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Volume 5, Number 8, Abstract 555, Page 555a doi:10.1167/5.8.555 http://journalofvision.org/5/8/555/ ISSN 1534-7362

Method to detect a gist change

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Abstract

Although large changes in an image can go unnoticed, it is assumed that changes which affect the gist will be noticed. However, a method for detecting if a change affects the gist is lacking.

Gist is often viewed as the high-level meaning of an image, but images can have different meanings for different people. Gist is the *interpretation* of the essence of an image.

We have designed a method to determine gist change based on a Generator-Rater procedure. Since gist can be represented in a description, a change affecting the gist would result in a different description. As it is possible that people have a different interpretation of an image, even descriptions of the same image can be different. Therefore raters are used to judge the appropriateness of the descriptions for each of the images. The ratings for groups of descriptions can be compared.

To assess the method, 18 sets of 3 images were prepared. One is the original image. The second image has undergone a relatively large image transform but one that is likely to have no effect on gist. The Third image has undergone a relatively small transform, likely to affect the gist. Participants are shown one of the images and are asked to give a description. A different group of participants (the raters) is asked to rate the descriptions and indicate whether a particular description fits a certain image. Based on these ratings one can derive whether or not the gist of an image has been changed.

The method detects gist change, whilst allowing raters and generators to have different individual interpretations.

History
Received September 15, 2005; published September 23, 2005

Citation
van Montfort, X., de Greef, P., & Bouwhuis, D. (2005). Method to detect a gist change [Abstract]. *Journal of Vision*, *5*(8):555, 555a, http://journalofvision.org/5/8/555/, doi:10.1167/5.8.555.

Keywords
None

On-Line Presentation
None