More software patent eligible, Federal Circuit says lip synchronization not abstract

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Print Article

The Federal Circuit has issued a decision in the much anticipated case *McRo, Inc. v. Bandai Namco Games America*, which found that the software patent claims at issue were not directed to an abstract idea and, therefore, are patent eligible subject matter under 35 U.S.C. 101.

This case reached the Federal Circuit from the United States District Court for the Central District of California (having been transferred from Delaware and

consolidated). After holding a *Markman* hearing, the district court granted the defendants' motion on the pleadings that all asserted claims were unpatentable. The district court said that the claims, on their face, do not seem to be directed to an abstract idea, but ultimately determined that the claims were too broad and not limited to a specific set of rules, which in the mind of the district court meant that they were abstract ideas. Ultimately, the district court found that while the claims do not preempt the field of lip synchronization for computer generated 3D animation; the claims did preempt lip synchronization using a rules-based morph target approach.

The Federal Circuit panel of Judges Reyna, Taranto, and Stoll, reversed. Judge Reyna delivered the opinion for the panel.

In a blog post by Erich Andersen, Vice President & Deputy General Counsel of Microsoft's IP Group, the Federal Circuit decision is praised for providing more certainty for three specific reasons. Andersen explains that the Court's ruling (1) emphasizes the need to consider the claims as a whole (i.e., not oversimplify the claims); (2) explains software claims may be patent eligible if they represent a technological improvement; and (3) makes clear that data processing claims may be patent "eligible even if they produce information rather than a physical product or result." *See [Federal Circuit rules on software patent eligibility](#)*.[1]

The Invention

The patents in question relate to automating a part of a 3D animation method. Essentially, the patents cover lip synchronization of animated characters so that the lips of the animated character move in a normal fashion to the point where the animated character's lips can be read.

In the prior art, to animate the character as it speaks, the method morphs the character's expression between models. For example, with the "neutral model" being that of the resting, neutral facial expression of an animated character. The other models of the character's face are known as "morph targets," and each one represents that face as it makes a certain sound (i.e., pronounces a phoneme). The patents at issue criticize the preexisting approaches as tedious and time consuming, as well as inaccurate.

The invention covers in the patents in question aims to automate a 3-D animator's tasks. Automation is accomplished through rules applied to the timed transcript to determine the morph weight outputs. The patents describe many exemplary rule sets that go beyond simply matching single phonemes from the timed transcript with the

appropriate morph target. As a result, the rule sets aim to produce more realistic speech by taking into consideration the differences in mouth positions for similar phonemes based on context.

The Representative Claim

Claim 1 of U.S. Patent No. 6,307,576 was deemed representative and dispositive of the asserted claims for the purposes of the appeal:

A method for automatically animating lip synchronization and facial expression of three-dimensional characters comprising:

obtaining a first set of rules that define output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence;

obtaining a timed data file of phonemes having a plurality of sub-sequences;

generating an intermediate stream of output morph weight sets and a plurality of transition parameters between two adjacent morph weight sets by evaluating said plurality of sub-sequences against said first set of rules;

generating a final stream of output morph weight sets at a desired frame rate from said intermediate stream of output morph weight sets and said plurality of transition parameters; and

applying said final stream of output morph weight sets to a sequence of animated characters to produce lip synchronization and facial expression control of said animated characters.

CAFC Decision

At the outset of the Federal Circuit discussion, Judge Reyna noted that in this case the claim construction carried out by the district court was "helpful to resolve the question of patent eligibility under § 101." This statement almost sounds out of place until you

realize that most times district courts do not engage in a claim construction analysis prior to determining whether the claims are patent eligible. It is astonishing that any court could ever even attempt to determine whether a claim is patent eligible because it merely covers an abstract idea without first engaging in a thorough analysis of what the claim actually covers. Merely looking at a claim on its face and pretending to be able to divine what is covered is the type of analysis one would expect from the utterly uninformed, not something that ostensibly passes for justice.

After going through a two-plus page recitation of the law, Judge Reyna summarized the district court holding, that the claims were drawn to an abstract idea of automating rules-based use of morph targets and delta sets for lip synchronization in 3D animation. Reyna explained that the Federal Circuit disagreed with that determination, reminding the district court that they have cautioned courts to carefully "avoid oversimplifying the claims." Reyna would go on to say that these claims are specifically "limited to rules with specific characteristics."

When addressing the specific limitations of the rules (see bottom of page 21) the Federal Circuit in *McRo* did not cite to *Enfish v. Microsoft*, but did observe: "The specific, claimed features of these rules allow for the improvement realized by the invention." Recall that the patents at issue in *Enfish* explained that the claimed invention in that case was an improvement, which the Federal Circuit would make a great deal about in their patent eligibility analysis. The Federal Circuit explained in *Enfish* that the claims at issue plainly focused on improvements to computer functionality. This led the *Enfish* panel to unanimously conclude, "the claims at issue in this appeal are not directed to an abstract idea within the meaning of *Alice*. Rather, they are directed to a specific improvement to the way computers operate, embodied in the self-referential table." *See Federal Circuit says software patent claims not abstract, are patent eligible*.

It would seem that once again the fact that the claims covered an improvement were to some extent pivotal in the Federal Circuit analysis. For example, at the top of page 22, Judge Reyna writes: "As the specification confirms, the claimed improvement here is allowing computers to produce "accurate and realistic lip synchronization and facial expressions in animated characters" that previously could only be produced by human animators."

Later, at the bottom of page 23, the Federal Circuit did cite to *Enfish*, as well as *Rapid Litigation Management v. CellzDirect*. In this paragraph Judge Reyna addresses the preemption concerns, explaining:

We therefore look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or

effect that itself is the abstract idea and merely invoke generic processes and machinery.

Finally, in the penultimate paragraph before the Conclusion, Judge Reyna writes:

When looked at as a whole, claim 1 is directed to a patentable, technological improvement over the existing, manual 3-D animation techniques. The claim uses the limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice. Alice, 134 S. Ct. at 2358 (citing Diehr, 450 U.S. at 177). Claim 1 of the '576 patent, therefore, is not directed to an abstract idea.

Conclusion

There is no denying the fact that the rules at issue in the '576 patent claims being viewed as specific and limiting played an important role to the outcome of this case, but it is hard to ignore the fact that the Federal Circuit again continued to point out that the innovation at issued was an improvement. This should give patent practitioners important clues into how to characterize software related innovations so as to maximize the likelihood of prevailing in *Alice* inspired challenges and rejections.

Hopefully the United States Patent and Trademark Office will not ignore *McRo* and will issue guidance to patent examiners. Taking a "nothing to see here" approach to this case would be inexcusable. The tide seems to be turning relating to patent eligibility and it is time for the Patent Office to both instruct patent examiners and demand that examiners follow the law. *Enfish*, [BASCOM](), *Rapid Litigation Management* and now *McRo* represent a trend. Examiners claiming these cases are an aberration and that they won't be followed is unacceptable, period.

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[1] It seems particularly noteworthy that Microsoft sees the *McRo* decision as one that "will provide additional certainty to industries that generate more than $5 trillion in U.S. economic activity and 40 million American jobs." Over the past decade Microsoft has at times been in alignment with Google and others on the issue of patent reform, and even challenged the presumption of validity afforded patents taking a case all the way to the Supreme Court. *See i4i v. Microsoft*. In recent years, however, Microsoft has seemed to take a decidedly pro-patent turn.