

Computer implemented simulations referred to the Enlarged Board of Appeal

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Today, in the decision T_0489/14 the EPO's Boards of Appeal published their referral of three questions relating to computer implemented simulations to the Enlarged Board of Appeal. Referrals to the EPO's Enlarged Board of Appeal do not come around often, referrals in the area of computer technology even less so.

The purpose of referrals to the Enlarged Board of Appeal is to prevent divergence and/or provide clarity on the implementation of the law. The questions to be referred are:

1. In the assessment of inventive step, can the computer-implemented simulation of a technical system or process solve a technical problem by producing a technical effect which goes beyond the simulation's implementation on a computer, if the computer-implemented simulation is claimed as such?
2. If the answer to the first question is yes, what are the relevant criteria for assessing whether a computer-implemented simulation claimed as such solves a technical problem? In particular, is it a sufficient condition that the simulation is based, at least in part, on technical principles underlying the simulated system or process?
3. What are the answers to the first and second questions if the computer-implemented simulation is claimed as part of a design process, in particular for verifying a design?

To give some background to why these questions have been raised, the invention in the appealed application is related to a computer implemented method used to simulate the movement of a crowd of pedestrians through an environment. The purpose of the simulation being to aid in designing a venue such as a railway station or a stadium.

The Board of Appeal were of the opinion that the invention lacked an inventive step asserting that the claimed steps do not provide a technical effect beyond the implementation of the method on the computer. The applicant argued against this reasoning citing a previous Board of Appeal case T_1227/05 (Circuit simulation /Infineon Technologies).

T_1227/05 related to the simulation of circuits to determine how they are affected by noise before they are fabricated. In T_1227/05 it was found that the simulation methods themselves are part of steps of the fabrication process, and as such a simulation method cannot be said to lack a technical effect only based on the fact that they do not incorporate the physical end product.

The Board of Appeal accepted the applicant's arguments that the present application was analogous with the case in T_1227/05. In T_1227/05 the invention was found to have a technical effect as the simulation enabled the chance of success of a prototype to be determined before it is built. In comparison the present case involved simulating a model environment with respect to pedestrian crowd movement before the environment had been built.

Despite the similarity between the two cases the Board of Appeal were not convinced by the reasoning given in T_1227/05. They recognised that as this case is referred to in both the Case Law of the Board of Appeal¹ and the EPO's Guidelines for Examination² to reject the present case and go against the previous decision would lead to a divergence in the law, and provide uncertainty for applicants. Hence the decision to refer these questions to the Enlarged Board of Appeal for some clarity on the issue.

We will be watching this closely to see the outcome of this decision as this will hopefully provide some certainty on how computer simulation inventions are handled at the EPO.

¹ see *Case Law of the Boards of Appeal*, 8th edition, 2016, I.A.2.4.3, under f)

² see Part G, Chapter II, 3.3.2, of the *Guidelines for Examination in the EPO* (November 2018).