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## Computer Implemented Inventions in the UK - Clarity from the High Court?

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In a recent decision of the High Court, *Halliburton Energy Services Inc v Comptroller of Patents* ([2011] EWHC 2508), relating to the high-profile area of patent law (patentability of computer-implemented inventions), His Honour Judge Colin Birss has made some interesting and useful comments that can serve as a helpful guide to those seeking patent protection in this area. The court's conclusions may be summarised by stating that the "contribution approach", explained below, holds, but when considering whether or not a computer program is patentable subject-matter, it is necessary to look to see what task it is that the program, or programmed computer, actually performs. As discussed below, this should be borne in mind when drafting a new application in this area for filing at the European Patent Office (EPO) and/or the United Kingdom Intellectual Property Office (UKIPO).

### Background

In general, the legal requirements for having a patent granted are first that there must be an "invention", and second that invention is considered new and involves an inventive step when considered against everything that has gone before. Within the law there is no positive definition of what something must be or do to qualify as an invention. Rather, a list of exclusions is provided that define those things that are considered not to be inventions. In general the list includes abstract ideas, and specifically includes, computer programs and rules and methods for performing mental acts. Something will only fall foul of one of the exclusions if it is considered to relate to that thing "as such". Accordingly, in the history of patent law many cases have focussed on exactly what it takes to escape the exclusions.

### The EPO Position

Technologists and engineers in the area of computer implemented inventions are probably aware of the oft repeated mantra that computer software is excluded from patent protection in the UK unless there is some "technical contribution". This can be traced back some 25 years to the well-known *Vicom* decision (T208/84 OJ EPO 1987) of an EPO (Technical) Board of Appeal. This decision related to an invention comprising a method of digital image processing using "operator matrices" for convolving with a data array representing an image. The Board of Appeal considered the specific exclusion from patentability of computer programs *as such* and decided that an invention which would be patentable in accordance with conventional patentability criteria should not be excluded from protection simply because it was implemented using "modern technical means in the form of a computer program".

Rather, what mattered, and indeed was considered decisive, was the technical contribution the invention as defined in the claims when considered as a whole made to the known art. This became known as the “contribution approach” and was for many years the accepted approach before the EPO.

Then some years later the rationale of this decision started to be challenged. The main objection was that the contribution approach seemed to conflate what should be separate grounds for patentability, that is to say, the test for patentable subject-matter (do you have an invention?) with the tests for novelty and inventive step (is it new and inventive?) In other words, to work out what a “contribution” is, you must first consider the state of the art to which the contribution is made. However, the state of the art is what is used to determine whether or not an invention is new and involves an inventive step. In other words, a “contribution” of any sort is not the correct test for whether or not something is patentable subject-matter.

The EPO case law thus developed and moved away from the contribution approach until today we have what may be thought of as an “any hardware” test. If a claimed invention mentions hardware, then you have an invention. This sets the threshold for patentable subject-matter very low. The hurdle is however raised when it comes to inventive step since only the technical features of a claim are deemed capable of contributing to the inventive step of an invention. Thus, for example, the mere computerisation of a business method will almost certainly not be protectable by patent, since only the technical features, i.e. the known computer, can be taken into account when deciding on inventive step. Since the computer is a known piece of apparatus it cannot involve an inventive step, let alone be new.

## The UK Position

Looking now at the UK, by a series of decisions over the years in the UK Court of Appeal, the UK courts have adopted the EPO-derived contribution approach and to this day, this stands. The approach was formalised in the *Aerotel* decision of the Court of Appeal ([2006] EWCA Civ 1371), which provides a four point test for deciding this matter. The UKIPO must therefore use this approach when examining applications for patents.

Thus, given the EPO’s departure from the contribution approach, there has been much discussion by lawyers in the UK, and Europe more generally, about the differences on this matter as between the UKIPO and the EPO. This recently came to a head when the EPO’s highest judicial authority, the Enlarged Board of Appeal (EBA) was asked to rule on the apparent divergence of EPO positions. One difference identified in the referral to EBA was based on the fact that some Board of Appeal Decisions have accepted the mere presence of a computer in a claim as being enough to provide patentable subject-matter, whereas others have not.

For technical legal reasons relating to the powers it has to answer questions referred to it, in its opinion *G3/08*, the EBA declined to answer the questions it was asked. However, it did explain at some length, that the approach that the EPO currently adopts, described above as the “any hardware approach”, is what is used by Examining Divisions and Boards of Appeal and understood by the patenting community. Thus, it concludes that on this matter there is no uncertainty amongst users of the European patent system.

## Halliburton Energy Services Inc ([2011] EWHC 2508)

In this recent High Court decision (“Halliburton”), there is provided a clear and well-written review of this area of law. *Halliburton* is to do with the computer software and mental act exclusions. In essence, the judge concluded that when you have an invention that is implemented in software, this is not of itself enough to conclude that the subject-matter is excluded. As he stated,

*“...The question is decided by considering what task it is that the program (or the programmed computer) actually performs. A computer programmed to perform a task which makes a contribution to the art which is technical in nature, is a patentable invention and may be claimed as such...”*

This may be characterised as what I refer to as a “black box” test. The test involves placing the invention, in a black box that does the function the invention is designed to do. It matters not how the function is performed or achieved. What matters is if that black box considered as whole does something technical. This may be useful in coming to a conclusion and is the way the UK courts seems to be thinking at present. It is of course important to remember that *Halliburton* is “only” a High Court decision. The Court of Appeal decisions, in, say, *Aerotel* and *Symbian* ([2008] EWCA Civ 1066) still provide the basis for the approach to patentable subject-matter, but *Halliburton* shows us how these cases can be applied.

Interestingly, it seems, as the judge commented, that to fall into the computer software exclusion it is almost always necessary really to fall into *two* of the specific excluded areas. The fact that the invention is implemented in software is not of

itself enough to exclude the invention. What matters is what the programmed computer does. If this too is excluded, say as one or more of a business method, the presentation of information etc, then the subject-matter will be excluded. This approach is a useful commercial approach and provides some clarity when facing decisions early in the innovation process. It can help inform the decision as to whether or not the investment in patent protection is likely to be worthwhile.

Of further interest was that one of the main points for consideration in this decision is the extent of the “mental act” exclusion. The invention in *Halliburton* related to a method of designing drill bits for drilling in earth formations, i.e. large drill bits for oil fields and the like. The application had been refused by the UKIPO as a mental act and the applicant appealed this point. The judge therefore had to decide how to construe this exclusion. The judge identified a wide construction being one in which a method is a scheme for performing a mental act if it is capable of being performed mentally regardless of whether as claimed it is in fact performed mentally. In the alternative a narrow construction was identified as one that would only exclude acts actually carried out mentally. The judge opted for the narrow construction based on UK precedent and also on the basis that the wide construction is uncertain in scope. He could see no reason to construe it in this wide way. By referring to the uncertain scope he seems to indicate that the wide construction could end up coverings lots of things that really ought not be covered and which should not be denied patent protection.

Next of particular interest to users of the UK and EPO systems were the judge’s comments regarding which approach (UKIPO or EPO) is likely to be “better” for patent applicants seeking

protection for their inventions. The judge concluded, that the effect of following one approach as compared to another e.g. the UK instead of EPO, will not lead to a different overall outcome. In other words, the conclusion of the judge in this case seems to be that the relative chances of success on a patent application directed to a computer implemented invention as between the UK and the EPO seem to be very similar, even if before the EPO you will fail for lack of inventive step, whereas before the UKIPO you will fail for unpatentable subject-matter.

### Will the UK Follow the EPO?

Finally, readers may well be aware of the tension that has existed between the UK courts and the EPO on this subject due to the different approaches taken, as discussed above. This has brought specific mention in various cases. For example, in one Board of Appeal decision (*Duns Licensing Associates, L.P.*, T154/04), responding to a suggestion by the UK courts that the EPO might like to clarify exactly what approach should be followed, the UK courts themselves were accused of taking an approach that was inconsistent with a good faith interpretation of the European Patent Convention. Harsh words indeed from one judicial body to another.

The present judgement indicates that it was suggested to the court that the UK should now depart from the contribution approach of *Aerotel* and follow instead the EPO approach to excluded subject-matter (any hardware). The rationale given was that the EBA has effectively definitively ruled as to what the EPO approach is (by refusing to answer the questions put to it and thus confirming the status quo) and so national courts should align behind this, in the interest of harmony across Europe on this important legal and commercial matter. This was dismissed in no uncertain terms by the court, stating, not unreasonably, that the EPO approach to excluded subject-matter, will only work in combination with the EPO approach for inventive step (only taking into account technical features). The court stated that to suggest that you can take one without the other, “will not do”!

### Conclusions

To conclude, the position in the UK has been stated clearly. The contribution approach holds, but when considering a computer program, it is necessary to look to see what task it is that the program, or programmed computer, actually performs. When drafting a case in this area, it would be advisable to have this view in mind so as to maximise the chance of success before the UKIPO, or indeed the EPO.

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**If you would like to have more detailed advice on the matters arising from this note, please contact Avi Freeman (afreeman@beckgreener.com).**