

## T 697/17 - Hope for improved algorithms

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This decision is certainly worth reading if you deal with inventive step objections of the form “abstract algorithm implemented on a generic computer” or the like. The Board of Appeal provides a helpful review of case law, and pushes back the frequent assumption that improved algorithms cannot give a technical effect. This decision could well be worth referencing when formulating a response to this type of objection. The application relates to SQL database management, and claims a method of updating values in a data structure in a relational database system. This is a fairly classic case of an algorithm which could conceivably be abstract, but which is implemented on a computer in any modern industrial application.

The examining division originally refused the application under Article 52 EPC on the ground that it is directed to a purely abstract method. The Board of Appeal dismissed this ground, confirming the well-established low bar for patent-eligible subject-matter, with even “database system” being enough to give a technical element to the claim.

However, the examining division also sensibly set out an assessment of inventive step for an assumed computer-implemented version of the claimed method, in the expectation that the first hurdle of Article 52 EPC could potentially be overcome.

### Examining Divisions' Approach To Assessing Partially Technical Claims

The standard assessment of a mixed claim comprising technical features and per se non-technical features, as set out in COMVIK (T 641/00), requires identifying which features contribute to the technical character of the claim, identifying which of these features are novel, and assessing whether a technical problem is solved by a novel technical contribution to the art.

In the appealed decision, the examining division decided that there was no technical character to anything claimed, beyond a general computer on which the method is assumed to be implemented. Therefore no technical problem was solved, and there was no inventive step. In particular, the examining division noted that a relative effect, such as an improvement in speed compared to previous algorithms with a similar purpose, does not give technical character to the features which provide the relative effect.

This is an approach commonly seen in examination of computer implemented inventions at the EPO, and can sometimes make applications in this field seem hopeless despite describing genuine improvements over prior art in terms of normally technical and industrial goals such as improved speed or reduced resource usage.

However, the Board of Appeal gives some hope in this respect. In particular, while the Board of Appeal recognises decisions which have concluded that a particular relative effect does not mean that a particular feature has technical character, the Board states that it is incorrect to generalise this point and assume that all relative effects are irrelevant for assessing whether a feature has technical character.

### Potential Arguments For Technical Character

Instead, the Board of Appeal reviews the developing case law (some of which has been authored by the same Board) and indicates that, when considering if a per se non-technical feature makes a technical contribution, it is necessary to consider:

1. the intention of the feature; and
2. the context of the feature.

With respect to intention, the relevant question is whether the feature was chosen based on technical considerations aimed at achieving an effect over prior art, or whether the effect is achieved by non-technical modification of an underlying non-technical scheme. As examples, the Board notes that features chosen based on technical considerations of how to improve processing speed, reduce a memory requirement or improve scalability may have technical character. On the other hand, features chosen based on a desire to produce a better search result from a search algorithm, for example, may not have technical character.

With respect to context, per se non-technical features may interact with obviously technical features. The combination of the technical with the per se non-technical may result in a greater technical feature which has a technical effect relative to a corresponding technical feature of prior art. Accordingly, the Comvik assessment cannot be performed by only assessing each claim feature individually to determine whether it contributes to the technical character of the claim. Instead, each feature must be assessed based on its effect on the whole claimed combination of features i.e. a difference between the combination without that feature, and the combination with that feature.

Applying the above to the decision under review, the Board concluded that, without an assessment of the above factors, the reasons given by the examining division were incomplete and could not be upheld. However, the Board also did not conclude that it was in a position to order a grant, and remitted the case for further examination at the first instance.

### Takeaways For Drafting

Although this was not a point discussed in the decision, it seems likely that it may be difficult to prove during prosecution that a particular feature has been motivated by technical considerations.

However, this can be significantly helped by identifying technical intentions and motivations at the drafting stage. In particular, by associating specific features with specific expected technical advantages in the specification as originally filed, the burden can be transferred onto the examiner to show that the feature lacks technical character.