



Neutral Citation Number: [2020] EWHC 1706 (Pat)

Case No: CH-2020-000007

**IN THE HIGH COURT OF JUSTICE**  
**BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES**  
**INTELLECTUAL PROPERTY LIST (ChD)**  
**PATENTS COURT**  
**ON APPEAL FROM THE UK INTELLECTUAL PROPERTY OFFICE**  
**Decision BL O/754/19 of 10<sup>th</sup> December 2019 by Deputy Director P Mason for the**  
**Comptroller**

Royal Courts of Justice  
The Rolls Building  
7 Rolls Buildings  
Fetter Lane  
London EC4A 1NL

Date: 09/07/2020

Before :

**MR JUSTICE BIRSS**

Between :

**LENOVO (SINGAPORE) PTE LTD** **Appellant**  
**- and -**  
**COMPTROLLER GENERAL OF PATENTS** **Respondent**

**Aaron Wood of Keystone law for the Appellant**  
**Anna Edwards-Stuart (instructed by The Treasury Solicitor) for the Respondent**

Hearing dates: 24th June 2020

**Approved Judgment**

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

.....  
MR JUSTICE BIRSS

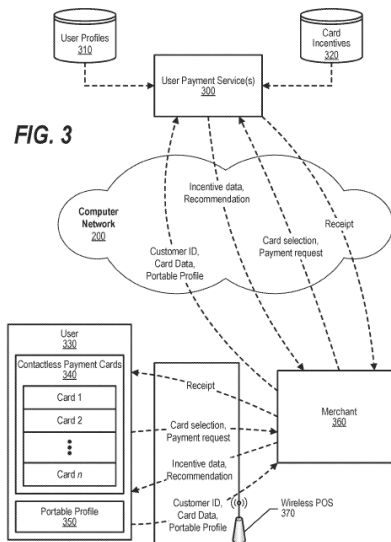
**Covid-19 Protocol: This judgment was handed down remotely by circulation to the parties' representatives by email, release to BAILII and publication on the Courts and Tribunals Judiciary website. The date and time for hand-down is deemed to be 10:30pm on 9<sup>th</sup> July 2020.**

**Mr Justice Birss :**

1. This is an appeal from Decision BL O/754/19 of 10th December 2019 by Deputy Director P Mason on behalf of the Comptroller General of Patents. It arose as follows. The patent application was filed on 8 March 2016 in the name of Lenovo and claims a priority date of 9 March 2015. The application was published on 11 September 2016 as GB 2536569. The examiner found the invention was excluded by s1(2) and, after several rounds of correspondence and amendment, the matter came to a hearing before the Deputy Director. At that stage Mr Benjamin Echterhoff of Schweiger & Partners represented the applicant.
2. By the Decision the Comptroller decided that the subject matter claimed in patent application GB 1603975.2 (entitled “Selecting a contactless payment card”) was excluded from patentability by s1(2) of the Patents Act 1977 in the ground that it relates to a computer program and a business method as such. Therefore the Comptroller refused the application under s18(3) of the Act. The applicant (Lenovo) contends on appeal that the decision is wrong because the subject matter claimed in patent application GB 1603975.2 is not excluded.
3. It is common ground that the approach of the court on appeal on those circumstances is *Actavis Group PTC EHF & Ors v ICOS Corporation & Anor* [2019] UKSC 15 (27 March 2019) at paragraphs 78-81.

*The invention*

4. The invention relates to buying things with contactless payment devices such as credit cards. There is a problem called “card clash”. This may happen when the physical wallet presented by a purchaser contains more than one card. In that case, which card is the electronic card reader supposed to read? Or if the machine reads more than one card representing different accounts, which account is meant to be debited? In the invention, the user presents multiple contactless payment devices to a reader, where each payment device (card) relates to a separate payment account. The system automatically splits the payment between a plurality of payment accounts according to one or more pre-set user preferences.
5. Figure 3 of the application is as follows:



6. Although there are multiple claims, it is only necessary to consider the following claim (which is an amended form of claim 1). It was set out in the Decision at paragraph 6:

(i) A machine-implemented method comprising:

(ii) receiving, from a user, one or more user preferences comprising a split transaction preference;

(iii) retrieving, from a plurality of contactless payment devices, a plurality of contactless payment identifiers, wherein each of the contactless payment identifiers pertain to a separate payment account;

(iv) automatically selecting multiple of the plurality of contactless payment identifiers based on the split transaction preference; and

(v) transmitting a payment request for one or more purchases using the payment accounts corresponding to the selected multiple contactless payment identifiers.

[numbering added]

7. The relevant legislation is s1(2) of the 1977 Act which implements Art 52 of the European Patent Convention. The Deputy Director accurately dealt with the legislation at paragraph 7.

8. As the Deputy Director explains in paragraph 8, the leading cases governing the application of s1(2) are two decisions of the Court of Appeal. First ***Aerotel Ltd v Telco Holdings Ltd & Ors Rev 1*** [2007] RPC 7 and then ***Symbian Ltd v Comptroller General of Patents*** [2009] RPC 1. ***Aerotel*** sets out a four step test to be applied, which, as the Deputy Director put it in paragraph 9, ***Symbian*** explains was not intended to be a new departure in domestic law. The four steps are:

- (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.
9. ***Symbian*** also explained that although in methodological terms the approach in the UK and the approach in the EPO may look different, in practice they reach the same result, at least usually. I mention this because it has been a feature of some of these appeals in the past to argue that the UK approach was out of step with the approach in the EPO. Mr Wood made clear that he was not making that submission. The appellant's case takes the UK law as it stands. The submission is that the error was in the application of that UK law to the facts of this case.
10. Also relevant are the signposts identified by Lewison J in ***AT&T Knowledge Ventures/CVON Innovations v Comptroller General of Patents*** [2009] EWHC 343 (Pat) and reformulated in ***HTC v Apple*** [2013] EWCA 451 by Lewison LJ as follows:
- i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer
  - ii) whether the claimed technical effect operates at the level of the architecture of the computer; that is to say whether the effect is produced irrespective of the data being processed or the applications being run
  - iii) whether the claimed technical effect results in the computer being made to operate in a new way
  - iv) whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer
  - v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented
11. Nevertheless, as Lewison LJ himself made clear, these are not intended to be prescriptive (***HTC v Apple*** paragraph 149).
12. The Deputy Director's summary of the law was rightly not criticised by either party. Nevertheless some points of principle were discussed on this appeal. They relate to the identification of the contribution made by the invention (***Aerotel*** step 2). They are best dealt with in context below.

*The decision*

13. Having set out the law, the Deputy Director mentioned that there was no dispute about claim construction (***Aerotel*** step 1) and so moved on to step 2 (identify the

contribution) from paragraph 12 onwards. He started by referring to Jacob LJ in Aerotel who said the following about the second 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.”

14. The Deputy Director addressed the problem to be solved, how the invention works, and a relevant item of prior art which had been identified albeit no search had yet been carried out. The prior art is US 8113438B1. This also relates to card clash. The position was accurately summarised in paragraph 19:

“19 Therefore, it is clear from US ‘438, that successfully retrieving a plurality of contactless payment identifiers, each pertaining to a separate payment account, from a plurality of contactless payment devices presented simultaneously at a reader was known at the priority date of the invention. Mr Echterhoff agreed at the hearing that this is the case. Moreover, it is clear from the application under consideration that this multiple card reading step was known because no detail is provided in the application on how this step may be achieved in practice to avoid the unintended consequences such as ‘card clash’ described above. Although I acknowledge that when considering the contribution, it is not acceptable to ‘salami-slice’ the claim and eliminate everything in the claim that is known, it is also important to determine what the inventor has really added to human knowledge. I consider here that the step of retrieving a plurality of contactless payment identifiers was sufficiently well known by the skilled person at the priority date of the invention to not form part of the contribution. It seems to me that the contribution lies in the subsequent step of selecting a subset of the retrieved contactless payment identifiers to allow the payment to be made automatically across more than one payment account.”

15. Therefore it turns out that the idea of a card reader reading multiple cards at the same time was known and the Deputy Director concluded that the contribution lies in the subsequent step to allow the payment to be made automatically across more than one account.
16. There is no challenge to this on appeal. The first point of principle, on so called salami slicing, arises here. Counsel for the Comptroller submitted that the approach the Deputy Director took, in which he did not just stop at having identified a feature as disclosed in the prior art, but went on to reflect on this question more widely before coming to a conclusion about the contribution really was, was the right one. The appellant did not suggest this was a wrong approach and so there has been no

adversarial argument on the point. Nevertheless if it will assist the Comptroller in future, I will say that I agree, it is the right thing to do. After all invention can lie in a new combination of old features and so, while identifying an individual feature as disclosed in prior art is a relevant thing to do, it will always be necessary to consider it in the context of the invention as a whole before reaching a conclusion.

17. A second point arising from this section in the Decision was the question whether the Comptroller was obliged formally to carry out a prior art search before taking a point on excluded subject matter. No such search was conducted in this case and the Comptroller submitted that it was not necessary. Again, the appellant did not suggest this was a wrong approach and so there has been no adversarial argument on the point. Nevertheless again, if it will assist the Comptroller in future, I will say that I agree it cannot be formally necessary to conduct a prior art search before taking this sort of point. It would not be wrong to do that, but the Comptroller need not do so. Some cases may be such that no reference to prior art at all is needed to see that the subject matter is unpatentable and in that kind of case, the extra cost and trouble of a search would be wasted. Others, like this one, can be addressed based on prior art which the examiner was aware of without having to undertake a formal search.
18. After paragraph 19, the Deputy Director noted that the invention is implemented on a computer system using standard hardware and data transmission means, such that these aspects cannot form part of the contribution (paragraph 20) and went on to characterise the contribution in paragraph 21 as follows:

“21. From all of these factors I consider the contribution to be:

a computer-implemented method of automatically selecting multiple contactless payment identifiers based on user preferences to enable a purchase to be split across multiple payment accounts, and allow the user to benefit from different account payment incentives and limits.”
19. Lenovo agrees with this formulation for the purposes of this appeal. It is a fair way of putting it.
20. The Deputy Director addressed Aerotel steps 3 and 4 together, explaining in paragraph 22 that:

“22. The third and fourth steps of the Aerotel test involve considering whether the contribution falls solely within excluded categories, and then checking whether the contribution is technical in nature. It is appropriate to consider these two steps together because whether the contribution is technical in nature will have a direct impact on whether it falls solely within excluded matter.”
21. I agree.
22. Then in paragraphs 23-31 the Deputy Director approached the matter by considering AT&T signposts (i) to (v) first (paragraphs 23-29) and then considered the invention as a whole in paragraphs 30-31.

23. On appeal there is no need to consider signposts (ii), (iii) or (iv). The Deputy Director did not think they advanced Lenovo's case and neither do I. The signposts are really focussed on what one might call the better computer cases, but this is not one of those. It is signposts (i) and (v) which are of most relevance to this case. Indeed that is how Mr Echterhoff had put the case below. Signpost (i) is whether the claimed technical effect has a technical effect on a process which is carried on outside the computer, and signpost (v) is whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.
24. For signpost (i) Lenovo argued there were two physical interactions which meant that there was a technical effect on a process carried out outside a computer. They were (a) that the user did not have to present multiple contactless payment devices one after another, and (b) that the user did not have to actively select a split, such as by clicking on options presented on a screen as in the prior art US '438.
25. In paragraph 25 the Deputy Director said:
- “25. In response to these arguments, I agree that an invention that makes a physical interaction obsolete can derive from this a technical effect. It is important, however, to consider the particular physical interactions involved. ...”
26. He was right. Making a physical interaction obsolete is capable of giving rise to a technical effect but, as he said, it is important to examine the detail.
27. The first alleged physical interaction did not survive the Deputy Director's analysis. He had held that reading multiple cards at the same time was not part of the contribution, because it was known, and therefore not having to present cards one after the other was not a technical effect of the invention in this case. I agree, and on appeal the appellant did not really challenge this.
28. The Deputy Director dealt with the second physical interaction in paragraph 26:
- “26 Regarding the second physical interaction, Mr Echterhoff explained further at the hearing that the user no longer needs to actively press a button to select the preferences and influence a payment. He argued that manually pressing a button and the resulting processes involved to register the button press is a technical process and therefore omitting this step through an automatic process is also a technical process carried on outside the computer.
- In response, it seems to me that the invention lies in receiving user preferences and automatically deciding which payment accounts should be used for the transaction from those retrieved to make best use of incentives and account balances. If done manually the user would need to weigh up the various options and calculate the required split. This would be non-trivial especially for a large number of payment devices.

The final step of actually selecting an account by pressing a button once those to be used have been chosen is rather straightforward; implementing a manual button press to select a user preference was well-known at the priority date of the invention. I cannot see how this step results in the invention having a technical effect on a process outside the computer. The invention therefore does not meet the first signpost.”

*[separation into three parts added]*

29. The first part is an accurate reflection of the argument and the second part is a fair response but there is at least a slip in the third part. That third part is written as if the technical effect relied on is the step of having the user press a button, which is dismissed because it is well known, leading to the conclusion that such a step has no technical effect outside the computer. However this is the wrong way round. The alleged technical effect in this case does not involve implementing a button press, it is involves getting rid of it. Claim feature (iv) requires that the selection of multiple contactless payment identifiers is automatic. Therefore the user no longer needs to actively press a button, as the start of paragraph 26 correctly acknowledged. I wondered if the point being made was that since adding a button press is trivial, so too is taking it away, however that is not what the decision says, and much more importantly that logic would be flawed. Just because adding something is a minor step to take does not mean that taking it away is equally minor. I will return to this below.
30. Mr Wood sought to draw a comparison between this case and the specifics of the Aerotel case itself as described by the Court of Appeal at paragraphs 51-53. The point was that the patent in Aerotel was a payment system for pre-paying for telephone calls and the invention involved an extra piece of equipment, a special exchange, which was not part of the normal system and in which payment preferences were stored. I do not believe a comparison between this case and the facts of another like Aerotel assists because before one can carry out the comparison there would need to be a much closer examination of the facts and the relationship between the known art and the invention in each case. Using the signposts is a better approach. In that sense the facts of Aerotel could be an example of signpost (iii), but the present case is not.
31. To complete the review of the decision, I turn to paragraph 29 in which the Deputy Director addressed signpost (v) as follows:

“29. Mr Echterhoff did not provide written submissions regarding signpost (v). However, at the hearing he followed a similar reasoning to signpost (i) to suggest that making at least two physical interactions from the user obsolete solves a technical problem rather than circumventing it. I do not need to repeat my earlier response. I add, however, that I see the problem here to be how to automatically split a payment across more than one payment account corresponding to more than one contactless payment device so that the user can benefit from different account payment incentives and limits. The technical aspects of this problem had already been solved, in



particular simultaneously retrieving a plurality of contactless payment identifiers from a plurality of contactless payment identifiers. The remaining problem is a non- technical one that has been solved by the invention in a non-technical way by running a computer program on standard (finance-related) data using conventional computer hardware. The invention does not meet the fifth signpost.”

32. Although this paragraph refers back to the reasoning on signpost (i), it does not suffer from the mistake in paragraph 26.
33. Finally the Deputy Director considered the invention as a whole and in particular looked at both the computer program exclusion and the business method exclusion. Leaving out his quotation from paragraph 35 of my judgment in Halliburton [2012] RPC 129 about the difficulty of dealing with business method cases, the relevant parts of the decision are:

30. It is useful finally to stand back and consider the invention as a whole. In the invention, the user presents say a wallet full of cards or other contactless payment devices to a reader at a POS system and the payment is automatically split between two or more of the corresponding payment accounts without the user making any further input. The contribution, however, lies in a process implemented via a conventional computer system that takes the retrieved financial data (i.e. the payment identifiers and associated data), considers the user preferences and automatically decides the best split across particular corresponding payment accounts that provides the best outcome for the user for the particular purchase in hand. Considered in this way, the invention has a clear business objective, solving a customer-focussed problem on finance-related data. [*reference to Halliburton*]

31 In this case the transaction process may be faster and more efficient than before. In particular, the user does not need manually to weigh up and calculate the various options to determine the best outcome for the purchase. Instead, this process is implemented by a computer program, well-suited to the task in hand. I have carefully considered all the arguments put before me and I cannot find a technical effect that would allow this process to fall outside the excluded categories. Therefore, I consider the invention to relate to a computer program and a business method as such.”

34. Were it not for the mistake in paragraph 26 of the decision, I would simply endorse the reasoning in these paragraphs. The problem for Lenovo in this case is not simply the exclusion from patentability of computer programs as such, it is that exclusion combined with the exclusion of business methods as such too. Mr Wood suggested that there was an error when the Deputy Director referred to the fact that the invention had a clear business objective, because, as Mr Wood said, many if not all inventions have that objective. So they do, but it is not the point the Deputy Director was

making. The point was that this invention lies in the field of business, it is a general method for paying for things. The data being processed is financial data. The invention involves a method of doing business. The fact that the inventors of a new medicine may well have a business objective to sell the treatment and make money, does not turn a new medical invention into a method of doing business.

35. It is useful to ask: what more is the Lenovo invention than a method of doing business? The answer is not a new medicine or a new industrial process, the answer comes perilously close to being – a computer program running on a conventional computer. That is the answer the Deputy Director arrived at in paragraphs 30-31, but it was based on the earlier conclusions. To work out if it is the right answer takes one back to paragraph 26.
36. The key question in this case is whether the invention involves a different physical interaction with the world outside the computer, as compared to what had gone before. As I have said already, I would agree with the reasoning at the end of paragraph 26 if the technical effect relied on resided in pressing a button in a computer system because that is a conventional feature of using conventional computer systems. Those features may be technical in a sense, but they cannot add technical character to make a computer program as such patentable. However, again as explained above, the point of this invention is the opposite. It is in US 438 that the user has to press a button to choose which card to use or to split the payment between two cards. In the Lenovo invention, this is handled automatically at the point of sale because the user's preferences have already been acquired and stored elsewhere. The automatic nature of the process is recognised in the formulation of contribution identified in the decision at paragraph 21. As a result of this automatic feature, the card clash problem experienced with contactless payment cards is solved without the user having to take any extra physical step at the point they use their contactless cards. In my judgment that difference is an effect of the invention which is neither a computer program as such nor a method of doing business as such nor a combination of the two. That difference is technical in character and, in the context of the invention as a whole, it is not just one of the normal incidents of a conventional computer system. The claimed invention may or may not be obvious over US 438, or any other prior art, but what would count for s1(2) of the 1977 Act / Art 52 EPC is that the invention does have an effect which is of the right character to satisfy the law.

### *Conclusion*

37. The appeal will be allowed. The application will need to continue its passage through the office.