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## Post-Bilski Standards For Data

*Law360, New York (March 17, 2009)* -- In re Bilski, 545 F.3d 943 (Fed.Cir. 2008), gives two safe harbor provisions for method claims to be patent-eligible: “[a] claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” Id. at 954.

What Bilski left unclear is exactly how this reinvigorated test from a 1972 U.S. Supreme Court opinion applies to claims for software-related inventions stemming from the computer revolution that was in its infancy in 1972.

Recently, in *Ex Parte Zybura*, No. 2008-2195, 2009 WL 282081 (Bd.Pat.App. & Interf. Feb. 3, 2009), the U.S. Patent and Trademark Office (PTO) had a post-Bilski opportunity to decide an appeal including a section 101 rejection of software-related method claims.

This article discusses three things a claim must have if data is going to be acceptable to the PTO as a transformed material to meet the post-Bilski test for patent-eligible subject matter: (1) the transformation must be central to the claim, (2) the data must represent a physical or tangible object, and (3) the claim must specify how or where the data were obtained.

### **The Transformation Must be Central to the Claim**

The claims at issue in *Ex Parte Zybura* relate to resolving conflicts in namespaces. Namespaces are used in programming languages and in other areas, such as XML, to enable names of data elements or attributes to be unique.

For example, a data element from Namespace A can be called ProductID, while another unrelated data element from Namespace B can be called ProductID. These two identical data elements can be treated uniquely by specifying their namespace such as A:ProductID and B:ProductID.

Thus, namespaces serve an increasingly important function of allowing a software system to operate using independently developed data elements and labels that may otherwise contain conflicting names.

In *Ex Parte Zybura*, the PTO determined that Claim 1 did contain a transformation. In that case the claim read:

1. A method for synchronizing information in namespaces, comprising:
  - receiving an indication of a change to information in a first namespace;
  - based on the indication, determining if an entity exists in a second namespace related to the information;
  - if so, determining if the entity has a characteristic that conflicts with the information; and
  - if a conflict exists, modifying the entity to resolve the conflict prior to applying the change to the second namespace.

The PTO indicated that the modification of the entity arguably transforms the entity into a different state and applying it to the second namespace transforms that namespace. However, the rejection of Claim 1 was affirmed as drawn to non-statutory subject matter for other reasons (see Section 2 below).

Contrast with Claim 21, which did not meet the transformation element of the test. Claim 21 read:

"21. A technique for synchronizing entities within two namespaces, comprising: while synchronizing the two namespaces: identifying a conflict between a change notification received from a first namespace and a state of information within a second namespace; creating a temporary entity within the second namespace that allows the synchronization to proceed without interference by the conflict; and if the conflict becomes resolved such that the temporary entity is no longer necessary, removing the temporary entity."

Here, the PTO determined that Claim 21 did not "recite an article which is being transformed into a different state or thing." *Id.* at \*4.

This ended the section 101 analysis for Claim 21. This is surprising because the claim recites creating a temporary entity within the second namespace and then maybe removing the temporary entity. This clearly transforms the second namespace into a different state (at least temporarily).

This result is also somewhat confusing, considering that the Court of Appeals for the Federal Circuit (CAFC) noted in *Bilski* that the mere displaying of data was a sufficient “transformation.” *Bilski*, 545 F.3d at 963.

There are two lessons that can be drawn from the PTO’s treatment of Claims 1 and 21.

First, each transformation step should clearly recite the transformation that is taking place using terms suggestive of transforming or altering. For example, compare “modifying” as used in Claim 1 with “creating” as used in Claim 21.

Second, the transformation should be clearly tied to the data being transformed. Again, compare “modifying the entity” of Claim 1 with “creating a temporary entity within the second namespace” of Claim 21.

## 2. The Data Must Represent a Physical or Tangible Object

This is where independent Claim 1 in *Ex Parte Zybura* failed, according to the PTO. As to Claim 1, the PTO stated that “the entity being transformed is not a physical object” and “the namespace being transformed is not a physical object.” *Zybura*, 2009 WL 282081, at \*3.

The PTO was not quite accurate in their application of the *Bilski* requirements. *Bilski* mentions that acceptable data must represent a physical or tangible object, not that the data itself be a physical object as stated by the PTO.

*Bilski* lists the following examples of data representing a physical object: x-ray data, cardiac signal data, and seismic data. Not a very helpful list unless you are lucky enough to be drafting medical or seismic method claims. Judge Rader’s dissent in *Bilski* offers an interesting analysis of the inherent difficulties with this part of the test.

As a practical matter, claims should, of course, include a specific recitation of the physical object represented by the data, especially if the represented object is an object like those recognized in *Bilski*.

However, for the rest of the software-related world (much like the invention in *Ex Parte Zybura*), the data likely does not represent a physical object.

In these cases, a claim may be drafted to focus on the transformation, the type of data and how or where the data are obtained, as discussed below.

But, be warned, the PTO in *Ex Parte Zybura* ended the section 101 analysis for independent Claims 1 and 13 when it determined that the data did not represent a physical object or article.

So, if you find that your data does not represent a physical object, then it may be helpful to re-examine whether there is any particular machine or apparatus that can be introduced in the claim in order to get back to the first provision of the Bilski safe harbor.

### *3. The Claim Must Specify How or Where the Data were Obtained*

In *Ex Parte Zybura*, the PTO ended the analysis before reaching this element. One should not overlook this element, though — the PTO did list this part of the test along with the physical object representation.

Although *Ex Parte Zybura* doesn't offer much guidance on this element, *In re Abele*, 684 F.2d 902 (Cust. & Pat. App. 1982), discussed in *Bilski*, offers some guidance in this area.

In *Abele*, independent Claim 5 was rejected as non-statutory, but dependent Claim 6 was held directed to statutory subject matter. Claim 6 of *Abele* read, in part, "wherein said data is X-ray attenuation data produced in a two dimensional field by a computed tomography scanner." *Id.* at 908.

Claim 6 of *Abele* recites how or where the data came from and, arguably more importantly, recites a specific machine involved with the data collection—the computed tomography scanner.

Claim 6 is referenced in *Bilski* as having data representing a physical object. But Claim 6 does not explicitly recite the connection between data and object.

This gap is filled in by the CAFC, perhaps from the specification, when it says the data "clearly represented physical and tangible objects, namely the structure of bones, organs, and other body tissues." *Bilski*, 545 F.3d at 963.

It is important to know when drafting claims that transforming data representing a physical object may not be enough to meet the *Bilski* safe harbor, at least according to the PTO.

Reciting how or where the data came from may also be required. This aspect was not prominently discussed in *Bilski*, where the CAFC mentioned that Claim 6 in *Abele* "did not specify any particular type or nature of data; nor did it specify how or from where the data was obtained or what the data represented." *Id.* at 962.

However, from the discussion in *Ex Parte Zybura*, it would seem that the PTO has included this element as a requirement for data as a transformable material.

In light of *Ex Parte Zybura*, claims should include how or where the data are collected. Though, as you can see from *Abele*, this likely leads back to the first safe harbor of *Bilski*. Once in the mode of reciting how the invention got the data or where it came from, apparatus of some sort usually starts to enter the picture.

A petition for certiorari has been filed in *Bilski*. So, all of this may be temporary, much like the namespace creation in Claim 21 of *Ex Parte Zybura*. Unfortunately, given its claims, *Bilski* is not an ideal case for updating the law applying section 101 to software-related inventions.

Finally, considering the ongoing flux in law and PTO emphasis regarding section 101, it may be helpful to include specification support for several alternative claim formulations including both traditional methods and *Bilski* safe harbor methods.

Support for some of the post-*Bilski* out-of-favor tests — such as the concrete, tangible, useful result — may also be helpful, because, as we learned in *Bilski*, old trends sometimes come back into fashion.

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