

Title (en)

MULTI-PULSE LIDAR SYSTEM AND METHOD FOR CAPTURING AN OBJECT IN AN OBSERVED REGION

Title (de)

MULTIPULS-LIDARSYSTEM UND VERFAHREN ZUR ERFASSUNG EINES OBJEKTS IN EINEM BEOBACHTUNGSBEREICH

Title (fr)

SYSTÈME LIDAR À IMPULSIONS MULTIPLES ET PROCÉDÉ DE CAPTURE D'UN OBJET DANS UNE RÉGION OBSERVÉE

Publication

**EP 4045931 A1 20220824 (DE)**

Application

**EP 20772290 A 20200916**

Priority

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- EP 2020075815 W 20200916

Abstract (en)

[origin: WO2021073824A1] A multi-pulse lidar system (100) for capturing at least one object (400) comprises: a transmitter device (110) with at least one laser source (111); a receiver device (140) with a detection area (141) comprising a line-shaped or matrix-shaped sub-detector arrangement (143) for receiving a transmission laser beam (210) that was reflected and/or scattered at the object (400) in an observed region (300), wherein the receiver device (140) is embodied to image a capture region (310n), captured by the transmission laser beam (210), on the detection area (141) in the form of a picture element (230n); a scanning device (120) for generating a scanning movement (122) of the transmission laser beam (210) and a reception laser beam (220); and a control device (130) for determining distance information about the capture regions (310n), wherein the control device (130) is embodied to select an angular range (307) of the observed region (300) and to group sub-detectors (142i,j) for evaluation purposes to form a first macro pixel (160n) for at least one first single laser pulse, by means of which a first capture region (310n) is able to be illuminated; and to group sub-detectors (142i,j) for evaluation purposes to form at least one second macro pixel (160n) for at least one second single laser pulse, by means of which one at least second capture region (310n) is able to be illuminated; wherein the selected angular range (307) is able to be imaged in each case by means of the sub-detectors (142i,j) of the first and of the at least one second macro pixel (160n) and wherein the sub-detectors (142i,j) are each captured by a picture element (230n) currently imaged on the detection area (141).

IPC 8 full level

**G01S 7/48** (2006.01); **G01S 7/481** (2006.01); **G01S 7/4863** (2020.01); **G01S 17/10** (2020.01); **G01S 17/42** (2006.01); **G01S 17/931** (2020.01)

CPC (source: CN EP)

**G01S 7/4817** (2013.01 - CN EP); **G01S 7/4863** (2013.01 - EP); **G01S 17/08** (2013.01 - CN); **G01S 17/10** (2013.01 - EP); **G01S 17/42** (2013.01 - EP); **G01S 17/931** (2020.01 - EP)

Citation (search report)

See references of WO 2021073824A1

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