VISUAL MEMORY LLC v. NVIDIA CORPORATION, Appeal No. 2016-2254 (Fed. Cir. August 15, 2017). Before O'Malley, Hughes, and Stoll. Appealed from D. Del. (Judge Andrews).

Background:

Visual Memory sued NVIDIA for infringement of patent claims disclosing a computer memory system having one or more *programmable operational characteristics* used for determining a type of data to be stored by a cache based on the type of processor. NVIDIA filed a motion to dismiss for failure to state a claim.

In granting NVIDIA's motion, the district court concluded that, under step one of the *Alice* test, the claims are directed to the "abstract idea of categorical data storage," which humans have practiced for many years, and, under step two, the claimed computer components—main memory, cache, bus, and processor—were generic and conventional, and provided no inventive concept. According to the district court, the *programmable operational characteristics* did not provide an inventive concept because they represent generic concepts that determine the type of data to be stored by the cache. Visual Memory appealed.

Issue/Holding:

Did the district court err in its determination of patent-ineligibility based on the two-part *Alice* test? Yes, reversed and remanded.

Discussion:

In the step one analysis, the Federal Circuit indicated that the key question is "whether the focus of the claims is on the specific asserted improvement in computer capabilities (*e.g.*, the self-referential table for a computer database) or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool."

The specification explains that the memory system permits "different types of processors to be installed with the subject memory system without significantly compromising their individual performance," and "although prior art memory systems possessed the flexibility to operate with multiple different processors, this one-size-fits-all approach frequently caused a tradeoff in processor performance." That is, the patent's teachings obviate the need to design a separate memory system for each type of processor, which proved to be costly and inefficient.

Accordingly, the Federal Circuit held that, like *Enfish*'s self-referential table, the claims are directed to a technological improvement: an enhanced computer memory system. In so doing, the Federal Circuit distinguished the patent-ineligible determinations in *Content Extraction* (basic concept of data recognition and storage), and *TLI Communications* (classifying and storing digital images in an organized manner) as not being directed to improvements in computer functionality, as in the current case. Thus, the claims were not directed to an abstract idea under step one, thereby ending the *Alice* analysis.

Judge Hughes dissenting opinion found no specific claim limitations on the "*programmable operational characteristic*," thereby making it a purely functional component, and a "black box for performing the abstract idea of storing data based on its characteristic, and [with] the patent [lacking] any details about how that is achieved."

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