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D E C I S I O N
of 29 January 2002

Case Number: T 0130/00 - 3.5.1

Application Number: 94300006.7

Publication Number: 0606131

IPC: H04N 1/32

Language of the proceedings: EN

Title of invention:

Method for compiling multiple jobs with job reference sheets

Applicant:

XEROX CORPORATION

Opponent:

-

Headword:

Job reference sheets/XEROX

Relevant legal provisions:

EPC Art. 52(1), 56

Keyword:

"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



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Boards of Appeal

Chambres de recours

Case Number: T 0130/00 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 29 January 2002

Appellant: XEROX CORPORATION
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Representative: Grünecker, Kinkeldey,
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 7 September 1999
refusing European patent application
No. 94 300 006.7 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: S. V. Steinbrener
Members: R. Randes
P. Mühlens

Summary of facts and Submissions

I. This is an appeal against the decision by the Examining Division to refuse the present European patent application because the independent claims of the main and first auxiliary requests lacked inventive step in view of the following documents:

D1: EP-A-0 366 425

D2: US-A-4 987 447.

The Examining Division held that the subject-matter of the independent claims of the main request lacked inventive step in view of either the teaching of D1 in combination with common general knowledge or the combination of the teachings of documents D1 and D2.

II. In response to the statement of the grounds of appeal, in which the Appellant defended the independent claims of the main request as well as those of the auxiliary request as refused by the Examining Division, the Board in an annex to the summons to oral proceedings expressed the preliminary opinion that the subject-matter of the independent claims, at least of the main request, did not appear to involve an inventive step.

III. In the oral proceedings, held before the Board on 29 January 2002, the Appellant **requested**

that the **decision** under appeal **be set aside** and

that the **patent be granted** on the **basis of claims 1 to 5** of the request filed in the oral proceedings.

The independent claims 1 and 4 according to this request read as follows:

"1. A method of forming an assembled job from a first job (156), represented by a first set electronic pages, and a second job (156), represented by a second set of electronic pages, in an electronic printing system (2) having a printer (8) and a scanner (6) adapted to convert the jobs (156) into sets of electronic pages and to decode machine-readable code, comprising the steps of:

scanning said first and second job to generate said first and second set of electronic pages, storing the first set of electronic pages at a first location in a memory section (61);
assigning a first unique job identifier to the stored first job (156) for indicating the first location of the stored first job (156) in the memory section (61);
on demand, automatically printing a first job reference sheet (170) comprising the first unique job identifier in machine-readable code;
storing the second set of electronic pages at a second location in the memory section (61);
assigning a second unique job identifier to the stored second job (156) for indicating the second location of the stored second job (156) in the memory section (61);
on demand, automatically printing a second job reference sheet (170) comprising the second unique job identifier in machine-readable code;
upon scanning the first job reference sheet (170):
reading the first unique job identifier comprised on the first job reference sheet (170), and

accessing the first set of electronic pages stored at the first location in the memory section (61) identified by the read first unique job identifier (170);
upon scanning the second job reference sheet (170):
 reading the second unique job identifier comprised on the second job reference sheet (170), and
 accessing the second set of electronic pages stored at the second location in the memory section (61) identified by the read second unique job identifier;
in response to the scanning the first job reference sheet (170) and the second job reference sheet (170):
 compiling the first set of electronic pages with the second set of electronic pages, and storing said compiled set at a memory location to form the assembled job.

4. An electronic printing system (2) for forming an assembled job from a first job (156), represented by a first set of electronic pages, and a second job (156), represented by a second set of electronic pages, comprising:

 a scanner (6) being adapted to convert the first job (156) into the first set of electronic pages and the second job (156) into the second set of electronic pages;
 means (61) for storing the first set of electronic pages at first location and the second set of electronic pages at second location;
 means being adapted to assign a first unique job

identifier to the stored first job (156) for indicating the first location of the stored first job (156) and a second unique job identifier to the stored second job (156) for indicating the second location of the stored second job (156); a printer (8) being adapted to print on demand automatically a first job reference sheet (170) comprising the first unique job identifier in machine-readable code and a second job reference sheet (170) comprising the second unique job identifier in machine-readable code; the scanner (6) further being adapted to scan the first job reference sheet (170) and the second job reference sheet (170), and to decode machine-readable code, for reading the first unique job identifier comprised on the first job reference sheet (170) and reading the second unique job identifier comprised on the second scanned job reference sheet (170); means for accessing the first set of electronic pages stored at the first location identified by the read first unique job identifier and the second set of electronic pages stored at the second location identified by the read second unique job identifier; and means adapted to compile, in response to scanning the first job reference sheet (170) and the second job reference sheet (170), the first set of electronic pages with the second set of electronic pages and to store said compiled set at a memory location to form the assembled job."

IV. During the oral proceedings the Appellant expressed the view that the prior art documents D1 and D2 could not destroy the inventive step of the subject-matter of the

independent claims, since the documents did not hint at the core of the invention at all, i. e. that the "reference sheets" according to the present invention were used as place holders and that they were used to fetch data concerning the corresponding job from memory by means of the unique job identifier adhered to them, so that the operator did not need to load stacks of document batches of those jobs onto the input tray of the reproduction apparatus. Moreover the assembled jobs stored in memory could, if necessary, be combined ad lib with other jobs later on.

Reasons for the decision

1. The appeal complies with the provisions mentioned in Rule 65(1) EPC and is therefore admissible.

2. The Board notes that the independent claims of the only request concern compiling a plurality of jobs into a single, assembled job in an efficient manner. These claims correspond to the independent claims of the former auxiliary request, also refused by the Examining Division, albeit for some clarifying additions. All claims meet the requirements of Article 123(2) EPC.

3. The Examining Division relied in its refusal on documents D1 and D2. In the opinion of the Board none of these documents point in the direction of the present invention. Also a combination of the two documents does not appear to lead the skilled man to the invention.
 - 3.1 The "job ticket" described in D1 could at first sight be compared with that of the reference sheet of the present invention. The "job ticket" can according to D1

be produced at an input station 90. When a job program is to be entered, a blank "job ticket" is called up and displayed on screen 95. Using keyboard 93 and mouse 94 the desired job options shown on the "job ticket" displayed on screen 95 are electronically filled in. A job identification number 105 for a particular job is entered and coded (bar code) at 104. Memory 14 stores the completed job program and an electronic copy of the "job ticket" 100. Moreover a hard copy of the "job ticket" 100 is printed out for assembly with a batch 73 of documents 70 that comprise the job. The document batches 73, together with the corresponding "job tickets", are loaded on a tray 74 (cf. figures 2 and 5) of the automatic document handler 10 of the printer. During printing, the "job ticket" 100 accompanying the batch of documents 70 is scanned by the input scanner 7 along with the documents 70 and the job identification number 105 is obtained. Using the job identification number, the job program stored in memory 14 for that job number is addressed (cf. D1, column 8, lines 21 to 29).

It appears to the Board that the "job ticket" described in D1 has a different function to the "reference sheet" according to the invention. The "job tickets" are added to every batch of documents belonging to a certain job in a stack of a plurality of jobs. The job identification number of a ticket designates the memory location at which the printing instructions concerned are stored. Thus the "job tickets" are only used to fetch program instructions from a memory for the machine setup and are not place holders in the sense of the reference sheets according to the present invention. The data content of the real jobs to be printed is not stored in a memory at all, but is

provided by scanning all the document sheets of the respective jobs (document batches) concerned. According to the invention however the pages to be printed are retrieved by simply reading the job reference sheet which physically replaces the job.

- 3.2 D2 discloses a reproduction apparatus wherein a "control sheet" is used like the "job ticket" in D1 to control the setup of the of the apparatus during reproduction. The "control sheet" avoids manual operation of entering setup information at a control panel. As pointed out by the Appellant, this setup information is related to a particular setup and is therefore related to the reproduction apparatus and not to the job.

The reproduction apparatus according to D2 comprises a printer (marking engine 12) comprising a multi-page image buffer 20. The data to be printed is fed to buffer 20 either from a scanner 14 or from a raster image processor 16 containing a job buffer 52 which stores incoming jobs for use by a master processing unit 50 within the processor 16. If it is desirable to save setup function instructions for subsequent jobs a forms generator 44, which reads the setup instruction values from RAM 42, generates a rasterised bit map of machine readable indicia corresponding to the setup instructions. The bit map is transmitted to the printer which produces a "control sheet", bearing machine readable setup instructions. Later on the "control sheet" can be inserted in a stack of originals to be copied, or may be used in conjunction with a print job to precondition the printer configuration (D2, column 3, lines 18 to 30). When the "control sheet" is scanned the machine must recognize that it is indeed

the "control sheet". One way of doing this would, according to D2, be to press a special button, but preferably the "control sheet" could bear an indicia which is recognized by the scanner logic.

Thus, as pointed out by the Appellant, the "control sheet" mentioned in D2 serves the same purpose as the "job ticket" in D1, both define the printing instructions. A difference may be seen in the fact that the "control sheets" of D2 contain the printing instructions in machine readable form, whereas the "job tickets" of D1 merely comprise an address indication of where to find the respective printing instructions in memory.

- 3.3 Hence the subject-matter of claim 1 (and corresponding device claim 4) differs from the teachings of documents D1 and D2, respectively, in substance by the features relating to storage of the scanned jobs in a memory section and generation of machine readable "place holders" which, when scanned, allow compilation of the stored jobs.

The subject-matter of the independent claims is thus novel with respect to the prior art identified (Article 54 EPC).

- 3.4 Having regard to the teaching of either D1 or D2, it appears to the Board that the subject-matter of the independent claims solves the problem of providing a technique for compiling a plurality of jobs into a single, assembled job in an efficient and flexible manner, as set out in the original application documents (see column 3, lines 26 to 30 of the published application). By using "reference sheets"

having unique job identifiers indicating the corresponding locations of the corresponding jobs in a memory the invention achieves a very efficient and flexible composition of differently assembled jobs. By physically assembling the "reference sheets" in a desired order, scanning them and compiling the corresponding sets of electronic pages an assembled job is created which is stored at a specific memory section and which can be arbitrarily used later on for printing (as to the point in time, number of copies, combination with other jobs etc.). Comparing the invention with the prior art it therefore appears that the efficiency and flexibility of a reproduction system has been greatly increased, which is also manifestly demonstrated in the example in the present patent application (column 11, line 13 onwards). There is no doubt that the physical workload of the operator has been significantly reduced and that the planning and organisation of future jobs at his reproduction system has been simplified.

- 3.5 The Examining Division expressed the opinion that a person skilled in the art, who at the priority date of the present patent application (04-01-1993) was aware that the store capacity of electronic memories had increased in relation to that of the memories used in D1 (priority date 24-10-1988), would not merely store the printing instructions for a particular job to be printed, but also the content of the pages of the job.

The Board, however, agrees with the opinion of the Appellant that even at the priority date of D1 the capacity of memories was such that the whole content of even a plurality of jobs could have been stored in memory. It is true that the capacity of RAM's is constantly being increased. However, memories with

large capacities have existed for a very long time (as main memories and external memories). Moreover document D2 (filed 18-09-1989 and published 22-01-1991) discloses a multi-page image buffer 20 (which in itself is not the object of the claimed invention of D2 and at that time apparently was of a quite normal capacity) in the printing section 12 which is sufficient to store all the pages of a particular job so that plural sets of collated pages may be produced. The Board is therefore of the opinion that it cannot be concluded that the development of memories between the priority dates of D1 and the present invention could have led a skilled person in the direction of the invention.

- 3.6 It is true that according to D2 the data stored for a particular job in the job buffer 52 has to be retrieved using a "control sheet". However, there is no hint in D2 that the "control sheet" is provided with an address for accessing data stored in the buffer (cf. point 3.2 above). As pointed out above, the "control sheets" only bear the machine readable setup instructions for the job and possibly further jobs to be printed. Although the teaching of D1 indicates that the setup instructions for a specific job can be stored and later on fetched from a memory with the aid of a job identification number on the "job ticket", the Board, contrary to the Examining Division, finds that a combination of the teachings of D1 and D2 would not lead a skilled person to the invention, since such combination does not neither disclose, nor hint at, the claimed "place holder" concept.

4. The Board therefore concludes that the subject-matter of independent claims 1 and 4 as filed in the oral proceedings involves an inventive step (Articles 52(1)

and 56 EPC) and is therefore allowable. Dependent claims 2, 3 and 5 also meet the requirements of the EPC.

5. The Board notes that the description of the patent application has not yet been adapted to the new claims. Moreover, it seems that there are parts of the description apparently requiring amendment (see the published application, for example column 9, lines 22 and 53 and column 10, line 3 - "incorporated by reference") to meet the requirements of the EPC. The Board therefore considers it appropriate to remit the case to the first instance for adaptation of the description and grant of a patent with the claims now under consideration.

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 for further prosecution.

The Registrar:

The Chairman:

M. Kiehl

S. V. Steinbrener