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[Continued on next page]

(54) Title: MAGNIFICATION IN OPHTHALMIC PROCEDURES AND ASSOCIATED DEVICES, SYSTEMS, AND METHODS

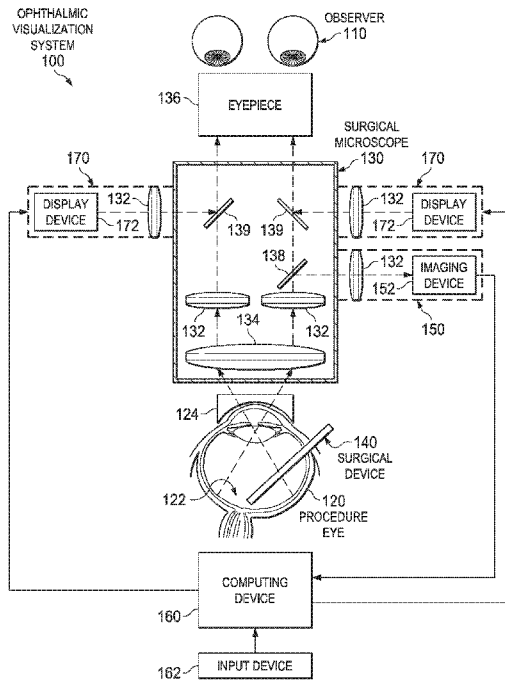


Fig. 1

(57) Abstract: An ophthalmic visualization system can include an imaging device configured to acquire images of a surgical field; a computing device configured to determine an area of interest based on the images; and a display device in communication with the computing device and a surgical microscope, wherein the display device is configured to provide a graphical overlay onto at least a portion of a field of view of the surgical microscope, and wherein the graphical overlay includes a magnified image of the area of interest. A method of visualizing an ophthalmic procedure can include receiving images of a surgical field acquired by an imaging device; identifying an area of interest; generating a graphical overlay including a magnified image of the area of the interest; and outputting the graphical overlay to a display device such that the graphical overlay is positioned over a field of view of a surgical microscope.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G02B 21/18 (2016.01)

CPC - G02B 21/18 (2016.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - G02B 21/00 G02B 21/18, G02B 21/32, G02B 21/36 (2016.01)

CPC - G02B 21/00 G02B 21/18, G02B 21/32, G02B 21/36 (2016.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

U.S. Class/Subclass(es): 359/368, 359/362, 359/369 (Keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Orbit, Google Patents, Google

Search terms used: ophthalmic eye microscope field of view magnify enlarge zoom picture-in-picture visualization surgery surgical image overlay

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,661,571 B1 (SHIODA et al) 09 December 2003 (09.12.2003) entire document	1-25
A	US 2006/0293557 A1 (CHUANGGUI et al) 28 December 2006 (28.12.2006) entire document	1-25
A	WO 2014/106536 A2 (QUANTEL MEDICAL INC) 10 July 2014 (10.07.2014) entire document	1-25
A	Shahidi et al. Proposed Simulation of Volumetric Image Navigation Using a Surgical Microscope. Journal of Image Guided Surgery, 1:5, 249-265. 06 January 2010. [Retrieve 04 February 2014]. Retrieved from internet:< http://dx.doi.org/10.3109/10929089509106331 > entire document	1-25

Further documents are listed in the continuation of Box C.

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