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## Display For Cataracts - High Contrast Content

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## **DISPLAY FOR CATARACTS - HIGH CONTRAST CONTENT**

**IPD #201605713**

### ABSTRACT

A system and method are disclosed to improve visibility of content on a TV display. The method includes increasing parameters, such as brightness and contrast, and magnifying the most active part of a display. The system provides access to settings that would enable a user to adjust the parameters. The system may automatically magnify the most active part of the display by recognizing where most of the action is taking place with motion vectors and I-macroblocks. Alternatively, the viewer may switch to various predetermined blocks, which enables the viewers to back-out and then back-in to certain video scenes as needed. Advantages of the system and method include improved user experience for visually impaired viewers.

### BACKGROUND

A problem with visual impairment due to cataract is blurred vision, which leads to an overall loss of detail. For instance, a person with cataract viewing TV may not be able to comprehend images and must look to the side, causing difficulty. Present technologies for visually impaired provide audible accessibility to visual menus or visual indicators. However, state-of-the-art TVs have not specifically addressed the problems of people suffering from cataract.

### DESCRIPTION

A system and method are disclosed to improve visibility of content on a TV display. The method includes increasing parameters, such as brightness and contrast, and magnifying the most active part of the display. The system provides access to settings that would enable adjusting these parameters. High contrast and brightness content may appear unnatural to a person with

normal eyesight. However, to someone suffering from cataracts, the high contrast content is more easily discerned. The TV's advanced settings may help simulate this display enhancement for sufferers of cataracts. Additionally, the system may automatically magnify the most active part of the display by recognizing where most of the action is taking place with motion vectors and I-macroblocks. For instance, the system may greatly magnify the area of interest, e.g. a person talking, a monument appearing such as the Eiffel tower in Paris, etc. Alternatively, the viewer may switch to various predetermined blocks, which enables him/her to back-out and then back-in to certain video scenes as needed.

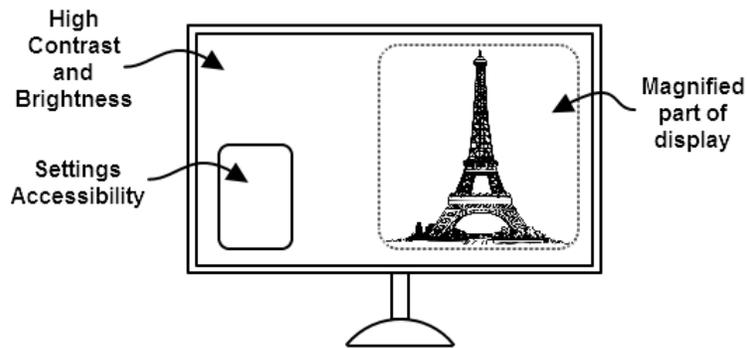


FIG. 1: Display with high contrast content for visually impaired

Advantages of the system and method include improved user experience for visually impaired viewers. Additionally, blowing up selected blocks on screen may be a type of trick play that general viewers might enjoy.