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D E C I S I O N
of 30 April 2002

Case Number: T 0918/99 - 3.5.2

Application Number: 92114140.4

Publication Number: 0513880

IPC: G07B 17/02

Language of the proceedings: EN

Title of invention:

Microprocessor systems for electronic postage arrangements

Patentee:

PITNEY BOWES INC.

Opponent:

NEOPOST LTD

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0918/99 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 30 April 2002

Appellant: PITNEY BOWES INC.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 15 July 1999
revoking European patent No. 0 513 880 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: R. G. O'Connell
P. H. Mühlens

Summary of Facts and Submissions

I. This is an appeal from the revocation by the opposition division of European patent No. 513 880. The reason given for the revocation was that *inter alia* the subject-matter of claim 1 of the patent as granted did not involve an inventive step, having regard to the combination of the following prior art documents:

D1: DE-A-3 024 370

D2: EP-A-0 019 515.

II. Claim 1 of the patent as granted (main request on appeal) is worded as follows:

"1. An electronic postage meter comprising: a printing means (80, 81, 82); first and second microprocessors (60, 61); first and second accounting memories (20, 21) connected to be separately controlled by said first and second microprocessors, said first and second microprocessors having program routines for separately updating their respective accounting memories to account for the printing of postage by said printing means by coding the stored data differently in each accounting memory; and means for comparing the accounting results in said first and second accounting memories for disabling said postage meter in the absence of a coincidence of data in said first and second accounting memories."

Claim 2 (main request) is dependent on claim 1.

III. Oral proceedings were held before the board on 30 April 2002.

IV. The appellant proprietor argued essentially as follows:

The decision under appeal correctly found that D2, which concerned an electronic postage meter with microprocessor controlled dual redundant memories for storing accounting data, was the closest prior art. D1, in contrast, was not in the field of postage meters, nor even in the general field of data processing, storage or transmission. The latter document was classified under the international patent classification (Int. Cl³.) in class G05 - controlling; regulating - in the subclass G05B 9/03 which related to safety arrangements with redundant control systems. This classification was confirmed by the general tenor of the disclosure of D1, it being noted that the prior art documents referred to in the introductory part of D1 related to commanding actuators such as magnetic valves. Redundant control systems were found in applications like the actuation and control of ailerons in aircraft - a technical field which was very remote from that of electronic postage meters. Control signals were transmitted and used in real time and not stored (other than transiently), whereas accounting data in an electronic postage meter was stored over a period of a month or more. Not only was D1 not credible as the closest prior art, the person skilled in the art, starting from the closest prior art, D2, and addressing the problem of reducing errors in the storage of accounting data in electronic postage meters, would not even find D1. Starting from D2, it would have required a major step of generalisation followed by a particular specialisation to find D1. Broadening the search in this way would yield so many documents that it would be impossible to sift through them all to find the relevant nugget of information even if it were there.

The finding in the decision under appeal that the passage in D1 bridging pages 12 and 13, relating to protection against transient interference signals, would cause the skilled person to find it was based on a misunderstanding of the corresponding passage in the description of the opposed patent at column 4, lines 16 to 18. The problem of transient interference referred to there was solved by a different invention - the staggering in time of data inputs - as was clear from the passage in the patent specification immediately following that reference, down to line 38. The problem solved by the invention to which the opposed patent related was not that of transient interference but the occurrence of errors in the data stored in the redundant memories undetectable by comparison of the data stored in the two memories (column 4, lines 39 to 44).

Even if one were to assume, as the opposition division did in the decision under appeal, that the person skilled in the art, starting from the closest prior art, D2, and addressing the problem mentioned above, would find D1 even though he had no knowledge of the present invention, he would not readily find a solution to the problem in the teaching of D1. He would not see a teaching aimed at reducing the risk of misoperation or failure of a real-time control system as being relevant. To the extent that there was any data stored in different forms in D1 it was in the transient processing store of the temporary working space stores AS1 and AS2; this was not comparable with the long-term storage in the non-volatile random access memories of the opposed patent.

The respondent opponent's contention that an electronic

postage meter was a form of control system in the sense of D1 demonstrated the kind of over-generalisation of the prior art teaching and/or the teaching of claim 1 of the opposed patent that was required to make a link between the two and was itself a clear indication that the claimed electronic postage meter could not be arrived at without the exercise of inventive imagination on the part of the person skilled in the art.

V. The respondent opponent's arguments can be summarised as follows:

Although the decision under appeal was right in the result and correct in its technical reasoning, it had erred in regarding D2 as the closest prior art. The closest prior art did not necessarily have to lie in the generic field of the invention as claimed, ie electronic postage meters. One had to have regard to the invention, which in this case was the application of dual processor technology to electronic postage meters. From that perspective D1 was the closest prior art. As such the question of the document being remote or not easily found did not arise; the legal fiction operated, according to which the person skilled in the art was irrebuttably presumed to be aware of the document. In particular the international patent classification was not determinative of the question whether a particular document would be found; documents could also be retrieved by searching the text content.

As the decision under appeal correctly pointed out, the person skilled in the art would appreciate that the protection against interference provided by different coding in D1 was just as applicable to storage as to

transmission of data and hence applicable to the accounting memories of electronic postage meters.

The critical feature in claim 1 of the opposed patent that the data was coded differently could be read onto the complementary coding of corresponding data in D1; there was no need for a further encoding of the non-inverted data since all data transmitted or stored was necessarily represented in some code, eg binary coded decimal (BCD). This was recognised in the description of the opposed patent at column 4, lines 41 to 42, where it is stated that "the data stored in one or both of the memories may be coded".

The proprietor's contention that D1 was to be regarded as a narrow teaching relating to a control system of the kind used for controlling ailerons in aircraft was purely speculative; D1 made no mention of aircraft. In any case a franking machine or electronic postage meter could be subsumed under the notion of a control system in its widest sense. The use to which the signals were put made no difference to the teaching; all that mattered was that it was an application in which reliable substantially error-free operation was important.

Similarly, the distinction the appellant sought to make between the long-term storage in a non-volatile random access memory (NVRAM) of accounting data in the opposed patent and the transient storage of the transmission signals in the working space memories ("Arbeitsspeicher" AS1, AS2) of D1, figure 1 could not be taken into account since the opposed claim did not specify the type of memory.

It was important to note that D1 disclosed all the features of claim 1 other than the postage meter.

- VI. The appellant proprietor requested that the decision under appeal be set aside and that the patent be maintained unamended (main request) or in amended form in accordance with an auxiliary request.
- VII. The respondent opponent requested that the appeal be dismissed.

Reasons for the Decision

- 1. The appeal is admissible.
- 2. Novelty is not in dispute. The board takes the same view as the opposition division in the decision under appeal in agreeing with the appellant proprietor's contention that D2 should be regarded as the closest prior art. It is in the same narrow technical field of microprocessor-controlled electronic postage meters as the opposed patent and is concerned with the broad subjective problem addressed and solved by the opposed patent, viz reducing the possibility of non-detectable error conditions in the storage of accounting data in such electronic postage meters by the provision of redundant memories; cf description of the opposed patent at column 1, lines 18 to 35 and lines 44 to 47 (page 1, line 18 to page 2, line 8 of the description of the application as filed).
- 3. It is common ground that the electronic postage meter specified in claim 1 of the opposed patent (main request) differs from that disclosed in D2 in that:

- (a) the dual memories are connected to be controlled separately by dual microprocessors, and
- (b) the microprocessor programs cause their respective accounting memories to code the stored data differently in each accounting memory.

4. The board accepts the appellant proprietor's contention that the analysis in the decision under appeal, at point 7(b), of the technical effect of feature (b) above was not completely accurate. The measure referred to in the patent specification to deal with transient interference on the data or address bus lines which could interfere, in the same manner, with the simultaneously transmitted data is sequential addressing of the memories with respect to the same data as illustrated in figures 2 and 3; cf column 4, lines 12 to 38. This measure is not part of the subject-matter of claim 1. The effect of feature (b) of claim 1 is to reduce the occurrence of errors undetectable by comparison of the data stored in the two memories. Such errors may originate in the memory, not necessarily on the data or address bus lines. In fact the exemplifying embodiment of different coding in figure 4, described at column 4, lines 44 to 52, protects essentially the stored data not the data on the bus lines. It remains true, however, that a coding which protects against corruption caused by interference pulses on the bus lines is not excluded from the subject-matter of claim 1, so that the analysis in the decision under appeal at point 7(b) is partially correct in the sense that the feature concerned can have this effect also. On this latter point the appellant proprietor's submission that claim 1 should be construed narrowly so that "coding

the stored data differently in each accounting memory" did not encompass the data in one memory only being coded as suggested by the description at column 4, line 41 ("one or both") did not persuade the board.

5. It follows from the above analysis that the objective technical problem solved by the invention of the opposed patent is to reduce the occurrence of errors undetectable by comparison of the data stored in the two memories in an electronic postage meter which stores accounting data in redundant memories, ie the kind of electronic postage meter known from D2, this problem being solved by modifying the D2 meter in accordance with features (a) and (b) above.
6. The questions to be answered then are whether the person skilled in the art, starting from the closest prior art, D2, and addressing the objective technical problem identified above, would find the prior art document D1 and, if he found it, whether an inventive step would be required to arrive at the claimed solution in the light of this document.
7. As the appellant proprietor has persuasively argued, D1 is not only not in the field of electronic postage meters, it does not even relate to redundant data processing or transmission in general. As is shown by the title and confirmed by the prior art cited in the introduction, it relates to the narrow field of control engineering, ie the generation and transmission of control signals in the sense of commands (Befehle) which cause actuators (Stellglieder) to change the position of mechanical devices such as valves. In particular it is concerned with commands which must be executed ultra-reliably and in a fail-safe manner;

cf page 9, lines 6 to 17. As is to be expected in relation to processing commands, although the command data is transiently stored in working memory (Arbeitsspeicher AS1, AS2 in figure 1), reliable signal transmission, not data storage, is the primary concern. This kind of transient data storage of commands to be executed in such a control system is very remote from the long-term storage of accounting data in an electronic postage meter.

8. The most specific link between the opposed patent and D1 is the passage in D1 bridging pages 12 and 13 which refers to the signals on the dual redundant channels being transmitted in complementary (mutually inverted) coded form to overcome the effect of interference pulses, which corresponds to the passage at column 4, lines 12 to 18 discussed at length in paragraph 4 above. This passage constitutes a link between the description of the application as originally filed (corresponding to the specification of the opposed patent) and D1 but not, of course, a link between D2 and D1. And, as explained above, the link between claim 1 of the opposed patent and D1 is more tenuous than the passage in the description might at first suggest. Thus it was to be expected that the EPO search would retrieve the document D1, but the board agrees with the appellant proprietor's contention that it not plausible to suppose that the person skilled in the art, starting from the closest prior art, D2, and addressing the objective technical problem derivable from claim 1, would find it. Having generalised his search from electronic postage meters to redundant data processing and storage in general, the person skilled in the art, unguided by foreknowledge of the solution claimed in the opposed patent, would have to delve into

many special fields of control engineering applications before he would eventually find D1. In addition, in the judgement of the board, even if the skilled person found D1, the general tenor of the teaching of the document in relation to reliable fail-safe transmission of actuator commands in a servomechanism type control loop would not lead him to regard it as relevant. Seeing its potential relevance would amount to an inventive insight.

9. For completeness the respondent opponent's argument that in view of the fact that D1 discloses all the features of claim 1 other the electronic postage meter, D1 should be regarded as the primary document, ie the closest prior art leading to the objective technical problem of finding an application in other fields for the teaching of different coding of dual redundantly transmitted and stored data, should be mentioned. Such an argument is contrary to the established jurisprudence of the EPO Boards of Appeal in relation to the problem and solution approach to the assessment of inventive step. According to the latter the demands of realism and fairness mean that such a problem shifting in attacking inventive step is only justified if the subjective problem as presented by the applicant/proprietor is shown to be known and solved.
10. Quite apart from this established jurisprudence of the EPO Boards of Appeal, it appears implausible that the skilled person looking for a problem to which to apply the solution of D1 would consider the field of electronic postage meters as a likely candidate.
11. The board concludes therefore that, having regard to the prior art on file, in particular the prior art

documents D1 and D2, the electronic postage meter constituting the subject matter of claim 1 is not obvious for the person skilled in the art and is therefore to be considered as involving an inventive step within the meaning of Article 56 EPC and that, accordingly, the patent can be maintained unamended, thus granting the main request of the appellant. The appellant's auxiliary request need not be considered.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is maintained unamended.

The Registrar:

The Chairman:

M. Hörnell

W. J. L. Wheeler