Hepworth Browne
EUROPEAN PATENT & TRADE MARK ATTORNEYS

Pearl Chambers
22 East Parade
Leeds LS1 5BY

Tel: +44 (0)845 **270 4900**
Fax: +44 (0)845 **270 1060**

Email: mail@hepworthbrowne.com
www.hepworthbrowne.com

PRACTICE NOTE

ALICE (CORP) THROUGH THE LOOKING GLASS:
A European Perspective

1.0 Introduction

1.1 For more than twenty years the European Patent Office - and indeed the English Courts especially following the highly criticized *Aerotel*[1] decision - have adopted a noticeably stricter approach to what is, and more critically what is not, patent eligible in the field of computer-implemented inventions (CIIs), programs for computers and business methods. In contrast, the USPTO has been more dynamic, liberal and pro-patentee in allowing (initially) the grant of patents for process-based inventions that produce "a useful, concrete, and tangible result" (see *State Street Bank vs Signature Finance*[2]). Subsequently this was changed to satisfy the machine-or-transformation approach advanced in *Gottschalk vs Benson*[3] and later moderated by the Supreme Court in *Bilski vs Kappos*[4].

1.2 Without doubt, the US and European patent systems are not yet quite in step. Recent decisions from the Boards of Appeal (*T1769/10-IGT*[5]) and a succession of US Supreme Court cases – most recently *Alice Corp vs CLS Bank*[6] - suggest that convergence is on the way on the issue of patentability of both CIIs and "schemes, rules and methods for performing mental acts, playing games or doing business."

1.3 This practice notes sets out some considered observations on the similarities and differences between cases, and presents a considered view on the technical threshold required for a claim to pass from being unallowable for reasons of statutory exclusion to the point at which an objective assessment of patentability must be made of the claim relative to the prior art. This commentary draws on the extensive prosecution experience of the author before both the first instance Examining Divisions and the Boards of Appeal of the EPO.

2.0 Issues Surrounding Convergence to a Sensible Common Position

2.1 Before getting into the detail, it is worth summarizing some of the problems that practitioners have recognized within the system as a whole:

2.1.1 A common approach is not helped by the fact that the language of the respective national/regional legislation remains different, although the intent of the language is arguably - in view of TRIPS[7] - meant to have a similar legal effect. For example, Art.52(3) EPC[8] expressly delimits 'non-inventions'- defined in Art.52(2) EPC - only to the extent that they seek protection for excluded subject-matter or activities "*as such*".

2.1.1.1 In the USA, 35 U.S.C. §101[9]defines patentable invention positively, whilst the jurisprudence has excluded "laws of nature, natural phenomena, and abstract ideas" from patentability.

2.1.1.2 Art.52(2) EPC says: "The following in particular shall not be regarded as inventions within the meaning of paragraph 1: (a) discoveries, scientific theories and mathematical methods; (b) aesthetic creations; (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers; (d) presentations of information.

2.1.2 Many "leading" cases on both sides of the Atlantic are poor jurisprudence since they (i) seem to muddle the fundamental issues and (ii) are frequently directed to subject-matter that could have been rejected more effectively under obviousness standards, rather than as excluded subject-matter objections. Indeed, the arguments presented frequently appear to ask the wrong question(s) or propagate a fundamentally compromised approach to the objective assessment of patentability.

2.1.3 There has been a noted reluctance from any of the major tribunals to take a lead in setting a standard threshold of patentability for CIIs and business methods.

2.1.4 Some of the "leading" decisions have apparently:
(a) Side-stepped the real underlying issues about the threshold for patentability and what amounts to a "technical contribution" as reflected by the 'non-opinion' of the Enlarged Board of Appeal of the EPO in ***G03/08***[10] and the Justice Kennedy's Opinion of the Court in *Bilski*, section B2, final paragraph: "… the patent law faces a great challenge in striking the balance between protecting inventors and not granting monopolies over procedures that others would discover by independent, creative application of general principles. Nothing in this opinion should be read to take a position on where the balance ought to be struck"; and/or

(b) Lacked clarity with the result that patent office examiners have not understood the guidance from the courts and, consequently, have applied an overly zealous approach to the patentability of CIIs and business methods. Grant rates from one of the EPO Examining Divisions responsible for CIIs and gaming applications has historically been around 3%, while grant rates from the USPTO on business methods have plummeted following the decision *Alice Corp vs CLS Bank*.

2.1.5 The observed hysteresis around the threshold for patentability manifestly provides no certainty for business, erodes confidence and compromises innovation.

> *"Mad Hatter: "Why is a raven like a writing desk?"*
> *"Have you guessed the riddle yet?" the Hatter said, turning to Alice again.*
> *"No, I give it up," Alice replied: "What's the answer?"*
> *"I haven't the slightest idea," said the Hatter"*
>
> *— Lewis Carroll, Alice in Wonderland*

SIMILARITIES AND DIFFERENCES IN APPROACH

3.0 Scientific Theories and Mathematical Methods

3.1 The EPC expressly excludes "discoveries, scientific theories and mathematical methods" from patentability to the extent that the invention relates to this subject-matter "as such." Consequently, it's not possible to obtain patent protection for, say, Newton's Law of Gravitation, Game Theory or a Fourier transform. However, this does not preclude patentability of a machine that:

i) makes use of gravity in its operation, e.g. an exercise work station employing variable weights,

ii) has complex signalling interactions based on specific inputs, e.g. such as in ***T533/09***[11] where patentability was established for a specific modulation of a train of defibrillation pulses separated by pauses, or

iii) applies a mathematical method in a signal processing mechanism to bring about an enhanced image (as in ***T208/84-Vicom***[12]).

3.2 The common thread is that there is a "practical application" of an excluded principle that brings about a positive real-world [technical] effect.

3.3 Correspondingly, the exclusions under US jurisprudence prohibit protection of "laws of nature, [and] natural phenomena". These terms are logically understood and it is reasonable to conclude that their use and intent aligns with the similar terms in Art.52(2)(a) EPC. For the time being, it is necessary to put aside the issue of what amounts to "an abstract idea", but we will return to this later.

3.4 In the non-opinion of *G03/08*, the Enlarged Board of Appeal of the EPO positively indicated that the so-called "*contribution approach*" was an inappropriate mechanism for objective assessment of a patentable invention. The contribution approach assesses features on an individual basis with respect to the contribution that each feature makes having regard to the prior art. The contribution approach therefore would view a cup having a surface printed logo as non-patent eligible given that cups are known and that the printed image was expressly excluded for reasons of being an aesthetic creation or the presentation of information. The right approach, as reflected in ***T1173/97-IBM***[13], is to say that the cup and image in combination are indeed technical and thus fundamentally patent eligible, but the printed logo contributes insufficiently to the overall technical function performed by the cup. Consequently, the claim – in essence the cup with its applied logo - can be rejected for having no technical synergy over the prior art and thus be dismissed for lack of an inventive step.

3.5 The threshold for excluded subject-matter is therefore not high; but it is a separate test (***T0154/04-Duns Licensing***[14], section 5D). It is necessary to consider only the totality of what is being claimed and then to consider whether the "what" is expressly excluded from patentability, e.g. is it a cup (which is technical subject-matter) or is it the presentation of information (which is excluded)?

3.6 Once you get over the threshold test and fundamental exclusions to patentability under the EPC "as such", the substantive issues of patentability, i.e. novelty and inventive step, come into play.

3.7 At this point, it is still necessary to consider the totality of the real world effect (as indicated in *Mayo Collaborative Services vs Prometheus Laboratories*[15], see Headnote 1) achieved by the interaction of each claim feature. The additional point here is that the EPO has recognized (see *T0154/04-Duns Licensing*) that a claim may legitimately have a mix of technical and non-technical features. These non-technical features may actually form a dominating part of the claimed subject matter. However, non-technical features, *to the extent that they do not interact with the technical subject-matter for solving a technical problem*, i.e. non-technical features "as such", do not provide a technical contribution to the prior art and should therefore be ignored when… assessing novelty and inventive step. Unfortunately, with inventive step/obviousness considerations, it is too easy for an Examiner 'to throw too many things out of the basket' so care needs to be exercised in understanding how seemingly "non-technical" claim features actually impact on the effect achieved by the invention in the real world. One should step back and ask the more fundamental question of whether the invention covers statutory-excluded subject-matter, and only then move on to the objective assessment of novelty and inventive step.

3.8 ***Mayo Collaborative Services vs Prometheus Laboratories***[16] confirmed that, after the initial enquiry into whether the claim at issue is directed to patent-ineligible subject-matter, the claim elements should be considered both individually – this is dangerous and arguably misplaced in that isolation of features encourages subjectivity and prejudice – and then "as an ordered combination" to see whether the claim is transformed. Consideration of the entire interaction and resulting effect, i.e. the ordered combination, is therefore important, as it is before the EPO. In fact, consideration of the patent claim "must be considered as a whole" following ***Chatfield, 545 F. 2d 152, 158 (CCPA 1976)***[17].

3.9 The two-step framework in *Mayo* therefore needs to be treated with care since the two steps are distinct and entirely independent. One is a high-level threshold test for assessing general suitability of the invention for patent eligibility, and the other a detailed investigation about the contribution of the invention for reasons of objective assessment of inventive step/non-obviousness. Examiners should be reminded that the result from the first enquiry should not influence the independent enquiry about secondary technical contribution that leads to transformation of the claim. This aspect of *Mayo* should therefore reflect the headline approach in *T0154/04-Duns Licensing*, and once passed permits the invention to be assessed objectively in terms of its technical contribution under the substantive heading of obviousness or inventive step. In summary of the problem, the perception is that Examiners tend to incorrectly mix these two separate tests together.

3.10 An EPO Board of Appeal has recently decided in ***T1539/09***[18] that a programming language was non-inventive since the additional steps were not technical. The subject-matter related to a graphical programming language and environment that enabled a user to produce program code without requiring major learning effort or programming expertise. It is noted that the case was not rejected for reasons of excluded subject-matter - as one might have expected - but rather under substantive issues of obviousness. The finding was that the new claim features were merely a mental process comparable to the verbalization of a thought or the formulation of a mathematical fact in calculus, with the totality of the claim (although technical) therefore being non-inventive. The threshold for overcoming an initial patent ineligible objection, i.e. the "as such" get-out-of-jail card in Europe, is therefore low.

3.11 *T1539/09* therefore highlights how exclusions under Art.52(2) EPC are perhaps dissimilar to the notion of an "abstract idea" under US practice. That said, it seems evident that the outcome of the case would have been the same regardless of whether the claimed subject-matter was considered as a fundamental building block or otherwise as either having no secondary technical contribution or merely the presentation of information "as such".

4.0 "Abstract Ideas"

> *"If there's no meaning in it," said the King, "that saves a world of trouble, you know, as we needn't try to find any. Let the jury consider their verdict."*
>
> *— Lewis Carroll, Alice in Wonderland*

4.1 In *Gottschalk vs Benson*, there are some useful summary pointers and statements on the subject of patent eligibility. The case established that '[a]n idea of itself is not patentable', following ***Mackay Co. vs Radio Corp***[19]" [w]hile a scientific truth, or the mathematic expression of it, is not a patentable invention, a novel and useful structure created with the aid of knowledge of the scientific truth may be". Firstly, this fits closely with the EPO's position in, for example, ***T471/05***[20] where a method claim merely formulated a series of mathematical and optical abstract concepts without properly requiring a physical, technical implementation. Protection of a mere 'design' that encompasses a purely abstract and conceptual implementation therefore is either a "mental act" or a "mathematical method" "as such".

4.2 The protection of such broad ideas or concepts – that have no concrete technical base – will therefore continue to fail on both sides of the Atlantic.

4.3 In the EPO, for computer implemented invention (CIIs) and business methods, we are not faced with having to argue whether or not the concept is "an abstract idea", but rather whether there is a "secondary technical effect" and whether the invention possesses the required technical contribution for patentability. In this regard, the Board of Appeal in ***T1543/06 Gameaccount***[21] found no identifiable synergistic effect between the game rules and technical implementation. The Board was unable to identify any effects other than those inherent in the game rules themselves or those connected to carrying out functions by a computer (with a processor and display). This decision confirmed that the mere technical implementation of excluded subject matter as such cannot form the basis of inventive step. In other words it is necessary to ask *how* the subject matter (e.g. a game or business method) in totality is implemented. Additionally, any consideration of the particular manner of implementation *must focus on any further technical advantages or effects associated with the specific features of implementation over and above the effects and advantages inherent in the excluded subject-matter*. *T1543/06-Gameaccount* therefore also confirms the decision in ***T258/03–Hitachi***[22]. In Hitachi, the non-patentable invention related to the automation of the non-technical activity of performing a "Dutch" auction in the absence of bidders, whereby a server (implementing the method) applied a business scheme (amounting to rules of an auction) and performed any necessary calculations. The *Hitachi* decision provided a definition of what amounts to an "invention" under Art.52(1)EPC, i.e. "subject matter having technical character" that can be inferred from the physical features of an entity or the nature of an activity or could be conferred on a non-technical activity by the use of technical means. *T258/03-Hitachi* confirmed that an invention which as a whole falls outside the exclusion zone of Art.52(2) EPC (i.e. is technical

in character) cannot rely on excluded subject matter alone, even if that non-technical matter is novel and non-obvious. The Board stated that "method steps consisting of modifications to a business scheme and which are aimed at *circumventing* a technical problem rather than *solving* it by technical means cannot contribute to the technical character of the subject matter."

4.4 Returning to *Mayo vs Prometheus* as reflected in *Alice Corp*, the US Supreme Court was similarly not prepared to permit a simple generic computerised implementation of a well-known method, nor would it allow a patentable invention to come about simply because of a limitation to a particular technological environment. As stated in MPEP §2106[23], insignificant "extra-solution" components or insignificant post-solution activity will also not help render a claim patent eligible since the extra-solution component or method activity will not be considered as central to the purpose of the alleged (non-patent eligible) innovation.

4.5 Rather, the common position between US Supreme Court and current EPO practice, such as in *T1543/06-Gameaccount*, is that an appropriate technical implementation must bring about some form of synergistic technical effect that is more than just the change of binary zeros to binary ones in a processor. There needs to be an application of such concepts "to a new and useful end." In other words there is a practical real world effect achieved by the claims. *Mayo vs Prometheus* says:

> "Considered "as an ordered combination," these computer components "ad[d] nothing… that is not already present when the steps are considered separately." *Id.*, at ___. Viewed as a whole, these method claims simply recite the concept of intermediated settlement as performed by a generic computer. They do not, for example, purport to improve the functioning of the computer itself or effect an improvement in any other technology or technical field. An instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer is not "*enough*" to transform the abstract idea into a patent-eligible invention. *Id.*, at ___. Pp. 14–16"

5.0 Building Blocks

5.1 In ***Parker vs Flook***[24], the US Supreme Court reiterated that "phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work".

5.2 In ***Funk Bros. Seeds Co. vs Kalo Co.***[25], the US position seemingly differs immaterially: "He who discovers a hitherto unknown phenomenon of nature has no claim to a monopoly of it which the law recognizes. If there is to be an invention from such a discovery, it must come from the application of the law of nature to a new and useful end".

5.3 In considering the decision in *State Street Bank vs Signature Finance*, the US Court of Appeals was arguably on the right track, but failed to go far enough to explain adequately what was meant to be covered by the statutory exclusions under the US statute. The Court of Appeals indicated that certain types of mathematical subject-matter, standing alone, represented nothing more than abstract ideas until reduced to some type of *practical application*, i.e. "a useful, concrete and tangible result".

5.4 The developing case law in the USA now appears to point strongly towards the requirement for some form of secondary technical effect to justify patentability, and that this is the over-reaching requirement.

5.5 Additionally, the *Alice Corp* decision now touches on two independent arguments that are being used successfully before the EPO and explains why certain applications fail.

5.6 First, from arguments initially presented in *Bilski*, organizing human activity in a business sense has some analogies to the treatment of a human-being by surgery or therapy. Protection for surgical therapies is unpalatable from ethical and moral perspectives. Correspondingly, attempting to secure patent rights to a process that seeks to exercise direct control over a human's behaviour when no choice is available to the human will likely always fail, since this form of control amounts to use of a fundamental building block. In this respect, *Alice Corp* notably references a statement from *Bilski*:

> "Although hedging is a longstanding commercial practice, *id.*, at 599, it is a method of organizing human activity, not a "truth" about the natural world " 'that has always existed,'…"

5.7 In fact, it is noted that the rebuttal observation from the Petitioner's attorney to Chief Justice Roberts in *Bilski* hits the issue square on: "Now, the government has gone farther than that and really wants to exclude methods of organizing human behaviour. I think that's the way they describe it. That's really the business method rejection in other words..."

5.8 Secondly, CIIs require something more than post-solution activity. The simple computerized implementation of a concept – an abstract idea - does not possess enough real world technical interaction. In this respect, *Alice Corp* says:

> "These cases demonstrate that the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea "while adding the words 'apply it' " is not enough for patent eligibility. *Mayo, supra,* at ___ (slip op., at 3). Nor is limiting the use of an abstract idea " 'to a particular technological environment.' " *Bilski, supra,* at 610–611. Stating an abstract idea while adding the words "apply it with a computer" simply combines those two steps, with the same deficient result. Thus, if a patent's recitation of a computer amounts to a mere instruction to "implemen[t]" an abstract idea "on . . . a computer," *Mayo, supra,* at ___ (slip op., at 16), that addition cannot impart patent eligibility. This conclusion accords with the pre-emption concern that undergirds our §101 jurisprudence. Given the ubiquity of computers, see 717 F. 3d, at 1286 (Lourie, J., concurring), wholly generic computer implementation is not generally the sort of "additional featur[e]" that provides any "practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself." *Mayo,* 566 U. S., at ___ (slip op., at 8–9).
>
> The fact that a computer "necessarily exist[s] in the physical, rather than purely conceptual, realm," Brief for Petitioner 39, is beside the point. There is no dispute that a computer is a tangible system (in §101 terms, a "machine"), or that many computer-implemented claims are formally addressed to patent-eligible subject matter. But if that were the end of the §101 inquiry, an applicant could claim any principle of the physical or social sciences by reciting a computer system

> configured to implement the relevant concept. Such a result would make the determination of patent eligibility "depend simply on the draftsman's art," *Flook, supra,* at 593, thereby eviscerating the rule that " '[l]aws of nature, natural phenomena, and abstract ideas are not patentable,' " *Myriad*, 569 U. S., at___ (slip op., at 11)."

5.9 The EPO has consistently stated that its preferred mechanism for assessing inventive step - determining obviousness - is the 'problem-solution' approach. However, while this approach is acknowledged as not being the only mechanism, it is the *de facto* standard. The objective of the problem-solution assessment is to identify the real world technical contribution, but for mixed inventions, such as CIIs and business methods, a straightforward formulation may give a subjective and inappropriate result. Consequently, in *T1769/10-IGT*, the EPO Board of Appeal recognized the inherent difficulties and produced a generic statement about the use of the problem-solution approach to assessing mixed inventions:

> "In the problem-solution approach, the objective technical problem to be solved is formulated based on the technical effect caused by the distinguishing features of the claim over the prior art, and thus depends on the individual case...
>
> In the case where some general form of implementation of the aim to be achieved in the non-technical field is already known from the prior art, the objective technical problem to be solved may be formulated more specifically as *how to implement technically* the aim in the non-technical field, or, reworded, *to provide a technical solution involving technical means how to achieve the aim* in the non-technical field" [emphasis added].

5.10 Consequently, the issue of patentability of mixed inventions (especially CIIs and business methods) reduces to *how to implement technically* the aim in the non-technical field, or, reworded, *to provide a technical solution involving technical means how to achieve the aim* in the non-technical field.

5.11 This conclusion is supported by the EPO decision in***T1051/07-SK Telecom***[26].

5.12 In fact, the nature of "*how*" an invention is implemented arose to a more limited sense in *T1051/07-SK Telecom*. The question of *what* was being achieved by the claimed subject-matter was largely ignored, with the objective problem posed as: "to provide the system with means allowing a user to load money on his account in the host computer (or to realise money from his account)". The objective problem does not consider '*what'* in practical reality the invention sought to protect because the claim was fundamentally a technical solution, although it is evident that the effect in the real world is a computerised banking system that provides access to funds, i.e. a computer-implemented business method that moves and releases funds to a client. The recited 'technical' means in the allowed claim supports implementation of the loading of a mobile financial account granted to a cell phone and very little else. However, this was patentable because the implemented solution involved technical interactions that enhanced the existing system in a way that brought about synergy in the real world.

5.13 Drawing all the case law together, the fundamental issues appear to be as follows.

5.13.1 Claiming a broad business process concept of "what is achieved" or what is being undertaken is going to fail – see further commentary in sections 5.12.3 & 6.7 below.

5.13.2 A claimed invention (for CIIs, mathematical methods and natural phenomena, etc.) must always have a practical application in that the totality of the claim must be seen to bring about a tangible real world secondary technical effect that is more than just a change in computer logic states. This reflects the "new and useful end" in ***Diamond vs Diehr***[27] and *Gottschalk vs. Benson* (amongst others). In fact, *Alice Corp* eloquently summarises what is needed:

> "Accordingly, in applying the §101 exception, we must distinguish between patents that claim the " 'buildin[g] block[s]' " of human ingenuity and those that integrate the building blocks into something more, *Mayo*, 566 U. S., at ___ (slip op., at 20), thereby "transform[ing]" them into a patent-eligible invention, *id.*, at ___ (slip op., at 3). The former "would risk disproportionately tying up the use of the underlying" ideas, *id.*, at ___ (slip op., at 4), and are therefore ineligible for patent protection. The latter pose no comparable risk of pre-emption, and therefore remain eligible for the monopoly granted under our patent laws."

5.13.3 Claims that organize human activity or exercise unwavering or inevitable human control will fail because they are the building blocks of society. However, if there are (i) options available, (ii) the particular solution is technically implemented and (iii) the solution is not the mere automation of an existing business principle, then you have a shot at patentability. In other words, a valid claim will not see ultimate control of human behaviour, but rather a technical implementation that supports a particular choice or requires further interpretation.

5.14 "Abstract ideas" do not seem to encompass the concept of choice, nor do they preclude the assembling of multiple but fundamental building blocks into an interactive arrangement that has a real-world contribution seen in some form of secondary technical effect.

5.15 That said, the headline test that needs to be passed to move the claim into substantive examination is low. The hurdle to overcome will be whether the invention is non-obvious and possesses an inventive step.

5.16 The *Alice Corp* application would have failed at the EPO for the reasons expressed in *T1543/06-Gameaccount*, namely that there was no synergistic technical effect and, moreover, the "invention" amounted to the mere automation of a well-known business process, i.e. the claims looked to protect a fundamental *behavioural* process that permitted no option or choice. In fact, even with a more liberal and pro-patentee position, the *Alice Corp* claims would have failed at the EPO at the point of objective consideration of inventive step under *T641/00-Comvik* applying *T1769/10-IGT* correctly.

> *"It's a poor sort of memory that only works backwards,' says the White Queen to Alice."*
>
> *— Lewis Carroll, Alice's Adventures in Wonderland & Through the Looking-Glass*

5.17 In the recent decision from 13 November 2014 in *Lantana Ltd*[28] *v The Comptroller General of Patents, Design and Trade Marks [2014] EWCA Civ 1463*, the Court of Appeal considered patentability of a CII under the patentable exclusions identified in section 1(2) of the UK Patents Act 1977. The alleged invention related to a method of extracting and transferring data between two computers linked over the internet and wherein one made a request to the other for a file. The local computer contained a list of the documents stored on the other computer. The user of the local computer sent an email message to the remote computer. The remote computer automatically responded by sending a return message with the file attached. In essence, there was a database and a communication flow between two computers based on a request and return function. Lantana argued that the arrangement saved the need for continuous connection to the remote computer and reduced the risks of being hacked while connected or losing the connection.

5.18 In the UK, while there is no comprehensive test for identifying a technical contribution, the courts have established a number of "signposts" tests initially developed in *AT&T Knowledge Ventures' Application* [2009*] EWHC 343 (Pat)*[29] and then refined in *HTC Europe Co. Ltd vs Apple Inc. [2013] EWCA Civ 451*[30]. These signposts firstly attempt to provide a quasi-codified approach to the assessment of CIIs. Secondly, they further attempt to align the approaches of the English Courts and those employed by Boards of Appeal of the EPO, especially in *Vicom*, *Hitachi* and *Duns' Licensing*. However, these signposts are not easily reconcilable with the EPO's later approaches in *T1051/07-SK Telecom* or *T1769/10-IGT* and are seemingly overly restrictive. In any event, the Hearing Officer and first instance judge both indicated that there was no identifiable effect outside of the computer program itself and that the signposts were not of help. Lantana failed because it had no relevant technical effect given that any increase in the reliability of the data retrieval process was due solely to the use of e-mail rather than any other communication method. Lantana also failed because there was no indication that either of the two computers or the network were intrinsically more reliable. On the issue of connectivity, the use of an intermittent connection simply circumvented the problems of maintaining a good continuous connection. In the limit, a person at one site could have referenced a data library entry, phoned a colleague at a different site and obtained the information related to the identified file verbally from his colleague. The Lantana invention was therefore excluded because the "*how*" it achieved the results was nothing significant over a conventional process and, arguably, the "what" it achieved merely the computer-based implementation of a business process.

5.19 Without doubt, there is a reluctance in senior judges of the English Court of Appeal to re-visit the *Aerotel* test. It is also noted that the English courts are bound by the concept of precedent. However, case law does evolve and can be influenced by external factors, particularly significant decisions from the EPO in which the case law in a particular subject area is considered "settled".

5.20 Instead of considering inventive step in *Lantana*, the courts decided the application under section 1(2) of the UK Patents Act dismissing the case for embodying excluded subject-matter. The concern is that the right decision was reached but for the wrong reasons. Arriving at the correct result through different assessment processes does not, however, mean that the English Courts are aligned with the Boards of Appeal of the EPO or that the one or other of the approaches is correct.

5.21 To demonstrate this point, the *Lantana* appeal says, at paragraph [52], that the appellant's attorney: "…did not dispute Kitchin LJ's observation in argument that the methodology of the EPO and the English court should produce the same result. The position may be that the EPO and the English court ask the same questions - is there a contribution and, is that contribution solely within the exclusion? - but in a different order. The decisions of the EPO, therefore, provide only limited assistance to this court in determining whether the process adopted by the judge in this jurisdiction was flawed."

5.22 Furthermore, the appeal decision in *Lantana* – see paragraph [14] of the appeal – references the English High Court's initial assessment, namely: "Being novel and inventive is not what takes a contribution outside the excluded area nor is it what makes an effect or contribution "technical"." At this point, alarm bells should be ringing with respect to alignment with the approach of the Boards of Appeal in both *T0154/04-Duns Licensing* and *T1769/10-IGT*.

5.23 In *G03/08*, the Enlarged Board of Appeal provided a specific warning on the difficulties surrounding the assessment of what is and what is not 'technical'. In fact, the Enlarged Board entirely side-stepped the issue by saying: "It is hoped that readers will accept these assertions without requiring a definition of exactly what falls within the boundaries of "technical"." Returning now to the criticism of the English Court of Appeal by the Technical Board of Appeal in *T0154/04 Duns Application*, the Board said that, with respect to the distinct and independent nature of *invention* within the patentability requirements of Art.52(1) to (3) EPC, it would be a "legal fallacy" to mix up the layman's ordinary understanding of invention as a novel and often also an inventive contribution to the known art with the concept of invention in the sense of Art.52 EPC. Indeed, "any reference to the prior art in the context of Art.52(2) and (3) EPC would lead to insurmountable difficulties", with the "technical effect approach endorsed by Lord Justice Jacob in the *Aerotel/Macrossan* judgement rooted in the second ordinary meaning of the term invention... which is not consistent with "a good faith interpretation of the European Patent Convention." In fact, "the technical effect approach (with the rider) applied in *Aerotel/Macrossan is irreconcilable with the EPC for the further reason that it presupposes that novel and inventive purely excluded matter does not count as a 'technical contribution*'" [section 12, emphasis added]. The final clause of the *Duns Licensing* criticism appears to be the antithesis of the approach advanced in *Lantana*. In fact, the *Lantana* decision seemingly contradicts the EPO's position directly and reflects the legal fallacy of *Aerotel*, notwithstanding the "practical reality" requirement from *Symbian*, is being propagated though *Lantana* (see paragraph [08]).

5.24 There is a further problem with Board of Appeal decisions in that different boards are not bound by precedent, with any conflicts between different Board of Appeal decisions resolved through a referral to the Enlarged Board of Appeal. Any Enlarged Board of Appeal should, invariably, set a legal standard across all court instances in all contracting states of the EPC.

5.25 With there being no express definition for the word "technical", the meaning is left open to some varying interpretations by different examiners. For example, in *T641/00-Comvik* – considered an important case - the Headnote 1 says: "An invention consisting of a mixture of technical and non-technical features and *having technical character as a whole is to be assessed*

with respect to the requirement of inventive step by taking account of all those features which contribute to said technical character whereas features making no such contribution cannot support the presence of inventive step." This statement requires very careful consideration. *Technical character* is an absolute requirement for an invention in the sense of the EPC, with this stated in ***T931/95-Controlling Pension Benefits System/PBS Partnership***[31], but technical character is also undefined other than it relies on a circular definition and consideration of *all* those features which *contribute* to the *technical character*. What amounts to a meaningful 'contribution' *as a whole* is therefore a critical step in any objective assessment. The problem with *Comvik* is that it skirts around the issue and makes some fairly bland if not unclear statements that are open to interpretation or confuse the underlying message, e.g. "where a feature cannot be considered as contributing to the solution of any technical problem by providing a technical effect it has no significance for the purpose of assessing inventive step." Furthermore, *Comvik* is now more than 10 years old and its approach to mixed inventions and the assessment of inventive step seemingly must be viewed in light of the newer and apparently accepted "how to implement technically the aim in the non-technical field…" instruction of *T1769/10-IGT* (although this was from a different Board).

5.26 The rejection of non-technical features within a claim balances on establishing whether a causal link can be established between interacting technical and non-technical features, which causal link then brings about an overall technical contribution when the claim is considered as a whole. It is, however, noted that in ***T27/97-Cryptographie à clés publiques/France Telecom***[32] the Board of Appeal, in assessing inventive step, ignored a feature distinguishing the claimed subject-matter from the prior art for lack of any established technical effect causally related to that feature.

5.27 The divergence of the English Court of Appeal's approach relative to the Boards of Appeal should therefore not be underestimated since the current English approach seemingly unduly restricts the meaning of *technical* and what amounts to a *technical contribution*.

5.28 Finally, on the issue of CIIs and business methods, it is noted that the Australian Full Federal Court (FFC), in its long-awaited ***Research Affiliates***[33] appeal decision, has held that claims directed to a method and system for generating an index of assets (such as stocks) do not constitute patentable subject matter because they are directed to an "abstract idea". The FFC said: "the method of the invention is not one that has any artificial or patentable effect other than the implementation of a scheme, which happens to use a computer to effect that implementation." This decision therefore appears consistent with *T258/93-Hitachi*, *Lantana* and *Alice Corp* given that there is no underlying secondary contribution and the claim was merely the implementation of a business process in computer code.

6.0 Observations & Recommendations

"Where should I go?" - Alice.
"That depends on where you want to end up." – The Cheshire Cat."
- Lewis Carroll, Alice's Adventures in Wonderland &Through the Looking-Glass

6.1 Does the test for inventive step - in contrast to the test for non-patent eligible subject-matter under Art.52(2) EPC and 25 U.S.C. §101 - in mixed inventions or CIIs reduce to "*how*" functional features are implemented? Is the "*how*" aspect over-riding and therefore irrespective of *what* the claimed invention in totality seeks to protect? We leave it to the reader to decide

the relative importance of "*what*" the claim seeks to protect and "*how*" this is achieved, although we feel that these are distinct investigations.

6.2 In the short to mid-term, a problem remains with education of Patent Office examiners. Attorneys need to understand how specifications and arguments should be framed to prevent examiners from inappropriately generalizing either the precedent established by the Courts or the guidance provided by the Boards of Appeal. The correct approach should limit the ability of an examiner to advance inappropriate or facile arguments against patent ineligibility and inventive step that rely on hindsight or flawed subjective reasoning. The fact remains that "*inventions that integrate the building blocks of human ingenuity into something more by applying the abstract idea in a meaningful way are eligible.*" But there is no hard definition of an "abstract idea" and, equally, no definition of what is meant by "technical effect". These subjective terms therefore mean different things to different people. The problems lie in identifying what amounts to just a "building block" and further identifying "when does a claim overcome the threshold test for inherent patentability, thereby permitting objective assessment of non-obviousness to commence?" The threshold to overcome the statutory exclusion was intended by the legislator to be low, and is low when approached correctly.

6.3 There is a significant distinction between the fundamental building blocks of commerce which will inherently be "abstract ideas" and the technical implementations of solutions that on their face appear to be directed towards abstract ideas. In the latter respect, if the overall subject-matter of the claim has a technical flavour, then the patentability issue should invariably reduce to the question of inventive step and particularly the technical contribution that the claimed invention (in its totality) makes to the real world. Once there is a general technical character, the substantive question is how the invention is implemented technically to bring about a discernible real-world technical effect.

6.4 The USPTO's notice "*Preliminary Examination Instructions in view of the Supreme Court Decision in Alice Corporation Pty. Ltd v. CLS Bank International, et al*"[34] dated 25 June 2014 unfortunately prominently stated that "abstract ideas are excluded from eligibility based on a concern that monopolization of the base tools of scientific and technological work might impede innovation more than it would promote it". This statement, however, is not the complete objective test. However it will now doubt be interpreted by the unwary to result in, at least initially, the unreasonable and potentially wholesale rejection of CII and business method cases through a belief that business methods are unpatentable.

6.5 Drafting of applications for business methods and CIIs alike therefore critically must include the following.

i) An explanation of the real world effects. Expressing commercial advantages in terms of corresponding technical effects is preferable. For example, rather than speak about protecting confidential information, the flip (technical) side might be to provide reduced signalling across the network to limit interception opportunities and reduce overall data traffic between specific components;

ii) Identification of interactions in terms of both real world cause and effect;

iii) Identification of specific functional and structural differences over prior art systems; and

iv) Statements about all forms of advantage associated with either the particular architecture(s) or each aspect of the signalling scheme and/or communication protocol.

6.6 Object statements are generally undesirable since they invariable expose the clients' feet to the flame when an Examiner suggests that a changed main claim no longer fulfils the stated objective; and therefore that unallowable new matter has been added to the initially filed disclosure. However, it is necessary to "sell" the "technical" aspect of the invention through a positive statement of acquired benefits and advantages. This can be done either in the summary of the invention or otherwise in the main body of the description. These statements can be de-limited through optional but preferable use of the word "may". Failure to sell the real world technical effect for CIIs and business method inventions will likely prejudice prosecution of the application by allowing an examiner to take the easy way out. A facile rejection of the subject-matter is more difficult if the Applicant's arguments constrain the discussion to the overall secondary technical effect achieved in the real world, as discussed above. It is noted again that, in considering the achieved *technical* effect, examiners have in the past demonstrated a desire to discard claim features that initially appear to relate directly to excluded subject-matter. However, with objectivity and a detailed contextual understanding of the entire claim, those same features may actually support a real world secondary effect.

6.7 In summary, non-inventions related to abstract ideas, discoveries, scientific theories, mathematical methods, aesthetic creations, presentations of information and programs for computers do not in isolation have a practical application. Consequently, claims that "as such" relate to these "building blocks" should not be patentable, whereas claims that actively and practically apply those building blocks to bring about a further 'technical effect' should always succeed. Non-inventions that can be categorized as relating to the "human behavioural principle" – i.e. inventions that relate to abstract ideas or schemes, rules and methods for performing mental acts, playing games or doing business and which dictate precise and unwavering control of a human action without choice or option - should not be patentable for this reason alone, notwithstanding that such claims may very well have some form of practical application, e.g. new tactics employed in football or new ways of investing money. Exercising control over accepted human behaviour is tantamount to having exclusive rights for a surgical procedure that instructs a surgeon about how to remove your appendix safely. The courts are not going to permit this level of control.

***

Notice: This practice note reflects the current opinion of Hepworth Browne and is distributed to selected associates and friends with a view to outline opportunities and to promote or highlight effective prosecution regimes before, particularly, the EPO. The views expressed herein may change with time and should not be considered as legally binding. Should specific questions or issues arise, Hepworth Browne recommends that, prior to the undertaking of any course of legal action whatsoever, specific professional advice be obtained by the reader from a competent and qualified advisor. In this latter respect, Hepworth Browne remains at the reader's assistance. For specific questions and further information, please refer any query to Bruce C. Dearling (Partner: Software, Telecommunications and Business Systems) at bcd@hepworthbrowne.com.

***

Hepworth Browne – Different by Design

© Hepworth Browne 2014

***

References

[1]***Aerotel Ltd & Telco Holdings Ltd vs Neal William Macrossan***
Neutral Citation Number: [2006] EWCA Civ 1371
http://www.bailii.org/ew/cases/EWCA/Civ/2006/1371.html
[2]***State Street Bank & Trust Co. v. Signature Financial Group, 149 F.3d 1368 (Fed. Cir. Jul. 23, 1998)***
http://scholar.google.co.uk/scholar_case?case=4678936614949330705&hl=en&as_sdt=6&as_vis=1&oi=scholarr&sa=X&ei=rzNjVOnaLcfIsATAqYDACg&sqi=2&ved=0CB8QgAMoADAA
[3]***Gottschalk v. Benson 409 U.S. 63 (1972)***
https://supreme.justia.com/cases/federal/us/409/63/case.html
[4]***Bilski vs Kappos 561 U.S. __ (2010) No. 08-964***
https://supreme.justia.com/cases/federal/us/561/08-964/opinion.html
[5]***T1769/10-IGT from the Technical Board of Appeal 3.4.03 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t101769eu1.html#q=
[6]***Alice Corp. v. CLS Bank International 573 U.S. ___ (2014) No. 13-298***
https://supreme.justia.com/cases/federal/us/573/13-298/concur4.html
[7]***Agreement on Trade Related Aspects of Intellectual Property Rights ("TRIPS")***
http://www.wto.org/english/docs_e/legal_e/27-trips.pdf
[8]***European Patent Convention***
http://www.epo.org/law-practice/legal-texts/html/epc/2013/e/index.html
[9]***35 U.S.C. §101***
http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf
[10]***Opinion of the Enlarged Board of Appeal of the EPO G03/08***
http://documents.epo.org/projects/babylon/eponet.nsf/0/DC6171F182D8B65AC125772100426656/$File/G3_08_Opinion_12_05_2010_en.pdf
[11]***T0533/09 from the Technical Board of Appeal 3.4.01 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t090533fu1.html#q=
[12]***T208/84-Vicom from the Technical Board of Appeal 3.5.01 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t840208ep1.html#q=
[13]***T1173/97-IMB Computer Program Product from the Technical Board of Appeal 3.5.01 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t971173ex1.html#q=
[14]***T0154/04-Duns Licensing Application from the Technical Board of Appeal 3.5.01 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t040154ex1.html#q=
[15]***T641/00-Comvik from the Technical Board of Appeal 3.5.01 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t000641ex1.html#q=
[16]***Mayo Collaborative Services vs Prometheus Laboratories 566 U.S. _ (2012) No. 10-1150***
https://supreme.justia.com/cases/federal/us/566/10-1150/opinion3.html
[17]***Chatfield 545 F.2c 152 (C.C.P.A 1976)***
https://casetext.com/case/application-of-chatfield
[18]***T1539/09 from the Technical Board of Appeal 3.5.06 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t091539du1.html#q=
[19]***Mackay Radio & Telegraph Co. v. Radio Corp. of America, 306 U.S. 86 (1939)***
https://supreme.justia.com/cases/federal/us/306/86/case.html
[20]***T0471/05 from the Technical Board of Appeal 3.4.02 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t050471eu1.html#q=
[21]***T1543/06-Gameaccount from the Technical Board of Appeal 3.2.04 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t061543eu1.html#q=
[22]***T258/03-Hitachi from the Technical Board of Appeal 3.5.01 of the EPO***
http://www.epo.org/law-practice/case-law-appeals/recent/t030258ex1.html#q=
[23]***MPEP §2106***
http://www.uspto.gov/web/offices/pac/mpep/s2106.html
[24]***Parker vs Flook 437 U.S. 584 (1978)***
https://supreme.justia.com/cases/federal/us/437/584/case.html
[25]***Funk Bros. Seeds Co. vs Kalo Inoculant Co*. 333 U.S. 127 (1948)**
https://supreme.justia.com/cases/federal/us/333/127/
[26]***T1051/07-SK Telecom from the Technical Board of Appeal 3.4.03 of the EPO***

http://www.epo.org/law-practice/case-law-appeals/recent/t071051eu1.html#q=

[27]***Diamond vs Diehr 450 U.S. 175 (1981) No. 79-1112***
https://supreme.justia.com/cases/federal/us/450/175/case.html

[28]***Lantana Ltd v The Comptroller General of Patents, Design and Trade Marks [2014] EWCA Civ 1463***
http://www.bailii.org/ew/cases/EWCA/Civ/2014/1463.html

[29]***AT&T Knowledge Ventures' Application/CVON Innovations Ltd vs Comptroller General of Patents***
http://www.bailii.org/ew/cases/EWHC/Patents/2009/343.html

[30]***HTC Europe Co. Ltd vs Apple Inc. [2013] EWCA Civ 451***
http://www.bailii.org/ew/cases/EWCA/Civ/2013/451.html

[31] ***T931/95 Controlling Pension Benefits System/PBS Partnership from Board of Appeal 3.5.01***
http://www.epo.org/law-practice/case-law-appeals/recent/t950931ep1.html#q=

[32]***T27/97-Cryptographie à clés publiques/France Telecom from Board of Appeal 3.5.01 (different composition)***
http://www.epo.org/law-practice/case-law-appeals/recent/t970027fu1.html#q=

[33]***Research Affiliates LLC v Commissioner of Patents [2014] FCAFC 150 (10 November 2014)***
http://www.judgments.fedcourt.gov.au/judgments/Judgments/fca/full/2014/2014fcafc0150

[34]***Preliminary Examination Instructions in view of the Supreme Court Decision in Alice Corporation Pty.Ltd vs CLS Bank International, et al.***
http://www.uspto.gov/patents/announce/alice_pec_25jun2014.pdf

***

Hepworth Browne – Different by Design

© Hepworth Browne 2014