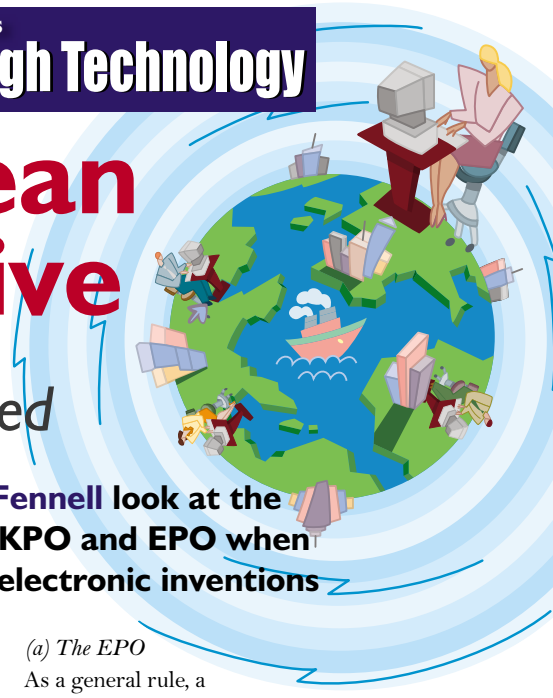

A European perspective

Regimes compared

Chris Thornham and Gareth Fennell look at the different approaches of the UKPO and EPO when assessing the patentability of electronic inventions

In summary

– Computer systems and software support almost all aspects of everyday life. This article reviews the differing approaches of the UK and European Patent Offices when assessing the patentability of inventions in these electrical/electronic fields

– UK law regarding patentability in the field is changing, and some of the English court cases are also discussed

– The article also highlights English litigation regarding standards and requests by litigants for a declaration that a given patent is not essential for practising a standard

Authors

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The public can readily identify electrical/electronic inventions in consumer devices such as mobile telephones, digital cameras and personal music players. Behind such devices lie associated systems and processes for storing, transmitting, reading and processing digital data. Indeed, more generally, computer systems and software support almost all aspects of everyday life. This article reviews the differing approaches of the UK Patent Office (UKPO) and the European Patent Office (EPO) when assessing patentability of inventions in these electrical/electronic fields. We also look at some of the English court cases (in appeals from UKPO decisions, and when validity has been litigated between parties). UK law regarding patentability in the electrical/electronic field is changing. It is not a revolution, but evolution, case-by-case. This article also highlights English litigation regarding standards and requests by litigants for a declaration that a given patent is not essential for practising a standard.

What protection is available?

The law applied by the UKPO and the EPO[1] includes a list of certain things that are excluded from patent protection. This list of exclusions includes mathematical methods, methods for performing mental acts, business methods and computer programs. Patent protection is not available in these excluded fields *"as such"*, but that does not mean patent protection is precluded by the mere fact that an invention is implemented using, for example, a computer program[2]. Although the UK law is framed to have the same effect as the European provision[3], the two patent offices have developed their own approaches to the question of whether an application relates to one or more of the exclusions. This exclusion question is most often encountered when a patent application is concerned with a software or computer-implemented invention.

(a) The EPO

As a general rule, a patent will be granted by the EPO if the invention is a non-obvious technical solution to a technical problem. In the landmark *Vicom*[4] case in 1986, the EPO reasoned that *"decisive is what technical contribution the invention as defined in the claim when considered as a whole makes to the known art"*. In this case an invention defined in terms of a mathematical method was not allowed, but a re-phrasing of the invention in terms of a method of digitally processing images using the mathematical method was allowable. Built on this foundation – and following two later significant EPO decisions of *PBS Partnership*[5] in 2000 and *Comvik*[6] in 2002 – the EPO has developed a methodology which incorporates the exclusion question into the assessment of non-obviousness. This methodology has been followed in one form or another in various EPO decisions[7] and prohibits non-technical features of the invention from contributing to inventive step.

In *PBS Partnership*, regarding a new pension benefit scheme, it was found that *"the regime of patentable subject matter is only entered with the programming of a computer system for carrying out the invention. The inventive step thus has to be carried out from the point of view of a software developer or application programmer … having the knowledge of the concept and structure of the improved pension benefits system and the underlying schemes of information processing"*. With no invention at the software developer level, the programmed computer system was found to lack an inventive step.

Comvik related to the concept of allocating two user-selectable identities to the subscriber identity module of a mobile telephone system so that costs could be conveniently distributed between business and personal use. It was found that *"selectively distributing the costs for service or private calls … does not make a contribution to the technical character of the*

invention." Although the application indicated that an object of the invention was to eliminate inconveniences caused by distributing costs for service and private calls, it was decided that this was not considered to be a technical problem and that *"to arrive at the technical problem this object needs to be reformulated as being to implement the GSM system in such a way as to allow user-selectable discrimination between calls for different purposes… .In fact the technical professional would, in a realistic situation, receive knowledge of the cost distribution concept as part of the task information given to him."* The claimed invention was found to lack an inventive step.

The EPO has not formally defined the term "technical" and is unlikely to do so. EPO cases give guidance that certain areas are non-technical (e.g. economic concepts and practices, and business, actuarial and accountancy systems) but, in the absence of a positive definition, there is scope for arguing a particular feature has sufficient "technical" character. The current approach applied by the EPO requires the identification of a non-obvious solution to a technical problem, where the problem is set for a "technical professional" and may contain novel non-technical features of the claimed invention. This means that in cases where a technical implementation on a computer system of an innovative non-technical scheme is routine, the EPO will find the application to lack an inventive step. In other words, if there is only innovation at a non-technical level then one should expect the EPO to refuse the patent application.

(b) UK law and developments regarding patentability

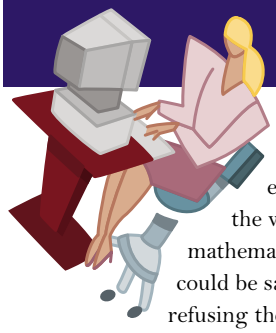
Formerly, the UKPO applied a *"technical contribution"* test which had its roots in *Vicom* and a 1997 Court of Appeal case, *Fujitsu*[8]. The UK approach, unlike the European approach, tried to keep the exclusion question separated from the assessment of inventive step. If an invention made a technical contribution, it was patentable, otherwise it was not. There were no other court cases and the UKPO gave little guidance on what constituted a *"technical contribution"*. The view was that in some instances borderline cases might be granted by the UKPO where refusal might be expected at the EPO.

On 29th July 2005 – following Court judgments in *CFPH*[9] and *Halliburton*[10] – the UKPO issued a practice notice[11] on the exclusion question. The notice indicated that the UKPO examiners would apply a new approach, based on *CFPH*, to determining whether or not a patent application is directed to an exclusion. This approach is a two-step one, which is summarised in the notice as follows:

1. Identify what is the advance in the art that is said to be new and not obvious;
2. Determine whether it is both new and not obvious under the description of an "invention"[12] in the sense of Article 52 EPC which section 1(2) of the Act reflects.

As a test, this can be likened to the *Vicom* approach – if the "advance" is an improved mathematical method (or other exclusion) then the application is not allowable, but if it is an improved method of digitally processing images (something not on the list of exclusions) then the application is allowable. There is, however, a danger that the test can be misapplied (even by patent office examiners) by not looking for an advance achieved by the invention *as a whole*, but looking at the portion of the invention that is said to be new and non-obvious and if this portion relates to an exclusion (e.g. in the way that a mathematical formula could be said to) then refusing the application.

"If there is only innovation at a non-technical level then one should expect the EPO to refuse the patent application"



Following the introduction of the new approach, anecdotal evidence is that applicants have experienced a toughened stance from the UKPO. Several appeals from UKPO refusals have been heard by the court since July 2005[13]. The judges have not always referred to the UKPO test, and some have preferred to apply the exclusion question in terms of the more established *"technical contribution"* approach[14]. It was nearly a decade ago when the exclusion question was considered by the Court of Appeal in *Fujitsu*. However, the Court of Appeal heard two appeals on 2nd August 2006: *Aerotel Ltd v Telco Holdings Ltd* (appeal from a finding of the trial court on summary judgment that the patent was invalid) and *Macrossan's application* (appeal of the refusal of the UKPO and court to allow the patent application). The Court of Appeals' decisions are awaited.

In the *Aerotel* case, the granted patent GB 2178177 B1 related to a telephone system, whereby a customer could make long-distance calls by dialing a centre (presumably on local rates) that would check the customer's credit (after the customer had given a personal identification number) and would then connect the customer long-distance if he/she had credit. The stated advantage was said to be that a customer could make long-distance calls from hotels without incurring hotel charges or could use a call-box without the need for a great deal of change. Telco Holdings Ltd and others denied infringement and brought an application for summary judgment (heard 3rd May 2006) that the patent was invalid and should be revoked. It was accepted that no new equipment was used for the system, but Aerotel said a patentable invention nevertheless lay in the new system. The court found the patent invalid and granted summary judgment (which required a finding of no real prospect of success at trial for Aerotel on the issue of patentability/validity). The judge concluded the system was no more than a new way of paying for telephone calls and was an unpatentable business method. The willingness of the Court of Appeal to hear the appeal, despite a summary judgment finding, suggests the Court of Appeal may not have agreed fully with the legal principles the judge applied.

The *Macrossan* case relates to the refusal by the UKPO of an application for an automated method for acquiring the documents necessary to incorporate a company. The computer-implemented system interrogates the user and gathers the information necessary to complete the forms. The UKPO said it related to excluded subject-matter, namely a mental act, a method of doing business, or a computer program as such. The court gave its decision on 3rd April 2006. Like the UKPO it said the subject-matter of the application was not patentable. The court said the alleged invention was no more than a method of performing a mental act (systematic interrogation to gather data) on a computer and made no technical contribution.

(c) Patent filing practice

The Court of Appeal decisions in *Aerotel* and *Macrossan* should hopefully provide guidance for patentees and their advisors on the approach the English courts (and consequently the UKPO) will take when considering exclusion from patentability. To the extent that there remain differences between the UK and the EPO, practitioners may still continue to pick and choose their application route. In some cases practitioners may pursue applications in parallel at the EPO and in the UK (de-designating UK from the European application if the GB patent is granted first, or withdrawing the GB application if the European patent is granted and is not opposed). The UKPO processes patent applications within four and half years and there are no post-grant opposition proceedings in the UKPO (unlike the EPO). These two factors may be of value to an applicant in a rapidly changing market.

> **"To the extent that there remain differences between the UK and the EPO, practitioners may still continue to pick and choose their application route"**

"Standards" patent litigation in the UK

Aside from cases regarding patentability and the statutory exclusions, the English court has seen other cases recently regarding mobile telephone standards. There is also a case currently in litigation in the UK regarding the M-PEG standards used for MP3 players. Both offer interesting insights.

Industry standards have been established in a number of fields to ensure interoperability. In theory they may also encourage innovation and reduced barriers to entry for competition. Numerous multinational telecommunications companies have large patent portfolios. Members of the Electronic Telecommunications Standards Institute (ETSI) – an industry association – are required to disclose their patented technology. Where those patents are said to be "essential" the patentee is expected to license them to all others on terms that are "fair, reasonable and non-discriminatory" (FRAND). The patentee declares which of its patents are "essential". Companies have filed as many patents as they can that relate to industry standards. The more "essential" patents they hold, the stronger their negotiating position when cross-licensing with others. ETSI does not have a procedure for resolving which patents are "essential", nor does it police whether licence terms offered are FRAND (leaving that to commercial negotiation). The only sanctions ETSI has are to threaten to exclude a party from participation in standard setting, or to steer a standard in a direction away from that party's patent portfolio[15].

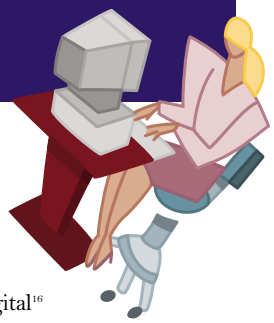
Nokia v InterDigital "non-essential" telecommunications patents

In recent disputes between Nokia and InterDigital the English court has been willing to accept jurisdiction to determine patent essentiality under the ETSI standards. InterDigital holds numerous patents regarding 2G and 3G handset technology. Nokia and InterDigital could not agree licensing terms and sums payable. Nokia brought an action in the English court against InterDigital[16] seeking revocation of three InterDigital patents and a declaration that they were not essential to the 2G standard. The English court accepted not just the revocation case (which any party may bring against a patent in force in the UK) but also the non-essentiality case (in the court's inherent jurisdiction). The matter went to trial on invalidity and non-essentiality. However, the case was overtaken by parallel ICC arbitration, where a final determination was made and Nokia was ordered to pay $252m to InterDigital in royalties for handset sales in 2002-2006. Nokia and InterDigital then settled globally. Nokia were in court against InterDigital in March 2006, this time regarding 3G technology[17]. Nokia did not seek revocation, but did seek a declaration of non-essentiality of some 30 patents. The court accepted inherent jurisdiction to grant such negative declaratory relief, setting out a three-stage test:

(1) The question is decided as a matter of discretion
The Court was unwilling to accept arguments that this would open the floodgates of litigation against InterDigital.

(2) Negative declarations are only suitable where they will serve a useful purpose
The court was satisfied that as an independent experienced patent tribunal its reasoned opinion could have significant persuasive authority in licensing negotiations even though the UK is only a small part of the global market. The court noted that if patents were non-essential and related only to a specific method of working a standard then they could be designed around and it was therefore likely there would be no need for subsequent patent infringement proceedings.

(3) The issues must be sufficiently clearly defined
Pumfrey J had previously heard the 2G trial and was satisfied that ETSI standards and the patent claims in dispute were sufficiently clearly defined.



Young telecommunications companies, who will be net payers in cross-licensing negotiations because they do not have large patent portfolios of their own, may consider such declaratory relief proceedings in the UK if they believe competitors' patents are non-essential and not in fact used by them. The English court has placed itself at the centre of developing patent law in the global telecommunications field.

Phillips v. SanDisk M-PEG (MP3) patent litigation

By 1992, the Moving Pictures Expert Group (MPEG) had developed compressed digital audio and video standards, and had concluded a first standard called MPEG-1 for use in CDs. There were three formats for audio data (labelled layers 1, 2 and 3). Layer 3 was a more efficient format and was widely adopted as a way to store music on relatively small hard disk drives and to transfer music files over the internet. By the mid/late 1990s, MPEG-1 layer 3 became known simply as "MP3". Fraunhoffer and Philips, amongst others, developed the standards and filed patents. Fraunhoffer now use licensing and royalty collection agents to mange their patent portfolio[18]. Phillips use licensing and royalty collecting agents, Audio MPEG[19] in the US and Societa Italiana Per Lo Sviluppo Dell'Ellettronica (Sisvel)[20] in Europe.

SanDisk make memory products, including MP3 players, with prices ranging from as low as $49.99 up to over $250. Though SanDisk has taken a licence to the Fraunhoffer patent portfolio (and their royalty collecting agents publish that they collect in the region of $1 per unit royalty) SanDisk has not taken a licence from Sisvel. In February 2006 SanDisk

brought revocation proceedings[21] in the UK against Phillips and other joint owners regarding six MP3 patents[22]. A month later, in March 2006, SanDisk brought an action[23] seeking a declaration that their products "need not" infringe three of the MP3 patents[24] and seeking a declaration that they are "not essential" for SanDisk's MP3 players. The parallels with the Nokia/InterDigital "non-essential" patent litigation are clear. SanDisk has also sought a similar declaration of non-essential patents. The case has been listed to be heard in March 2007 with a trial running 13-15 court days.

Other electrical/electronic cases

There are other telecommunications patent cases in the UK that have been commenced involving Qualcomm/Nokia and Samsung/Sony Ericsson. There are also other electrical/electronic cases that have been started in the courts. The English courts offer the practical and procedural advantages of experienced specialist patent judges; disclosure of documents; party-appointed experts; and cross-examination of witnesses and experts at trial. These factors, combined with thorough examination of the issues at trial result in reasoned detailed judgments from the specialist judges. Further, the English court is one of the fastest jurisdictions in Europe. Cases can be brought to trial in less than a year from commencement. An example is the RIM BlackBerry litigation. When InPro sued RIM's customer, T-Mobile in Germany, RIM brought revocation proceedings in the UK to try to get a court decision before the German trial. RIM succeeded in obtaining a finding of invalidity in the UK. Where companies are faced with patent-owners that are not exploiting their patents other than by litigation and licensing, the UK can be a good location to bring proceedings for revocation and/or a declaration of non-infringement on an expedited timetable to trial. So-called "patent trolls" who choose to sue in other countries in Europe may find their patents challenged in the UK courts in fast-moving litigation. Though the English courts are more expensive than elsewhere in Continental Europe, the winner on an issue at trial will normally recover his reasonably incurred costs (typically 65-80% of the actual cost incurred). That may help deter speculative cases being brought against parties in the UK.

Notes

1 Section 1(2) of the Patents Act 1977 (as amended) and Article 52(2)of the European Patent Convention, respectively
2 See, e.g. T0208/84 *Vicom*, paragraph 16
3 The Patents Act 1977, Section 130(7)
4 T0208/84 *Vicom*
5 T0931/95 *Pension Benefit Systems Partnership*
6 T0641/00 *Comvik*
7 e.g. T0258/03 *Hitachi*; T0244/00 *Matsushita*; T0634/01 *Fuji*; T0049/04 *Walker*; T0411/03 *Microsoft*
8 *Fujitsu's Application* [1997] RPC
9 *CFPH LLC's Application* [2006] EWHC 1589 Pat [2006] RPC 5.
10 *Halliburton Energy Services Inc v Smith International (North Sea) Limited & others* [2005] EWHC 1623 Pat [2006] RPC 2.
11 http://www.patent.gov.uk/patent/notices/practice/examforpat.htm
12 This refers to the list of exclusions.
13 See, for example, *Macrossan v Comptroller-General* [2006] EWHC 705 (Ch), (2006) 29(5) IPD 29043; *Crawford's application* [2006] RPC 11; and *Citibank's application* [2006] EWHC 1676 (heard 9 June 2006).
14 *Citibank*, [2006] EWHC 1676 (Ch), paragraphs 10 and 11.
15 ETSI's failure to take a more active role in regulating "essential" patents and potential licensing abuse has lead to European Commission scrutiny.
16 *Nokia Corp v InterDigital Technology Corp* [2004] EWHC 2920 appealed in April 2005 at [2005] EWCA Civ 614.
17 *Nokia Corp v InterDigital Technology Corp* [2006] EWHC 802 (Pat).
18 see www.mp3licensing.com
19 see www.audiompeg.com
20 see www.sisvel.com
21 Action HC 06 C00615
22 EP 0 402 973; EP 0 599 824; EP 0 599 825; EP 0 660 540; EP 0 708 533; and EP 0 751 520
23 Action HC 06 C00835
24 EP 0 403 973; EP 0 660 540; and EP 0 599 824
25 Some of these cases are about to grant following recent hearings at the UKPO or EPO

Examples of patents granted[25] by the European and UK Patent Offices

EP 1 028 377, Data transfer with expanded clipboard formats (T0411/03).

EP 0 917 698, Enhancing text presentation from machine readable natural language text (T0049/04).

EP 1 319 211, Click based trading with intuitive grid display of market depth (opposition proceedings pending).

GB 2 391 980, Enhanced JAVA machine instructions (BL O/057/06).

GB 2 391 348, Compilation of application code in a data processing apparatus (BL O/066/06).