

Invitation to tender for a license / purchase of rights to solution from Poznań University of Technology entitled:

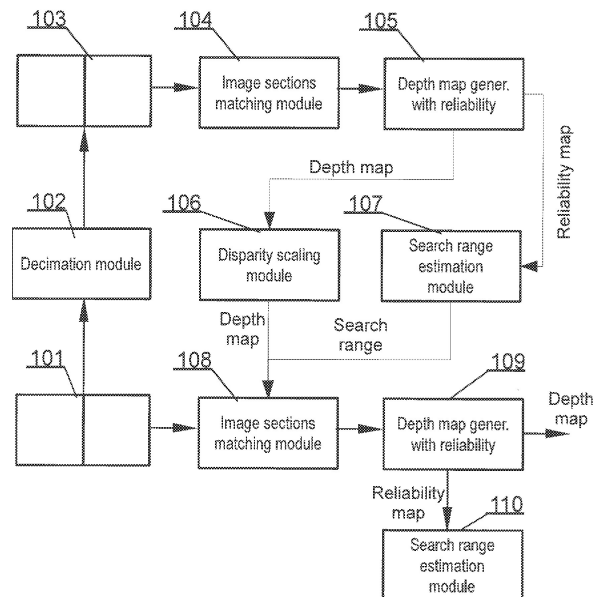
System and a method for generating a depth map

Type of solution

Invention

Idea of solution

A computer-implemented system for generating a depth map for a pair of stereoscopic images, the system comprising: a lower level processing arrangement comprising: a decimation module configured to decrease resolution of the pair of stereoscopic images by a factor of "a"; an image sections matching module, receiving the decimated pair of stereoscopic images configured to output information on matching cost, at appropriate disparities, to appropriate points of the other image from decimated pair of stereoscopic images; a depth map generation with reliability module receiving output of the image sections matching module configured to output a depth map and a reliability map wherein the reliability map comprises data on reliability, with which a disparity value has been determined for each point of the decimated pair of stereoscopic images; a disparity scaling module receiving the depth map and configured to upscale the image of the depth map and scale its values by a factor of "a"; a search range estimation module receiving the reliability map and configured to determine a range of considered disparities in the higher level of processing wherein a decision regarding such range is taken based on the reliability map; and a higher level processing arrangement comprising: an image sections matching module configured to search only a narrowed range of possible disparity as indicated by the input from the search range estimation module, of the lower level, wherein the image sections matching module receives the depth map from the disparity scaling module, of the lower level; a depth map generation with reliability module receiving output of the image sections matching module configured to output a depth map and a reliability map wherein the reliability map comprises data on reliability, with which a disparity value has been determined for each point of the pair of stereoscopic images.



Solution advantages / Market advantage

The subject of the present invention is a hierarchical method for generating a depth map with its simultaneous reliability check. Based on the provided reliability parameter, on each hierarchy level, there is narrowed down a range of searched disparities. The advantages obtained by using the invention include acceleration of depth map generation, possibility of determining a reliability map for a depth.

Clients
Companies dealing with Virtual Reality systems, multi-view sequence compression, Free Viewpoint Television (FTV).
Technology Readiness Level (TRL)
TRL 4 - technology validated in lab
Status of legal protection
Patent no US 14665004 https://patents.google.com/patent/US20160275691A1/en?q=US+14665004
Preferred form of commercialization
Non-exclusive license Exclusive license Sale of patent rights Spin-off company R&D and implementation projects
Form of transfer of rights
Patent documentation.
Additional information
<ol style="list-style-type: none"> 1. This Invitation to submit offers does not constitute an offer within the meaning of the provisions of the Civil Code. 2. Poznan University of Technology will reject the offer if it contains an abnormally low price in relation to the value of the solution. 3. Poznan University of Technology, in order to determine whether the offer contains an abnormally low price in relation to the value of the solution, will ask the Tenderer to provide explanations within a specified time limit regarding the elements of the offer affecting the price. 4. If in the competition procedure it is not possible to select the best offer due to the fact that offers of the same price have been submitted, the Poznan University of Technology will call the Tenderers who submitted these offers to submit additional offers within the time limit specified by the Poznan University of Technology. 5. Poznan University of Technology reserves the right to cancel the competition procedure if the submitted offers contain prices whose value will not exceed the value of the solution. 6. Poznan University of Technology reserves the right to negotiate with selected Bidders. 7. Poznan University of Technology has the right to withdraw from the procedure without giving any reason, without choosing an offer. 8. The conclusion of the contract is conditional on the fulfillment of procedures provided for by legal regulations applicable to universities.
Method of submitting offers
Offers should be submitted in Polish, in writing to the address of the Technology Transfer Center of the Poznan University of Technology or electronically to the unit's e-mail address.
Contact details
Technology Transfer Centre of the Poznan University of Technology pl. Marii Skłodowskiej-Curie 5 Office 409 60-965 Poznan ctt@put.poznan.pl