

Review of EPO Software Decisions in 2017

The so-called “Comvik” approach to mixed inventions has been applied consistently, with Board 3.5.01 introducing the “notional business person” to help distinguish between technical features - which can contribute to inventive step - and non-technical features - which can’t. Nevertheless, the presence of non-technical features in a claim remains a strong predictor of rejection.

This paper reviews notable decisions published in 2017 by the “electrical” Technical Boards of Appeal (Boards 3.5.01, 03, 04, 05, 06 and 07), which most often handle software related inventions, excluding Board 3.5.02 which mostly handles electrical components and hardware.

The Notional Business Person and What is Non-Technical

The characteristics of this hypothetical colleague of the “person skilled in the art” were first set out by Board 3.5.01 in the decision [T 1463/11 Universal merchant platform/CardinalCommerce²](#) and further explained in [T 0630/11 Gaming Server/Waterleaf³](#), although some earlier decisions refer to the role of the business person in the hypothetical process of invention set out in the Comvik decision. The Comvik approach divides the process of arriving at an invention into two phases:

the definition of non-technical “requirements” (also referred to as the background phase) and the implementation of the requirements in technical features. Inventive step is only recognised in the second phase.

CardinalCommerce says that the requirements phase is the responsibility of the notional business person and the implementation phase is the responsibility of the person skilled in the (technical) art. The notional business person has no technical knowledge and so cannot include any technical features in the requirements, no matter how well known. Waterleaf cautions that the prohibition on the requirements including any technical features does not go so far as to prohibit requirements that have technical implications. The CardinalCommerce decision provides a useful precedent when Examiners include too much of the invention in the requirements phase. On the other hand, since the notional business person would address any non-technical prejudices, it will not support inventive step to argue that a non-technical prejudice has been overcome.

Although decided by a different Board and without referring to the notional business person, a case in which an alleged non-technical prejudice was disregarded was [T 1065/14 Engineering Tool/ Siemens which related to a web-based interface for programming a programmable logic controller](#). It seems likely that the prospects of the application were not helped by statements in the description extolling it as a “new paradigm in the engineering tool marketplace” or a “new business paradigm for selling

engineering tool services”, in relation to which the Board commented that the alleged “paradigm shift thus seems to be of little concern to the persons of technical skill in the art”.

Business and administrative requirements

A common categorisation of non-technical features in claims is “administrative”, “policy” or “business”. In 2017 features or aims labelled as such by Boards have included:

- [T 2465/11](#) - the probability of a user being interested in specific data items
- [T 0969/12](#) - that a user is a member of certain pre-defined groups
- [T 1179/14](#) - adjusting a user’s security rating in view of the security rating of that user’s communication
- [T 1135/11](#) - representation and processing of numbers representing “security levels”
- [T 2073/11](#) - changing the recipient’s name or address or even the “delivery status” of a delivery
- [T 0535/15](#) - associating a piece of content with different rights during different “release windows”
- [T 1221/12](#) - play lists
- [T 2399/11](#) - track genre
- [T 1098/12](#) - to enable users to try out software on a mobile terminal for a limited time at a lower price
- [T 0797/11](#) - process planning and business optimisation
- [T 1232/12](#) - a fair trading environment
- [T 1627/11](#) - performing a combined search on the internet and on files in the local file system
- [T 1040/14](#) - being ‘promotional’

By way of contrast, in [T 1028/14](#) the Board overruled the Examining Division to hold that “given that the whole application is concerned with telecommunication messages (such as SIP or email messages) and that undesired messages correspond to spam messages, the board is satisfied that the underlying problem to be solved is indeed a technical problem.”

In the above cases, the Boards had little difficulty or doubt in labelling features or aims technical or non-technical. However, there is a strand of case law that says a non-technical feature should not be disregarded if it combines with technical features to achieve a technical effect. This was addressed in [T 1992/10](#) which related to identifying objects or sets of objects. The Board said:

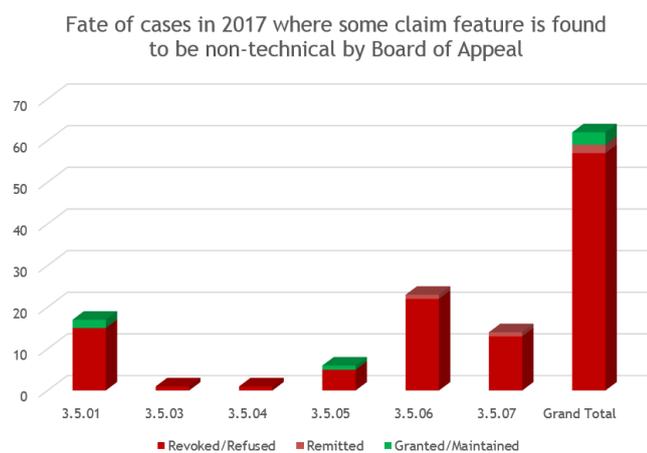
although the steps are per se non-technical, a technical contribution cannot be immediately ruled out. The need to

investigate the obviousness of these steps depends on such a contribution. The aim of the invention is a non-technical one: identify objects and sets of objects, and keep track of them. The present invention, however, starts from an existing technical method of identifying objects. It seeks to overcome shortcomings in that technical method, and raises rather more problems than the cases referred to above. Are the shortcomings themselves technical? Are technical means used to overcome them? In short: what is the technical effect on the prior art system?

The possibility of a feature having both technical and non-technical aspects also arose in [T 0477/12](#). Here, the provision of a preview of a default formatting rule in a spreadsheet to assist the user in appreciating its effect was considered non-technical but where it made processing more efficient, it was considered technical.

Over the years quite a few applications relating to workflow management systems have been considered by the Boards of Appeal and most if not all have been rejected as uninventive. This year did not change that, with Board 3.5.01 in [T 0894/10](#) commenting that “all aspects of the idea of modelling and manipulating representations of a workflow are fundamentally non-technical, being essentially aspects of either a business method or an algorithm or both”.

As in previous years, the presence of non-technical features in a claim indicates a very high probability of rejection, as can be seen from the graph below:



It is therefore interesting to see what can be learned from the three such cases that were granted.

The first decision granting a claim with non-technical features published in 2017 is [T 1463/11 Universal merchant platform/CardinalCommerce](#), which introduced the notional business person. The invention here was a payment processing system in which “plug-ins” to deal with different payment methods are installed on a central processing server rather than on individual merchant’s servers. This allows the installation and updating of these plug-ins to be managed centrally. The Examining Division had considered that the invention was obvious given a non-technical aim of outsourcing the authentication of a commercial transaction to a third-party but the Board held that the transaction authentication cannot be abstracted to a purely business activity because of the technical aspects such as the use of plug-ins and servers. The Board did disregard an alleged business prejudice against the outsourcing as well as most of the expert evidence submitted by the applicant but considered that there was a sufficient technical prejudice to make the invention non-obvious.

The second such decision was [T 1658/15](#), a divisional of the application in [T1463/11](#) discussed above and decided on the same basis.

The third granted case was [T 1284/13](#) which related to book-binding and involved a preview image. The Board considered that although the preview image involved the presentation of information, it was not directed to the information content as such and, hence, is technical. Interestingly, the application was withdrawn a week after the Board of Appeal oral proceedings at which the main request was granted. Having been filed in 2000, perhaps the applicant concluded that the grant costs were not justified by the short remaining life of the patent.

Unfortunately no help in dealing with rejections of cases including non-technical subject matter can be derived from the two such cases remitted for further prosecution, [T 2416/12](#) and [T 2015/12](#). Both decisions related to clarity and the grounds for refusal were mostly overcome by amendment. The clarity issues are discussed in a separate section below.

Programming

Whilst the Boards are happy to accept that automated compilation and code optimisation is technical (see for example [T 1635/12](#)), the art of programming as performed by a person is not. For example, in [T 1126/13](#) in response to an argument that the invention achieved reliable processing of messages the Board stated that it is “purely a task for the programmer, and hence a non-technical task, to make certain, using sound programming techniques, that all possible situations are dealt with by the program”. Similarly, saving effort by a programmer was held not to be a technical effect that could contribute to inventive step, see [T 1090/12](#) and [T 1541/16](#). The latter decision also held that “features which merely concern the organisational structure of a program (e.g. its partitioning into pieces of software, such as components, modules, objects, procedures, functions, source code files or executable files) cannot usually contribute to an inventive step”.

In [T 2418/12](#) the Board drew a distinction between an “algorithmic rather than a technical consideration” on the basis that the former “does not require considerations about the internal functioning of a computer.” Hence re-use of an intermediate result produced by an earlier algorithmic step was not considered to contribute to inventive step.

Modelling and simulation

Several well-known decisions ([T 0756/09](#), [T 0471/05](#) and [T 1227/05](#)) are often cited as holding that modelling or simulation and design methods are patentable. However the key point is that such a method is only protectable if what is being simulated or designed is technical; the mere fact of simulating, even using technical means (a computer, does not make a non-technical thing technical.

This was the issue in [T 0575/15](#). Although the invention related to process control system engineering, which would seem inherently very technical, the Board seemed to consider the invention to be too abstracted from that. In the Board’s summary, “the invention is concerned with simplifying the process of configuring a system without however changing the configuration results themselves.” Addressing an argument that the claimed invention should be considered technical because it relates to the “technical state of a machine” the Board asserted that the generated model could be prescriptive rather than descriptive, i.e. the information being

displayed might relate to how the system should be rather than how it actually is.

In [T 1817/14](#) the invention was also, at best, one step too remote from modelling a technical thing. The invention related to information modelling, specifically applied to patent applications, and so was held to be an intellectual activity (effectively a method for performing mental acts, Article 52(2)(c) EPC) which does not contribute to the technical character of an invention). It perhaps did not help that quite a lot of the claimed method was carried out by the user, rather than automated.

Again in [T 1630/11](#) the Board held that the technical purpose of the claimed simulation was not adequately defined. The claims were directed to “simulating a multi-processor system” but the Board seemed to consider the invention only to relate to the establishment of a model in a graphical modelling environment and that any contribution to the art lay in the field of programming, which is not considered technical.

Presentation of information

It is established that features which merely lower the cognitive burden of the user are in general not technical⁴ but there may be technical character in features which improve a data input process⁵. [T 1930/13](#) contained examples of both technical and non-technical features in a GUI for trading. Features relating to the display of a plurality of bid and offer indicators related to presentation of information and lacked technical character but other features relating to data input and formulation of an order message did contribute to technical character.

However, care has to be taken in the wording of a claim to ensure that a technical effect is always obtained. In [T 0596/12](#) a claim feature was disregarded because it was “so generally formulated that it covers the displayed pane being updated without any technical effect ... For instance, the displayed pane may be updated with a company logo ... as the additional feature does not necessarily have a technical effect, it cannot contribute to inventive step” (emphasis added).

In the November 2017 edition of the EPO’s Guidelines for Examination, the section on presentation of information was substantially revised to include a detailed discussion on how examiners should determine whether or not the presentation of information contributes to a technical effect. The section on GUIs was also revised to emphasise that features that merely reflect subjective user preferences are not technical but those which enable objective performance improvements can be. The Guidelines for Examination are not binding on the Boards of Appeal but rather reflect prior case law. The decisions mentioned above are consistent with the revised guidelines.

Sufficiency, Support and Clarity

The requirement that an application contain a description sufficient to support the claims, which must be clear, is less often an issue for software related inventions than in some other fields. However, in [T 2163/11](#) the patent was revoked for lack of sufficiency because it failed to deliver on the aim of automatically creating “a scan sequence to obtain full geometrical coverage” for a dental impression. Board 3.5.04 identified circumstances where the described method would get stuck in a loop rather than terminate with the desired result. This seems to have been a trap that could have been avoided by not over-promising in the description.

In [T 0737/11](#) the application had been rejected on the ground of insufficient disclosure because, according to the Examining Division, it provided “no examples of corresponding XSLT code nor of any intermediate code” to support claimed steps of transforming XML data into intermediate code using XSLT. The Board of Appeal stated that it “cannot see any compelling reason why it would have been necessary in the present case to disclose specific examples of code” and that the skilled person would not have had any particular difficulties. Use of code to disclose an invention is rare, and discouraged by the Guidelines for Examination, which state that it cannot be relied on as sole disclosure.

A case in which a Board overturned a rejection based on clarity is [T 2015/12](#) where the Examining Division thought the claim unclear because it was not specified whether a step was fully automated or required user intervention. This was said to cause a lack of clarity because a method step “carried out by a human programmer [could] not be used to characterise the technical subject matter of” the claims “because the input data received from a user [did] not characterize the system receiving the user input”. The Board however did not think this mattered and that it was enough that the claimed system was equipped to “receive instructions”, irrespective of whether they are input by a human operator or not.

Clarity was also an issue in [T 2416/12](#) where the Board considered that “purchase” was broad rather than unclear, perhaps allowing greater leniency because the term is non-technical and was not critical to distinguishing the invention over the prior art. In addition the Examining Division seemed to have misinterpreted the claim as to whether functions had to be performed in a server or could be done at the client.

Novelty and Inventive Step

Once the non-technical features of a claim have been identified and disregarded, the EPO generally follows the problem and solution approach as in other fields of technology with the proviso that the closest prior art is selected on the basis of similarity of technical features ([T 1930/13](#) referring to [T 1379/11](#)). The non-technical problem or non-technical features are not relevant, even though the non-technical purpose of an invention may determine the technical environment needed ([T 1145/10](#)). Nevertheless, the starting point for an objection of lack of inventive step should still be realistic ([T 1379/11](#)).

In a variation of the common objection that mere automation of non-technical and/or known methods is obvious, the Board in [T 2423/10](#) held a method for delivery of digital to be assets (e.g. songs) obvious because it was analogous to physical delivery of mail.

In [T 0632/12](#) Google sought to provide novelty over a prior art disclosure by a disclaimer - specifying that the claimed method applied “to code rates other than 3/4”. There was no explicit basis for this limitation but Google sought to rely on Enlarged Board of Appeal decision [G 1/03](#) which allows unsupported disclaimers to distinguish over “accidental anticipations”. The G decision held that “an anticipation is accidental if it is so unrelated to and remote from the claimed invention that the person skilled in the art would never have taken it into consideration when making the invention”. The fact that the disclosure belongs to a remote or unrelated technical field may be important, but it is not decisive; the anticipation must be such that it “has nothing to do with the teaching of the claimed

invention” (G 1/03, reasons 2.2.2). In this case the prior art was very relevant to the invention and held not to be an accidental anticipation within the meaning of G 1/03. The disclaimer could also have been criticised as excluding more than necessary to avoid the prior art and this case illustrates the great difficulties using disclaimers for anything other than discrete chemical entities.

T 2518/10 contains some observations on inventive step of general applicability in the software field. In particular, the Board considered that it would be routine for the person skilled in the art to “trade space for time” - in other words would make necessary compromises between storage formats that are more compact and that minimise computation.

In T 1369/11 the Board held there was no surprising technical

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effect if a reduction in processing burden was achieved simply by doing less. Picking between client-side and server-side processing was said to be well within the capabilities of the person skilled in the art in T 1046/15 to address a problem of making web development easier.

Footnotes

1. Carl Josefsson, formerly Senior Judge of Appeal at the Svea Court of Appeal in Stockholm
2. and parallel case T 1658/15
3. See also our briefing: [The Notional Business Person - A New Actor on the IP Stage](#)
4. [T 1834/10](#)
5. [T 643/00](#)