NAME

deva-visibility − estimate locations of potential low-vision hazards

SYNOPSIS

deva-visibility *preset-option* {*input.hdr* | −} *coordinates*
xyz.txt dist.txt nor.txt simulated-view.hdr hazards.png

or

deva-visibility [*options*] *acuity contrast* {*input.hdr* | −} *coordinates*
xyz.txt dist.txt nor.txt simulated-view.hdr hazards.png

DESCRIPTION

Extends functionality of **deva-filter** to provide estimates of likely low-vision hazards, defined as geometric structures that may be a mobility hazard but are not co-located with detectable visual contrast. Two output images are created. One is the same Radiance HDR format image that would be created by **deva-filter**, given comparable arguments. The other is a color PNG image, with estimated visibility hazards shown in red and other geometric features estimated to be less of a potential visibility hazard shown in dark gray.

OPTIONS

All of the **deva-filter** options, plus:

−−**luminanceboundaries**==<*filename*>*.png*
Write a grayscale PNG image file indicating the location of detected luminance boundaries.

−−**luminanceboundaries**==<*filename*>*.png*
Write a grayscale PNG image file indicating the location of detected luminance boundaries.

ARGUMENTS

input.hdr
Original Radiance image of area in design model to be evaluated for low-vision visibility hazards, as for **deva-filter**.

coordinates
A two line text file. The first line specifies the units for the *xyz.txt* and *dist.txt* files. The second line is the same as the VIEW record in *input.hdr*. See **make-coordinates-file** for information on how to create this file.

xyz.txt A Radiance ASCII format file specifying the xyz model coordinates for each surface point in the model corresponding to the line of sight associated with each pixel in *input.hdr*.

dist.txt A Radiance ASCII format file specifying the distance from the viewpoint to each surface point in the model corresponding to the line of sight associated with each pixel in *input.hdr*.

nor.txt A Radiance ASCII format file specifying the surface normal in model coordinates for each surface point in the model corresponding to the line of sight associated with each pixel in *input.hdr*. Note that the numeric values are unitless since they specify a unit normal.

simulated-view.hdr
A Radiance image simulating the reduced visibility associated with loss of visual acuity and contrast sensitivity.

hazards.png
An output PNG image indicating likely potential visibility hazards.

AUTHOR

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