[0006] If a plurality of such 3D point coordinates are derived using a triangulation technique, and these point coordinates correspond to vertices of a planar structure, then geometry information of that structure may be inferred, including lengths, slopes, areas of regions, and so forth.

[0007] It may be the case that only some but not all of a plurality of available **aerial** images are complementary for a particular triangulation task. It further may be that not all of the images are as effective as a complementary image to a selected image. There thus is a need in the art for a system ad method that defines one or more measures of suitability of an image to be complementary to a selected ("initial") image and to use such one or more measures to automatically determine the best complementary images image to the initial image among the plurality of available aerial images.

SUMMARY

[0007a] In a first aspect, the present disclosure provides a method, implemented by a digital processing system, for selecting complementary images from a plurality of images captured from distinct views and/or locations, each respective image captured from a respective camera having respective camera properties, the method comprising: accepting the plurality of images, including, for each accepted image, parameters related to the accepted image and to properties of the camera that captured the accepted image; accepting input from a user to select one of the accepted images to be an initial image; accepting input from the user indicating one or more geometric features of interest; and automatically selecting from the accepted plurality of images and using an optimality criterion an optimal image that is complementary to the initial image for the purpose of determining one or more 3D properties of the indicated one or more geometric features.

[0007b] In a second aspect, the present disclosure provides a digital processing system comprising: an input port configured to accept a plurality of images captured from distinct views and/or locations, each respective image having been captured from a respective camera, the accepting including accepting, for each respective accepted image, respective parameters related to the respective accepted image and to properties (collectively the “camera model”) of the respective camera that captured the respective accepted image; a user terminal having a display screen and a user interface that enable displaying on the display screen and that that enables a user to provide input, and otherwise interact with an image displayed on the display screen; a digital image processing system coupled to the user terminal, the digital image processing system

including one or more digital processors, and a storage subsystem that includes instructions that when executed by the digital processing system, cause the digital processing system to carry out a method of selecting one or more complementary images from a plurality of images accepted via the input port, the method according to the first aspect.

[0007c] In a third aspect, the present disclosure provides a non-transitory machine-readable medium comprising instructions that when executed on one or more digital processors of a digital processing systems cause carrying out a method according to the first aspect.

[0007d] In a fourth aspect, the present disclosure provides a processing system comprising: a storage subsystem; and one or more processors; wherein the storage subsystem includes a non-transitory machine-readable medium according to the third aspect.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The following drawings and the associated descriptions are provided to illustrate embodiments of the present disclosure and do not limit the scope of the invention; the scope is defined by the claims. Aspects of and advantages of this disclosure will become more readily appreciated as these aspects and advantages become better understood by reference to the following detailed description, when taken in conjunction with the accompanying drawings, wherein:

[0009] FIG. 1 shows a simplified flowchart of a process involving a user interacting with a digital processing system for determining one or more geometric features on an initial image, including the system carrying out a method of automatically selecting a "best" complementary image to the initial image from a provided set of images according to one or more selection criteria. The process includes providing for a user a user interface on which the user may modify a feature determined using one or more selected complementary images in order to repeat the automatically selecting a "best" complementary image until a satisfactory result is obtained.

[0010] FIG. 2 shows a simplified schematic of a process for calculating geometric complementarily, according to an embodiment of the invention.

[0011] FIG. 3 shows a simplified schematic of an intersection of camera frustums used as one viable measure of image overlap, according to an embodiment of the invention.