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Some Multicolor Night Lighting Effects Through Edge Detection Techniques

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Abstract:
Various LED and electronic circuit based colorful night lighting effects are available in the markets that are seen in various festivals as a decoration. Here author has produced sixmulticolor night lighting effects through computer generated algorithms especiallyby edge-detection techniques from a sample RGB color image.

Keywords: Night-lighting, edge-detection, LED, festivals, decoration

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I. Introduction

Colorful night lighting based hoardings are seen in various religious and non-religious festivals where electronic tiny LEDs and control circuitry are used on boards, as a decoration. But In this paper author has introduced six night color lighting effects that are generated through computer based edge detection techniques of digital image processing.

II. Experimental procedures

Sample RGB color image of figure1 has been converted into color night lighting effects using edge detection techniques. Edge detection techniques used areCanny (Figure 2),Sobel(Figure 3), Prewitt (Figure 4), Roberts (Figure 5), LoG (Figure 6), Zerocross (Figure 7) through Matlab 6.1.

Figure1: Sample RGB color image

Figure2: Canny

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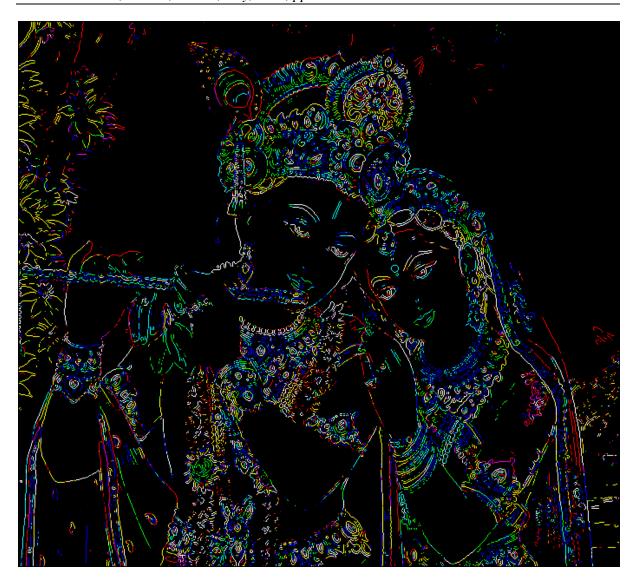*ISSN: 2248-9622, Vol. 14, Issue 7, July, 2024, pp: 106-112*

Figure 3: Sobel

Figure 4: Prewitt

Figure 5: Roberts

Figure 6: LoG

Figure 7: Zerogross

III.   Results and Discussions

Six edge detection techniques have been used here. All the techniques used are not similar in all respects. Figure2, figure 6 and figure 7 have generated more image details of night lighting effects, whereas figure 3, figure4 and figure5 have generated fewer image details.

IV.   Conclusions

Six colorful night lighting effects that are used here are like color halftones with imagedetails, mostly in linework. Further investigation in future may produce more color image details in such type of effects.

References

[1].   Matlab 6.1.0.450 Release 12.1 Documentation, The MathWorks, Inc, 1984 – 2001, USA.