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Patentability of mathematical methods

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In a notable decision (BGH X ZB 1/15, "Flugzeugzustand"), the German Federal Supreme Court (BGH) has resolved questions concerning the definition of a mathematical method "as such".

According to \$1 (3) (1) and \$1 (4) of the German Patent Act (PatG), mathematical methods shall not be regarded as inventions when protection is sought for said methods as such.

During prosecution of a patent application before the German Patent Office (DPMA), features of a claim that do not contribute to solving a technical problem with technical means are not considered when assessing the inventive step of said claim. Therefore, it may be one hurdle during prosecution of patent applications to convince the patent examiner that a potentially critical feature is a technical feature.

In its decision "Flugzeugzustand", the BGH found that mathematical methods shall be regarded as inventions if they contribute to solving a concrete technical problem with technical means. A mathematical method shall only be considered non-technical if it is not related to a targeted use of forces of nature. A sufficient relation to a targeted use of forces of nature exists if a mathematical method is used to determine more reliable findings on the status of a plane based on available acquired measurements and, as a result of this determination of more reliable findings on the status of the plane, to influence the functioning of the system that is used for determining the status of the plane.

In other words, features that are related to preparation and pre-processing of acquired measurements before these measurements are used for determining the status of a plane do solve a technical problem with technical means if the preprocessing influences the operation of the status determination system (for example by enabling a faster calculation or requiring less computational power), and are to be considered when assessing the inventive step of a claim.

In summary, the BGH seemed to further open the door to patent protection for applications with a mathematical background, as long as the functioning of a technical system is considered by the claimed method steps.