



# PATENT, TRADEMARK & COPYRIGHT



## JOURNAL

Reproduced with permission from BNA's Patent, Trademark & Copyright Journal, Vol. 76, No. 1886, 10/3/2008. Copyright © 2008 by The Bureau of National Affairs, Inc. (800-372-1033) <http://www.bna.com>

### PATENTS

Recent Board of Patent Appeals and Interference opinions provide insight into how claims for software-based inventions may be interpreted post-*Comiskey*.

#### ***In re Comiskey* Aftermath: Its Ruling Applied by the PTO Board**

By MICHAEL A. SARTORI, Ph.D., J.D.

The Patent and Trademark Office's Board of Patent Appeals and Interferences has applied the Federal Circuit's ruling from *In re Comiskey*, 499 F.3d 1365, 84 USPQ2d 1670 (Fed. Cir. 2007) (74 PTCJ 633, 9/28/07), in several recent decisions regarding patent applications for software-based inventions. The post-

*Comiskey* BPAI decisions discussed herein are: *Ex parte Wasynczuk*, Appeal No. 2008-1496 (B.P.A.I. June 2, 2008) (informative opinion); *Ex parte Langemyr*, Appeal No. 2008-1495 (B.P.A.I. May 29, 2008) (informative opinion); *Ex parte Simpson*, Appeal No. 2008-0569 (B.P.A.I. May 29, 2008) (unpublished); and *Ex parte Godwin*, Appeal No. 2008-0130 (B.P.A.I. June 30, 2008) (unpublished).

Drawing on guidance from the recent BPAI decisions, when a software-based invention is claimed as a method, an apparatus, a system, or a computer-readable medium, an apparatus (such as a computer, a processor, or a physical computing device) should be recited in the body of the claim and not only in the preamble. Further, the apparatus recited in the body should be tied to the recited functions. Instead of reciting an apparatus in the body, a transformation of a category of statutory subject matter, other than a method, could be recited.

This article discusses (a) the Federal Circuit's decision in *Comiskey*, and (b) the four recent board cases decided after *Comiskey* involving software-based inventions when recited as (1) a method, (2) a system or an apparatus, and (3) a computer-readable medium.

*Michael A. Sartori, Ph.D., J.D., is a lawyer with Venable, Washington, D.C., and chairman of Venable's Patent Prosecution Group. His practice includes patent prosecution, counseling, opinion work, and litigation. Sartori has a bachelor of science, master of science, and doctorate in electrical engineering from the University of Notre Dame, Notre Dame, Ind. He received his law degree from Georgetown University Law Center. Sartori holds several patents and was a patent examiner with the Patent and Trademark Office. He is registered to practice before the PTO and is a member of the Virginia and District of Columbia bars. He can be reached at [masartori@venable.com](mailto:masartori@venable.com) or (202) 344-4000.*

## A. *In re Comiskey*

In *Comiskey*, the Federal Circuit re-characterized the abstract idea test and reaffirmed the transformation test used to determine whether a claim recites statutory subject matter under Section 101.

As to the abstract idea test, the court described the test as having two parts. “First, when an abstract concept has no claimed practical application, it is not patentable.” *Id.* at 1376. Second, “a claim that involves both a mental process and one of the other categories of statutory subject matter (i.e., a machine, manufacture, or composition) may be patentable under § 101.” *Id.* at 1377.

As to the transformation test, the Federal Circuit described the test as also having two parts. The first part is the same as the abstract idea test, namely requiring a claimed practical application. To satisfy the second part of the transformation test, a method claim needs to recite transforming another category of statutory subject matter. *Id.* at 1376.

Combining the second part of the abstract idea test and the transformation test, the Federal Circuit stated that “the Supreme Court has held that a claim reciting an algorithm or abstract idea can state statutory subject matter only if, as employed in the process, it is embodied in, operates on, transforms, or otherwise involves another class of statutory subject matter, i.e., a machine, manufacture, or composition of matter.” *Id.*

Notably, the Federal Circuit did not mention the useful, concrete, and tangible result test applied in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596 (Fed. Cir. 1998) (56 PTCJ 346, 7/30/98), and again applied in *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358, 50 USPQ2d 1447 (Fed. Cir. 1999) (57 PTCJ 443, 4/1/99). Instead, the court noted that the claims in these two cases recited statutory subject matter under Section 101 as satisfying the re-characterized abstract idea test. *Comiskey*, at 1377 n.14.

The invention in *Comiskey* was directed to using binding arbitration to resolve disagreements regarding legal documents, such as wills or contracts. *Id.* at 1368. Although the patent application discussed using a computer or a network, Claim 1 recited a method without mentioning a computer or a network. *Id.* at 1368 n.1.

The Federal Circuit noted that inventions for business methods may be patented but must still satisfy “the same legal requirements for patentability as applied to any other process or method.” *Id.* at 1374. The court found that while the method recited in Claim 1 recited a practical application, the method was not tied to another category of statutory subject matter. As such, the claimed method did not pass the abstract idea test for subject matter patentability.

Further, the claimed method did not pass the transformation test. Hence, the court held that the claim did not recite statutory subject matter under Section 101. *Id.* at 1379.

In contrast, the court found the opposite for Claim 17 of the patent application. Claim 17 recited a system, and the court reasoned that the recited modules of the system could use a computer as disclosed in the application. *Id.* at 1369 n.3, 1379-80. As Claim 17 combined a method with another class of statutory subject matter, the court held that the claim recited statutory subject matter under Section 101. *Id.* at 1380.

## B. Recent BPAI Decisions

In analyzing the BPAI’s position on statutory subject matter after the Federal Circuit’s decision in *Comiskey*, the claims at issue in *Wasynczuk*, *Langemyr*, *Simpson*, and *Godwin* are discussed in terms of reciting a claim as a method, a system, an apparatus, and a computer-readable medium.

### 1. *Software-Based Invention Recited as a Method*

In *Wasynczuk*, *Simpson*, and *Langemyr*, the BPAI addressed statutory subject matter for the software-based inventions recited as method claims. The BPAI reasoned that the method claims in *Wasynczuk* and *Simpson* recited statutory subject matter under Section 101, whereas the method claim in *Langemyr* did not.

In *Wasynczuk*, the BPAI found that a method claim recited statutory subject matter under Section 101. Claim 9 in *Wasynczuk* recited a method as follows:

9. A **computer-implemented method** for simulating operation of a physical system having a plurality of physical subsystems, comprising:

simulating a first physical subsystem with a first continuous-time simulation on **a first physical computing device**;

accepting a request for export of information relating to a number *n* of state-related variables that characterize the state of the first physical subsystem in said simulating;

sending a first series of state-related messages, each message containing information relating to the value of at least one of the *n* state-related variables;

simulating a second physical subsystem with a second continuous-time simulation on **a second physical computing device**;

receiving in said second continuous-time simulation said first series of state-related messages from said first continuous-time simulation without said first series of state-related messages passing through a central communication process; and

outputting [sic] data representative of a state of the second continuous-time simulation; wherein:

the first physical subsystem interacts with the second physical subsystem; and

the at least one state-related variable characterizes at least a portion of the interaction between the first physical subsystem and the second physical subsystem.

*Wasynczuk*, at 3-4 (emphasis added).

Relying on the reasoning in *Comiskey*, the BPAI determined that Claim 9 recited a method employing another statutory category. In particular, Claim 9 recited “on a first physical computing device” and “on a second physical computing device” in the body of the claim, and the BPAI concluded that each recited device was an apparatus. The BPAI noted that these recited devices were “not simply a generic computing device for performing the steps.” *Id.* at 22.

As a result, the BPAI held that Claim 9 recited statutory subject matter under Section 101. *Id.*

In *Simpson*, Claim 22 recited a method as follows:

22. A method, comprising:

discovering **devices** directly connected to **a network** that are not directly connected to **a computer**; and

providing to a user via a network browser a list of at least one discovered **device** that is available for use on **the network**, wherein the list comprises at least one link to an available **device**.

*Simpson*, at 2 (emphasis added).

In *Simpson*, while the BPAI *sua sponte* rejected some claims under Section 101, the BPAI did not reject Claim 22 under Section 101. *Simpson*, at 8-10. Applying the reasoning in *Comiskey*, claim 22 can be seen to recite a method interacting with “devices,” “network,” “computer,” and “device,” all of which are recited in the body and all of which may be considered to be an apparatus.

Hence, as the BPAI did not *sua sponte* reject the claim under Section 101, as with other claims in the patent application, Claim 22 may be seen as passing muster under the abstract idea test of *Comiskey* and reciting statutory subject matter under Section 101.

In *Langemyr*, the BPAI found a method claim to be non-statutory. The BPAI summarized Claim 1 as reciting a method having manipulations performed with a computer, data representing physical systems, and a step reciting “outputting a model.” *Langemyr*, at 18.

Claim 1 of *Langemyr* recited a method as follows:

1. A method **executed in a computer apparatus** for creating a model of a combined physical system having physical quantities by representing physical quantities of the combined physical system in terms of a combined set of partial differential equations, the method comprising:

representing at least one of a plurality of systems as two or more selected application modes modeling physical quantities of said one of said plurality of systems;

determining a set of partial differential equations for each of the two or more selected application modes, parameters of the partial differential equations being physical quantities of corresponding ones of said plurality of systems;

forming said combined set of partial differential equations using the determined sets of partial differential equations associated with said one of said plurality of systems; and

**outputting a model** of said combined physical system based on said combined set of partial differential equations for the two or more selected application modes for the said one of said plurality of systems, whereby the model represents a mathematical expression of the physical quantities of the combined physical system.

*Id.* at 2-3 (emphasis added).

Applying the two tests for statutory subject matter from *Comiskey*, the BPAI reasoned that Claim 1 failed both the abstract idea test and the transformation test. The BPAI stated that the method claim “does not include a particular machine, nor does it transform subject matter to a different state or thing.” *Id.* at 19.

The BPAI felt that the recitation of “executed in a computer apparatus” in the preamble was a nominal recitation of structure and did not save the claim. *Id.* at 20. The BPAI stated that they would “not allow such a nominal recitation in the preamble to convert an otherwise ineligible claim into an eligible one.” *Id.* at 21.

Moreover, the BPAI dismissed the recitation of “outputting a model” as not passing muster under the transformation test for statutory subject matter and, further, as insignificant post-solution activity. *Id.* at 21, 26-27.

Further, the BPAI reasoned that the steps in the body of Claim 1 were “directed only to a manipulation of abstract ideas implemented by any machine that calculates” and “wholly preempt all uses of this abstract idea.” *Id.* at 22 (internal quotations omitted). The BPAI further aligned the facts here with those in *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ 673 (1972), in which the Supreme Court found unpatentable a method for a software-based invention tied to a general purpose computer. *Langemyr*, at 23-25.

The BPAI stated that the steps of Claim 1 “describe nothing more than the manipulation of basic mathematical constructs, the paradigmatic abstract idea.” *Id.* at 26 (internal quotations omitted). In addition, the BPAI determined that the claim failed the useful, concrete, and tangible result test because the output of the method “does not relate to any system in the real world.” *Id.* at 27. As a result, the BPAI held that the claim did not recite statutory subject matter under Section 101. *Id.*

Based on these three BPAI cases, when a software-based invention is claimed as a method, an apparatus (such as computer, a processor, or a physical computing device) should be recited in the body of the claim and not only in the preamble. Further, the apparatus recited in the body should be tied to the recited functions. For example, the method claim in *Langemyr* may have been considered to be statutory if the “computer apparatus” was recited in the body and tied to the functions recited in the body, instead of only being recited in the preamble.

## 2. Software-Based Invention Recited as a System or an Apparatus

In *Wasynczuk* and *Godwin*, the BPAI addressed statutory subject matter for the software-based inventions recited as system and apparatus claims. In both of these cases, the BPAI determined that the claims did not recite statutory subject matter under Section 101.

In *Wasynczuk*, Claim 1 recited a system as follows:

1. A **computer-implemented system**, comprising:

a **first executing process** that:

implements a first continuous-time model to simulate a first physical subsystem, the first model being programmed in a first language and having a first state variable; and

sends a first series of state-related numerical values, each numerical value reflecting information relating to the value of the first state variable at a different point  $t_m$  in simulation time in the first model; and

a **second executing process** that:

receives said first series of state-related numerical values from said first executing process without said first series of state-related numerical values passing through a central communication process;

implements a second continuous-time model to simulate a second physical subsystem, the second model being programmed in a second language and

taking as an input values from said first series of state-related numerical values; and

outputs data representative of a state of the second continuous-time model.

*Wasynczuk*, at 2-3 (emphasis added).

In contrast to Claim 9 discussed above, the BPAI determined that a particular machine was not recited in Claim 1. Instead, the BPAI noted that the only structural limitation was recited in the preamble, namely “computer-implemented system.”

As such, the BPAI reasoned that “the computer or process is essentially any conventional apparatus that performs the claimed functions” and held that Claim 9 did not recite statutory subject matter under Section 101. *Id.* at 25-26.

In *Godwin*, Claims 7 and 12 recited a portal server system and a portal server, respectively, as follows:

7. A portal server system comprising:

a portal coupled to a plurality of portlets, each of said portlets having associated portlet rendering logic;

a portlet aggregator communicatively linked to said portlet rendering logic; and,

a visual service extension to said portlet aggregator programmed to process said portlet rendering logic to transform visual style attributes in said portlet rendering logic into markup language tags which can be rendered for display in a specified type of pervasive agent.

12. A portal server comprising:

a portal aggregator configured to aggregate portlet views into a single portal view; and,

a visual service extension to said portlet aggregator programmed to process said portlet rendering logic for selected ones of said portlet views to transform visual style attributes in said portlet rendering logic into markup language tags which can be rendered for display in a specified type of pervasive agent.

U.S. Patent Application No. 10/439,867, Appeal Brief filed Aug. 14, 2006, pages 19-20.

Similar to the BPAI’s reasoning in *Wasynczuk*, the BPAI here noted that the “portal server system” and the “portal server” were recited in the preambles, and not the bodies, of Claims 7 and 12, respectively. Further, the body of Claim 7 recited a “portal,” “portlet aggregator,” and “visual service extension,” and the body of Claim 12 recited a “portlet aggregator” and “visual service extension.”

The BPAI found that the specification of the patent application stated that the “present invention can be realized in hardware, software, or a combination of hardware and software.” Hence, the elements recited in the bodies of Claims 7 and 12 could be software.

As such, the elements were not tied to a particular machine and did not recite a transformation. Thus, the BPAI concluded that Claims 7 and 12 did not recite statutory subject matter under Section 101. *Godwin*, at 3-4.

Based on these two BPAI cases, when a software-based invention is claimed as a system or an apparatus, an apparatus (such as computer, a processor, or a physical computing device) should be recited in the body of the claim, not only in the preamble, and should

be tied in the body to the recited functions. For example, Claim 1 in *Wasynczuk* may have been viewed as reciting statutory subject matter if the claim recited:

1. A computer-implemented system, comprising:

a first ~~executing~~ process *executing on a first processor* that:

...

a second ~~executing~~ process *executing on a second processor* that:

...

where the strike-throughs indicate deletions and the underlines indicate additions. As another example, the claims in *Godwin* may have been considered to recite statutory subject matter if the functions in the bodies were tied to hardware so as to eliminate the possibility that only software was claimed in the body.

### 3. Software-Based Invention Recited as a Computer-Readable Medium

In *Simpson* and *Langemyr*, the BPAI addressed statutory subject matter for the software-based inventions recited as computer-readable medium claims. In both of these cases, the BPAI found that the claims did not recite statutory subject matter under Section 101. As an exercise, the reasoning from *Langemyr* can be applied to a claim at issue from *In re Beauregard*, 53 F.3d 1583, 35 USPQ2d 1381 (Fed. Cir. 1995), which initiated the practice of reciting software-based inventions as computer-readable medium claims.

The claims in *Simpson* included the following computer-readable medium claim:

32. A device discovery **service stored on a computer-readable medium**, the service comprising:

**logic configured** to discover devices directly connected to a network that are not directly connected to a computer; and

**logic configured** to provide a user home service accessible with a network browser with a list of at least one discovered device that is available for use on the network.

*Simpson*, at 2-3 (emphasis added).

Like Claims 22 discussed above, Claim 32 recited “devices,” “network,” “computer,” and “device” in the body, and all of these may be considered to be an apparatus. However, the BPAI in *Simpson* reasoned that the recitation of logic in the body of the claim indicated “the algorithm or reasoning behind an operational computer program, not the program itself.” *Id.* at 9.

Further, the BPAI found fault with the application describing that the computer-readable medium “could even be paper.” *Id.* The BPAI, however, indicated that if the body of the claim recited “instructions,” instead of “logic,” it would have been statutory, except for the description of the computer-readable medium being paper. *Id.* As such, the BPAI held that Claim 32 did not recite statutory subject matter pursuant to Section 101.

In *Langemyr*, Claim 42 recited a computer-readable medium as follows:

42. A **computer readable medium** having **stored thereon instructions** for creating a model of a combined physical system having physical quantities by representing physical quantities of the combined physical system in terms of a combined set of partial

differential equations **comprising machine executable code** which when **executed by at least one processor, causes the processor to perform** steps comprising:

representing at least one of a plurality of systems as two or more selected application modes modeling physical quantities of said one of said plurality of systems;

determining a set of partial differential equations for each of the two or more selected application modes, parameters of the partial differential equations being physical quantities of corresponding ones of said plurality of systems;

forming said combined set of partial differential equations using the determined sets of partial differential equations associated with said one of said plurality of systems; and

**outputting a model** of said combined physical system based on said combined set of combined set of partial differential equations for the two or more selected application modes for the said one of said plurality of systems, whereby the model represents a mathematical expression of the physical quantities of the combined physical system.

*Langemyr*, at 3-4 (emphasis added).

In comparing Claim 42 and Claim 1, discussed above, of *Langemyr*, the bodies are the same, but the preambles differ. However, the BPAI was unpersuaded by the different preamble. "Simply placing instructions on a computer readable medium, wherein the instructions are designed to perform mere manipulations of abstract ideas, should not convert an otherwise non-statutory method into patentable subject matter." *Id.* at 28. Relying on the reasons for finding that claim 1 did not recite statutory subject matter, the BPAI held that Claim 42 likewise failed to recite statutory subject matter under Section 101.*Id.*

The BPAI in *Langemyr* appears to be taking the position that computer-readable medium claims that recite software instructions in the body, without more, are non-statutory as not passing the abstract idea test and the transformation test from *Comiskey*. The BPAI further appears to suggest that loading the software on a computer or executing the software on a computer could be recited to make the claim statutory. In particular, the BPAI stated:

We see no reason why placing instructions on a computer readable medium that cause a processor, when executed, to engage in manipulations of abstract ideas [as in claim 42] should be treated any differently from the methods of claim 1. . . . There is also no transformation in the subject matter of claim 42, because the claim merely recites instructions stored on a computer readable medium. Although the instructions, when executed in a computer, may cause a transformation of the computer, the step of executing the instructions in a computer is not claimed here. In other words, the claim is not directed to a computer or machine loaded with and/or executing the software. We are not saying, by this distinction, that such a claim would necessarily be patentable in this case either. We are not, however, confronted with such a machine claim, and thus we decline to rule on whether such a claim would be directed to statutory subject matter.

*Langemyr*, at 28-29 (citations omitted).

Interestingly, the reasoning of the BPAI from *Langemyr* can apparently be applied to render statutory the claims at issue in *Beauregard*, which serves as the basis for the practice of reciting software-based inventions as computer-readable claims. Of note, Claim 10 in *Beauregard* recited a computer-readable medium as follows:

10. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for filling a polygon having a boundary definable by a plurality of lines displayed on a graphics display of said machine, said method steps comprising:

testing the polygon to determine if there is one continuous scan line for each one of a plurality of scan lines of said polygon;

sequentially traversing first the boundary of the polygon from a lowest point of the polygon to a highest point of the polygon and sequentially traversing second the boundary of the polygon from the highest point of the polygon to the lowest point of the polygon;

generating a first array, during said first sequential traverse, having a minimum value and a maximum value representing a minimum point and a maximum point along the boundary of the polygon for each one of said plurality of scan lines for each one of a plurality of lines of the polygon if the test to determine if there is one continuous scan line for each one of said plurality of scan lines is positive;

generating a second array, during said second sequential traverse, having a minimum value and a maximum value representing a minimum point and a maximum point along the boundary of the polygon for each one of said plurality of scan lines for each one of a plurality of lines of the polygon if the test to determine if there is one continuous scan line for each one of said plurality of scan lines is positive;

combining said first array and said second array into one array having a greatest maximum value and a least minimum value for each one of said plurality of scan lines; and

passing a pointer to said one array, after said sequential traverse of said polygon, **to a routine in a graphics support library in the machine for drawing a fill line** between said least minimum value and said greatest maximum value for each one of said plurality of scan lines.

U.S. Patent No. 5,710,578 (Jan. 10, 1998).

In *Beauregard*, the BPAI agreed with the examiner that the claim did not recite statutory subject matter under Section 101, and the patent applicant appealed the case to the Federal Circuit. Brief for Appellants Gary M. Beauregard et al., *In re Beauregard*, 1995 WL 17205110, at \*\*2-3 (Fed. Cir. 1995) (No. 9501954). While the appeal was pending, however, the PTO reversed itself, stating "that computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. § 101." *Beauregard*, 53 F.3d at 1584.

Accordingly, the case was remanded back to the PTO. *Id.* The PTO subsequently issued the application as U.S. Patent No. 5,710,578.

In comparing Claim 42 of *Langemyr* and claim 10 of *Beauregard*, the preambles have similar form, and both

have bodies that recite functions performed by software. The following Table 1 provides a side-by-side

comparison of similar phrases in the preambles of these two claims.

**Table 1. Comparison of the Preambles of Claim 42 of *Langemyr* and Claim 10 of *Beauregard***

Phrases from Preamble of Claim 42 of <i>Langemyr</i>	Phrases from Preamble of Claim 10 of <i>Beauregard</i>
computer readable medium	program storage device readable by a machine
having stored thereon instructions	tangibly embodying a program of instructions
machine executable code	instructions executable by the machine
machine executable code which when executed by at least one processor, causes the processor to perform steps comprising:	instructions executable by the machine to perform method steps. . . , said method steps comprising:

As can be seen, the preambles of Claim 42 of *Langemyr* and Claim 10 of *Beauregard* have similar recitations regarding the computer-readable medium.

Under the reasoning of the BPAI in *Langemyr*, the Claim 10 of *Beauregard* may be considered as reciting statutory subject matter, whereas Claim 42 of *Langemyr* did not. Claim 10 of *Beauregard* recites six steps.

Following the reasoning in *Langemyr*, the first five steps in the body of *Beauregard*'s Claim 10 may be considered to be "directed only to a manipulation of abstract ideas implemented by any machine that calculates," to "wholly preempt all uses of this abstract idea," and to "describe nothing more than the manipulation of basic mathematical constructs, the paradigmatic abstract idea." See *id.* at 22, 26 (internal quotations omitted).

In contrast, the sixth step in the body of Claim 10 of *Beauregard* recites the following:

passing a pointer to said one array, after said sequential traverse of said polygon, **to a routine in a graphics support library in the machine for drawing a fill line** between said least minimum value and said greatest maximum value for each one of said plurality of scan lines.

U.S. Patent No. 5,710,578 (Jan. 10, 1998) (emphasis added). Noteworthy, the sixth step of the claim refers back to the "machine" of the preamble, whereas the body of Claim 42 of *Langemyr* does not refer back to the "processor" recited in the preamble. Further, the sixth step of Claim 10 recites that a particular graphic library having a particular routine for drawing a fill line are recited as part of the machine.

This recitation would appear to overcome the reasoning of the BPAI in *Langemyr* that "[c]laims that involve machines in a merely incidental fashion are not automatically directed to a patentable process." *Langemyr*, at 24. Hence, based on the reasoning of the BPAI in *Langemyr*, Claim 10 of *Beauregard* may likely be viewed as reciting statutory subject matter under Section 101.

Based on these BPAI cases, when a software-based invention is claimed as a computer-readable medium, an apparatus (such as computer, a processor, or a physical computing device) should be recited in the body of the claim and not only in the preamble. Further, the apparatus recited in the body should be tied to the recited functions. This technique is illustrated with a claim at issue in *Beauregard*. Instead of reciting an apparatus in the body, a transformation of a category of statutory subject matter, other than a method, could be recited in the body.

## Conclusion

Recent BPAI opinions provide insight into how claims for software-based inventions may be interpreted post-*Comiskey*. Based on these recent BPAI opinions, when a software-based invention is claimed as a method, an apparatus, a system, or a computer-readable medium, either: (1) an apparatus should be recited in the body of the claim, not only in the preamble, and tied to the recited functions in the body; or (2) a transformation of a category of statutory subject matter, other than a method, should be recited in the body.

Finally, it will be interesting to see how these insights may be affected by the pending Federal Circuit appeal of the BPAI decision in *Ex parte Bilski*, Appeal No. 2002-2257 (B.P.A.I. Sept. 26, 2006), which deals with the claiming of statutory subject matter for a non-software related business method invention.

Full text of BPAI informative opinion in *Ex parte Wasynczuk* at <http://pub.bna.com/ptcj/081496June2.pdf>

Full text of BPAI informative opinion in *Ex parte Langemyr* at <http://pub.bna.com/ptcj/081495May29.pdf>

Full text of BPAI unpublished opinion in *Ex parte Simpson* at <http://pub.bna.com/ptcj/080569July2.pdf>

Full text of BPAI unpublished opinion in *Ex parte Godwin* at <http://pub.bna.com/ptcj/080130June30.pdf>