be used only once when introducing the respective feature or element. In the following, in most cases, when referring to the respective feature or element, the expressions "at least one" or "one or more" will not be repeated, non-withstanding the fact that the respective feature or element may be present once or more than once.

Further, as used in the following, the terms "preferably", "more preferably", "particularly", "more particularly", "specifically", "more specifically" or similar terms are used in conjunction with optional features, without restricting alternative possibilities. Thus, features introduced by these terms are optional features and are not intended to restrict the scope of the claims in any way. The invention may, as the skilled person will recognize, be performed by using alternative features. Similarly, features introduced by "in an embodiment of the invention" or similar expressions are intended to be optional features, without any restriction regarding alternative embodiments of the invention, without any restrictions regarding the scope of the invention and without any restriction regarding the possibility of combining the features introduced in such way with other optional or non-optional features of the invention.

In a first aspect of the present invention, a method of performing at least one analytical measurement is disclosed. The method comprises using a mobile device having at least one camera. The method comprises the following steps which, as an example, may be performed in the given order. It shall be noted, however, that a different order is also possible. Further, it is also possible to perform one or more of the method steps once or repeatedly. Further, it is possible to perform two or more of the method steps simultaneously or in a timely overlapping fashion. The method may comprise further method steps which are not listed.

The method comprises:

i) capturing, by using the camera, a time series of images of at least a part of at least one medical article;

ii) deriving, from the time series of images, image-derived position information on a relative position of the mobile device and the medical article, thereby generating a first time series of position information;

iii) capturing, by using at least one sensor device of the mobile device, measurement information on the relative position of the mobile device and the medical article, wherein the measurement information comprises at least one item of information indicating at least one of: spatial position information of the mobile device; spatial velocity information of the mobile device; spatial acceleration information of the mobile device; angular position information of the mobile device; angular velocity

information of the mobile device; angular acceleration information of the mobile device;

iv) deriving, from the measurement information, measurement-derived position information on the relative position of the mobile device and the medical article, thereby generating a second time series of position information, wherein step iv) further comprises using at least one item of position information from the first time series of position information, wherein step iv) comprises estimating at least one item of measurement-derived position information on the basis of the at least one item of position information from the first time series of position information and at least one item of measurement information captured in step iii);

Claims

1. A method of performing at least one analytical measurement by using a mobile device having at least one camera, the method comprising:

   i) capturing, by using the camera, a time series of images of at least a part of at least one medical article;

   ii) deriving, from the time series of images, image-derived position information on a relative position of the mobile device and the medical article, thereby generating a first time series of position information;

   iii) capturing, by using at least one sensor device of the mobile device, measurement information on the relative position of the mobile device and the medical article, wherein the measurement information comprises at least one item of information indicating at least one of: spatial position information of the mobile device; spatial velocity information of the mobile device; spatial acceleration information of the mobile device; angular position information of the mobile device; angular velocity information of the mobile device; angular acceleration information of the mobile device;

   iv) deriving, from the measurement information, measurement-derived position information on the relative position of the mobile device and the medical article, thereby generating a second time series of position information, wherein step iv) further comprises using at least one item of position information from the first time series of position information, wherein step iv) comprises estimating at least one item of measurement-derived position information on the basis of the at least one item of position information from the first time series of position information and at least one item of measurement information captured in step iii);

   v) generating an augmented time series of position information by combining the first time series of position information and the second time series of position information; and

   vi) providing guidance to a user, based on the augmented time series of position information, for changing the relative position of the mobile device and the medical article in order to have the user bring the mobile device into at least one relative target position of the mobile device and the medical article.

2. The method according to the preceding claim, wherein step vi) comprises deriving at least one item of current position information from the augmented time series of position information and comparing the at least one item of current position information with the at least one relative target position.

3. The method according to the preceding claim, wherein step vi) comprises determining a current point in time, and wherein step vi) further comprises determining whether the current point in time corresponds to a capturing time at which an image of the time series of images is captured, and, if so, using the first time series of position information for deriving the at least one item of current position information, and, if not, using the second time series of position information.

4. The method according to any one of the preceding claims, wherein the relative target position of the mobile device and the medical article comprises a non-parallel relative orientation of the mobile device and the medical article.

5. The method according to any one of the preceding claims, wherein the analytical measurement comprises determining the concentration of at least one analyte in a sample of a bodily fluid, wherein the medical article comprises at least one optical test strip having at least one reagent test field.

6. The method according to the preceding claim, wherein the medical article further comprises at least one color reference card comprising at least one of: a plurality of different color reference fields having known reference color values; a plurality of different gray reference fields.

7. The method according to any one of the preceding claims, wherein the first time series comprises image-derived position information as a function of capturing times of the images, wherein the second time series comprises measurement-derived position information as a function of time, wherein the measurement-derived position information of the second time series is given for points in time differing from the capturing times of the images.

8. The method according to any one of the preceding claims, wherein the estimating comprises at least one of: interpolating position information based on image-derived position information derived in step ii) and measurement information captured in step iii); extrapolating position information based on image-derived position information derived in step ii) and measurement information captured in step iii); determining at least one prospective trajectory of the relative position of the mobile device and the medical article, based on the at least one item of position information from

the first time series of position information and at least one item of measurement information captured in step iii).

9. The method according to any one of the preceding claims, wherein the user guidance comprises information for the user indicating at least one of: a direction into which the mobile device is to be moved in order to achieve the target position; an orientation into which the mobile device is to be oriented in order to achieve the target position.

10. A mobile device, the mobile device comprising at least one camera, the mobile device further comprising at least one sensor device for capturing position information, the mobile device being configured for performing the method according to any one of the preceding claims.

11. A kit for performing at least one analytical measurement, specifically for determining the concentration of at least one analyte in at least one sample of a bodily fluid, the kit comprising the mobile device according to any one of the preceding claims referring to a mobile device, the kit further comprising at least one medical article, wherein the medical article specifically comprises at least one optical test strip having at least one reagent test field.

12. The kit according to the preceding claim, further comprising at least one color reference card, wherein the color reference card comprises a plurality of different gray reference fields locally assigned to the test field, and wherein the color reference card comprises a plurality of different color reference fields having known reference color values and a plurality of different gray reference fields locally assigned to the color reference fields.

13. A computer program comprising instructions which, when executed by a mobile device according to any one of the preceding claims referring to a mobile device, cause the mobile device to carry out the method according to any one of the preceding claims referring to a method.

14. A computer-readable storage medium comprising instructions which, when executed by a mobile device according to any one of the preceding claims referring to a mobile device, cause the mobile device to carry out the method according to any one of the preceding claims referring to a method.