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5 April 2011

Dear Sirs

European Patent Application No. 05253548.1
RICOH COMPANY, LTD.
Our ref: N.94995 JGL/DF/ej

With reference to the Communication of 3 February 2011, we hereby make written submissions for the Oral Proceedings scheduled for 5 May 2011.

In view of the expense to our client of attending the Oral Proceedings, we should be very grateful if you could consider these written submissions in good time before the date of the Oral Proceedings and let us know if you would be willing to grant a patent on the basis of any of the Requests (or minor variations thereof) without the need to attend the Oral Proceedings.

For the avoidance of doubt, Dr Dominic Forsythe will be speaking at the Oral Proceedings should they still be necessary.

Our written submissions consist of a Main Request and a First Auxiliary Request. We enclose retyped and manuscript amended versions of the amended pages for each of the Requests.

REQUESTS

We request that the application be granted on the basis of the Main Request attached hereto and described below. Should the Examining Division be minded to refuse the Main Request, we request grant of the application on the basis of the First Auxiliary Request attached hereto and described below.

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Regulated by IPREG
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MAIN REQUEST

We request that the application be granted on the basis of the papers as currently on file with description pages 3, 3a and 4 and claims pages 20 and 21 being replaced by amended description pages 3 and 4 and amended claims pages 20 and 21 enclosed herewith and marked “MAIN REQUEST”.

AMENDMENTS & BASIS - MAIN REQUEST

In response to the comments in the Communication of 3 February 2011 concerning inventive step, we have amended claim 1 to incorporate the subject matter of claim 5, and to delete the requirement that the process information comprise lens type information, information about a focussing point and a zoom position at the time the image was produced and that the image processing device be configured to execute a distortion aberration correction process or a peripheral light intensity correction process based on the process information. The combination of features of newly amended claim 1 were disclosed together in the combination of original claims 3 and 5, for example. Claims 6 to 9 (now 5 to 8) have been renumbered accordingly.

The introductory part of the description has been amended to ensure conformity with the newly amended claims.

INVENTIVE STEP - MAIN REQUEST

Claim 1 has been amended to specify that the process information comprises “information of distortion aberration at the time of producing the image” and that “the image processing device is configured to execute a distortion aberration correction process based on the information of distortion aberration”.

Relative to previous claim 1, we believe that the subject matter of newly amended claim 1 is further distinguished over the cited prior art because none of the prior art arrangements contain any hint or suggestion of including values in metadata that represent an aberration directly (i.e. the “information of distortion aberration”). Instead, the prior art consistently teaches use of metadata referring to capture conditions, such as lens focal length, brightness, subject distance, F-number etc. Data falling within the scope of “capture conditions” could in principle be used to calculate values that represent an aberration, for example in combination with a look-up table. However, the prior art does not suggest including such values as metadata.

Therefore, even if the skilled person would be led based on the teaching of D1 or D4 to include metadata that would be useful for carrying out distortion aberration correction processing, the most that he would be motivated to include would be capture conditions. The image processing step that is carried out later on would then have to use a look-up table and/or associated calculations in order to derive the distortion aberration using the capture conditions.

The invention defined by the newly amended claims is a technically distinct implementation in which the processing load associated with the image processing is spread more evenly between the image obtaining device and the image processing device. More work is required by the image obtaining device (to obtain the information of distortion aberration and transmit this information to the image obtaining device) than would be required if the image obtaining device only had to obtain and

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transmit capture conditions. On the other hand, the processing of the image processing device is simplified because it is no longer necessary to refer to a look-up table in order to carry out the image processing using the process information. The difference between these two approaches can be seen generally by comparing Figures 3 and 6, and Figures 11 and 13 as originally filed.

Relative to the closest prior art D1, the objective technical problem may be defined as how to implement distortion aberration correction processing in an efficient manner.

The Examiner has argued that it would be obvious to develop the arrangement of D1 so that it is configured to carry out distortion aberration correction processing and that this would involve generating metadata comprising “potentially useful information” such as “lens type information, information about a focussing point and a zoom position at the time the image was produced”.

We do not concede that the Examiner’s assertion is fully justified. Nevertheless, we have amended claim 1 to be further distinguished over the prior art. There is no suggestion in any of the prior art documents that the concept of spreading a processing load between an image obtaining device and an image processing device by avoiding use of a look-up table, in the manner described above, has been appreciated. Furthermore, there is no hint or suggestion of the solution proposed by the present invention as defined in the newly amended claims. Accordingly, it cannot be seen how the skilled person would be taught by the prior art to modify any of the arrangements disclosed in the cited prior art in such a way as to fall within the scope of the newly amended claims.

In view of the above, it is submitted that the subject matter of the newly amended claims is novel and involves an inventive step relative to the cited prior art.

FIRST AUXILIARY REQUEST

We request that the application be granted on the basis of the papers as currently on file with description pages 3, 3a and 4 and claims pages 20 and 21 being replaced by amended description pages 3 and 4 and amended claims pages 20 and 21 enclosed herewith and marked “FIRST AUXILIARY REQUEST”.

AMENDMENTS & BASIS - FIRST AUXILIARY REQUEST

In response to the Examiner’s comments in the Communication of 3 February 2011 concerning inventive step, we have amended claim 1 to incorporate the subject matter of previous claim 7, and to delete the requirement that the process information comprise lens type information, information about a focussing point and a zoom position at the time the image was produced and that the image processing device be configured to execute a distortion aberration correction process or a peripheral light intensity correction process based on the process information. The combination of features of newly amended claim 1 were disclosed together in the combination of original claims 3 and 9, for example.

The introductory part of the description has been amended to ensure conformity with the newly amended claims.

INVENTIVE STEP - FIRST AUXILIARY REQUEST

Claim 1 has been amended to specify that the process information comprises “information of a correction value and a type of a correction process for the produced image” and that “the image processing device is configured to execute a correction process based on the information of the correction value and the type of the correction process for the produced image”.

The inventive concept underlying the newly amended claims is similar to that underlying the claims of the Main Request described above. As we understand it, the prior art consistently suggests that metadata should relate to capture conditions, and the like. Correction values are obtained after the metadata has been processed in some way, for example by reference to a look-up table. The idea of including the correction values themselves as metadata does not appear to be suggested by the prior art.

The subject matter of the newly amended claims is therefore novel and inventive for the same reasons, *mutatis mutandis*, as the Main Request.

Furthermore, according to the amended claim 1 of the First Auxiliary Request, the process information further specifies explicitly the “type of a correction process” for the produced image. This feature further reduces the processing that is necessary at the image processing device because it is no longer necessary to detect what type of correction is needed. Furthermore, providing the image obtaining device with the capability of specifying what type of image processing should be carried out by the image processing device, using the type of a correction process field in the metadata, provides the user of the image obtaining device with greater control over how the image is processed and thus on the final image itself.

We have not been able to find evidence that such concepts have been recognized in the cited prior art. Accordingly, we cannot see how the skilled person would be motivated to adapt any of the arrangements disclosed in such a way as to fall within the scope of the newly amended claims of the First Auxiliary Request.

CONCLUSION

As mentioned above, we should be grateful if the Examiner would consider the above Requests in good time before the Oral Proceedings, in case it may be possible to avoid them. If there are any questions or problems with any of the above that might be resolved by telephone, the Examiner is invited to contact our Dr D Forsythe on +44 20 3077 8600.

Yours faithfully



DR D FORSYTHE
AUTHORISED REPRESENTATIVE