



ISTITUTO ITALIANO  
DI TECNOLOGIA

#### TITLE

Algorithm for the revelation of disparities between image signals

#### INVENTORS

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#### DESCRIPTION

The invention relates to a method for processing disparity maps from signals representing image data (L, R) originated from two image sensor devices, arranged horizontally at a respective predetermined distance, said image data regarding respectively a first image (L) and a second image (R), said processing including computing a matching cost between pixels coming respectively from data of said first image (L) and of said second image (R), wherein said operation of computing a matching cost includes comparing each pixel (Li) of said first image (L) to a set of pixels (MD) of the second image (R), by a specialized cost function (BSAD, costfunction) which is monodimensional and scaled by computing a value of offset as intensity difference between reference pixels (Lx, Ry) of the first and second image, the set of pixels (MD) of the second image (R) belonging to the same line of a comparison pixel (Lx) of said first image (L).

#### APPLICATIONS

Stereoscopic images, environment images

#### KEYWORDS

Disparity maps, pixels, distance

#### BIBLIOGRAPHIC DATA

Apparato di elaborazione per la rilevazione di disparità fra segnali di immagine

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