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Case Number: T 0207/06 - 3.4.03

Application Number: 03002688.4

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IPC: G07F 5/18

Language of the proceedings: EN

Title of invention:
Imaging apparatus and method for equitable and simple charging of its use

Applicant:
Ricoh Company, Ltd.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54, 83

Keyword:
"Main request: Novelty (no)"
"1st and 2nd auxiliary request: sufficiency of disclosure (no)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0207/06 **-** 3.4.03

D E C I S I O N
of the Technical Board of Appeal 3.4.03
of 18 April 2008

Appellant: Ricoh Company, Ltd.
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Ohta-ku
Tokyo 143-8555 (JP)

Representative: Schwabe - Sandmair - Marx
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 20 October 2005 refusing European application No. 03002688.4 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: R. G. O'Connell
Members: V. L. P. Frank
J. Van Moer

Summary of Facts and Submissions

I. This is an appeal from the refusal of application 03 002 688 for lack of inventive step (Article 56 EPC).

II. The appellant applicant requested that the decision under appeal be set aside and that a patent be granted on the basis of main, first or second auxiliary requests.

III. Claim 1 of the main request as amended on appeal reads (the changes with respect to the refused version marked by the board):

"A charging method using a use point that is a unit, common to a plurality of imaging apparatuses **being connected to a network** for charging according to use thereof, the charging method comprising the steps of:

(a) providing a set of contents of a use point system stored in a memory as a conversion table;

(b) converting a result of use of each of functions of each of the apparatuses to use points;

(c) totalling the use points of each of the apparatuses obtained in said step (a) based on a predetermined unit;

(d) charging for use of each of the apparatuses based on the use points totalled in said step (c);

(e) calculating, if each of the apparatuses has a normal mode and a power-saving mode as functions, the use points of each of the apparatuses in each of the normal and power-saving modes **to determine which mode is the more suitable concerning the degree of consumption** ~~and displaying the~~

~~calculated use points of each of the normal and power-saving modes of each of the apparatuses~~."

Claim 1 of the first auxiliary request reads as follows (amendments with respect to the main request marked by the board):

"A charging method **carried out automatically by a computer and** using a use point that is a unit, common to a plurality of imaging apparatuses being connected to a network ~~for~~ of charging according to use thereof, the charging method comprising the steps of:

(a) providing a set of contents of a use point system stored in a memory as a conversion table;

(b) converting a result of use of each of functions of each of the apparatuses to use points;

(c) totalling the use points of each of the apparatuses obtained in said step (a) based on a predetermined unit;

(d) charging for use of each of the apparatuses based on the use points totalled in said step (c);

(e) calculating~~, if each of the apparatuses has a normal mode and a power-saving mode as functions,~~ the use points of each of the apparatuses in each of the normal and power-saving modes to determine which mode is the more suitable concerning the degree of consumption;

(f) displaying the use points for each of said modes."

Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request in point (b) which has the following wording (emphasis added by the board):

"(b) converting a result of use of each of functions of each of the apparatuses to use points, **wherein the memory with the conversion table is configured to store the correlation between the use of each function and corresponding use points and wherein the state of use of each function of each of the plurality of imaging apparatuses is converted into use points by referring to the conversion table**;"

The claims also comprise independent claim 10 directed to an imaging apparatus which, however, has no relevance for this decision.

IV. The following prior art document was cited in the examination procedure:

D1: US 6 216 113 B

V. The reasoning of the decision under appeal no longer applies to the present claims, since the method of claim 1 now requires that the calculated use points in the normal and power-saving modes are used for determining which mode is the more suitable concerning the degree of consumption

VI. The appellant applicant argued essentially as follows:

– It was the technical object of the present invention to measure the consumption of resources of a plurality of imaging apparatuses, wherein the consumption of resources could be measured for each of the imaging apparatuses separately, to determine which of two different operational modes saved more resources.

– According to the invention, the consumption of all the different consumable resources were converted into use points so that the consumption in a normal mode and in a power-saving mode could be compared on the basis of a standardized use point system. The reactivation from the power-saving mode into the normal mode consumed a lot of electrical power. The constant operation in the normal mode, however, consumed still more power, so that it was advisable to switch the imaging apparatus into the power-saving mode. On the other hand, in case an imaging apparatus was switched into the power-saving mode too often, this surprisingly consumed still more electrical power. Also the consumption of other resources depended on the operational mode, the sequence of operational modes over a time period, etc. According to feature (e) of claim 1 the use points were calculated and on the basis of the calculation it was determined whether the normal mode or the power-saving mode was more suitable.

– The weighting factors disclosed in document D1 were only used in a particular job, eg a job to print color sheets or to print in a duplex mode, to charge the client with a different amount of money for the different services used. The weighting factors only allowed the calculation of a different fee on the basis of a differentiation between different jobs. There was no suggestion in D1 to use the "use points" as units of a generalized measurement for comparing the consumption of resources.

– According to D1, it was necessary to use respective counters for each of the different services provided. When calculating the different amounts to be charged for a normal and a power-saving mode, the required configuration would be more complicated than the solution proposed in the present invention, which proposed to provide a memory configured as a conversion table, so that it was only required to request the corresponding use point values from the memory and to add up these values to come to a final result. According to D1, it would have been necessary to calculate a value separately for each function in the normal mode as well as in the power-saving mode and to sum up the calculated values. This was more CPU-time consuming and needed more effort.

Reasons for the Decision

1. The appeal is admissible.

2. *Main request – Novelty (Article 54 EPC)*

2.1 Claim 1 of the main request is directed to "a charging method using a use point that is a unit, common to a plurality of imaging apparatuses being connected to a network for charging according to use thereof".

Step (e) defines: "calculating, if each of the apparatuses has a normal mode and a power-saving mode as functions, the use points of each of the apparatuses in each of the normal and power-saving modes to

determine which mode is the more suitable concerning the degree of consumption."

2.2 It follows that the calculation defined in step (e) is not necessarily done when one of the imaging apparatus connected to the network does not have a power-saving mode as function, since it can be assumed that all apparatuses have a normal mode. In such cases the method of claim 1 is defined as comprising steps (a) to (d).

2.3 Document D1 discloses a charging method comprising steps (a) to (d), namely in the words of claim 1:

A charging method using a use point that is a unit, common to a plurality of imaging apparatuses being connected to a network for charging according to use thereof (column 1, lines 4 to 6)

The charging method comprises the steps of:

(a) providing a set of contents of a use point system stored in a memory as a conversion table (D1 discloses weighting factors and a weighting logic for assigning these factors. It is implicit that these factors are stored in a memory as a conversion table which relates each function of the printer to its corresponding weighting factor; column 4, lines 48 to 53);

(b) converting a result of use of each of functions of each of the apparatuses to use points (in D1 the printing machine has a plurality of modes of operation to effect recurring events and includes apparatus for generating a weighted total of events by assigning weighting factors to each

event; column 1, lines 43 to 47; the correspondence between the use points and the weighting factors will be discussed below);

(c) totalling the use points of each of the apparatuses obtained in said step (a) based on a predetermined unit (column 1, lines 49 to 50);

(d) charging for use of each of the apparatuses based on the use points totalled in said step (c) (column 1, lines 51 to 54).

2.4 The appellant applicant argued that the "use points" of the present invention could not be equated with the weighting factors disclosed in D1. However, D1 discloses that a weighting factor is assigned to each function of the printer, eg a double sided print has a higher weighting factor than a single sided one, since the former is more costly than the latter, so that a billing total can be formed. The board considers that the use point system of the present invention is nothing else and allows, as done in D1, to add up things which differ in nature. Although electric power consumption is not an issue in D1, the charging method of claim 1 does also not address this issue in steps (a) to (d). It is only in step (e) where the normal and power-saving modes are considered and compared, but this is done, as already mentioned, only if each of the apparatus connected to the network possesses such modes.

2.5 For these reasons the board judges that the charging method according to claim 1 of the main request is not new over the disclosure of document D1.

3. *First and second auxiliary requests – Sufficiency of disclosure (Article 83 EPC)*

3.1 Step (e) of claim 1 is the same for the 1st and 2nd auxiliary request and reads as follows:

"(e) calculating the use points of each of the apparatuses in each of the normal and power-saving modes to determine which mode is the more suitable concerning the degree of consumption;"

This implies that the calculation is always done.

3.2 Although the term calculation involves in principle any mathematical operation, the description does not give any details of the calculation itself or on any mathematical model underlying it. It is disclosed that "If the apparatus 1 has a normal mode and a power-saving mode, the use points may be calculated in each of these modes and displayed as required. The client can determine, referring to the calculated use points of each of the modes, which of the two is the more suitable, to frequently switch off the power or to use the power-saving mode. This helps the client save power and reduce costs" ([0062] and [0063] of the published application).

3.3 The board interprets therefore the above mentioned calculation as adding up the use points from staying in the normal and in the power-saving mode. Thus two separate totals are formed from the use points "spent" in each one of these modes. Obviously not all use points are added up, but only those relating to the power consumption. It would make no sense, according to

the appellant's representative, to add up the use points due to the printing operations in the normal mode, since no printing is possible in the power-saving mode. Therefore, a use point unit is assigned eg for every minute spent in one of these modes and two totals are formed corresponding to the total time spent in the normal or in the power-saving mode.

3.4 The appellant has argued that although the power-saving mode consumed less power than the normal mode, the switching from the former to the latter required additional electric power and that, therefore, frequent switching from one mode to the other could surprisingly result in a higher power consumption than staying in the normal mode.

3.5 The application does not disclose that the switching operation between these two modes is recorded or taken into consideration when doing the calculation. However, a comparison between the total power, or equivalently the total use points, consumed in each of the two modes does not allow a determination as to "which mode is the more suitable concerning the degree of consumption" as defined in claim 1. The use points for the normal and power-saving modes would add up to the same amount if (a) the apparatus stayed for one single continuous interval of time in the normal mode and the remaining time in the power-saving mode or if (b) it switched back and forth between both modes. Case (a) involves one switching operation, while case (b) involves an arbitrary number of them.

3.6 The board therefore judges that the invention according to claim 1 of the 1st and 2nd auxiliary requests has not

been disclosed in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art, as the calculation required to determine which mode is the more suitable has not been disclosed.

Order

For these reasons it is decided that:

The appeal is dismissed.

Registrar | Chair

S. Sánchez Chiquero | R. G. O'Connell