

c) Potential technical effect

In G 1/19 the argument was put forward, that it was sufficient for a computer-implemented invention to have the potential to produce a technical effect, citing T 1173/97 as well as a number of other decisions (T 208/84, OJ 1987, 14; T 163/85, OJ 1990, 379; T 110/90, OJ 1994, 557; T 1351/04).

The Enlarged Board held that the principle developed in T 1173/97 that software (which in itself may only have "potential effects") is treated as software running on a computer is still applied, while the further analysis (i.e. whether the software causes further technical effects) is now carried out according to the COMVIK approach. When run on a computer, the combination of the claimed features must establish a technical invention. In the COMVIK analysis, the features have to be assessed as to their contribution to the technical character of the invention.

The Enlarged Board distinguished between the potential effects discussed in T 1173/97 and the potential technical effects seen in older cases such as T 208/84 and T 163/85. While the potential effects in T 1173/97 include all (technical and non-technical) effects resulting directly from the running of a program on a computer, i.e. effects occurring within the computer and relating to the hardware which executes the program, T 208/84 and T 163/85 appeared to confirm that data intended for controlling a technical device may be considered to have technical character because it has the potential to cause technical effects. These potential technical effects are "downstream" effects which may or may not be caused by said data output.

In the context of the problem-solution approach and the COMVIK approach, such potential technical effects may be considered if the data resulting from a claimed process is specifically adapted for the purposes of its intended technical use. In such cases, either the technical effect that would result from the intended use of the data could be considered "implied" by the claim, or the intended use of the data (i.e. the use in connection with a technical device) could be considered to extend across substantially the whole scope of the claimed data processing method.

Numerical data output from a computer is a necessary pre-condition for any effects that are caused, and the "downstream effects" can be seen as a potential effect of the software. However, the necessarily technical nature of some effects inside the computer does not mean that the "downstream" effects caused by the data output of the computer are necessarily of a technical nature.

d) Virtual or "calculated" technical effect

In G 1/19 it was argued that technical effects which are not achieved through an interaction with physical reality, but are calculated in such a way as to correspond closely to "real" technical effects or physical entities, should be treated as technical effects for the purposes of the COMVIK approach. In the Enlarged Board's view, virtual or calculated technical effects should be distinguished from potential technical effects which, for example when a computer program or a control signal for an image display device is put to its intended use,