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BAR BULLETIN FOCUS: INTELLECTUAL PROPERTY

Ex parte Gutta: A New Framework for Examining Software Innovations

By Mohammad S. Rahman and David E. Moore

The United States Patent and Trademark Offuce's Board of Patent Appeals and Interferences (BPAI) delivers a precedential opinion affecting examination of software-related patent applications in *Ex parte Gutta*, App. No. 2008-4366 slip op. 1, 2 (BPAI Dec. 21, 2009). *Gutta* is of particular interest because of its analysis of software inventions defined by apparatus and article of manufacture claims.

Patent law allows "anything under the sun made by man" to be patent-eligible in the U.S. (*see Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)). However, this broad doctrine is limited by judicially-created exceptions. Most notably, laws of nature, natural phenomena and abstract ideas are not eligible for patent protection. *Diamond v. Diehr*, 450 U.S. 175, 185 (1981). Mathematical algorithms including software are traditionally categorized as abstract ideas, and accordingly algorithms themselves are not patent-eligible. *Gutta*, No. 2008-4366 slip op. at 14 (BPAI, Dec. 21, 2009). However, the machines (e.g., computer hardware) and articles of manufacture (e.g., computer-readable media) that implement an algorithm are patent-eligible. Nonetheless, in *Gutta,* the BPAI further defines the bounds of patent-eligible subject matter of apparatus and article of manufacture inventions that implement an algorithm.

The BPAI introduces a two-part test to determine whether apparatus and article of manufacture claims that include an algorithm are patent-eligible. *Id. at 15.* First, the claim must be limited to a tangible practical application, in which the mathematical algorithm is applied, that results in a real-world use (e.g., "not a mere field-of-use label having no significance"). *Id.* Second, the claim must be limited so as to not encompass substantially all practical applications of the mathematical algorithm either "in all fields" of use of the algorithm or even in "only one field." *Id.* Both of these inquiries must be satisfied in order for a software invention defined by apparatus and article of manufacture claims to be patentable. *Id.* at 16.

The invention in *Gutta* includes software that generates a television viewer's preferred profile that includes the types of programs and channels of interest to the viewer and then recommends other programs/channels to the viewer based on the profile. The invention focuses on the algorithm that selects the program/channel which most closely matches the viewer's preferences. The apparatus claim in *Gutta* includes "a system for identifying one or more mean items for a plurality of items, J, each of the items having at least one symbolic attribute having a symbolic value, the system comprising: a memory for storing computer-readable code; and a processor operatively coupled to the memory, the processor configured to: compute a variance of the symbolic values of the plurality of items relative to each of the items; and select at least one mean item having a symbolic value that minimizes the variance."

Under the first inquiry, the BPAI indicates that the claim neglects to define a particular or physical item or article and does not define a tangible practical application that will use the algorithm. *Id.* at 20. The BPAI indicates that the claimed "items" and "symbolic attributes" and "symbolic values" are merely abstract ideas that are not defined as a particular physical item. *Id.* The BPAI suggests that had the claim referred to "television programs" or "channels" or "titles" instead, then these items would constitute particular or physical items. *Id.* Furthermore, the BPAI concludes that the claim's language of "identifying one or more mean items" equates to a "broad range of potential uses" and overall the claim fails to recite a tangible practical application in which the algorithm is applied that results in a real-world use. *Id.* Accordingly, the claim fails the first inquiry.

Under the second inquiry, the BPAI indicates that the inventors are attempting to claim the algorithm itself because the claim covers all practical applications of the algorithm. *Id.* at 22. The BPAI acknowledges that the claim includes physical components; namely the memory and the processor, but that these components are non-descriptive structures described as RAM and/or ROM and CPU components in the specification without explaining how these components perform the algorithm or any other structural significance associated with them. *Id.* at 21. Generally, the BPAI acknowledges that the claim includes physical structures, but that the structures are performing abstract functions, and thus the claim encompasses substantially all practical applications of the algorithm and thereby impermissibly attempts to patent the algorithm itself. *Id. at 22.* Therefore, merely including structure in a claim containing an algorithm is insufficient for patentability. Accordingly, the claim fails the second inquiry. Securing patent rights for

algorithms continues to be a hot-button issue. The BPAI does not preclude all patent rights for algorithms and inventions that utilize algorithms continue to be worthy of patent protection. However, the BPAI requires more specificity and practicality in how the algorithm is claimed. Accordingly, software-related patent applications should be prepared with a clear understanding of the BPAI's two-part test.

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