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To: 2014_interim_guidance
Subject: 101 Eligibility and WWW or Distributed Program Systems

I have been reviewing the CAFC decision in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (F. Cir. 2014) because I am working on a WWW (World Wide Web) based patent application for an employer. Unfortunately, I cannot disclose anything about that, but I have served as a patent litigation consultant to several law firms in the past and have thought about the issues addressed in this case on my own time.

The CAFC seems to have been distracted by the networking protocols.

The World Wide Web/Internet is a vast giant NORMA (defined below) distributed multiprocessor system.

Today practically all computer systems are multiprocessor systems because almost all the major CPU chips are available in multicore versions that contain multiple processor cores that run in parallel. (It has been a long time since I have actually worked with a single core single processor system although I know one could still design such a system with available microprocessor chips.)

Generally multiprocessor systems fit into three categories:

UMA (Uniform Memory Access) -- all processors see memory in exactly the same way,

NUMA (Non-Uniform Memory Access) -- each processor can access its local memory quickly and can access remote memory more slowly. Local memory to one processor is remote memory to a separate processor,

NORMA (No Remote Memory Access) -- each processor accesses its local memory quickly and cannot access remote memory directly. Instead remote memory is typically accessed by message exchange (over some sort of network medium - like the Internet). In the past such systems have generally been IP based distributed systems that use RPC (remote procedure call) libraries to access resources. (Of course, in the past IBM, DEC, Prime, et alia all had their own proprietary distributed systems based on proprietary networking protocols.)

Various open and proprietary software packages are available as a means to run some number of separate computer systems as a NORMA distributed system. Beowulf is an example of an open software system meant to create a NORMA distributed cluster from off the shelf computer systems. Mercury Systems, Inc. is an example of a company that provides a proprietary cluster distributed systems.

The latest distributed systems skip building RPC libraries and developing (or using) various sorts of resource location systems. Instead they piggy-back on WWW protocols and use extended versions of URLs (Uniform Resource Locators). SOAP (Simple Object Access Protocol) or REST (Representation State Transfer) or combinations thereof are generally used in implementing a WWW based NORMA distributed computing system.

Sometimes NORMA systems use a software layer to emulate NUMA systems.

When such software emulation is built into hardware logic, one typically refers to (NUMA) fabric interconnected systems. Starfabric provides this capability. The DOD likes it, but generally fabric-interconnect has been a solution in search of a problem.

If the CAFC judges that adjudicated *DDR Holdings* understood the WWW as computer scientists (like me) do, the claims of the *DDR Holdings* patents would have been invalidated by the precedent of *Gottschalk v. Benson*, 409 U.S. 63 (1972).

Below is the first independent claim of the '399 patent. As long as the desktop or laptop computer is running the browser, it is part of the vast NORMA distributed computer system that is the WWW.

1. A method of an outsource provider serving web pages offering commercial opportunities, the method comprising:

- (a) automatically at a server of the outsource provider, in response to activation, by a web browser of a computer user, of a link displayed by one of a plurality of first web pages, recognizing as the source page the one of the first web pages on which the link has been activated;
- (i) wherein each of the first web pages belongs to one of a plurality of web page owners;
- (ii) wherein each of the first web pages displays at least one active link associated with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants; and
- (iii) wherein the selected merchant, the outsource provider, and the owner of the first web page are each third parties with respect to one other;
- (b) automatically retrieving from a storage coupled to the server pre-stored data associated with the source page; and then
- (c) automatically with the server computer-generating and transmitting to the web browser a second web page that includes:
 - (i) information associated with the commerce object associated with the link that has been activated, and
 - (ii) a plurality of visually perceptible elements derived from the retrieved pre-stored data and visually corresponding to the source page.

In the above DDR Holdings' claims, a web page was just calculated/generated at a server from some (browser) terminal inputs (something quite trivial by use of common automatic web page generation systems) and displayed on a (browser) terminal. The server queried a database that was also located within the NORMA distributed computer system. These claims are at least as directed to an abstract idea as those of Benson as was decided in *Gottschalk v. Benson*.

Note that as a PHOSITA using the '399 patent as a guide, I would first implement the DDR Holdings method of Claim 1 on a Linux system by installing the mongodb database server thereon along with the node.js server-side scripting system. I would then install one of the node.js mongodb interface packages along with the node.js express server framework package. Then I would simply code the described DDR holdings server. The whole server is unlikely to exceed more than a few hundred lines. I could test the whole system by means of a Chrome, Mozilla, or Safari browser installed on the Linux system. Voilà I have implemented the method of Claim 1 in three local programs (my server script+off-the-shelf browser+mongodb server) on my Linux system. Because I implemented the server by means of node.js, the server script could be run on any computer system that hosts node.js and implements WWW protocols. The server script could access a mongodb server on any computer system that implements WWW protocols. In other words, I just implemented a system that implements the method of Claim 1. As far as I can tell, the USPTO and the CAFC have allowed patent claims whose inputs and outputs are purely within a single (distributed) multiprocessor computer system and that don't in anyway represent an improvement to the WWW viewed as a vast NORMA distributed computer system. All of the '399 independent claims should be ineligible under 101 even though the CAFC incorrectly decided otherwise.

Note the USPTO abstract idea guidance (http://www.uspto.gov/patents/law/exam/abstract_idea_examples.pdf) provides ways to formulate Web-related claims that would be eligible under 101. The desktop/laptop has sort of a dual personality/identity/aspect. If the user terminates the browser, the user's computer is no longer part of vast NORMA distributed computer system.

If the browser uploaded a file from the laptop/desktop to a web server that analyzed it and generated a new/modified file that is saved to file storage on the user's desktop/laptop computer and that could be reviewed by the user independent of the World Wide Web (browser) and of the vast NORMA distributed computer system that the WWW forms, a claim could be written that avoided 101 ineligibility.

I have also seen robotic systems that are controlled (or at least configured) via the Web. Such systems would probably be 101 eligible according to the precedent of *Diamond v. Diehr*, 450 U.S. 175 (1981).

BTW, the logic that renders the '399 patent invalid under 101 should also apply to the Google Panda patent (US 8682892) and similar patents. The USPTO needs to seriously reevaluate 101 eligibility within the context of NORMA distributed systems, and judges in the district court system as well as those on the CAFC need to be brought up to speed with respect to modern distributed computing concepts before the patent system is inundated by a new flood of trash patents.

Regards,

Joachim Martillo