

The USPTO Strikes Back: Interim Guidance Update Promotes Software Patent Eligibility

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In December 2014, the USPTO released its [Interim Guidance on Patent Subject Matter Eligibility](#), which summarized the sprawling case law of 35 USC 101 into examiner instructions. The 2014 *Interim Guidance* was a cautious document, tracking closely with court opinions, but lacking insight into important questions that the courts had not yet answered. Regarding the critical issue of the types of claims that remain patent-eligible under 35 USC 101, especially for computer-related inventions, this material provided little comfort.

In late July, the USPTO released [an update to the Interim Guidance](#) with a remarkably different tone. Undaunted by [the unchecked growth of invalidity decisions and very few findings of patent-eligible claims](#), the July update presents a set of hypothetical claims, characterizes these claims as patent-eligible, and provides an extensive analysis under *Alice* that supports this finding. Through this bold step, the USPTO fills crucial gaps in 35 USC 101 that the courts have failed and even refused to mend – and although the courts’ conformity with these opinions is by no means guaranteed, the July update adds much-needed balance to the discussion of subject matter eligibility.

1. The Conservative Tone of the December 2014 *Interim Guidance*

In their continuing efforts to define subject matter eligibility, the courts enjoy an abundance of freedom. Judges can be choosy in their review of cases and the reach of their opinions; they can arbitrarily change their minds about the law, and can fabricate new legal theories and requirements out of thin air; they can even issue decisions that conflict with their own precedent by marking such opinions “non-precedential.” Since the courts do not answer to constituents, clients, or industry – only to *other courts* – they can disregard the practical consequences of their decisions, retreating behind the mantra: “we are merely the interpreters of the law and policy decided upon by the legislature.”¹

By contrast, the USPTO bears an overwhelming burden that is fraught with responsibility. Each of the 300,000 patents that the USPTO issued in FY 2014 is the issuance of a government-backed property right. Each rejected application (approximately the same number per year) is a legal decision to withhold a property right, often relegating an invention to the public domain, freely exposed to the paying applicant’s competitors and ripe for copying. And every decision is reviewable not only by a complex judicial apparatus – but by a public body that, at present, views the USPTO’s determinations critically by default.

Given its footing, when the USPTO released its *Interim Guidance for Patent Subject Matter Eligibility* last year – barely six months after *Alice* – it was unsurprising that the content of this material was exceptionally conservative. The initial release of the *Interim Guidance* was a straightforward summary of the emerging case law, consolidating the sprawling analysis provided by *Alice* and *Mayo* into a flowchart, with each box consolidating the courts’ statements about a particular piece of the 101 puzzle. This analysis was reinforced by an impressive compendium of 21 cases that define the courts’ interpretation of subject-matter eligibility, ranging from *O’Reilly v. Morse* (1853) to post-*Alice* cases. Little could be found in the *Interim Guidance* that was not derived directly from a court opinion.

While fitting for the circumstances, the conservative tone of the *Interim Guidance* limited its usefulness. Although court opinions can (and many do!) recite platitudes about the Information Age and hopeful speculation about the availability of patents for *valuable* software inventions, the USPTO bears the burden of stating *which inventions those are*. However, the compendium of court decisions included only a few examples of patent-eligible inventions in computing technologies (*SiRF Tech* and *Research Corp. Tech.*, both pre-*Alice*, as well as *DDR Holdings*) set against the expansive rhetoric of *Alice*. As a result, examiners – and by extension, applicants and the general public – could find little support in the *Interim Guidance* to inform the validation of claims for computer-related inventions under 35 USC 101.

To its credit, the co-authors of the *Interim Guidance* – Drew Hirshfeld and Raul Tamayo, as senior members of the USPTO Office of Patent Legal Administration (OPLA) – have been [publicly candid](#) about their limitations in authoring the 2014 *Interim Guidance*. When members of the public expressed anxiety over the important questions that the *Interim Guidance* failed to answer, Drew and Raul validated this frustration – acknowledging a shared distress over the courts’ lopsided decisions in this area.² And for the complaints that the USPTO *could* address through procedural changes (such as requiring examiners to explain their *Alice* rationale in office actions, rather than only the result), Drew and Raul pledged to address these issues in future versions of the *Interim Guidance*.

In January 2015, the USPTO supplemented the *Interim Guidance* with some examples of claims in the computing arts that were patent-eligible and patent-ineligible. The [“Abstract Idea Examples” Update](#) presented four hypothetical claims, each with a discussion of the *Alice* analysis leading to a conclusion of patent eligibility. However, three of the examples were lightly adapted from *DDR Holdings*, *Research Corporation Technologies* and *SiRF Technology* – all of which had been covered in the original *Interim Guidance* – while the fourth was carefully limited to a specialized area of computer security, and therefore difficult to generalize. Additionally, the January 2015 Update dutifully catalogued even more cases involving invalid claims, emphasizing the increasingly gloomy prospect for this area of patent law.

In sum, the central theme of the 2014 *Interim Guidance* (including the January 2015 Update) was the courts’ severe and as-yet-unbounded elevation of the “utility” requirement of 35 USC 101, casting a pall over the validity of a wide range of pending and issued patent claims.

2. The Ambitious Substance of the July 2015 Update to the *Interim Guidance*

Late in July 2015, the USPTO released a new update to the *Interim Guidance*. Most of this material is comparatively straightforward: updating the compendium of significant cases about subject matter eligibility; correlating selected comments in court opinions with principles such as “markedly different characteristics” and the examiner’s *prima facie* case requirements; meta-level responses to requests for clarification.

However, one part of the July update stands out: [Appendix A](#) of the July update presents several new examples of patent-eligible claims. These examples are not redundant with known examples, but involve subject matter in areas that the courts have not addressed yet – and present strong arguments for their eligibility under 101 that are generalizable to large classes of technology.

The notable examples in Appendix A include:

- **Example 21: Transmission of Stock Quote Data**

This hypothetical presents an example of a patent-eligible business method. First, the exercise presents a claim modeled after [U.S. Patent No. 7,035,914](#) (at issue in the pre-*Alice* case of *Google v. SimpleAir*), and characterizes it as patent-ineligible because the transmission of stock quote data is an abstract concept with no connection to technology. In contrast, a hypothetical claim is presented with additional elements pertaining to the presentation of this data on a device: the idea that time-sensitive stock quote alerts can be missed if the device is powered off, where a viewer application on the device turns the device on in order to present the alert.³ The hypothetical characterizes this claim as patent-eligible because it provides “significantly more” than an abstract idea. In this example, the USPTO ventures a strong opinion in quite uncharted technical waters: indicating that a claim may be patent-eligible because of the *manner* in which information is presented on a display – that is, the *behavior* of the device. To date, no court opinion has found any such claim to be patent-eligible. Of course, the closest case is *DDR Holdings* – but the subject matter there is different: the *content* of the information, and the manner of generating it for transmission to a device, which presents it in the conventional manner (presumably, in a web browser).

This hypothetical reinforces my earlier comments about [post-*Alice* patent-eligible business methods](#): in the context of a business method, a specific technical problem can arise, and can be solved by a specific device behavior. This exercise is also evocative of *Diamond v. Diehr*: the presence of an “abstract idea” (such as the Arrhenius equation), while ineligible in isolation, can be a key part of a practical application that garners patent eligibility. The “something more” must be more than a mere field of use (e.g., “presenting stock quotes on a mobile device”) – rather, the abstract idea must be used to cause the device to exhibit a “technical effect.”

- **Examples 22-23: Dueling Graphical User Interfaces**

These hypotheticals present contrasting examples of graphical user interface claims. Following the pattern above, Example 22 recites a claim found patent-ineligible in *Dietgoal Innovations v. Bravo Media*, which purports to present a user interface with a description of content. The example explains that technology is tied neither the device (beyond wholly conventional components: “a User interface,” and “a Database of food object”) nor the content (a user’s diet choices).

Contrasting Example 23 begins with an explanation of a common problem within graphical user interfaces – the avoidance of overlap conditions among windows – and techniques for automated detection and rearrangement of windows to alleviate this condition by adjusting the interior margins of the window. The example then presents two patent-ineligible claims that recite this idea in inadequate detail (those that end with the determination of a “scaling factor,” but that fail to apply it to anything), and two patent-eligible claims of different styles.⁴

This example is notable for two reasons. First, the subject matter of these claims is traditional computer science, of the “improve the functioning of the device” type – a prospect that, surprisingly, some post-*Alice* cases have called into question. Second, this hypothetical validates two different claim styles for computer-implemented inventions: a functional approach, describing the low-level functional steps of the method; and an algorithmic approach, emphasizing the types of calculations that form the mechanics of the technique. Both examples stand in stark contrast with the [dismissive approach](#) that several courts have exhibited, where the opinion outright disregards significant detail and lengthy blocks of claim language as immaterial to the question of patent eligibility.

- **Example 26: Internal Combustion Engine**

Following a review of examples reiterating *Parker v. Flook* and *Diamond v. Diehr*, this example presents a patent-eligible claim for an engine and a control system.⁵ While this claim closely resembles *Diehr*, the manner in which the claim elements are recited solely with functional language is interesting. Both the structural components (“a combustion chamber”; “a throttle position sensor”; and “an exhaust gas recirculation valve”) and the “control system” (a clear nonce term!) are described strictly according to their functions and functional interaction with other components. Looking past the names of components, the entire description is a functional block diagram. Moreover, the functionality is not even recited at a particularly low level: the valve simply “regulates the flow of exhaust gas from the exhaust manifold to the air intake manifold.”

The patent-eligible characterization of this example speaks strongly to the anti-functional-language movement. Some of the more extreme punditry since *Alice* has denigrated functional language to the level of “patent profanity,” and advocated structural – preferably physical – claim language as the sole province of 35 USC 101 – and even some examiners attempt to deny functional language any due weight. This example provides a clear rebuttal to these arguments.

- **Example 27: BIOS**

This example provides a patent-eligible claim involving booting a computer from BIOS stored on a network – i.e., the foundations of [PXE](#).⁶ This hypothetical is presented as an example of a device configuration that is so inherently rooted in technology that it not only satisfies 35 USC 101 – it does not even require a full *Alice* analysis, but only a verification of a valid statutory class and a cursory statement that an abstract idea is not involved.

Most interesting in this claim is that it is not even limited to a method performed by a device: a human could perform each step of the boot process. It is not clear whether the USPTO believes that the performance of the method by a human is included, or whether the claim *implicitly* requires its application by the host computer – but both conclusions are interesting, in the relaxed requirements of explicit “cause the machine to...” language for methods that centrally involve the performance of the computer as a machine.

In each of these hypotheticals, the USPTO has hazarded opinions in areas where the courts have not clearly spoken – and have provided more generalized and positive guideposts to patent-eligibility than the entire court system has, in the entire year since *Alice*. Such assertiveness is out of character for the USPTO, and contrasts markedly with the earlier versions of the *Interim Guidance*.

We cannot know the motivations of the USPTO in risking such bold statements, but we can speculate: While [101 rejections within the USPTO rapidly spiked after Alice](#), many such rejections were intended to tread water, until the courts could provide guidance to sort them out. After waiting over a year for reliable descriptions from the courts as to which claims it *should* allow, the USPTO’s patience has been rewarded with little more than vague rhetoric that such claims *might* exist in some other universe. Further delay risks further overburdening the PTAB with appeals and exacerbating the “churn” and backlog that has been the USPTO’s bane for over a decade. As an operational matter, the USPTO can no longer levitate on this issue – it must give its examiners *some* guidance on these topics. The courts cannot fairly admonish the USPTO for providing answers to critical questions on which the courts have failed to speak.

3. The Practical Impact of the July Update to the *Interim Guidance*

The boldness of the principles expressed in the July update prompts some evaluation of its reliability: How strongly should applicants and patentees rely upon these hypotheticals for decisions of filing, specification and claim drafting, prosecution, and litigation? How likely are examiners and judges to find arguments based on these hypotheticals to be well-founded and persuasive?

Several ideas affect the impact of this update:

- **Political Disadvantage:** In general, the *Interim Guidance* does not have the same force of law as court opinions – not even as much as PTAB opinions. Judges who disagree with the principles of these hypotheticals will experience no friction, not even a speed bump, in crushing them with superseding legal precedent.
- **Political Advantage:** The July update to the *Interim Guidance* is not particularly *inconsistent* with existing court decisions. Rather, it fills in gaps in the case law, perhaps reciting principles that the courts might have *liked* to support, but for lack of opportunity among the cases at bar. Conversely, court reversal of the USPTO’s opinions, lonesome as they are on this side of the discussion, would not only demonstrate a serious policy conflict, but would tip the courts’ hand as unabashedly anti-patent – in a way that might prompt unwanted attention and criticism from Congress.
- **Technical Advantage:** Each hypothetical includes a thorough technical analysis of the claimed subject matter, including an explanation of the “technical effect” of each patent-eligible claim. The depth of this analysis is more persuasive than courts’ superficial dismissal of reviewed cases, based on an overgeneralized, and distinctly non-technical, opinion. Additionally, the subject matter of the hypotheticals has been carefully crafted: courts will encounter difficulty in formulating a similarly detailed technical analysis that identifies technical flaws in the USPTO’s arguments.
- **Procedural Advantage:** Even though the *Interim Guidance* has little legal substance in courts, it has *more* power on Dulany Street: it is the primary authority and most direct instruction to examiners for making allowance and rejection decisions. It is therefore the single best source of authority for working with examiners to secure patents. And as a practical matter, possession is nine-tenths of the law – an issued patent is valid until invalidated at court, which requires extensive (and expensive!) effort. We can therefore expect the *Interim Guidance* to promote the issuance of a significant number of patents that will not be challenged in court, and remain at least *presumptively* valid.
- **Procedural Disadvantage:** The *Interim Guidance* does not address the single greatest problem with 35 USC 101. There is no cure for the sprawling, insubstantial, opinion-based chaos that *Alice* has created, which, even at this early stage, exhibits [the seeds of brand-new circuit splits](#). There is no cure for the fact that even the Court’s cornerstone example of patent eligibility, *Diamond v. Diehr*, could be [easily invalidated under Alice](#). Accordingly, examiners continue to enjoy [complete discretion](#) in patent eligibility determinations: the conflicting body of authority provides ample support for either allowing or rejecting / invalidating virtually any case, to reach the reviewer’s desired outcome based on personal philosophy or predilection.

This feature – the complete discretion afforded by the Court’s subjective, “smell-test” principles – continues to corrupt the core of U.S. patent law, transmogrifying it from a reliable, consistent, evidence- and statute-driven process into a capricious, Star-Chamber-like apparatus. The gravity of this defect cannot be overstated – and yet, this danger remains unrecognized, let alone mitigated. It is our duty to continue pointing out this alarming defect until those with power understand and address it.

Despite these considerations – in general, given the enormous body of patent-invalidating case law, *any* positive source of authority about patent-eligible claims is welcome at this point. For this, the USPTO’s uncharacteristic courage in providing substance to fill the vacuum should be duly recognized and appreciated.

Notes:

1. The legitimacy of this claim is called into question by [the Supreme Court’s unprecedented activism](#) over 35 USC 101 – despite the fact that “the statute has not changed a syllable” since its passage in 1952.
2. To be fair to the courts, judges can only rule on the claims under appeal – and since *Alice* more particularly targeted some areas of patenting such as business methods, it’s unsurprising that more of those cases were rapidly appealed to the courts than cases with strongly patent-eligible claims, thus skewing the score card of decisions.

On the other hand, the rhetoric of the courts has been overwhelmingly negative, providing heaps of rationale for invalidating claims. The courts could easily have chosen to balance their invalidation not with vague commentary that *some* claims might be patent-eligible, but with specific comments about how the claims at bar *could have been drafted differently* to satisfy 101. The courts could have also sought to identify some dependent claims or even specification material that does satisfy 101, as dicta that did not affect the outcome of the case in controversy. The rarity of these instances in the courts’ post-*Alice* decisions speaks volumes about the lack of balance in their priorities.

3. Example 21 patent-eligible claim:

2. A method of distributing stock quotes over a network to a remote subscriber computer, the method comprising:

providing a stock viewer application to a subscriber for installation on the remote subscriber computer;

receiving stock quotes at a transmission server sent from a data source over the Internet, the transmission server comprising a microprocessor and a memory that stores the remote subscriber’s preferences for information format, destination address, specified stock price values, and transmission schedule, wherein the microprocessor filters the received stock quotes by comparing the received stock quotes to the specified stock price values;

generates a stock quote alert from the filtered stock quotes that contains a stock name, stock price and a universal resource locator (URL), which specifies the location of the data source;

formats the stock quote alert into data blocks according to said information format; and

transmits the formatted stock quote alert over a wireless communication channel to a wireless device associated with a subscriber based upon the destination address and transmission schedule,

wherein the alert activates the stock viewer application to cause the stock quote alert to display on the remote subscriber computer and to enable connection via the URL to the data source over the Internet when the wireless device is locally connected to the remote subscriber computer and the remote subscriber computer comes online.

4. Example 23 patent-eligible claims:

1. A computer-implemented method for dynamically relocating textual information within an underlying window displayed in a graphical user interface, the method comprising:

displaying a first window containing textual information in a first format within a graphical user interface on a computer screen;

displaying a second window within the graphical user interface;

constantly monitoring the boundaries of the first window and the second window to detect an overlap condition where the second window overlaps the first window such that the textual information in the first window is obscured from a user's view;

automatically relocating the textual information, by a processor, to an unobscured portion of the first window in a second format during an overlap condition so that the textual information is viewable on the computer screen by the user; and

automatically returning the relocated textual information, by the processor, to the first format within the first window when the overlap condition no longer exists.

4. A computer-implemented method for dynamically relocating textual information within an underlying window displayed in a graphical user interface, the method comprising:

displaying a first window containing textual information in a first format within a graphical user interface on a computer screen;

displaying a second window within the graphical user interface;

constantly monitoring the boundaries of the first window and the second window to detect an overlap condition where the second window overlaps the first window such that the textual information in the first window is obscured from a user's view;

determining the textual information would not be completely viewable if relocated to an unobstructed portion of the first window;

calculating a first measure of the area of the first window and a second measure of the area of the unobstructed portion of the first window;

calculating a scaling factor which is proportional to the difference between the first measure and the second measure;

scaling the textual information based upon the scaling factor;

automatically relocating the scaled textual information, by a processor, to the unobscured portion of the first window in a second format during an overlap condition so that the entire scaled textual information is viewable on the computer screen by the user; and

automatically returning the relocated scaled textual information, by the processor, to the first format within the first window when the overlap condition no longer exists.

5. Example 26 patent-eligible claim:

1. An internal combustion engine providing exhaust gas recirculation comprising:

an air intake manifold;

an exhaust manifold;

a combustion chamber to receive air from the air intake manifold, combust a combination of the received air and fuel to turn a drive shaft, and output resulting exhaust gas to the exhaust manifold;

a throttle position sensor to detect the position of an engine throttle;

an exhaust gas recirculation valve to regulate the flow of exhaust gas from the exhaust manifold to the air intake manifold; and

a control system, comprising a processor and memory, to receive the engine throttle position from the throttle position sensor, calculate a position of the exhaust gas recirculation valve based upon the rate of change of the engine

throttle position and change the position of the exhaust gas recirculation valve to the calculated position.

6. Example 27 patent-eligible claim:

15. A method for loading BIOS into a local computer system which has a system processor and volatile memory and non-volatile memory, the method comprising the steps of:

(a) responding to powering up of the local computer system by requesting from a memory location remote from the local computer system the transfer to and storage in the volatile memory of the local computer system of BIOS configured for effective use of the local computer system,

(b) transferring and storing such BIOS, and

(c) transferring control of the local computer system to such BIOS.