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Datasheet for the decision of 29 October 2013

Case Number: T 2063/09 - 3.5.04

Application Number: 07109089.8

Publication Number: 2007128

IPC: H04N1/393, H04N1/00

Language of the proceedings: EN

Title of invention:
System and method for resizing images prior to upload

Applicant:
BlackBerry Limited

Headword:

Relevant legal provisions:
EPC 1973 Art. 56

Keyword:
Inventive step - (no)

Decisions cited:
G 0003/08, T 0154/04, T 0641/00

Catchword:
See point 5 of the Reasons

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Case Number: T 2063/09 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 29 October 2013

Appellant: (Applicant)	BlackBerry Limited 2200 University Avenue East Waterloo, ON N2K 0A7 (CA)
Representative:	MERH-IP Matias Erny Reichl Hoffmann Paul-Heyse-Straße 29 80336 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 26 May 2009 refusing European patent application No. 07109089.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman:	F. Edlinger
Members:	M. Paci
	B. Müller

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division refusing European patent application No. 07 109 089.8 published as EP 2007128 A1.

II. The decision under appeal was a decision according to the state of the file, as requested by the appellant, referring for its reasons to a previous communication dated 9 April 2009. In that communication, the following prior-art documents had been cited:

D1: US 7 027 084 B1,
D2: US 2002/0037711 A1,
D3: EP 1672902 A2 and
D4: US 2002/0051074 A1.

III. The application was refused on the grounds that amended claims 1 and 6 did not meet the requirements of Article 123(2) EPC and that, even if this objection were overcome by limiting the "periodical allotment" to the "monthly allotment" disclosed in paragraph [0047] of the application as filed, their subject-matter would still not involve an inventive step (Article 56 EPC 1973) in view of the skilled person's common general knowledge as evidenced in prior-art documents D1 to D4.

IV. With the statement of grounds of appeal the appellant filed amended claims 1 to 11 replacing the claims previously on file.

V. In a communication under Article 15(1) RPBA annexed to the summons to oral proceedings the board expressed the preliminary opinion that claims 1 and 6 did not comply with the requirements of Article 123(2) EPC (added

subject-matter) and Article 84 EPC 1973 (clarity) and that the subject-matter of claims 1 to 11 lacked an inventive step when starting from D1.

VI. In a letter of reply dated 27 September 2013, the appellant filed claims 1 to 9 according to a main request and claims 1 to 7 according to an auxiliary request, replacing the claims previously on file.

VII. On 29 October 2013, the board held oral proceedings, at the end of which it gave its decision orally.

VIII. The appellant's final requests are that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main or auxiliary request, both sets of claims filed with the letter of 27 September 2013.

IX. Claim 1 according to the appellant's **main request** reads as follows:

"A method of resizing an image on a handheld mobile communication device prior to uploading to an image repository account, comprising:
- determining a size of an original image;
- determining any upload size restrictions for uploading the image to the image repository account, the upload size restrictions including the amount of memory used on a user's image repository account in a month, the memory being allotted monthly to the image repository account;
- recommending a storage conservation mode in order to comply with upload size restrictions;
- upon receiving selection of the storage conservation mode, determining a reduced image size by one of:

- defaulting to a specified reduced size; or
- determining the reduced image size in dependence upon how much space remains in the user's monthly allotment; and

- resizing the original image to the reduced image size."

X. Claim 1 according to the appellant's **auxiliary request** reads as follows (the differences compared with claim 1 according to the main request are either underlined (additions) or struck out (deletions)):

"A method of resizing an image ... [see point IX above]
- determining the reduced image size in dependence upon how much space remains in the user's monthly allotment; ~~and~~
- extracting meta-data from the image prior to resizing;
- resizing the original image to the reduced image size, to generate a new resized image; and modifying the extracted meta-data to replace the original image size with the size of the new resized image while preserving other information in the extracted meta-data."

XI. The examining division's reasoning for refusing the application, in as far as it remains relevant to the present decision, can be summarised as follows:

Even if the objection under Article 123(2) EPC were overcome by correctly including in claim 1 or 6 the features of the embodiment described in paragraph [0047] of the application as filed, the claimed subject-matter would still not involve an inventive step for the following reasons:

Resizing an image on a mobile communication device prior to uploading to some image repository or other recipient depending on some restrictions for uploading the image is well known in the art and disclosed in each of documents D1 to D4.

The handling of "allotments" or "quotas", including "allotment of upload usage per month", is generally known in distributed storage systems, e.g. as commonly used in volume contracts of Internet providers. As resources are not infinite, a designer of an image repository management system will invariably encounter the problem of limited storage space. It would be obvious to the skilled person to use image resizing, as commonly done in the case of restricted bandwidth (D1, D2) or file size (D3) in order to be able to transfer images when storage space or "allotment of upload usage" approaches a limit.

Thus, the skilled person, having at hand the general knowledge available at the priority date of the present application, as made evident in documents D1 to D3, would have arrived at the claimed invention without performing an inventive step (Article 56 EPC 1973).

XII. The appellant's arguments regarding claim 1 according to the final requests can be summarised as follows:

(A) Main request

According to the board's provisional opinion, the closest prior art is the method of uploading an image from a handheld mobile communication device to an image repository account which is carried out when the user selects the "PHOTO UPLOAD" option shown in figures 7 and 20 of D1. The appellant notes in this respect that

this method is hardly described in D1 and is not the main focus of the document, which relates essentially to the transmission of images between handheld mobile communication devices.

The appellant considers that the method of claim 1 involves an inventive step in view of D1 and the skilled person's common general knowledge essentially for the following reasons:

(a) The embodiments of D1 relating to the transmission of images between handheld mobile communication devices address a problem of limited communication speed, not one of limited storage space as in claim 1. The appellant disagrees with the board's assertion that the two problems are related.

(b) The skilled person, in search of a solution to the objective technical problem defined by the board, would not attempt to solve this problem by performing a complex task such as resizing an image as in claim 1. Instead, he/she would try to find more memory space, either by deleting older images, purchasing more memory space or waiting for the next month's allotment.

(c) There is no suggestion in D1 of determining the amount of memory used on the user's image repository account and of resizing the image in dependence upon how much memory space remains in the user's monthly allotment. This determination requires a two-way communication between the handheld device and the repository in order to re-evaluate the available memory space each time. In contrast, in D1, as long as the telephone remains on the same communication network (e.g. the same telephone line), the communication speed

is unchanged and there is no need to re-evaluate the limitation due to communication speed.

(d) The method of claim 1 includes a recommendation of a storage conservation mode followed by a positive selection of this recommendation before the resizing of an image. In contrast thereto, D1 teaches away from a positive selection because the resizing of an image occurs automatically after selection of the "image mail" option shown in figures 7 and 20.

(B) Auxiliary request

According to D1 (see figure 11 and the corresponding description in columns 11 and 12) the metadata of the resized image comprises the number of pixels of the **original** image, not of the **resized** image as defined in claim 1. In D1, the number of pixels of the original image must be in the metadata because the user receiving the resized image may request that a higher resolution version of the image be sent to him/her and thus needs to know there is a higher resolution version available (see "request for enlargement" in figure 15 of D1). D1 thus teaches away from replacing the original image size by the resized image size in the metadata.

Reasons for the Decision

1. The appeal is admissible.

Main request - inventive step (Article 56 EPC 1973)

2. Closest prior art

D1 discloses an image communication system (see figure 1) comprising handheld mobile communication devices (see "communication systems" 80A and 80B, each consisting of a digital still camera and a mobile phone), a network and a server (90) to which a printer (100) is connected. A handheld mobile communication device may transmit data, in particular image data, via the network either to another handheld mobile communication device or to the server.

In the communication system of D1, a user can select from a menu on his/her handheld mobile communication device (see figures 7 and 20) to transmit image data according to one of the following options:
(1) transmission to the server for printing (option 1 "Print" in figures 7 and 20);
(2) transmission to another handheld mobile communication device (option 2 "Image mail" in figures 7 and 20);
(3) transmission to the server for upload (option 3 "Photo upload" in figures 7 and 20).

The board regards the method of uploading image data from a handheld mobile communication device to a server, carried out when the user selects option 3 above, as the **closest prior art** for the subject-matter

of claim 1. Although D1 does not spell out the steps of this method, it is implicit that the method includes a step of determining the size of the original image (see column 11, line 53, to column 12, line 6, and, in figure 11, data stored in the camera indicating the number of pixels of an original image) and that it must comprise all the necessary conventional steps for carrying out the transmission of the image data to the server, such as establishing a communication via a suitable protocol between the handheld mobile communication device and the server.

The appellant did not dispute that this method of D1 is a suitable starting point for the assessment of inventive step, but noted that it is hardly described in D1 and that the main focus of the document is on the transmission of images between handheld mobile communication devices, not from a handheld mobile communication device to a server.

The board concurs with the appellant that the method of uploading image data from a handheld mobile communication device to a server is not the main focus of D1, but considers that this fact alone does not exclude this method from being the closest prior art.

3. Distinguishing features

The method of claim 1 **differs** from the above method of D1 by the following features:

(i) determining any upload size restrictions for uploading the image to the image repository account, the upload size restrictions including the amount of memory used on a user's image repository account in a month, the memory being allotted monthly to the image repository account;

(ii) recommending a storage conservation mode in order to comply with upload size restrictions;

(iii) upon receiving selection of the storage conservation mode, determining a reduced image size by one of:

- defaulting to a specified reduced size; or
- determining the reduced image size in dependence upon how much space remains in the user's monthly allotment; and

(iv) resizing the original image to the reduced image size prior to uploading to the image repository account.

4. The skilled person

In the board's judgement, the skilled person for the subject-matter of claim 1 is an average practitioner in the technical field of processing, transmission and storage of data. This has not been disputed by the appellant.

5. Objective technical problem

As stated in distinguishing feature (ii) *supra*, the amount of memory space available in a user's image repository account for uploading images is limited to a given amount per month.

In the board's view, this limitation of the memory space available to the user on a monthly basis, rather than on any other basis, is the result of considerations of a financial, administrative or commercial nature, such as the definition of a pricing model for charging users for the use of the image repository. These considerations are of a non-technical nature.

According to the jurisprudence developed in decision T 641/00 "Two identities/COMVIK", OJ EPO 2003, 352, point 5 *et seq.* of the Reasons, and further explained in decision T 154/04 "Estimating sales activity/DUNS LICENSING ASSOCIATES", OJ EPO 2008, 46, point 16 of the Reasons, which may be regarded as well-established (see also G 3/08, OJ EPO 2011, 10, point 10.13.2 of the Reasons), if the problem is based on a mix of technical and non-technical considerations, the objective problem may have to be formulated by including the non-technical aspects, whether novel or not, as part of the framework of the technical problem that is to be solved, in particular as a constraint that has to be met.

Applying this approach to present claim 1, the monthly allotment of memory space on the user's account should be regarded as **a constraint** which the skilled person has to meet.

The board thus considers that the **objective technical problem** should be reformulated, by taking into account this constraint while avoiding pointers to the solution, as being to provide an improved method of uploading image data stored on a handheld mobile communication device to a user's account at an image repository, wherein the memory available in the user's account for uploading image data is allocated monthly.

The appellant did not dispute this formulation of the objective technical problem.

6. Obviousness

D1 does not mention any image size restriction when transmitting image data **from a handheld mobile communication device (80A) to a server (90):** see figure 23 which illustrates such a transmission to the server, though for printing the image, not merely for uploading it.

However, when the skilled person is given the additional constraint (see point 5 *supra*) that the amount of image data which may be uploaded to a user's account on the server of Dl is allocated on a monthly basis, he/she must consider the technical consequences thereof. One immediate consequence is that a user might reach his/her monthly limit before the end of the month and thus either be charged additional costs or be unable to upload further images until the beginning of the following month. As this would normally be a disadvantage for the user, it is reasonable to assume that the skilled person would attempt to solve the problem of how to avoid or at least mitigate this disadvantage.

D1 addresses a related problem concerning the situation in which an image is transmitted between two handheld mobile communication devices, namely one of communication speed limitation (see, for instance, column 1, lines 14 to 24, 39 and 40). The solution to this problem proposed in D1 is to reduce the size of the image prior to its transmission from one handheld mobile communication device (80A) to another (80B).

In the board's view, the skilled person would have regarded the problems of limited storage space and limited communication speed as closely related because

both may require that the amount of data be reduced before transmission, a limited communication speed limiting the image size that can be transmitted over a given period of time. Hence, in view of the teaching of D1 that an image file should be resized before transmission in order to overcome a communication speed limitation, it would have been obvious for the skilled person to consider reducing the size of an image prior to uploading it to the user's account on the server of D1, in dependence upon the amount of memory space still available in the user's account on the server according to the user's monthly allotment (and also in dependence upon the amount of memory used in the account that month, because the memory space used and the memory space remaining are closely related, the sum of both being equal to the monthly allotment). The skilled person would thus have arrived at distinguishing features (i) and (iv) *supra*.

Moreover, in this context, the board also regards distinguishing features (ii) and (iii) as obvious for the following reasons:

- Distinguishing feature (ii) is just a way of saying that the user's consent is requested before resizing the image, which is obvious because the user may not want his/her images to be resized.
- D1 teaches that the resizing ratio may either remain the same regardless of the communication speed (see column 12, lines 31 to 33) or it may depend on the communication speed between the two devices, wherein the lower the communication speed the smaller the resized image should be (see, in particular, column 12, lines 36 to 51, and figures 12 to 14). It would thus be straightforward in view of this teaching to either default to a specified reduced size or to use a resizing ratio depending on the remaining amount of

memory space in the user's account, thereby arriving at distinguishing feature (iii).

For the above reasons, the board considers that the subject-matter of claim 1 does not involve an inventive step in view of Dl and the skilled person's common general knowledge.

7. The appellant's arguments

The appellant's arguments (see paragraphs (a) to (d) in point XII *supra*) did not convince the board.

Re argument (a), the board agrees with the examining division that in the technical field of processing, transmission and storage of data, the problems of limited communication speed and limited memory space are closely related, because both limit the amount of data that can be transmitted in a given period of time.

Re argument (b), the board agrees with the appellant that there are several other possible solutions to the objective technical problem, such as trying to find more memory space by deleting older images, purchasing more memory space or waiting for the next month's allotment. In the board's view, these alternative options each have different advantages and disadvantages. Resizing of the image data may be somewhat technically more complex than for instance purchasing more memory space. However, this seemingly more complex solution was known to a person skilled in the art and constituted an obvious choice when not wanting to change the monthly allotment, in particular when account is taken of the fact that D1 provided a clear pointer to this solution by teaching to resize

image data in order to solve the related problem of communication speed limitation.

Re argument (c), the board regards as implicit, or at least obvious, in the disclosure of D1 that there must be a two-way communication between the handheld mobile communication device and a server. It is standard practice to use a two-way communication protocol for establishing a communication between two entities. Without a two-way communication, the receiving entity cannot acknowledge receipt of data, and thus data may be lost on the way without either of those two entities becoming aware of it. The board also disagrees with the appellant's assertion that in D1, as long as the telephone remains on the same communication network (e.g. the same telephone line), the communication speed is unchanged. First, as stated in column 15, lines 40 and 41, and as implied by the expression cellular phone and the zigzag arrows shown in figure 1, the communication between the handheld mobile communication devices or with the server may be wireless, i.e. with a communication speed depending on the quality of reception. Second, the communication speed in D1 is not constant: as illustrated in figures 14 and 16, the maximum communication speed between two handheld mobile communication devices must be determined by initially transmitting data at a high communication speed and iteratively reducing it until a reply is received.

Re argument (d), the board considers that it would be an obvious additional step to consult the user before resizing the image to be transmitted, because the user might not want his/her image to be resized.

8. Conclusion on the main request

Since the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC 1973), the appellant's main request is not allowable.

Auxiliary request - inventive step (Article 56 EPC 1973)

9. Claim 1 according to the auxiliary request differs from claim 1 according to the main request essentially in that it comprises the additional step of modifying the extracted metadata to replace the original image size with the size of the new resized image while preserving other information in the extracted metadata.

The appellant did not dispute that image data conventionally comprises metadata which provides additional information about the image, such as its format, the camera type, the date and time of the shoot, the image size, the shooting conditions, etc. The appellant also agreed that the image data in D1 comprises such metadata (see figure 11 and column 11, line 53, to column 12, line 3).

In the board's view, when the image is resized (for the reasons discussed *supra* regarding claim 1 of the main request) the skilled person would inevitably have to decide what to do about the metadata. As the image size is reduced, one part of the metadata which becomes inconsistent with the resized image is the image size, i.e. the number of pixels. The skilled person would effectively only have the following three solutions regarding the metadata:

(a) keeping the original image size;

(b) replacing the original image size by the reduced image size; and

(c) keeping the original image size and providing the reduced image size as well.

All three solutions have pros and cons. Solution (a) retains the size information of the original image, which might be useful if the original image remains accessible on request, but with the drawback that the metadata is not consistent with the resized image. Solution (b) has the advantage of consistency, but with the disadvantage that the information about the size of the original image is lost. Solution (c) has the advantages of solutions (a) and (b), but at a cost of storing more data in the metadata.

The appellant argued that because the method of D1 apparently used solution (a) (see column 12, lines 2 and 3) in order to allow the user receiving the reduced image to request a higher resolution image (see "request for enlargement" in figure 15 and from column 13, line 46, to column 14, line 59), it taught away from using solutions (b) or (c).

The board is not convinced by this argument. As mentioned, all three solutions have pros and cons. Depending on the purpose of the image data upload to the server, the skilled person might favour one or another of these three solutions. Moreover, the embodiment shown in figure 15 of D1 relates to the transmission of image data to someone else's handheld mobile communication device, not to a server. When uploading to a server, consistency of the metadata (i.e. solutions (b) and (c)) can be expected to be more useful than information about the original image size because there is no receiving user to request an enlargement.

For these reasons, the board considers that the method of claim 1 according to the auxiliary request does not involve an inventive step in view of D1 and the skilled person's common general knowledge.

10. Conclusion on the auxiliary request

Since the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC 1973), the appellant's auxiliary request is not allowable.

Conclusion

11. Since neither of the appellant's requests is allowable, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

K. Boelicke F. Edlinger

Decision electronically authenticated