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File No.: T 0071/91 - 3.5.1
Application No.: 83 109 604.5
Publication No.: 0 108 899
Classification: G06F 15/16
Title of invention: An electronic document distribution network with
uniform data stream

D E C I S I O N
of 21 September 1993

Applicant: International Business Machines Corp.
Proprietor of the patent:
Opponent:

Headword:

EPC: Art. 52(2), 56

Keyword: "Patentable subject-matter (yes)" - "Inventive step (yes)"

Headnote
Catchwords



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Boards of Appeal

Chambres de recours

Case Number: T 0071/91 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 21 September 1993

Appellant: International Business Machines Corporation
Armonk
New York 10504 (US)

Representative: de Pena, Alain
Compagnie IBM France
Département de Propriété Intellectuelle
F - 06610 La Gaude (FR)

Decision under appeal: **Decision of the Examining Division of the European Patent Office dated 13 August 1990 refusing European patent application No. 83 109 604.5 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: P.K.J. van den Berg
Members: A.S. Clelland
W.M. Schar

Summary of Facts and Submissions

I. European patent application No. 83 109 604.5, filed on 27 September 1983 claiming a priority of 9 November 1982 and published under No. 0 108 899, was refused by a decision of the Examining Division dated 13 August 1990.

II. The reason for the refusal was that the subject-matter of Claim 1 lacked an inventive step having regard to the disclosure of prior art document:

D1: US-A-4 356 546.

Reference was also made in the decision to Article 52(2)(c) EPC.

III. On 9 October 1990 the Applicant lodged an appeal against this decision and paid the prescribed appeal fee. Cancellation of the decision and the grant of a patent was requested. On 12 December 1990 a statement setting out the Grounds of Appeal was filed.

IV. In a communication pursuant to Article 110(2) EPC dated 10 July 1992, the Rapporteur questioned the clarity of Claim 1 and raised the issue of whether the claimed subject-matter related to the presentation of information, i.e. matter excluded from patentability under Article 52(2)(d) EPC.

In reply, the Appellant filed a new set of claims.

V. In a second communication dated 20 January 1993 the Rapporteur expressed the preliminary view that the claimed subject-matter was not clearly distinguished

from the prior art document distribution system acknowledged in the application.

VI. On 26 May 1993 the Appellant filed a new set of claims and drew attention to a document acknowledged in the description:

D2: T. Schick and R.F. Brockish, "The Document Interchange Architecture: A member of a family of architectures in the SNA environment", IBM Systems Journal, Volume 21, Number 2, 1982

VII. Claim 1 reads as follows:

"An electronic document distribution system having a network of communicating data processors and communicating linkages between said processors, each of the processors having means for receiving and means for transmitting (15) a uniform data stream containing:

- first parameters (DOCUMENT PROFILE) in sequence representative of the processing to be performed by a processor relative to a document, and
- second parameters (DOCUMENT CONTENT) representative of the content of said document,

said network being characterized in that it includes higher level processors having a higher level processing capability relative to said first parameters, and at least one lower level processor having a lower level of processing capability relative to said first parameters, said lower level processor further comprising:

- means (22, 23) for determining in said sequence, those parameters that the lower level processor is capable of processing,

- means (21, 24, 25) for:

storing those parameters that the lower level processor is capable of processing in first memory means (DOCUMENT LABEL), and

storing those parameters that the lower level processor is not capable of processing in second memory means (PROFILE VECTOR),

- means (28, 21, 24, 25) for storing said second parameters in third memory means,

- means (12) for processing a received document according to data in first and third memory means, and

- means for, after said processing, reconstituting said received stream for input to said transmitting means."

VIII. The Appellant requests grant of a patent on the basis of Claims 1 to 5 filed on 26 May 1993.

Grounds for the Decision

1. The appeal is admissible.

2. *Admissibility of the amendments*

The Board is satisfied that the amendments to the claims do not extend beyond the content of the application as filed and therefore comply with Article 123(2) EPC.

3. *Exclusion from patentability under Article 52(2) EPC*

3.1 The Board considers that the claimed subject-matter is not excluded from patentability under Article 52(2) EPC.

3.2 The electronic document system of the application consists of a plurality of processors or work stations which receive and transmit documents in the form of a data stream. The data represent both the contents of a document and information on the kind of processing to be performed relative to it. If a processor detects processing information which it is not capable of performing, that information is not merely ignored but is stored in a memory and retrieved when the data stream is transmitted to another processor. The data stream is thus reconstituted and the transmitted data is substantially the same as the received data, no information having been lost.

3.3 It is thus clear that the claimed subject-matter makes a contribution to the art in a field not excluded from patentability (cf. T 38/86, OJ EPO 1990, 384). The claimed system allows downstream processors to respond to all processing information associated with a document whereas, in the prior art system, data which a particular processor cannot use is lost to subsequent processors. This data is, as stated in the description, distinct from the document contents; it may for example

relate to printing operations. It is observed that in an analogous case (T 110/90, point 4, to be published in OJ EPO), the "control of hardware such as a printer" was held not to be excluded under Article 52(2)(c) EPC since it was not concerned with "the linguistic meaning of words of the text". In the present case the data to be processed is also distinct from the content of the document itself.

3.4 The subject-matter of Claim 1 (as well as of each of the dependent claims) is thus held to constitute an invention within the meaning of Article 52(1) EPC.

4. *Inventive step*

4.1 The Board is of the opinion that the closest prior art document is D2. This article, which is acknowledged in the description of the present application, discloses an electronic document distribution system having a network of communicating data processors. Receiving and transmitting means are provided so that documents can be exchanged between processors. The data stream representing the document contains, apart from the document contents, information about "functions required to be performed on the document contents, such as pagination, highlighting, headings, footings, and centering" (page 224).

D2 thus discloses all the features of the first part of Claim 1.

4.2 As already discussed at points 3.2 and 3.3 above, the invention provides a solution to a technical problem which arises in the document processing system known from D2, namely that data which a particular processor cannot use is lost to subsequent processors. This may

occur when a document is sent from a processor having a comparatively high processing capability to a less sophisticated processor having a comparatively low processing capability. In this situation it may happen that the receiving processor is not able to cope with all document parameters (for example printing format), some of which are therefore ignored. If the same document is subsequently forwarded from the less sophisticated processor to a higher capability processor, not all the original document parameters are included in the transmission since the ignored parameters have been lost. This is clearly undesirable.

The claimed solution to the problem provides means for storing the parameters that the lower level processor is not capable of processing. This stored information is retrieved when the data stream is transmitted to another processor. The data stream is thus reconstituted and the transmitted data is substantially the same as the received data, no information having been lost. The claimed system thus allows downstream processors to respond to all processing information associated with a document.

- 4.3 Neither the above-mentioned technical problem nor the claimed solution are suggested in D2. There is a brief indication to the effect that different work stations will generally be differently equipped (page 241, second paragraph), but this is not presented as giving rise to problems. Furthermore, the example of system operation (pages 239 to 241) concerns the distribution of a document directly from the author to each one of a number of addresses, in which case the problem does not occur.

- 4.4 Even if for the sake of argument it is assumed that the skilled man would indeed have recognised the technical problem, it does not appear to the Board that he would have arrived at the claimed solution without the exercise of invention.

A simple storage buffer in each low level processor would suffice to solve the problem by preserving the entire received data stream. The invention, however, goes a step further in separating, before storage, the document contents into the parameters which the processor is capable of processing, and the parameters which it is not capable of processing. Thus, if a document received has to be forwarded to another processor - which would not always be the case - this can be done with the aid of a comparatively small data file containing a number of parameters instead of a complete copy of the original document.

The Board cannot see that these considerations were obvious from D2.

- 4.5 The Board have also considered whether the claimed subject-matter involves an inventive step in the light of the disclosure of D1, the document on which the contested decision was based.

D1 describes a fault-tolerant multi-computer system for control applications. Each processor in the system receives "messages" from the other processors with information about their processing states. The messages contain data calculated by the other processors. When a processor has received all the data necessary to perform one of the tasks assigned to it, it performs the task and informs the other processors of the fact by means of a message.

Leaving aside the fact that D1 does not concern a document distribution system (at least if "document" is given the narrow meaning implied by the context), it can be seen that the data stream received by a processor is not forwarded after processing to other processors of the system; there is no reason for this since messages are transmitted to all processors simultaneously. This difference was recognised by the Examining Division but it was found obvious to provide the missing feature since it could be realised "e.g. by a simple conductor or buffer outside the particular processor". However, Claim 1 in its present wording excludes a mere conductor or buffer. Since the processors according to D1 need not be able to reconstitute a data stream from previously received and stored data, the technical problem underlying the invention is not evident from this document. The Board accordingly concludes that the skilled man, faced with the Appellant's problem and aware of the disclosure of D1, would not have arrived at the claimed solution without the exercise of inventive skill.

4.6 Nor does it appear to the Board that any combination of D1 with D2, or of either of these documents with any other document of which the Board is aware, would lead the skilled man to the claimed invention. The invention as claimed in Claim 1 is accordingly held to involve an inventive step.

5. Although the present claims have been held allowable, the Appellant has not yet filed an introduction to the description corresponding to the claims. For this reason it is necessary to remit the application to the Examining Division for examination to be completed.

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order that further prosecution is to be based on Claims 1 to 5 filed on 26 May 1993.

The Registrar:

The Chairman:

M. Kiehl

P.K.J. van den Berg