

Keywords: 35 U.S.C. § 101, abstract idea, technical improvement

General: Claim limitations reciting specific steps of functionality and description in the specification describing the improvements achieved to such steps in particular help satisfy the *Alice* test for patent-eligible subject matter.

CosmoKey Solutions GMBH & Co. KG v. Duo Security LLC, FKA Duo Security, Inc.

United States Court of Appeals for the Federal Circuit

No. 2020-2043

Decided: October 4, 2021

I. Facts

CosmoKey Solutions GMBH & Co. KG (“CosmoKey”) was issued U.S. Patent No. 9,246,903 (“the ‘903 patent”) directed to an authentication method. In particular, the authentication method includes the use of two communication channels to authenticate a user. A first communication channel is used to transmit a user’s identification from a terminal (e.g., a computer) to a transaction partner (e.g., a bank), such as in response to a user interaction with the terminal, and a second communication channel between an authentication device and the user’s mobile device (e.g., a phone) is used to determine whether an authentication function is active after the user’s identification is transmitted. If the authentication function is active within a suitable time of transmission of the user’s identification, the user’s identity is authenticated. The authentication function is normally inactive, so the user would have to activate the authentication function using their mobile device, which could be as simple as activating their mobile device. The specification of the ‘903 patent mentions different conventional authentication methods using a mobile device, including methods that require the user to perform multiple interactions and/or require a mobile device with special hardware, and the ‘903 patent improves upon such conventional authentication methods by simplifying a user interaction and mobile device functionalities to authenticate a user’s identity.

In September 2018, CosmoKey sued Duo Security, Inc. (“Duo”) for infringement of the ‘903 patent. In October 2019, Duo moved for judgment on the pleadings, arguing that the claims of the ‘903 patent are directed to an abstract idea of authentication and are ineligible under 35 U.S.C. § 101. On June 24, 2020, the district court granted Duo’s motion and analyzed the claims of the ‘903 patent under the *Alice* two-step framework. *See Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). In *Alice* step one, the district court agreed that the claims of the ‘903 patent are directed to the abstract idea of authentication. The District Court referred to *Prism Tech LLC v. T-Mobile USA, inc.* in which the claims were determined to be directed to the abstract idea of providing restricted access to resources. The district court found the claims in the ‘903 patent to be similar to the claims under discussion in *Prism* and therefore directed to a similar abstract idea. In *Alice* step two, the district court determined that since the ‘903 patent discusses prior art that similarly detects user activation of an authentication function within a time frame, the claims of the ‘903 patent teach generic computer functionalities and do not provide an improvement or otherwise amount to anything more than conventional authentication technology. CosmoKey appealed the district court’s judgment to the Federal Circuit.

II. Issue

Did the district court err in determining that the claims of the '903 patent are not directed to patent-eligible subject matter under 35 U.S.C. § 101?

III. Discussion

Yes, the Federal Circuit found that the district court did not correctly analyze the claims of the '903 patent under the *Alice* two-step framework. The Federal Circuit initially indicated that the district court did not properly analyze the claims of the '903 patent under *Alice* step one. In particular, the comparison of the claims of the '903 patent to the claims in *Prism* is flawed, because the claims in *Prism* used very broad language, such as receiving, authenticating, authorizing, and permitting. The Federal Circuit referred to another case, *Ancora Technologies Inc. v. HTC America, Inc.*, in which claims were also directed to verification techniques, but had recitations that were specific enough and sufficiently different from conventional techniques that the claims were determined not to be directed to an abstract idea.

However, the Federal Circuit ultimately did not state whether or not the claims of the '903 patent satisfied *Alice* step one. Rather, the Federal Circuit held that the claims of the '903 patent satisfy *Alice* step two, so analysis under *Alice* step one is moot. The Federal Circuit emphasized that in *Alice* step two, for a computer-implemented invention, such as the '903 patent, the computer must perform more than what would be well-understood, routine, and conventional, and cannot simply apply an abstract idea on a computer. The district court had originally determined that the claims of the '903 patent failed *Alice* step two because the specification of the '903 patent describes that detecting user activation of an authentication function is well-understood and routine. However, the Federal Circuit noted that the district court misinterpreted the excerpts of the '903 patent, and that the '903 patent describes different existing techniques for authentication, including sending a prompt to a user and receiving a confirmation signal from a mobile device, using a mobile device for activating and deactivating a credit card, and sending a token to a terminal and receiving an image of the token via a mobile device, and that these existing techniques are deficient. The claims of the '903 patent therefore seeks to provide an improved technique for authentication. The Federal Circuit noted that the specific limitations imposed by the claims, including the usage of the second communication channel and the authentication function, are not conventional, and the specification of the '903 patent emphasizes how those particular steps recited in the claims provide improvements to the prior art, including reducing complexity, requiring fewer user interactions and activities, and consuming fewer resources to provide an authentication. Thus, the claims of the '903 patent satisfy *Alice* step two.

Duo had argued that the claim recitations regarding usage of a second communication channel in a time frame of usage of a first communication channel and regarding usage of an authentication function that is normally inactive and temporarily activated are directed to an abstract idea. Duo refers to *ChargePoint, Inc. v. SemaConnect, Inc.*, in which claims directed to activating or deactivating charging at a connection were determined to be abstract. However, the Federal Circuit noted that the claims of the '903 patent recite more specific steps than simply activating and deactivating a function, and the specification describes how these steps are required to provide an improvement. Therefore, the claims of the '903 patent recite an inventive concept and amount to more than an abstract idea.

IV. Conclusion

The Federal Circuit reversed the district court's judgment that the claims of the '903 patent are patent-ineligible under 35 U.S.C. § 101. The Federal Circuit emphasizes the importance of drafting claims that recite specific steps and features to be patent-eligible. Additionally, more pointedly describing how those specific steps recited in the claims provide an improvement over the prior art helps show an inventive concept to satisfy *Alice* step two.

V. Concurring Opinion

Judge Reyna, in his concurring opinion, discussed the flaws of skipping analysis under *Alice* step one. Specifically, the *Alice* two-step framework lays out that analysis under *Alice* step two should only be used if the claims do not satisfy *Alice* step one. However, by skipping *Alice* step one and only analyzing under *Alice* step two, it suggests that claims that would otherwise be determined to be patent-eligible under *Alice* step one might fail *Alice* step two and therefore be incorrectly deemed as patent ineligible. Judge Reyna agreed with the analysis that the claims of the '903 patent recite an improvement to conventional techniques, but Judge Reyna believes that such an analysis indicates the claims provide a technological solution to a technological problem and therefore would have satisfied *Alice* step one per *Enfish*.