or deny access to the ATM based on the specific comparing methodology.

In discussing Claim 1, the Guidance states the steps of claim "describe a method of fraud prevention by verifying the authenticity of the customer's identity prior to proceeding with a banking transaction, which is a "long prevalent" business practice that bank tellers have used for many years. Fraud prevention by verifying the identity of the customer is as fundamental to business as the economic concepts that were identified as abstract ideas by the Supreme Court, such as intermediated settlement (*Alice Corp.*) and risk hedging (*Bilski*)." (*Id.* at 8).

This example seems to recognize that establishing the business practice is "long prevalent" is part of the required analysis to find a business practice "abstract" under the *Alice* and *Bilski* framework, although this concept is not explicitly discussed.

The examples also conclude that Claims 2 and 3 are directed to the same abstract idea, but are nonetheless eligible under Step 2B because they include significantly more than the abstract idea.

In particular, with respect to Claim 2, the examples explain why the additional detail in the comparing step is enough something more to make them eligible as follows:

However, the **combination** of the steps (*e.g.*, the ATM providing a random code, the mobile communication device's generation of the image having encrypted code data in response to the random code, the ATM's decryption and analysis of the code data, and the subsequent determination of whether the transaction should proceed based on the analysis of the code data) operates in a non€• conventional and non€•generic way to ensure that the customer's identity is verified in a secure manner that is more than the conventional verification process employed by an ATM alone. In combination, these steps do not represent merely gathering data for comparison or security purposes, but instead set up a sequence of events that address unique problems associated with bank cards and ATMs (*e.g*., the use of stolen or "skimmed" bank cards and/or customer information to perform unauthorized transactions). Thus, like in *BASCOM*, the claimed combination of additional elements presents a specific, discrete implementation of the abstract idea. Further, the combination of obtaining information from the mobile communication device (instead of the ATM keypad) and using the image (instead of a PIN) to verify the customer's identity by matching identification information does not merely select information by content or source, in contrast to *Electric Power,* but instead describes a process that differs from the routine and conventional sequence of events normally conducted by ATM verification, such as entering a PIN, similar to the unconventional sequence of events in *DDR*. The additional elements in claim 2 thus represent significantly more (*i.e.,* provide an inventive concept) because they are **a practical implementation of the abstract idea of fraud prevention that performs identity verification in a non€•conventional and non€•generic way, even though the steps use well€•known components (a processor and mobile communication device).** Claim 2 is eligible (*Step 2B: Yes*).

(*Id.* at 10 (emphasis added)).

The analysis for Claim 3 is comparable, but relies upon the combination of steps of "the ATM's provision of the random code, the mobile communication device's generation of the customer confirmation code in response to the random code, the ATM's analysis of the customer confirmation code, and the ATM's subsequent sending of a control signal to provide or prevent access to the keypad of the ATM and thus allow or prevent a transaction based on the analysis of the code data sets" (*Id.* at 11). Interestingly, the use the "control signal" as the specific way of "determining whether the transaction should proceed" was the type of detail sufficient to make the claim eligible.

Example 36 sets forth three claims directed to **Tracking Inventory**. The example draws a distinction between Claim 1, which is ineligible as being "directed to an abstract idea" and Claims 2 and 3 which are also directed to the same abstract idea but have additional elements that amount to significantly more than the abstract idea because "they recite specific limitations other than what would be well€•understood, routine, conventional activities in the field, which amount to significantly more." (*Id.* at 12).

In these examples, the PTO is distinguishing between Claim 1 which merely includes high-level general steps for tracking inventory, and Claims 2 and 3 which explain "how" an unconventional machine vision technique is used to track inventory.

In the context of Claim 2, the analysis explains:

However, the memory and processor in combination with a high€•resolution video camera array with predetermined overlapping views that reconstructs the 3€•D coordinates of the item of inventory using overlapping images of the item and prior knowledge of the location and field of view of the camera(s) provides significantly more than the abstract idea of using data collection techniques to manage inventory. As explained in the specification, at the time of this invention*, using a high€• resolution video camera array with overlapping views to track items of inventory was not well€• understood, routine, conventional activity to those in the field of inventory control.* In fact, the use of this camera array provides the ability to track objects throughout the entire storage space rather than simply the view of a single camera and determine their 3€•D location without any of the manual steps that were required of previous methods. That is, the *video camera array with reconstruction software provides the technological solution to the technological problem of automatically tracking objects and determining their physical position using a computer vision system*. Like in *DDR*, the claimed solution here is necessarily rooted in computer technology to address a problem specifically arising in the realm of computer vision systems. The claimed limitations are not simply an attempt to generally link the

abstract idea to the technological environment of computer vision systems. Rather, these are meaningful limitations that confine the claim to a particular useful application. Accordingly, when viewed as a combination, the additional elements thus yield a claim as a whole that amounts to significantly more than the abstract idea of inventory management (*Step 2B: Yes*). The claim is patent eligible.

(*Id.* at 15 (emphasis added)). Thus, the analysis looks to the specific technical solution claimed on "how" the tracking is accomplished in what is assumed for purposes of the analysis is a non-conventional way at the time of the invention.

The analysis offers a comparable analysis for Claim 3 as follows:

In combination, however, the limitations do amount to significantly more than the abstract idea of inventory management. As explained in the specification, the combination of the camera array's acquisition of high resolution image sequences, and the processor's performance of step (b)'s extracting contour and character information from the images to create feature vectors, step (c)'s recognizing and tracking items of inventory using the feature vectors and a recognition model, and step (d)'s determining the physical location of the recognized items using the position of the item in the image sequence(s*) is not well‑understood, routine, conventional activity in this field*. This combination of limitations provides a hardware and software solution that improves upon previous inventory management techniques by avoiding the cumbersome use of RFID and GPS transmitters and the inaccuracy issues that plagued previous computer vision solutions. This combination of features provide meaningful limitations to the practical application of inventory tracking with computer vision *, by improving the system's ability to identify and track objects across multiple cameras in a three‑dimensional space*. These limitations do not simply limit the abstract idea to the technological environment of image processing, but are instead meaningful limitations that integrate the abstract idea into a particular application that uses character and contour information from high resolution images to recognize items of inventory. When viewed as a combination, the additional elements thus yield a claim as a whole that amounts to significantly more than the abstract idea of inventory management (*Step 2B: Yes*). The claim is patent eligible.

(*Id.* at 15 (emphasis added)).

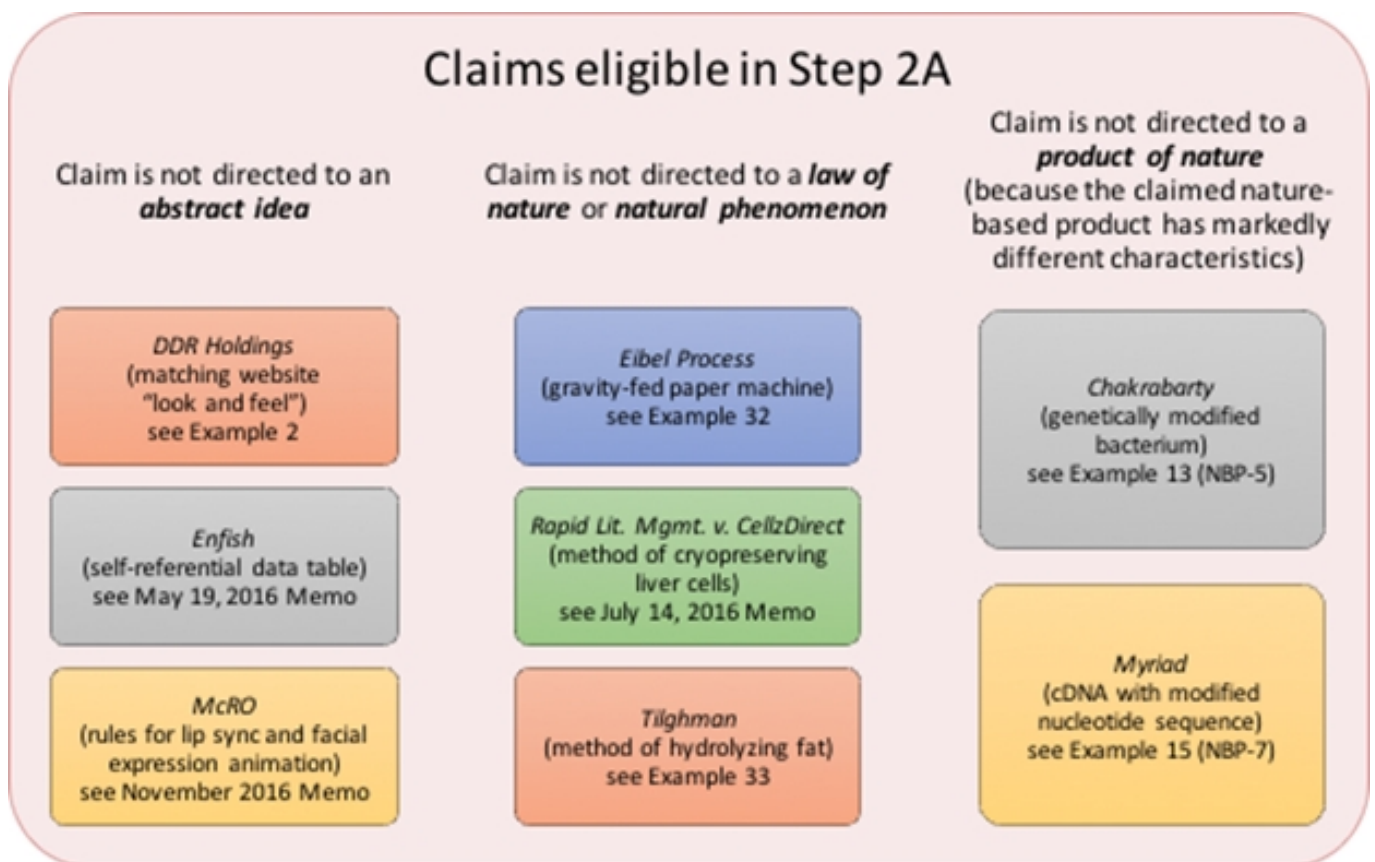A general take away from these examples, is that inclusion of a combination of detailed steps explaining "how" an otherwise generic process is being performed in an unconventional and non-routine way at the time of the invention should be enough something more to make a claim patent eligible, even when the claim is generally directed to business processes, such as ATM transactions and tracking inventory.

Quick Reference Sheet

The December Guidance also includes a Quick Reference Sheet to assist examiners (and applicants) with relevant cases that are available to rely upon during prosecution.

With respect to Step 2A (whether the claim is directed to an abstract idea), the Quick Reference Sheet includes the following diagram:

Claims eligible in Step 2A

Claim is not directed to an *abstract idea*

- DDR Holdings (matching website "look and feel") see Example 2
- Enfish (self-referential data table) see May 19, 2016 Memo
- McRO (rules for lip sync and facial expression animation) see November 2016 Memo

Claim is not directed to a *law of nature* or *natural phenomenon*

- Eibel Process (gravity-fed paper machine) see Example 32
- Rapid Lit. Mgmt. v. CellzDirect (method of cryopreserving liver cells) see July 14, 2016 Memo
- Tilghman (method of hydrolyzing fat) see Example 33

Claim is not directed to a *product of nature* (because the claimed nature-based product has markedly different characteristics)

- Chakrabarty (genetically modified bacterium) see Example 13 (NBP-5)
- Myriad (cDNA with modified nucleotide sequence) see Example 15 (NBP-7)

With respect to Step 2B, i.e. whether the claim as a whole amounts to significant more than the recited judicial exception, the Quick Reference Sheet includes the following diagram:

Claims eligible in Step 2B

(claim as a whole amounts to significantly more than the recited judicial exception, i.e., the claim recites an inventive concept)

Abele (tomographic scanning)	*Classen* (processing data about vaccination schedules & then vaccinating)	*Myriad CAFC* (screening method using transformed cells)
Amdocs (field enhancement in distributed network)	*Diehr* (rubber manufacturing) see Example 25	*RCT* (digital image processing) see Example 3
BASCOM (filtering Internet content) see November 2016 Memo & Example 34	*Mackay Radio* (antenna)	*SiRF Tech* (GPS system) see Example 4

A more detailed spreadsheet of case law is also provided by the PTO at https://www.uspto.gov/sites/default/files/documents/ieg-dec-2016-sme_crt_dec.xlsx

We will continue to monitor developments in patent-eligibility under 35 U.S.C. § 101. In the meantime, for more information on patent-eligibility, please contact one of our attorneys.

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