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[54] **METHOD AND APPARATUS FOR ASSESSING THE VISIBILITY OF DIFFERENCES BETWEEN TWO IMAGE SEQUENCES**

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[51] **Int. Cl.**[6] **G06T 5/10**; G06T 7/00

[52] **U.S. Cl.** **382/106**; 382/154; 382/162; 382/255; 382/274; 382/279; 382/302

[58] **Field of Search** 382/260, 264, 382/263, 270, 254, 303, 302, 304, 106, 154, 162, 255, 274, 279; 348/42

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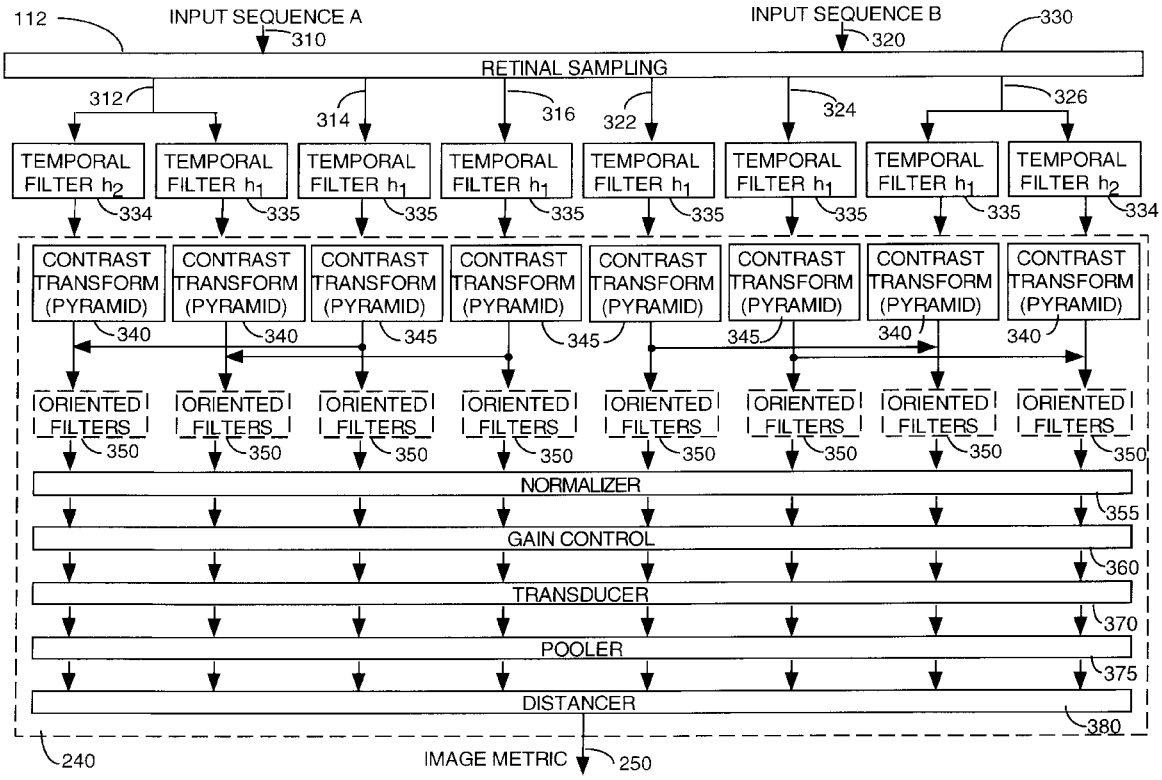
[57] **ABSTRACT**

A method and apparatus for assessing the visibility of differences between two input image sequences. The apparatus comprises a visual discrimination measure having a retinal sampling section, a plurality of temporal filters and a spatial discrimination section. The retinal sampling section applies a plurality of transformations to the input image sequences for simulating the image-processing properties of human vision. The temporal filters separate the sequences of retinal images into two temporal channels producing a lowpass temporal response and a bandpass temporal response. The spatial discrimination section applies spatial processing to the temporal responses to produce an image metric which is used to assess the visibility of differences between the two input image sequences.

20 Claims, 9 Drawing Sheets