

XY, LLC v. TRANS OVA GENETICS, LC, Appeal No. 2019-1789 (Fed. Cir. July 31, 2020).
Before Wallach, Plager and Stoll. Appealed from D. Col. (Judge Martinez).

Background:

XY sued Trans Ova for infringement of a patent directed to a method for controlling a flow cytometry apparatus to more accurately separate particles such as male-determining and female-determining sperm cells into different receptacles in real time. Specifically, the claimed method recited steps of converting signal data into n-dimensional parameter data, rotationally altering the n-dimensional parameter data, and scaling or translating the n-dimensional parameter data, thereby increasing spatial separation of data points that are grouped into different populations. That is, the claimed method improves the delineation of each population, which enables the flow cytometry apparatus to more accurately separate each population than was previously possible with conventional flow cytometers.

Trans Ova moved for summary judgment, arguing that the claims were directed to the patent-ineligible abstract idea of a mathematical equation. The district court granted Trans Ova's motion for summary judgment, holding the claims invalid under 35 U.S.C. §101. XY appealed.

Issue/Holding:

Did the district court err in holding the claims invalid under 35 U.S.C. §101? Yes, reversed and remanded.

Discussion:

The Federal Circuit found that the claims were not directed to an abstract idea of a mathematical equation under step one of *Alice*. Rather, the Federal Circuit found that the claims were directed to an improved method of operating a flow cytometry apparatus to sort and classify individual particles in the same sample in real time, and included a detailed recitation of the means for doing so. For example, the claimed method positively recites a step of sorting the individual particles with the flow cytometer based on the real-time classification of the individual particles. Accordingly, even though the claimed method employs formulas to improve classification and separation of individual particles, the Federal Circuit found that the formulas operate to achieve the improved result of the claimed method only when combined with the specific detectors and other flow cytometer features.

The Federal Circuit also found that the claimed method was analogous to the claims at issue in *Diehr* and *Thales*, which were directed to improving a structure or process by implementing or applying mathematical formulas to the structure or process. Therefore, the Federal Circuit held that the fact that a mathematical equation is required to complete a claim does not doom the claim to abstraction. Based on these findings, the Federal Circuit ruled that the claimed method is directed to patent-eligible subject matter under §101.