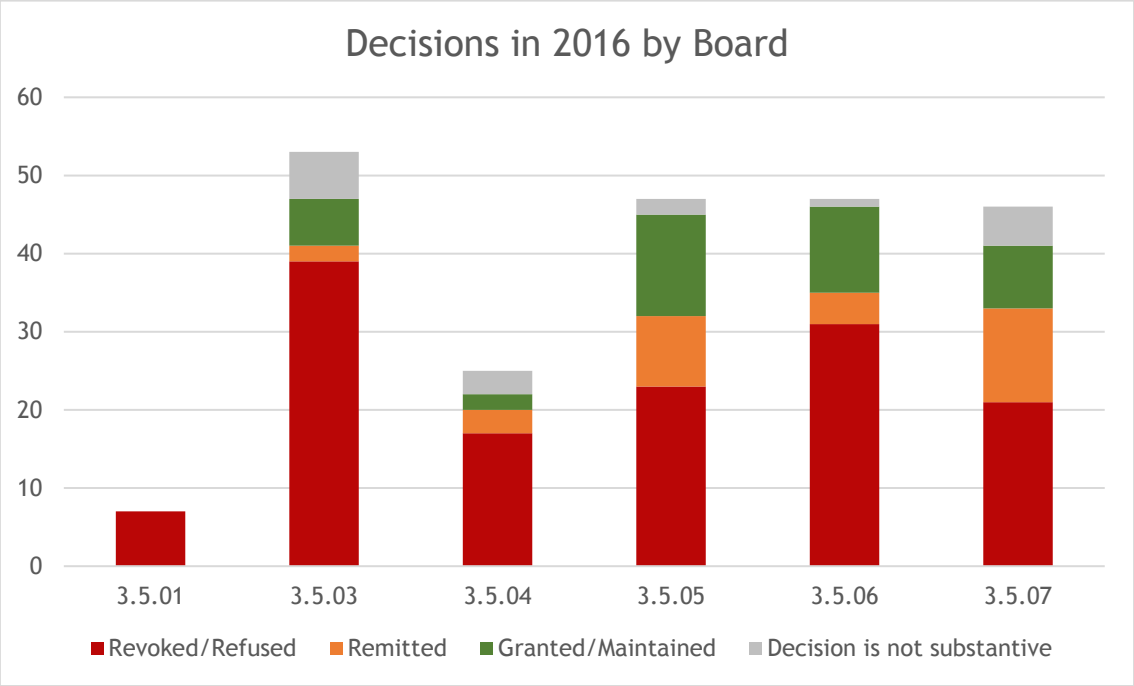
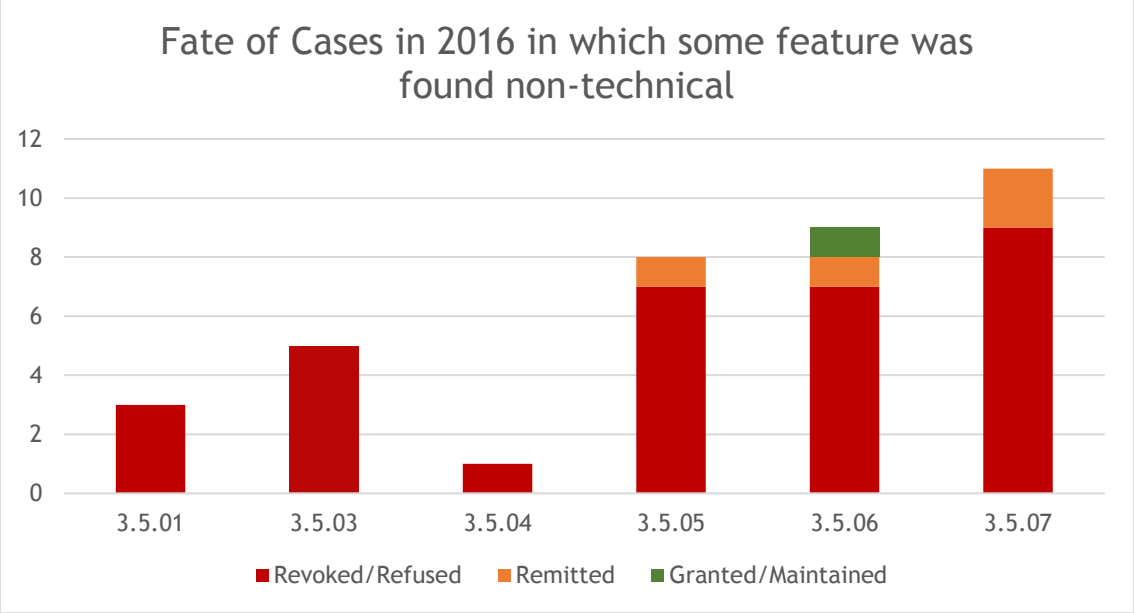
EPO BOARD OF APPEAL DECISIONS ON SOFTWARE PATENTS IN 2016

Notwithstanding surprising electoral developments in the UK and the US, 2016 was a continuation of business as usual for the Boards of Appeal of the EPO at least in relation to computer-implemented inventions. The Boards continued to apply the "Comvik" approach to examining mixed inventions, that is inventions involving both technical and non-technical features, but still did not offer any definition of what is and is not technical. Backlogs appear to have risen, due no doubt to the freeze on recruitment of Board members and consequent vacancies. This article discusses some statistics from 2016 of the various Boards of Appeal that consider software inventions and some interesting or notable decisions.

Statistics & Trends

The continuing freeze on recruitment of Board Members has left Board 3.5.01 (which deals with most business method cases) without a chairman all year so that it has published the fewest decisions (only 7) of any of the electrical Boards of Appeal and has the longest delays between hearing and written decision. Overall backlogs do not seem to be decreasing and across all the relevant Boards over 60% of decisions result in refusal of the application or revocation of the patent. The charts below show that some Boards are more inclined than others to refuse or revoke and that the presence in a claim of any feature that is held to be non-technical means refusal is very likely.





Procedural Issues

Rather oddly given the backlogs in the Boards of Appeal, in T 0823/11 (Managing patient care/CAREFUSION) Board 3.5.07 decided that a 12 year delay in prosecution of an application is serious procedural violation and then remitted the case to the Examining Division for examination of an auxiliary request. Thus, given the application had a 1996 filing date, it is very likely to have expired before being granted.

Boards in other fields have, in recent years, developed the principle that an appeal is a review of the first instance decision, not a re-examination of the whole case. Thus Boards are increasingly refusing to admit new claim requests and new prior art documents into appeals. T 1890/13 (Generation of security keys/ERICSSON) of 21.6.2016 from Board 3.5.05 seems a particularly harsh example of this trend. Document D28 was one of many documents cited in the original opposition statement but no arguments based on it were submitted until the appeal. The Board declined to admit those arguments on the basis that they were late filed. An opposition is supposed, from the outset, to include all "facts, matters and arguments" to be relied on in the case and so just citing a document is not enough; its relevance to the claims must be explained.

Another procedurally unusual situation concerned six related patents of Microsoft relating to the clipboard function in Windows™. A representative case is T 1789/11 (Clipboard formats I/MICROSOFT), the other decisions being essentially the same. The cases in question first came before a different Technical Board (3.5.01) on appeal from refusal by the Examining Division (see for example T 0424/03) and reached appeal the second time after revocation by an Opposition Division. Whilst Board 3.5.01 held that the inventions were not obvious in view of the WIndows™ 3.1 clipboard arrangement, Board 3.5.06 now held that the inventions were obvious over the same prior art. The different result can perhaps be ascribed to different interpretations of the claims by the different Boards, to the contribution of the Opponent's arguments and/or to a less vigorous defence of the opposition by Microsoft. Expiry of the patents in December 2015 might explain Microsoft's decision not to attend Oral Proceedings in December 2016.

Novelty and Inventive Step

A case heard in 2015 but published in 2016, T 2440/12 (Fluid flow simulation/SIMCON) addressed the issue of whether software on free commercial sale discloses the methods it embodies even if the source code is not available. Without fully deciding issues of whether reverse-engineering or de-compilation of the software was practically or legally possible, the Board decided that the software on sale disclosed the methods it embodied because the software could be run line-by-line in a virtual machine to analyse it. Whether this is any more practical in reality than de-compilation was not addressed. This decision was discussed in more detail in our earlier briefing – "Software – Virtual Disclosure at the EPO"

Aside from the principle that non-technical features are to be disregarded (examples of which are discussed below) some decisions on inventive step of general applicability were published in 2016.

In T 1370/11 (On-demand property system/MICROSOFT) Board 3.5.06 held that "the argument that a computer program or computer-implemented method is inventive because it is faster than an earlier one is on its own insufficient to establish an inventive step. More specifically, the improved speed of a computer program is not by itself a technical contribution to the art". The Board's logic is somewhat tortuous but we think comes to a reasonable conclusion. For any given computer program it is possible to conceive of another that does the same thing but slower, so to allow a

mere increase in processing speed to provide an inventive step would mean that an inventive step could be asserted for any computer program for a non-technical method on the basis of some earlier, slower approach. Thus the Board held that to support an inventive step, a clamed increase in processing speed or efficiency must contribute to a "further" technical effect (beyond the mere operation of the computer).

T 0894/12 (Inbetriebnahme einer Anlage/SEW) reiterates the principle that automation of previously non-automated workflows is not inventive and that an inventive step needs to be justified by specific, non-obvious automation steps, which were lacking in that case. Whilst T 2343/10 (Data matching using FPGA/IP RESERVOIR) held that in automating a non-technical workflow, combining simple logic operations, which are anyway necessary for extracting required information, cannot involve an inventive step. By way of contrast, T 0022/12 (Spam classification/MICROSOFT) held that *de*-automation of a computer-implemented method, by making a human perform steps that a computer could do automatically, is not a technical solution to a technical problem. Any reduction in computer processing would be a mere consequence of the de-automation.

In a case relating to Digital Rights Management, T 2247/10 (Descriptive data structure/INTERTRUST), it was held that if data is known to be encrypted it is obvious to encrypt related metadata.

Clarity & Sufficiency

In the pharmaceutical and biotech fields, a common issue is whether the invention is enabled and/or inventive across the full width of the claim. Although this is rarely an issue in software inventions, it did come into play in T 1948/13 which concerned an invention for assisting a physician to interpret images from a camera swallowed by a patient and capturing images as it passes through the digestive system. The Board held that the alleged technical effect was not achieved in claims which did not specify that the "average colour value" was calculated for a sufficient number of frames and over a "defined area" sufficiently large to make it possible to identify passage through different anatomical sites. More limited claims where however allowed.

A common clarity issue in software inventions arose in T 0850/12 (Media client/SONY) where a crucial limitation was that parts of the system were "controlled by a network operator". The Board held that because of various possibilities available to a network operator to exert commercial and/or technical control over devices in the subscriber domain, the skilled reader would not be able to determine clearly what is meant by "controlled by a network operator" nor which parts of the communication network are or are not controlled by a network operator.

Technical or Non-Technical

The crucial issue for many software inventions is what features of the claim are technical, and so can contribute to inventive step, or non-technical, and so are to be disregarded. There remains no clear definition of "technical", so the only guidance

available is to look at which way Boards have decided in specific cases. Of course most cases that discuss the issue hold that some features are non-technical since in the vast majority of cases the technical nature of the invention is unchallenged.

Of particular interest are cases where amendments to the claims have changed non-technical subject matter to technical and contributed to allowance. In T 0339/13 (Interacting with virtual pets/IMMERSION), claims to methods and apparatus "for providing haptic feedback in interacting with virtual pets … wherein the haptic effect is a pulsing sensation, wherein the rate or magnitude of the pulsing sensation indicates the health state of the virtual pet" were rejected. The haptic effect was said to increase the user"s engagement with the pet but the Board considered that increasing engagement is not a technical problem and was not always solved by the alleged invention.

However, an auxiliary request limited the virtual pet to being a cat, the user's interaction to be a stroking motion and the haptic effect to be a purr. This made all the difference – the Board were persuaded that a technical problem is increasing "realism" and, in the context of virtual pets, "achieving the reliable and re-producible perception of a physical interaction with the real pet." This was held to have been solved in a non-obvious manner by technical means, more specifically "a reciprocating cursor movement and haptic feedback". It is difficult to see what is fundamentally more technical about the auxiliary request, but the case illustrates that more detail can help.

Other cases in which Boards found contested subject matter to be technical included:

- T 1554/10 (Image rendering using 2D code/SONY) related to augmented reality and was considered technical because an image was adapted to reflect real-world spatial conditions captured by the apparatus.
- T 1494/10 (Multi-dimensional database/YANICKLO) held that the technical problem addressed was to improve the speed of processing relational database management system (RDBMS) queries that made use of aggregated data, in a manner that was transparent to the user.
- T 2413/10 (Database synchronization/NOKIA TECHNOLOGIES) related to database synchronisation and addressed the problem of "merely" providing an implementation for detecting "successful completion" of the synchronisation session.
- T 1321/11 (Authenticating an accessory/APPLE) expressly held that an "authorization scheme" involving parallel, rather than serial, organisation of the "access" and "authentication" processes, and in doing so making use of the parallel processing capabilities of the media player was technical. The Board considered that the "authorization scheme" would not have been formulated by the notional "businessman" or "administrator".
- T 0556/14 (Masking a private key/CERTICOM) held that a cryptographic method that provided improved protection against power analysis attacks is technical and not a mere mathematical method.
- T 1129/12 (Header and footer detection/XEROX) held that automatically identifying headers and footers in an electronic document constitutes a technical problem because the claimed method

relied on structural features of parts of the documents and not their meaning or semantic content.

In T 0651/12 (Map Database/Xanavi) Board 3.4.03, a Board which does not hear many software related cases, held that a car navigation system, where the novelty lay in mathematical calculations to produce a better bird's eye view, was a technical solution to a technical problem. The examining division had rejected it as a combination of a mathematical method and the presentation of information. However because it provided improved ergonomics and improved safety the Board considered the invention technical. It was commented that the exclusion of mathematical methods as such should only exclude "calculations for the sake of the calculation" and not calculations that perform a useful, technical purpose.

Again this year there have been various decisions relating to gesture control and other forms of user interface, some aspects of which are technical and some not. For example T 0997/13 (Footstep gestures/SONY) held that a predefined, musical gesture-to-command mapping is non-technical although the hardware – motion sensors – that detect the gestures is.

Apple had mixed results: T 1438/12 (GUI/APPLE) held that to provide an alternative solution for switching between different operation modes by using either a one-finger gesture or a two-finger gesture is a technical problem, although the claimed solution was obvious. In T 0543/14 (Touch interface reconfiguration/APPLE) it was held that certain "instructions" features gave an indication of the technical state of a machine and so need to be taken in to account for inventive step. Also T 2278/12 (GUI for displaying structured electronic documents/APPLE) held that improved navigation to and selection of content so as to provide an efficient way of swapping between different boxes of content was technical and not obvious.

T 0376/11 (Broadcast program overrun and underrun/TiVo) stated that to improve a user interface is technical problem but in this case the claimed solution was obvious. However, T 1073/13 (Presentation of button sequence/MICRO) held that a scheme to guide a user through configuration of a device amounted to presenting cognitive content and did not assist the user in performing the configuration of the technical device by "e.g. presenting the device's current operating state within a continued and guided human-machine interaction process". Hence the relevant features were a presentation of information as such and not technical.

The Boards quite often disregard features that they consider to be administrative matters or policy decisions. Examples in 2016 include:

- T 2095/10 (Tracking liquid food production/TETRA LAVAL) allocating identities to transfer events and to liquid food quantities
- T 2334/13 (Erweitertes Nutzerprofil/VODAFONE) "user profiles" tailored to personal user interests or represent user behaviour, for advertising or marketing purposes
- T 2401/13 (Pop-up window/PHILIPS) a specified order for hierarchical scanning of data sources
- T 0700/11 (Document URL to ID conversion/COPYRIGHT CLEARANCE CENTER) determining, for a particular identified publication, given

context and type of use, the applicable rights on the basis of legal and business criteria
- T 2009/12 (Recipient control of messages/PITNEY BOWES) temporarily stopping the delivery of messages and sending them later on *en bloc*
- T 1145/10 (Document region protection/MICROSOFT TECHNOLOGY LICENSING) policies required by an authority, or an owner or administrator of a document, with respect to certain operations to be allowed or denied for particular users of the document, for instance co-authors, collaborators or clients
- T 2241/11 (Windfarm network/GENERAL ELECTRIC) whether a switch (and, hence, the associated wind turbine or the wind turbine subnetwork) is identified by a name composed of alphanumeric characters or by a number
- T 2558/12 (Trust in a cryptographic token/HEWLETT PACKARD) specifying which tamper-resistant tokens to trust other than by reference to their technical properties
- T 1590/13 (Setting and adjusting access policies/PHILIPS) reservations, aversions or mistrust against an entire organization
- T 1742/12 (On-demand instantiation/RAYTHEON) rules indicating whether a service is available, especially when exemplified by business hours, outside of which a certain service is not being offered.

Another frequent ground for disregarding features is that they rely on the "cognitive content" of information. Examples included:
- T 0779/11 (Case law database/THOMSON REUTERS GLOBAL RESOURCES) that the query results are "judicial documents" and that the link included in one or more of these documents points to a "litigation document associated with the judicial decision"
- T 0022/13 (Browsing through a music catalog/APPLE) the type of data being media items, a collection of mediasets, a navigation list and the resulting list being a playlist
- T 2439/11 (Web-page classification/FACILITYLIVE OPCO) the "quality" of classification of web pages.

Boards also refused several applications for inventions based on programming techniques. In T 1130/11 (HPC scheduling/RAYTHEON) the Board held that the mere idea to offer more input options in a program does not per se produce a technical effect in comparison with a prior program. Whether an input is formulated in one part or in two parts is an organisational matter and does not contribute to the technical character of the present invention. T 2374/11 (Instruction emulation/NORTHROP) related to emulation of legacy processors. The Board held that key steps of the method, including categorising the instructions of the legacy processor and programming the translation software can only be performed by a human being. Thus, they lack technical character and cannot contribute to the presence of an inventive step.

The US case of Enfish v Microsoft has on occasion been over simplified as holding that spreadsheets are patentable. T 2045/10 (Sorting cells by format/MICROSOFT TECHNOLOGY LICENSING) considered sorting or grouping data in a spreadsheet and held it to be a presentation of information, which as such is non-technical.

"Especially where the data to be sorted lacks technical character and the way the data is presented does not convey any technical information, the process of deciding which sorting schemes are required … depend on non-technical considerations, such as considerations regarding the semantic content of the data in the cells …".

T 1827/11 (Diligent control of preview of stored contents/NIPPON HOSO KYOKAI) held that attribution of different preview time costs to different portions of content to prevent customers from previewing the most important parts of the content and losing interest in purchasing the content is a business concept.

January 2017

14 South Square
Gray's Inn
London WC1R 5JJ
UK

+ 44 20 3077 8600
www.jakemp.com