

Examiners' Report on Paper A/1994 (Electricity/Mechanics)

I

As regards the general content of the main claim, the preferred response is to direct it to a chip card reading/writing apparatus having a slot for receiving the card and a closure member for restricting access, characterised by a suitably worded definition of the function or position of the closure member, bringing out the essential distinction from the shutter arrangement of Document I. Such a response will be referred to as the closure member solution.

The reasons for preferring that solution are set out in part II of this report and the appropriate way to formulate the claim is discussed in detail in part III.

Part IV sets out alternatives to the closure member solution: these alternatives are individually discussed in parts V to VIII.

In part IX, the extent to which candidates may or should have proposed additional applications is discussed.

Part X contains some general remarks on claiming concrete features in functional terms, with particular reference to the version of Claim 1 presented in Paper B.

Part XI is concerned with the dependent claims and part XII with the introductory part of the description.

Finally, some general observations for the guidance of candidates are set out in part XIII.

II

At the top of page 2 of the client's letter, Document I is acknowledged as disclosing a chip card reading/writing apparatus having a shutter whose function is to prevent access from the outside to an inserted card. The letter goes on to state that it is of utmost importance to reduce further the possibilities of fraud in the use of such apparatus.

The type of fraudulent use which is possible in the Document I arrangement is specified in general terms in the last paragraph on page 1 of the client's letter, namely it is not proof against the use of a fake card connected to external circuitry. The text and drawing of Document I show that the card, when inserted into the slot (2), projects into a recess (8) between the slot and the shutter (3). It is furthermore pointed out, in the paragraph spanning pages 8 and 9 of the client's letter, that the shutter of Document I when closed has a relatively large exposed surface which could be pierced to provide a passage for conductors leading to circuitry associated with a fake card. The next following paragraph also refers to the possibility of arranging such circuitry within the recess.

These considerations should have led the candidate to consider what the inventor has done to remedy these defects of the Document I apparatus. The equivalent of the shutter (3) of Document I is clearly the closure member (4) of the invention. As specifically stated in the short paragraph in the middle of page 6, the closure member (4) is so arranged that, when closed, it isolates an inserted card from the slot (1). In contrast, the shutter (3) of Document I merely

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impedes access to both the card and the slot (2) from the exterior: it certainly does not isolate the card from the slot.

The manner in which this isolating function is achieved is by disposing the closure member (4) beyond the slot in the direction of card insertion, in contradistinction to the shutter (3) of Document I which is disposed inside the housing on the "upstream" side of the slot (2) and closes off the recess which leads to the slot, but does not close the slot itself.

III

In drafting a claim to the closure member solution, it is considered legitimate to phase the characterising part in broad functional terms directed to the isolating function of the closure member, thus arriving at a claim similar to the one presented in paper B. Essentially the same protection would however be provided if the position of the closure member relative to the slot is specified as being beyond it in the insertion direction. The examiners consider that these two ways of expressing essentially the same distinction of the invention from Document I are of equal merit and highest marks were accorded to candidates who proposed clear and concise claims to either of them. Of course, claims which are not clear and concise (e.g. so vague as not clearly to distinguish from Document I or overloaded with unnecessary restrictive features) are penalised by deduction of points.

Since the claim can be adequately distinguished from Document I in terms of the function or position of the closure member, it is quite unnecessary to incorporate further features of distinction such as the carriage (10), the contact pins (21) or the sensor (15): these features are not relevant to the closure member solution and the effect of mentioning them would be to restrict the scope of protection unduly. It is also considered unduly restrictive to specify details of the precise form of the closure member or to mention the associated latch lever (44). A significant deduction of points is made for such superfluous matter in what should be the broad main claim.

As to the essential features which should be mentioned, attention is drawn to the first sentence of Guidelines C III 4.4. It follows that it is not necessary to mention that means for transporting the card are provided or that the apparatus has contacts for engaging the card. Although such features might be necessary to the overall functioning of the apparatus, they are not essential for defining the solution to the problem solved by the invention.

IV

Having regard to the emphasis placed on certain aspects of the disclosure in the client's letter and to the client's overall objective of increasing security, the alternatives to the closure member solution are listed in order of merit as follows:

1. the transport means solution;
2. the automatic actuation solution;
3. the locking means solution;
4. any other solution which is not in some way concerned with improving security.

Candidates who propose one of these less-preferred alternatives are awarded fewer points for the concept of solution than those who propose the closure member solution. However, the examiners' practice of deducting points for unclarities and unnecessary restrictions is applied with respect to the features needed to provide a broad but clear expression of the chosen concept of solution. It can thus result that a well drafted claim to the second or third best solution can still obtain more points than a badly drafted claim to the preferred solution. Of course, the features that are essential will differ according to the solution concept chosen, but the principles applied in deducting points for poor formulation are the same in all cases.

V

The essence of the transport means solution is the provision of an arrangement whereby suitable means are provided for receiving the card and for transporting it beyond the slot to a final reading/writing position. It is however not necessary to restrict the transporting means to any particular mechanical form, such as a carriage (10).

In drafting a claim to the transport means solution, mention of the provision of a closure member for preventing access to the card is not regarded as a serious limitation of the scope. It would however be a serious mistake to direct the claim chiefly to the transport means and at the same time go into details about the slot-closing arrangement as well. The preferred solution and the listed alternative solutions are each capable of being claimed independently of the others and to claim two or more of these solutions in combination necessarily arrives at a claim of very restricted scope, inconsistent with the clear instruction that candidates should seek the broadest possible protection for the client's invention.

VI

The automatic actuation solution is based upon a recognition that the client's apparatus is such that when an inserted card arrives at the reading/writing position, a signal is generated and used to command operation of the closure member, thereby making slot closure an automatic consequence of card insertion. This is in clear contrast to the arrangement of Document I, where the shutter (3) is closed manually and quite independently of the card insertion and has the disadvantage that it is possible to insert the card but leave the shutter open for a sufficient time to perform fraudulent manipulations before finally closing the shutter. Hence, although it has been classified as the third-best solution, a clear claim in broad terms to this solution is capable of obtaining at least a qualifying mark (though not if the claim is unduly vague as to the functions performed and/or over-restricted by features which properly belong to one of the other solutions and are irrelevant to the solution chosen).

VII

The locking means solution, i.e. requiring merely that the closure member is provided with a latch which locks it mechanically in the closed position, has the merit that it does increase security and is not suggested by Document I. In the Document I apparatus, shutter closure is detected by a switch (5) having a switch-off function should the shutter be opened prematurely. However, a broad claim to the locking of the closure member by physical latching means, though

new with respect to Document I, is dubiously inventive because locking means as such is a commonly known security measure. Although this solution is valid against the only document cited as prior art, it is considered to be the weakest of the alternative solutions so far discussed.

VIII

Though some candidates found other solutions, none of these was concerned in any way with security and for that reason such solutions were considered of less value than the specific solutions discussed above. The plain requirement of the exercise is to provide the client with good patent protection for what he desires to protect, namely a chip card reading/writing apparatus obviating the defects of the one known from Document I. Those defects are plainly stated to be lack of security against fraudulent operation and hence a solution which is not relevant to improving security is inconsistent with the client's instructions.

IX

The sixth paragraph of the instructions to candidates requires that claims be proposed for one application only, which should meet the requirements of the Convention as to unity. It does however allow for candidates to propose protection of further inventions by one or more separate applications, the envisaged content of the main claim of each separate application having to be clearly identified in a note. In view of this, most but not quite all of the points available for independent claims were accorded to the main claim of the candidate's response, with just a few additional points reserved for outline proposals for separate applications. The highest marks of all thus went to those candidates who provided a well-drafted main claim to the closure member solution and also identified in a note the essential content of the main claims of separate applications, e.g. one to the transport means solution and one to the automatic actuation solution. Candidates are however advised that they are not expected to provide long lists of all the alternative inventions which might be claimed, nor will they get any credit for doing so. Indeed candidates who do this may on balance lose marks since (a) only very few points are available for separate inventions and (b) time spent on going into too much detail in this respect is necessarily at the expense of time which could be more profitably spent in considering what is the best formulation for the main claim of the application being drafted. Many candidates lose far more points for poor drafting of their main claim than they can possibly gain from their proposals for separate applications.

X

The claims presented to candidates in Paper B should not in general be regarded as providing a model solution to the task set in Paper A. However, in the case of this year's test, Claim 1 of Paper B is indeed a possible formulation for the preferred solution concept. The claim was however deliberately drafted in as concise a manner as possible with the characterising part in purely functional terms, on the basis explained in previous reports in respect of the functional claiming of apparatus features, namely (a) the function itself should be clearly specified and (b) a skilled person would have no difficulty in providing some means of performing the function without exercising inventive skill. In the present case, it is readily apparent that it really is a question of where one locates the closure member in relation to the slot and, as already stated,

candidates who preferred to claim it in that way were not penalised. On the other hand, candidates who sought to define the invention by specifying the result to be achieved, in particular where this amounted to merely identifying the underlying technical problem without making clear how it was to be solved, were heavily penalised.

XI

The dependent claims presented in Paper B should not be regarded as an ideal solution to the Paper A task. They were designed for a quite different purpose, namely to make it possible for the European Patent Office to reject all the claims. In fact, the examiners feel that the requirement of providing a good fall-back position should Claim 1 fall (cf. instructions to candidates) would best be met by having some dependent claims concerned with the slot closure means, some with the card transport means and some with an aspect not presented at all in the Paper B claims, namely the manner in which the contacts are moved onto the card (as opposed to rubbing across it as in Document I).

Accordingly, in marking the dependent claims for Paper A, the examiners gave highest marks to those candidates who proposed:

- (a) one or more dependent claims directed to preferred implementations of the feature(s) set out in the characterising part of Claim 1 (which, in the case of a candidate who selected our preferred solution for the main claim, would be details of the closure member);
- (b) a dependent claim defining one of the other aspects mentioned above, e.g. the transport means, in broad terms and one or more claims to preferred implementations thereof;
- (c) a dependent claim defining a remaining one of the aspects mentioned above in broad terms and one or more dependent claims to preferred implementations thereof.

The pattern of dependency, i.e. the manner in which the dependent claims are linked with the main claim, is of importance in connection with the need to set up a good fall-back position. If, for example, the broadest claim to the transport means is made appendant to a claim which is already very restricted in terms of the structure of the closure member, or if potentially independent features of both the closure member and the transport means are lumped together in one narrowly worded claim then the requirement of setting out a good fall-back position is not satisfied and points are deducted accordingly.

It is of course desirable to ensure that there is a claim effective to protect the intended application of the claimed card reading/writing apparatus to telephones. However, candidates who directed their main claim to a telephone lost marks, since this unduly restricts the overall scope of protection. The appropriate way to cover the apparatus when associated with a telephone is by a dependent claim of the form presented as Claim 11 in Paper B.

XII

As to the introductory part of the description, it should be first noted that the current instructions only require it to provide support for the independent claim(s). In so doing, it is of course necessary to ensure that the requirements

of Rule 27 of the Implementing Regulations to the Convention, so far as relevant to the introduction, are satisfied. Ideally, the relevant state of the art should first be duly acknowledged, then a problem which arises in the state of the art should be identified and finally the manner in which the invention solves that problem should be explained. The solution thus presented should of course be made entirely consistent with the actual wording of the main claim. Although relatively few points are obtained by setting out this problem/solution derivation of the claimed invention, candidates would be well advised to do it since it provides a useful control on which features are essential to the claim and which could or should be left out of the claim.

XIII

Candidates who spent time doing things they were not asked to do, such as appending lengthy notes as to their thought processes whilst considering their solution, or writing several pages providing *expressis verbis* support for some or all of the dependent claims, simply wasted their time: no points were given for this sort of thing and the time taken to write it would have been more profitably spent on careful revision of the wording of their claims. It cannot be too strongly emphasised that the essential purpose of Paper A is to test whether the candidate knows how to draft claims. A total points score of 50% is sufficient to achieve a pass grade and, as stated in the report on Paper A for 1993, about half of the available points are reserved for the independent claim(s). Most of the remaining points are for providing an appropriate set of dependent claims - which should not exceed a reasonable number. It follows that candidates should (a) identify those aspects of the disclosure which could be broadly claimed (usually there are several possibilities of which one should be selected as most suitable and the others briefly mentioned in a note as the possible basis for a separate application); (b) carefully consider first the general content and then the detailed wording of the main claim, perhaps at this stage drafting the introduction to ensure that everything in the claim will be clearly supported and fully consisted with the problem and solution with which the envisaged invention is concerned; (c) draft dependent claims, concentrating on those features which appear most likely to satisfy the requirement to provide a good, well-structured, fall-back position.

EXAMINATION COMMITTEE I

Candidate No.

Paper A Schedule of marks (E/M)

Category	Maximum possible	Marks awarded by first examiners		Revision of marks / grade (if any) or marking of further examiners (if appropriate)	
		Exr	Exr	Exr	Exr
Independent claims	26				
Dependent claims	15				
Description	7				
Total	48				
Corresponding Grade					

Translation
of marks
into grades

	Grade
0 - 11	7
12 - 17	6
18 - 23	5
24 - 29	4
30 - 35	3
36 - 41	2
42 - 48	1

Remarks by examiners which must be given if both the following requirements are fulfilled:

- (a) the grades awarded by the two first examiners before their discussion differ by two grades or more;
- (b) the marks awarded by at least one of the two first examiners have been changed during their discussion.

If marks are revised, brief explanation should be given.

Sub-Committee for Electricity/Mechanics☐ Sub-Committee agrees on _____ marks and grade _____☐ Sub-Committee does not agree on a grade**Remarks by Sub-Committee** which must be given where the Sub-Committee does not agree on a grade

Grade recommended to Board by Committee I _____

Remarks by Committee I_____
Date_____
Signature of Chairman of Committee I