



## Patentability of computer- implemented simulations at the EPO

### Oral proceedings for G1/19

On 15th July 2020, oral proceedings for G1/19 before the Enlarged Board of Appeal occurred. G1/19 could change the landscape for computer-implemented simulation inventions from a patentability perspective and the interest was significant. According to the Chairman of the Enlarged Board, over 1600 people registered to live stream the oral proceedings.

Ultimately, we will have to wait since the Chairman closed the oral proceedings saying further deliberations would occur amongst the Enlarged Board and the decision will follow in due course.

The following questions were referred to the Enlarged Board:

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?*

The Chairman said during the hearing that, the preliminary opinion of the Enlarged Board prior to the oral proceedings, was that: the answer to question 1 is yes; question 2 could perhaps be broken down to two respective sub questions, 2a and 2b: 2a may be inadmissible and the answer to 2b is no; the answer to 3 is that 1 and 2 remain the same.

This begs the following two questions.

First, assuming the preliminary opinion holds, and computer-implemented simulations are patentable, what is a sufficient condition for this given basing the simulation "on technical principles underlying the simulated system or process" is not?

Second, did the Enlarged Board hear anything during the oral proceedings that might have altered their preliminary opinion? A noteworthy submission came from the President of the EPO who seemingly provided a legal path that would not unduly restrict what could be patented. He advanced that a wind tunnel would be patentable in a classic sense and solves the technical problem of testing aerodynamic performance of a prototype structure.



A computer simulation of the wind tunnel and prototype structure provides an alternative solution to the same technical problem, and should be patentable for that reason alone. He also urged caution in restricting simulations that involve human behaviour since AI training of cars requires simulation of human driven vehicles. Similarly, managing network loading during an online auction requires modelling of how humans bid. He also pointed out that care needed to be taken not to inadvertently exclude machine learning which uses neural models rather than physical models.

To surmise, a simulation that provides an alternative solution to a classical technical problem may be palatable from the perspective of the EPC. Of course, whether the Enlarged Board agrees is another matter.

We eagerly await the written decision.

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