



Neutral Citation Number: [2006] EWCA Civ 1371

Case No: A3/2006/1007 and A3/2006/1067

**IN THE SUPREME COURT OF JUDICATURE**  
**COURT OF APPEAL (CIVIL DIVISION)**  
**ON APPEAL FROM THE HIGH COURT OF JUSTICE**  
**CHANCERY DIVISION (PATENTS COURT)**

**The Hon Mr Justice Lewison**

**HC 06C00360**

**The Hon Mr Justice Mann**

**CH 2005 APP 0248**

Royal Courts of Justice  
Strand, London, WC2A 2LL

Date: 27/10/2006

**Before :**

**THE RT HON LORD JUSTICE CHADWICK**  
**THE RT HON LORD JUSTICE JACOB**  
and  
**THE RT HON LORD JUSTICE NEUBERGER**

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**Between :**

**Aerotel Ltd**  
**(a company incorporated under the laws of Israel)**

**- and -**

- (1) Telco Holdings Ltd**  
**(2) Telco Global Distribution Ltd**  
**(3) Telco Global Ltd**

**Claimant/  
Appellant**

**Defendants/  
Respond-  
ents**

**And In the Matter of:**  
**The Patents Act 1977**

**And in the Matter of:**  
**Patent Application GB 0314464.9**  
**In the name of Neal William Macrossan**

**Simon Thorley QC** (instructed by Bristows) appeared on behalf of Aerotel  
**Daniel Alexander QC** (instructed by Linklaters) appeared on behalf of Telco  
**Colin Birss** (instructed by the Treasury Solicitor) appeared on behalf of the  
Comptroller General of Patents

**Mr Neal William Macrossan** was not present, and was not represented,  
but made written submissions

Hearing dates : 3<sup>rd</sup> and 4<sup>th</sup> August 2006

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**Approved Judgment**

**Lord Justice Jacob** (giving the Judgment of the Court):

1. These two appeals are about some of the categories declared by Art. 52(2) and (3) of the European Patent Convention (“EPC”) not to be “inventions” and so unpatentable. The “Aerotel appeal” is in what was a patent action between Aerotel and Telco. Sued for infringement, Telco counterclaimed for revocation of Aerotel’s Patent No. 2,171,877. The action started, inappropriately having regard to its complexity and the amount of money at stake, in the Patents County Court as long ago as February 2005. HHJ Fysh QC quite rightly transferred it to the High Court in November that year. Comparatively late in the day, in February 2006, Telco applied for summary judgment on its counterclaim, basing the application on the exclusion to patentability. The application succeeded before Lewison J who ordered revocation of the patent on 3<sup>rd</sup> May 2006 [2006] EWHC 997 (Pat). No point is now taken about the lateness of the application.
2. Just before these appeals came on, Aerotel settled with Telco. There is still a pending infringement action on the patent however, for Aerotel have also sued a company called Wavecrest. So Aerotel have a live commercial interest in getting their patent back. It is not normally appropriate for the Court of Appeal by consent or without examining the merits to reverse a first instance decision revoking a patent, *Halliburton v Smith International* [2006] EWCA Civ 185, [2006] RPC 653.
3. The other appeal (the “Macrossan appeal”) arrives here by a different route. Mr Macrossan is the applicant for a UK patent, No GB0314464.9. The Office took the view that the subject-matter was unpatentable. There followed a hearing before Mrs S.E. Chalmers, the hearing officer, at which Mr Macrossan was represented by an experienced patent agent, Mr Michael Butler. Mrs Chalmers, by a decision of 22<sup>nd</sup> March 2005, upheld the objection. Mr Macrossan appealed to Mann J who, by a decision of 3<sup>rd</sup> April 2006 [2006] EWHC 705 (Ch) dismissed his appeal. With permission granted by me, Mr Macrossan appeals. He lives in Australia and indicated prior to the hearing that he was content to have the appeal heard on paper. He submitted a “Full Argument” shortly before the hearing. He also received the transcript of the hearing, provided some short written observations after the first day and subsequently provided written submissions following the closing of oral argument. His submissions in the main were backed by diligent research and have been very helpful.
4. Mr Simon Thorley QC appeared for Aerotel. Mr Daniel Alexander QC was to have argued Telco’s case and had submitted a skeleton argument which we have taken into account. He appeared when the case was called on to confirm his clients no longer had any interest in it and then departed. Mr Birss, in addition to appearing in the Macrossan appeal, then took on the job of acting as an *amicus curae* in the Aerotel appeal, moving from a neutral position prior to the settlement to take on the burden of defending the judgment below in accordance with the procedure indicated in *Halliburton*. As would be expected of counsel for the Comptroller, Mr Birss presented matters objectively and in a non-partisan manner. The Comptroller, particularly in an appeal from the Office is essentially seeking the guidance of the court rather than defending the decision of his hearing officer. After all, the Comptroller’s job is to reject patents that should not be granted and grant patents that should. He is trying to get it right, not to win for the sake of winning.

5. In that connection we should record also that we accept Mr Birss' submission that any pure question of law involved should be decided during prosecution. It is not enough to get a patent past the application stage to show that as a matter of law it merely arguably covers patentable subject-matter. The position is different from that under the old law. Then the rule was that patents should be refused only where on no reasonable view could the subject-matter be patentable, see *Swift's Appn.* [1962] RPC 37 at p.46. Despite that being the rule, in the years that followed *Swift*, in practice a decision of the Office or on appeal to the Appeal Tribunal was taken to decide the matter once-and-for all. That itself shows there is no point doing other than deciding the question. Moreover that is what the European Patent Office ("EPO") does and there is no warrant in the EPC for the "arguable" approach. Of course if a debatable question of pure fact is or may be involved at the application stage, things are different – one cannot then say that the decision at that point must be the last word on the subject. Then the applicant must be given the benefit of any reasonable doubt.

### The Approach to the Legislation

6. As we have said these appeals turn on the application of Art.52(2) and 52(3) of the EPC. The provision was implemented in UK law by s.1(2) of the Patents Act 1977. Although s.1(2) pointlessly uses somewhat different wording from that of the EPC no-one suggests that it has any different meaning. So we, like the parties before us, work directly from the source. That has several advantages:
  - i) The difference in wording has at least the potential to lead to an erroneous construction of a provision which is intended to have the same meaning as that of the EPC (which is the effect of s.130(7) of the Act). Working using the EPC text obviates that risk;
  - ii) Decisions of the EPO Boards of Appeal on the exclusions are based on the provisions of the EPC. It makes sense to consider similar problems here by exactly the same language and Article number rather than a differently numbered variant which is supposed to have the same meaning;
  - iii) This is particularly important having regard to the fact that decisions of the Boards of Appeal on provisions of the UK Act intended to implement corresponding provisions of the EPC have "great persuasive authority" per Lord Hoffmann in *Merrell Dow v Norton* [1996] RPC 76 at p.82. Similar views have been expressed in other cases too, for instance by Nicholls LJ (with whom the other members of the court agreed) in *Gale's Appn.* [1991] RPC 305 at p.323, and by Lord Oliver in *Asahi's Appn.* [1991] RPC 485 at p.540.
  - iv) Moreover by using the text of the Convention the decisions of this court (and other UK courts) are more readily intelligible to those in other European countries who will be unfamiliar with the idiosyncratic ways of the UK Parliamentary draftsman. That is important: European patent judges ought, so far as they can, try to be consistent with one another, particularly in relation to the interpretation of national laws implementing provisions of the EPC. Decisions of important national courts on such provisions are also of persuasive authority within the EPO Boards of Appeal itself – see, for an

example, *Eisai* G 5/83 [1985] OJ 064 where the Enlarged Board had regard to a decision of the Bundesgerichtshof (the “BGH”), the Supreme Court of Germany.

## **Article 52: General considerations**

7. Article 52 reads:

“(1) European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step.

(2) 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.

(3) The provisions of paragraph 2 shall exclude patentability of the subject-matter or activities referred to in that provision only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.”

8. The provisions about what are not to be “regarded as inventions” are not easy. Over the years there has been and continues to be much debate about them and about decisions on them given by national courts and the Boards of Appeal of the EPO. They form the basis of a distinct industry of conferences and are the foundation of a plethora of academic theses and publications. There has also been much political debate too: some urging removal or reduction of the categories, others their retention or enlargement. With the political debate we have no concern – it is our job to interpret them as they stand.

9. As the decisions show this is not an easy task. There are several reasons for this:

- i) In the first place there is no evident underlying purpose lying behind the provisions as a group – a purpose to guide the construction. The categories are there, but there is nothing to tell you one way or the other whether they should be read widely or narrowly.
- ii) One cannot form an overall approach to the categories. They form a disparate group – no common, overarching concept, for example, links rules for playing games with computer programs or either of these with methods for doing business or aesthetic creations.

- iii) Some categories are given protection by other intellectual property laws. Most importantly, of course, aesthetic creations and computer programs have protection under the law of copyright. So the legislator may well have formed the view that additional protection by way of patentability was unnecessary or less appropriate.
- iv) Further, some categories are so abstract that they are unnecessary or meaningless. For instance a scientific theory as such is excluded. But how could a scientific theory ever be the subject of a patent claim in the first place? Einstein's special theory of relativity was new and non-obvious but it was inherently incapable of being patented. A patent after all is to a legal monopoly over some commercial activity carried out by human beings such as making or dealing in goods or carrying out a process. A scientific theory is not activity at all. It simply is not the sort of thing which could be made the subject of a legal monopoly.

Nor can the presence of the exclusion be explained on the narrower basis that it was intended to exclude woolly and general claims such as "Any application of  $E=mc^2$ ". For such a claim would be bad for the more conventional reason that it does not disclose the invention "in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art"(Arts. 83 and 100(b));

- v) There is or may be overlap between some of the exclusions themselves and between them the overall requirement that an invention be "susceptible of industrial application." The overall requirement is, perhaps surprisingly, hardly ever mentioned in the debate about the categories of "non-invention" (no-one relied upon it before us) but it is clearly a factor lying behind some of the debate.
10. The principles of treaty interpretation contained in Arts 31-3 of the Vienna Convention on the Law of Treaties (1969 but only in force from 27<sup>th</sup> January 1980) are merely a codification of principles settled well before that Treaty. So they apply to the EPC even though it was a 1973 Treaty. Recourse may be had to supplementary means of interpretation "including the preparatory work of the treaty and the circumstances of its conclusion" in order to determine the meaning where the general rules of interpretation leave the meaning ambiguous or obscure.
11. So, one asks, what help can be had from the *travaux preparatoires* to the EPC? The answer is not a lot. The debates amongst the framers of the Convention which lead to the excluded categories were the subject of two fascinating and valuable articles in 2005 by Dr. Justine Pila of the Oxford University Intellectual Property Research Centre (*Dispute over the Meaning of "Invention" in Art.52(2) EPC – The Patentability of Computer-Implemented Inventions in Europe* 36 IIC 173; *Art.52(2) of the Convention on the Grant of European Patents: What did the Framers Intend?* 36 IIC 755). She shows that the *travaux* provide no direct assistance to any of the categories we have to consider. "Only a bull's-eye counts" (*per* Lord Steyn in *Effort Shipping v Linden Management* [1988] AC 605 at 625) and there are no bulls-eyes in the *travaux* for present purposes. What does emerge is that the various categories are the result of various compromises and distinct discussions about each of them. So one can at least find confirmation that no overarching

principle was intended. What was done was to formulate the language of each of the categories independently of one another, add the “as such” rider to all of them and leave it to the EPO and European patent judges to work out the detail.

12. Perhaps one other thing emerges - by its absence. There is no indication of any intention as to how the categories should be construed – either restrictively or widely. In EU law exceptions to a general principle are generally interpreted restrictively, see e.g. *per* La Pergola A-G at [8] in *Amengual Far v Amengual Far* Case C-12/98 [2002] STC 382 (a VAT case): “This criterion has been consistently followed in the case law of this court”. The EPO Boards of Appeal have applied that principle to the interpretation of Art. 53 see e.g. *Harvard Oncomouse* (1990) T 0019/90 [1990] OJ 376, *Plant Genetic Systems/Glutamine Synthetase Inhibitors* (1995) T 356/93. But Art. 53 is not the same as Art.52(2). It is expressly entitled “Exceptions to patentability.” The exceptions are clearly specified as such and the exception principle of construction can and does apply to them. But Art.52(2), by contrast, is not expressed as an exception to patentability – it sets out positive categories of things which are not to be regarded as inventions.

### The position outside Europe

13. The position is different in Europe from that in the USA. Not only is there no equivalent of Art.52(2) in the US Statute but the courts have positively held that the types of patentable invention should be given “wide scope”. The general approach is that found in the Supreme Court case of *Diamond v Chakrabarty*, (1980) 447 U.S. 303, 100 S. Ct. 2204. The actual decision in *Chakrabarty*, that new and non-obvious microorganisms could be patented, is not that remarkable to European eyes for microorganisms are patentable as such under the EPC (only plants and animals are excepted by Art. 53(b)). But the expansive approach of the majority opinion (given by Burger CJ) in the Supreme Court goes wider:

“In choosing such expansive terms [in §101 the US Patent Act 35 USC] as ‘manufacture’ and ‘composition of matter’ modified by the comprehensive ‘any,’ Congress plainly contemplated that the patent laws would be given wide scope.

The relevant legislative history also supports a broad construction. The Patent Act of 1793, authored by Thomas Jefferson, defined statutory subject matter as “any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement [thereof].” Act of Feb. 21, 1793, § 1, 1 Stat. 319. The Act embodied Jefferson’s philosophy that “ingenuity should receive a liberal encouragement.” Writings of Thomas Jefferson 75-76 (Washington ed. 1871). See *Graham v. John Deere Co.*, 383 U.S. 1, 7-10 (1966). Subsequent patent statutes in 1836, 1870, and 1874 employed this same broad language. In 1952, when the patent laws were recodified, Congress replaced the word “art” with “process,” but otherwise left Jefferson’s language intact. The Committee Reports accompanying the 1952 Act inform us that Congress intended statutory subject matter to “include anything under the sun that is made by man.” S. Rep.

No. 1979, 82d Cong., 2d Sess., 5 (1952); H.R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952).

This same language was employed by P. J. Federico, a principal draftsman of the 1952 recodification, in his testimony regarding that legislation: “[Under] section 101 a person may have invented a machine or a manufacture, which may include anything under the sun that is made by man ...” Hearings on H. R. 3760 before Subcommittee No. 3 of the House Committee on the Judiciary, 82d Cong., 1<sup>st</sup> Sess., 37 (1951).

This is not to suggest that § 101 has no limits or that it embraces every discovery. The laws of nature, physical phenomena, and abstract ideas have been held not patentable. [citations follow] Thus, a new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that  $E=mc^2$  nor could Newton have patented the law of gravity. Such discoveries are “manifestations of ... nature, free to all men and reserved exclusively to none.”

14. The endorsement of the “anything under the sun that is made by man” approach led to further expansion of what is patentable in the US. In 1994 the Court of Appeals for the Federal Circuit decided that computer programs were patentable, *Re Alappat*, (1994) 33 F.3d 1526, 31 USPQ2d 1545. Then, in 1998, it decided in *State Street Bank v Signature Financial Group*, (1998) 149 F.3d 1368, 47 U.S.P.Q.2D (BNA) 1596 that business methods as such were too:

“Today, we hold that the transformation of data, representing discrete dollar amounts by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces “a useful, concrete and tangible result” – a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.”

“As we pointed out in *Alappat*, at 1557, application of the test could be misleading, because a process, machine, manufacture, or composition of matter employing a law of nature, natural phenomenon, or abstract idea is patentable subject matter even though a law of nature, natural phenomenon, or abstract idea would not, by itself, be entitled to such protection.”

15. The “exceptions” referred to in the US cases, e.g laws of nature, have some equivalents in Art.52(2). But that is really, as we have pointed out, because they are by their very nature incapable of being the subject of a legal monopoly. The fact that there are some parallels between what is declared by the judges to be unpatentable in the US and what is declared by Art.52(2) to be an excluded category of invention is no guide as to the interpretation of Art. 52.

## Other considerations

16. Before moving on we would add three things. First there has been some political pressure on Europe to remove or reduce the categories of non-inventions. Part of that has come, Mr Birss told us, from the fact that TRIPS (the *Agreement on Trade Related Intellectual Property Rights*, (1994), Annex IC to the *Marrakesh Agreement Establishing the World Trade Organisation*) does not have the same explicit categories of non-invention as the EPC. It says (Art.27(1)):

“Subject to the provisions of paragraphs 2 and 3 [which roughly correspond to the Art.53 exceptions] patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. .... patents shall be available and patent rights enjoyable without discrimination as to ... the field of technology”

Some of the Art.52(2) excluded categories are not fairly within the description “field of technology” and so not within TRIPS (e.g. aesthetic creations) but others seem to be within it – the paradigm example being computer programs. Hence the pressure. Whether “methods for doing business” are a “field of technology” within the meaning of TRIPS is perhaps debatable. The point does not arise here.

17. Secondly there is pressure from would-be patentees on patent offices. People are applying for what are, or arguably are, business method and computer program patents in significant numbers. This is evidenced, for example, by the fact that whereas a few years ago the Comptroller only had one or two hearings a year concerned with these topics, he now has about four a week – a number are awaiting on the outcome of these appeals.
18. This pressure in part stems from the fact that, following *State Street* (business methods) and *Alappat* (computer programs) people have been getting patents for these subject-matters in the USA. Since they can get them there, they must as a commercial necessity apply for them everywhere. If your competitors are getting or trying to get the weapons of business method or computer program patents you must too. An arms race in which the weapons are patents has set in. The race has naturally spread worldwide (for a recent Australian instance see *Grant v Commissioner of Patents* [2006] FCAFC 120m July 17<sup>th</sup> 2006 where the Federal Court of Appeal refused a patent for a method of protecting assets from bankruptcy involving the setting up of a trust, a gift to the trust, and a loan back with the trustee taking a charge on the loan). The Australian legislation is different from that of Europe so the decision itself is of no relevance here – as is the fact that Mr Macrossan has been granted an Australian patent for his invention.
19. Thirdly it by no means follows that because of pressure from applicants, the grant of patents for excluded categories should be allowed or that the excluded categories (particularly business methods and computer programs) should be construed narrowly. Just as with arms, merely because people want them is not sufficient reason for giving them.

20. Fourthly despite the fact that such patents have been granted for some time in the US, it is far from certain that they have been what Sellars and Yeatman would have called a “Good Thing.” The patent system is there to provide a research and investment incentive but it has a price. That price (what economists call “transaction costs”) is paid in a host of ways: the costs of patenting, the impediment to competition, the compliance cost of ensuring non-infringement, the cost of uncertainty, litigation costs and so on. There is, so far as we know, no really hard empirical data showing that the liberalisation of what is patentable in the USA has resulted in a greater rate of innovation or investment in the excluded categories. Innovation in computer programs, for instance, proceeded at an immense speed for years before anyone thought of granting patents for them as such. There is evidence, in the shape of the mass of US litigation about the excluded categories, that they have produced much uncertainty. If the encouragement of patenting and of patent litigation as industries in themselves were a purpose of the patent system, then the case for construing the categories narrowly (and indeed for removing them) is made out. But not otherwise.
21. In our opinion, therefore, the court must approach the categories without bias in favour of or against exclusion. All that is clear is that there was a positive intention and policy to exclude the categories concerned from being regarded as patentable inventions. We must simply try to make sense of them using the language of the Convention.
22. It was suggested to us that Pumfrey J was of the view that the court should incline towards patentability in the case of computer programs when he said in *Research in Motion v Inpro* [2006] EWHC 70 (Pat) at [187]:

“I am anxious that these exclusions are not given too wide a scope. All modern industry depends upon programmed computers, and one must be astute not to defeat patents on the ground that the subject matter is excluded under Art.52 unless the invention lies in excluded subject matter as such.”

We do not so read him. He was just sensibly warning against saying “well the claim involves the use of a computer program so it must be excluded”.

### The Case Law

23. The EPC came into force in 1978 but the case-law on the excluded categories really started only about 10 years later. We have to examine a mix of UK and EPO case-law, for there is much interplay between them. We must also consider some decisions of national courts in other European countries. There is now a large body of case law. Rather than burden the flow of our main judgment with the detail, we have set out our review in an Appendix.
24. It is clear that a whole range of approaches have been adopted over the years both by the EPO and national courts. Often they lead or would lead to the same result, but the reasoning varies. One is tempted to say that an Art.52(2) exclusion is like an elephant: you know it when you see it, but you can’t describe it in words. Actually we do not think that is right – there are likely to be real differences

depending on what the right approach is. Billions (euros, pounds or dollars) turn on it.

25. The decisions of the EPO Boards of Appeal are mutually contradictory. To say that is not to criticise anyone. On the contrary the Boards of Appeal have each done what they think is right in law – as befits tribunals exercising a judicial function. But surely the time has come for matters to be clarified by an Enlarged Board of Appeal. Under Art.112(1)(b) of the EPC the President of the EPO has the power to refer a point of law to an Enlarged Board where two Boards of Appeal have given different decisions on that question. That is now clearly the position. There are indeed at least four differing points of view. We have no power to refer any question and must reach our decision now independently of what any Enlarged Board might decide if and when there is a reference. Nonetheless we have ventured to formulate questions which might be asked of an Enlarged Board in the hope of encouraging a reference. We add that the Comptroller supports us in this course.
26. Our summary of the various approaches which have been adopted is as follows:

*(1) The contribution approach*

Ask whether the inventive step resides only in the contribution of excluded matter – if yes, Art.52(2) applies.

This approach was supported by Falconer J in *Merrill Lynch* but expressly rejected by this Court.

*(2) The technical effect approach*

Ask whether the invention as defined in the claim makes a technical contribution to the known art - if no, Art.52(2) applies. A possible clarification (at least by way of exclusion) of this approach is to add the rider that novel or inventive purely excluded matter does not count as a “technical contribution”.

This is the approach (with the rider) adopted by this Court in *Merrill Lynch*. It has been followed in the subsequent decisions of this Court, *Gale* and *Fujitsu*. The approach (without the rider as an express caution) was that first adopted by the EPO Boards of Appeal, see *Vicom*, *IBM/Text processing* and *IBM/Data processor network*.

*(3) The “any hardware” approach*

Ask whether the claim involves the use of or is to a piece of physical hardware, however mundane (whether a computer or a pencil and paper). If yes, Art.52(2) does not apply. This approach was adopted in three cases, *Pension Benefits*, *Hitachi* and *Microsoft/Data transfer* (the “trio”). It was specifically rejected by this Court in *Gale*.

However there are variants of the “any hardware” approach:

*(3)(i) Where a claim is to a method which consists of an excluded category, it is excluded by Art.52(2) even if hardware is used to carry out the method. But a claim to the apparatus itself, being “concrete” is not so excluded. The apparatus claim is*

*nonetheless bad for obviousness because the notional skilled man must be taken to know about the improved, excluded, method.*

This is the *Pension Benefits* approach.

(3)(ii) *A claim to hardware necessarily is not caught by Art.52(2). A claim to a method of using that hardware is likewise not excluded even if that method as such is excluded matter. Either type of claim is nonetheless bad for obviousness for the same reason as above.*

This is *Hitachi*, expressly disagreeing with *Pensions Benefits* about method claims.

(3)(iii) *Simply ask whether there is a claim to something “concrete” e.g. an apparatus. If yes, Art.52(2) does not apply. Then examine for patentability on conventional grounds – do not treat the notional skilled man as knowing about any improved excluded method.*

This is *Microsoft/Data Transfer*.

## Discussion

27. We begin with the last approach, that a claim to hardware is enough, an approach shared by the trio. Some examples outside the context of computer programs and methods of doing business show why it must be wrong. Consider for instance the following:

- i) a claim to a book, e.g. to a book containing a new story the key elements of which are set out in the claim;
- ii) a claim to a standard CD player or iPod loaded with a new piece of music.

Everyone would agree that the claims must be bad – yet in each case as a whole they are novel, non-obvious and enabling. To deem the new music or story part of the prior art (the device of *Pension Benefits* and *Hitachi*) is simply not intellectually honest. And, so far as we see, the *Microsoft* approach, which discards that device, would actually lead to patentability.

28. There is moreover a clear conflict between the variants. Mr Birss described the first two as “The Lord Giveth, the Lord Taketh away.” The giving is the passing of Art.52(2), the taking away being the device of treating the excluded matter as known. Mr Macrossan rightly pointed out that this was not so with the third variant – as he put it “the Lord Giveth but the Lord Doth not Always Taketh away.”

29. We are conscious of the need to place great weight on decisions of the Boards of Appeal, but, given the present state of conflict between the old (*Vicom* etc.) and the new (*Hitachi* etc.) approaches, quite apart from the fact that there are three distinct new approaches each to some extent in conflict with the other two, it would be premature to do so. If and when an Enlarged Board rules on the question, this Court may have to re-consider its approach. If such a ruling were to differ from what this court had previously decided a question would arise as to what should be done: should this court (and first instance courts) follow the previous rulings in our courts, leaving it to the House of Lords (or the future Supreme Court) to decide

what to do or should the new ruling of the Enlarged Board be followed? It may be that the better course then would be for a decision of the first instance court to be “leapfrogged” to the House of Lords or Supreme Court. For the present we do not have to decide this. All we decide now is that we do not follow any of the trio. The fact that the BGH has already declined to follow *Hitachi* reinforces this view – doing so will not lead to European consistency.

30. An element of the reasoning in the trio is that the various categories of Art.52(2) must have something in common: that they are all limited to something abstract or intangible. We think this is a mistaken assumption. We have already observed that the categories are disparate with differing policies behind each. There is no reason to suppose there is some common factor (particularly abstractness) linking them. The *travaux préparatoires* at least confirm this.
31. One thing does need to be said. Before you get to the “as such” qualification, you must make up your mind as to the meaning of the category which is excluded. Computer programs call for particular consideration here. There are, in principle, two views about what is meant by “computer program” in Art.52. A narrow view is that it means just the set of instructions as an abstract thing albeit they could be written down on a piece of paper. A wider view is that the term covers also the instructions on some form of media (floppy disk, CD or hard drive for instance) which causes a computer to execute the program – a program which works. This court and the earlier Board of Appeal decisions clearly take the latter view, as for instance in *Gale* and *Vicom*. The trio take the narrow view, working on the premise that all the exclusions are limited to the abstract. We are bound to say that we consider that wrong: so to limit the meaning of “computer program” would be to render the exclusion without real content. We think the framers of the EPC really meant to exclude computer programs in a practical and operable form. They meant to exclude real computer programs, not just an abstract series of instructions.
32. What then of the first, the “contribution” approach? Were the question open for free decision now, we think there is a lot to be said for it. Patents are essentially about information as to what to make or do. If all the patentee has taught new is something about an excluded category, then it makes sense for the exclusion to apply. If he has taught more, then it does not. We are not ourselves convinced that the two objections to this approach are valid.
33. The first objection is that it involves an inquiry as to what is old, whereas you ought to be able to determine whether an exclusion applies just by considering what is claimed – is this the sort of thing excluded? If one thinks about this however, particularly with the aid of examples, one can see that the inquiry may inevitably involve a question of discerning what is old so that it can be excluded. Take for instance a claim to a hard drive loaded with a piece of music. If it is an old hard drive, all that has been added is an excluded item. And this would be so even if the claim went to the trouble of spelling out element by element all the features of the old hard drive. But suppose the hard drive specified were itself new and inventive? Then a claim to such a drive loaded with a piece of music would be allowable. It would not be the individual piece of music (even if new) which caused the claim to escape Art.52(2) but the newness of the kind of hard drive on which the music was loaded. Of course in practice an inquiry as to what is old may not be difficult – indeed it will generally be self-evident. Claims to a piece of music or a computer

program loaded onto a known form of medium, or a claim to a particular system of conducting business over the internet using standard hardware are good examples. No detailed examination of the prior art is necessary there.

34. The second objection to the contribution approach is that accepted by this court in *Merrill Lynch* – a *reductio ad absurdum* argument. An example of it runs thus: suppose the “discovery” of the genetic (nucleotide) sequence which encodes for a particular valuable protein and a claim to a novel cloning vector incorporating that sequence. If you “strip out” the discovery all you have is a known sort of cloning vector. So all that has been added is the discovery – since that is unpatentable the claim is unpatentable too. That cannot be right – it would exclude many valuable inventions. Hence the contribution approach is wrong.
35. We are not ourselves convinced by this, though we are bound by the reasoning: the new cloning vector is more than a mere discovery, just as Whitford J’s compass is more than the discovery that a magnetised iron bar points north. You cannot “strip out” the “discovery”. The EPO Boards of Appeal are of the same opinion, see *Salk/Multimeric Receptors* (2002) T 0338/00.
36. In this regard the position is different from that of computer programs. A physical embodiment such as a cloning vector employing knowledge of the discovery of a DNA sequence is not the discovery as such, but a computer program loaded on to chip or hard drive is a computer program as such within the meaning of Art.52(2) and (3) – because “computer program” includes a working computer program on a medium.
37. We would add that we are not sure that the determination of the precise sequence of a piece of DNA is fairly to be regarded as a mere “discovery” in any event. Columbus “discovered” America, but those who in due course mapped it would not normally be said to have “discovered” the detail they put on their maps. We do not examine the fairly metaphysical question of whether there is a difference between a “discovery” and elucidation of detail such as a gene sequence further. It is not necessary to do so and the waters are deep enough already.
38. The fact is that this court is bound by its own precedent: that decided in *Merrill Lynch, Gale and Fujitsu* – the technical effect approach with the rider. We think we must apply it as we understand it, namely as set out above. That we will proceed to do.
39. However before doing so we must consider the approach which the Comptroller, through Mr Birss, urges upon us. We must in particular consider whether it is consistent with that which has already been decided.
40. The approach is in 4 steps:
  - “(1) properly construe the claim
  - (2) identify the actual contribution;
  - (3) ask whether it falls solely within the excluded subject matter;

(4) check whether the actual or alleged contribution is actually technical in nature”.

41. The Comptroller submits that this approach is structured and thus helpful to the public and examiner alike and is consistent with the principles enunciated in *Merrill Lynch*. He further submits:

“A structured approach needs to be workable across the whole field of Section 1(2). This is important because although the policy behind different exclusions is not uniform, the structure of the legislation requires that they ought to work the same way. A structured approach will also allow the examiners and hearing officers applying this area of law to follow a consistent scheme and will allow the public to see how a decision has been arrived at. A problem the Comptroller is often confronted with is reliance by applicants on broad observations from earlier decisions which work well in the particular circumstances in which they were made but break down when applied elsewhere”. (Mr Birss’ skeleton argument).

We think this structured approach is indeed consistent with what has been decided by this court. It is a re-formulation in a different order of the *Merrill Lynch* test.

42. No-one could quarrel with the first step – construction. You first have to decide what the monopoly is before going on the question of whether it is excluded. Any test must involve this first step.
43. The second step – identify the contribution - is said to be more problematical. How do you assess the contribution? Mr Birss submits the test is workable – it is an exercise in judgment probably involving the problem said to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise. The formulation involves looking at substance not form – which is surely what the legislator intended.
44. Mr Birss added the words “or alleged contribution” in his formulation of the second step. That will do at the application stage – where the Office must generally perform accept what the inventor says is his contribution. It cannot actually be conclusive, however. If an inventor claims a computer when programmed with his new program, it will not assist him if he alleges wrongly that he has invented the computer itself, even if he specifies all the detailed elements of a computer in his claim. In the end the test must be what contribution has actually been made, not what the inventor says he has made.
45. The third step – is the contribution solely of excluded matter? – is merely an expression of the “as such” qualification of Art.52(3). During the course of argument Mr Birss accepted a re-formulation of the third step: Ask whether the contribution thus identified consists of excluded subject matter as such? We think either formulation will do – they mean the same thing.

46. The fourth step – check whether the contribution is “technical” – may not be necessary because the third step should have covered that. It is a necessary check however if one is to follow *Merrill Lynch* as we must.
47. As we have said this test is a re-formulation of the approach adopted by this court in *Fujitsu*: it asks the same questions but in a different order. *Fujitsu* asks first whether there is a technical contribution (which involves two questions: what is the contribution? is it technical?) and then added the rider that a contribution which consists solely of excluded matter will not count as a technical contribution.
48. Mr Thorley criticised the Comptroller’s approach on the basis it was a re-writing of the statutory test: it either meant the same thing in which case it was unnecessary or it meant something different in which case it was wrong (cf. the apocryphal words of Caliph Umar about the destruction of the library of Alexandria and the Word of God). We do not accept that. It is, we think, a structured and more helpful way of re-formulating the statutory test. What Mr Thorley was unable to do was to pinpoint any specific way in which the test differed from the statutory test as interpreted by this Court.
49. Accordingly we propose to apply the Comptroller’s structured approach to both cases under appeal. To these we now turn.

### **The Aerotel Appeal**

50. The patent has two sets of claims, method claims (1-8) and system claims (9-23). It is only necessary to set out claims 1 and 9:

“1. A method of making a telephone call from any available telephone, comprising: obtaining a special code by making a prepayment; inserting the prepayment in a memory in a special exchange and being allocated to the special code in the memory for use in verifying a calling party call; dialling the special exchange when a telephone call connection is desired; inputting the special code for verification; inputting the number of called party; verifying at the special exchange by checking the special code and comparing the prepayment less any deductions for previous calls in the memory with the minimum cost of a call to the called party station; connecting the called and calling parties’ stations in response to said verification; monitoring the remaining prepayment less deductions for the running cost of the call; and disconnecting the call when the remaining prepayment has been spent by the running cost of the call.

9. A telephone system for facilitating a telephone call from any available telephone station, comprising:

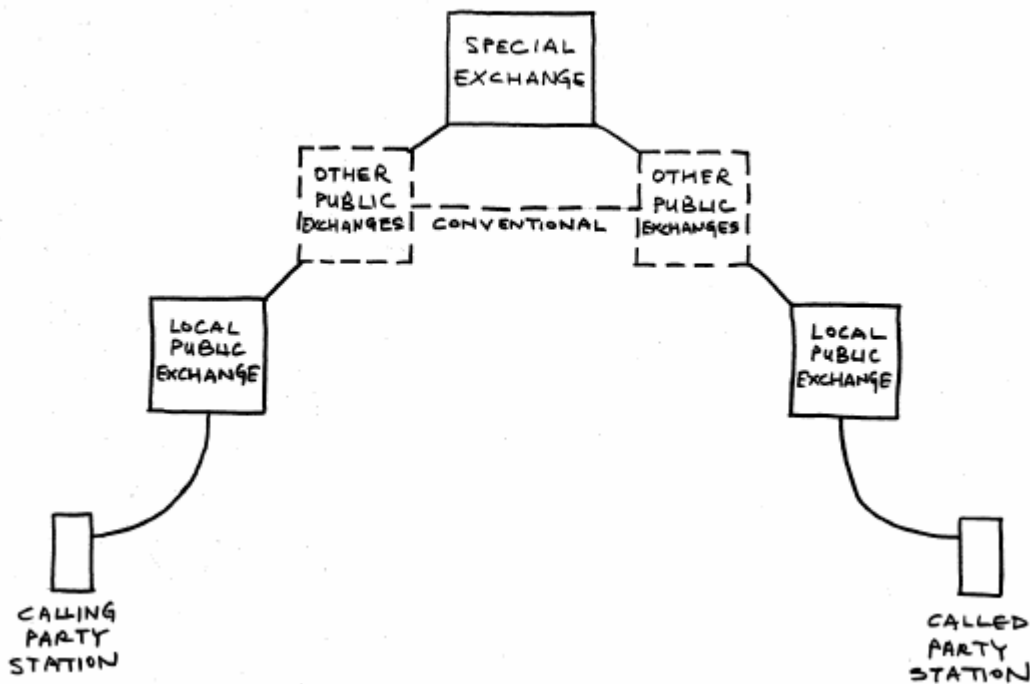
means for coupling a calling party station to a special exchange;

memory means in the special exchange for storing customer special codes and prepayment information individual to each customer;

means for verifying the calling party responsive to a code transmitted from the calling party station to the special exchange so as to verify that the code matches the special customer code in the memory means and the calling party has unused credit; and

means for connecting said calling party station to a called station responsive to the verification.”

- 51. We concentrate on the system claim first. Although called a “system” it is actually a claim to a physical device consisting of various components. Mr Thorley helpfully provided a simplified diagram of it:



- 52. A conventional method of making a phone call involves the caller dialling the callee’s number. The call goes through a number of public exchanges with an ultimate connection to the callee. The conventional route is shown in dotted lines. A system of measuring call duration applied to appropriate rates computes the cost. If the caller has no account running from his station (e.g. is in a call box) he will have to pre-pay. The patentee’s idea is to have an extra piece of equipment which he calls a “special exchange”. The caller has an account with the owner of that and deposits a credit with him. The caller has a code. To make a call he calls the number of the special exchange and inputs his code and then the callee’s number. If the code is verified and there is enough credit he is put through: the call will be terminated if his credit runs out.

53. The important point to note is that the system as a whole is new. And it is new in itself, not merely because it is to be used for the business of selling phone calls. So, moving on to step two, the contribution is a new system. It is true that it could be implemented using conventional computers, but the key to it is a new physical combination of hardware. It seems to us clear that there is here more than just a method of doing business as such. That answers the third step. Finally the system is clearly technical in nature. We see no Art.52(2) objection to the claim.
54. Turning to the method claims, they are essentially to the use of the new system. Given that that is free of a s.52(2) objection, then the narrower claim to its use must be too. Again the contribution is not just a method of doing business but the use of a new apparatus for such a method. So there is more than just a business method. And the method involves the use of apparatus and so is technical.
55. The Judge held otherwise. He considered solely the method claim. What persuaded him that it was a method of doing business as such was, we think, a misunderstanding of the evidence. He said:

“[19] ... It is clear that none of the equipment which is used in the method is new equipment. If that were not clear from the patent itself, it is made clear by the evidence of Mr. Hart, who is the expert called on behalf of Aerotel itself. Although he says that the system described in the patent has revolutionised the way in which telephone calls can be made and the way in which charges can be processed, he, none the less, is clear that the method would have been implemented using an electronic control exchange of a kind that had been available in the UK from the 1970s. Nothing else in the patent of a technical nature, in the sense of equipment, is said to be new and none of that technical equipment is described except in the most general terms.”

And later:

“[20] ... the question is, as it seems to me, how is that known equipment used? If it is used in a way that amounts to no more than a method of conducting business, then it still falls outside the area in which a patent can be granted.”

56. What Mr Hart actually said was:

“The Patent provides a new method and system for facilitating telephone calls. .... A skilled reader of the Patent in 1985 would have been able to implement the described special exchange using an electronic control exchange of the kind that was available in the UK and elsewhere at that time”

That is not saying that the equipment used in the method is not new. Still less is it saying the system is not new. It is merely saying that the system could have been implemented at the time using known components. So we think the Judge misassessed the contribution of the inventor – he was not saying “use existing

apparatus for my new method” he was saying “create a new overall combination of apparatus using known types of apparatus – and use that combination for my method.”

57. We therefore allow the appeal. If it were not plain already we would add that we do this not on the basis of *Hitachi* which was argued as a first point by Mr Thorley.

### **The Macrossan Appeal**

58. We borrow the description of Mr Macrossan’s application from Mann J and the hearing officer:

“The application claims a patent for an automated method of acquiring the documents necessary to incorporate a company. It involves a user sitting at a computer and communicating with a remote server, answering questions. Thereafter, in the words of the Decision:

‘The essence of the invention is that by means of posing questions to a user in a number of stages, enough information is gleaned from the user's answers to produce the required documents. Questions posed in the second and subsequent stages are determined from previous answers provided and the user's answers are stored in a database structure. This process is repeated until the user has provided enough information to allow the documents legally required to create the corporate entity to be generated. A number of document templates are also stored and the data processor is configured to merge at least one of these templates with the user's answers to generate the required legal documents. The documents may then be sent in an electronic form to the user for the user to print out and submit, mailed to the user, or submitted to the appropriate registration authority on behalf of the user’”.

59. Claim 1 (set out with Mr Birss’ helpful layout and emphasis) of the proposed patent is as follows:

A method for producing documents for use in the formation of a corporate entity using a data processing system,

the system comprising

a corporate entity creation service provider data processing apparatus including a data processor and data storage means associated with the processor;

remote client data processing apparatus;

and interactive communication means in communication with the data processor and the client data processing apparatus;

wherein the system

*assists* in the formation of a corporate entity in at least one answering session in which

the interactive communication means is configured to allow the data processor, configured in accordance with an application program

running on the data processor, to communicate sets of one or more questions to the client data processing apparatus for presentation to a user attempting to form a corporate entity,

and *allows* the data processor to receive from the client data processing apparatus the user's answers to the questions and to store the answers in the data storage means;

the data processor, configured in accordance with the application program and using the interactive communication means, is arranged

to successively *select and communicate* a further set of one or more questions to the client data processing apparatus for presentation to the user,

to *receive* the user's answers thereto

and to *store* the answers in the data storage means,

and to *repeat* said selection and communication of further sets of one or more questions

*until the data processor*, configured in accordance with the application program, *has received and stored enough answers* to allow the data processor to determine the documents that are legally required for the formation of the corporate entity;

*wherein the selection* of at least some of said further sets of questions by the data processor *is based on the received user's answers* to one or more previous questions;

wherein the data processor, configured in accordance with the application program,

*determines* the documents that are legally required for the formation of the corporate entity

and *generates* said legally required document in an electronic form using at least some of the user's answers that have been stored in the data storage means

and wherein the data storage means includes a database structure having a plurality of user answer fields in which at least a selected one of the user's answers are stored;

and wherein a store of document templates is accessible by the data processor, and the data processor is configured by the application program to *merge* at least one selected document template corresponding to said legally required documents, with at least a subset of the stored user's answers to generate said legally required documents."

60. The method is clearly intended in practice to be one carried out by a user accessing an internet site, though, as Mr Macrossan points out, that is not necessarily so. His PCT application from which the British Application is derived specifically mentions the internet as a possible interactive communications device for his method.
61. The principal points before Mann J were concerned with excluded matters. Mann J held that the application was;

- a) for a method of performing a mental act as such;
  - b) not for a method of doing business;
  - c) for a computer program as such.
62. Before us, as we have said in the Appendix, the Comptroller does not support Mann J's decision as to a mental act: we are doubtful as to whether the exclusion extends to electronic means of doing what could otherwise have been done mentally. But it is unnecessary to decide the point, for we are firmly of the opinion that the patent is both for a method of doing business as such and for a computer program as such.
63. We turn to a method of doing business as such. Step 1 of the structured approach (construe the claim) causes no difficulty. Step 2 calls for an assessment of the inventor's contribution. That again poses little difficulty. Mr Macrossan does not suggest he has invented any new kind of hardware. What he has thought of is an interactive system which will do the job which otherwise would have been done by a solicitor or company formation agent. Questions are asked, the answers incorporated in the draft, and depending on some particular answers, further questions are asked and the answers incorporated. That is his contribution.
64. Step 3 – is that contribution solely excluded matter? That depends on the meaning of “a scheme rule or method of doing business as such”. The hearing officer held that the claim was indeed just for that. She said:
- “To my mind, the production of legally compliant documents is just the sort of activity that falls within the business method exclusion. It is something that solicitors are paid to do. Thus, I find the present invention to fall potentially within the “business method” exclusion”.
65. Her reference to “potentially” was because she had not yet reached the stage of considering whether there was anything technical in character about the claim, as required by *Merrill Lynch*. She then went on to find none and thus concluded that the claim was indeed to a method of doing business as such.
66. Mann J disagreed. He said:
- “[30] The activity involved in the invention is a business service, or end product, for which the customer is prepared to pay and for which the customer contracts. That may entitle the invention to the title “a method of providing business services”, but that is not what the exclusion in the Act is aimed at, in my view. The exclusion is aimed more at the underlying abstraction of business method – the market making technique in *Merrill Lynch*; or the way of doing the auction in *Hitachi*. In *CFPH* Mr Prescott identified joint-stock companies themselves as being methods of carrying out business – see paragraph 41 of his judgment. That has the necessary level of abstraction or method (business method). The invention in the current application does not. It is merely a facility which might

be used in a business; or, to put it another way, a tool. That cannot be said of the inventions in *Merrill Lynch* and *Hitachi*. In those cases the inventions were more than a tool – they were ways of conducting the entire business in question. Again, in *Pensions Benefit* Board of Appeal held that the operation of a pensions scheme on a computer amounted to a method of doing business. In doing so it said that:

‘All the features of this claim are steps of processing and producing information having purely administrative, actuarial and/or financial character. Processing and producing such information are typical steps of business and economic methods.’

While that does not claim to be, and should not be treated as, a definition of a “method of doing business” it still, to my mind, captures something of the essence of the point. It does not get particularly close to describing the invention in this case.”

67. We do not agree. Implicit in this reasoning are two things, first that there must be something abstract about a method before the exclusion can apply and second that the exclusion only applies where what is claimed involves the completion of a business transaction – the cash register must ring or at least a debt become due.
68. As to the first point, we have already observed that there is no overarching principle that the exclusions are limited to abstract matters. There is no reason so to limit the business method exclusion. Besides, how is one to tell whether an idea is sufficiently abstract to come within the exclusion? Whether as an abstract or generalised activity or as a very specific activity, if it is a method of doing business as such it is excluded.
69. Nor do we see any requirement that the exclusion be limited to a completed transaction. Double entry bookkeeping was a good idea, but it was just a method of doing business, even though there was no completed transaction involved. So also the idea of having three trays: “in”, “out” and “too difficult”. They are all ways of conducting a business and no more.
70. Confirmation that the exclusion is not limited to completed business transactions is provided by both the French and German versions of the EPC, which have equal weight with that of the English version. These versions read:

“les plans, principes, et méthodes ... dans le domaine des activités économiques” [“in the domain of economic activities”]

“Pläne, Regeln, unter Verfahren ... für geschäftliche Tätigkeiten” [“business activities”]
71. The judge described Mr Macrossan’s idea as “a tool”, the notion being that it was akin to any other tool used in a business such as a telephone or a machine which makes nails. But as Aldous LJ pointed out in *Fujitsu* at p.618 in the context of the





















































