Edge Detection Method in YCbCr Color Space

Prepared by:

Dr. Sarah Behnam Aziz

College of Sciences,

Computer Science &IT Department

Salahaddin University

Erbil, IRAQ-KRG

sarah.aziz@su.edu.krd

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Agenda

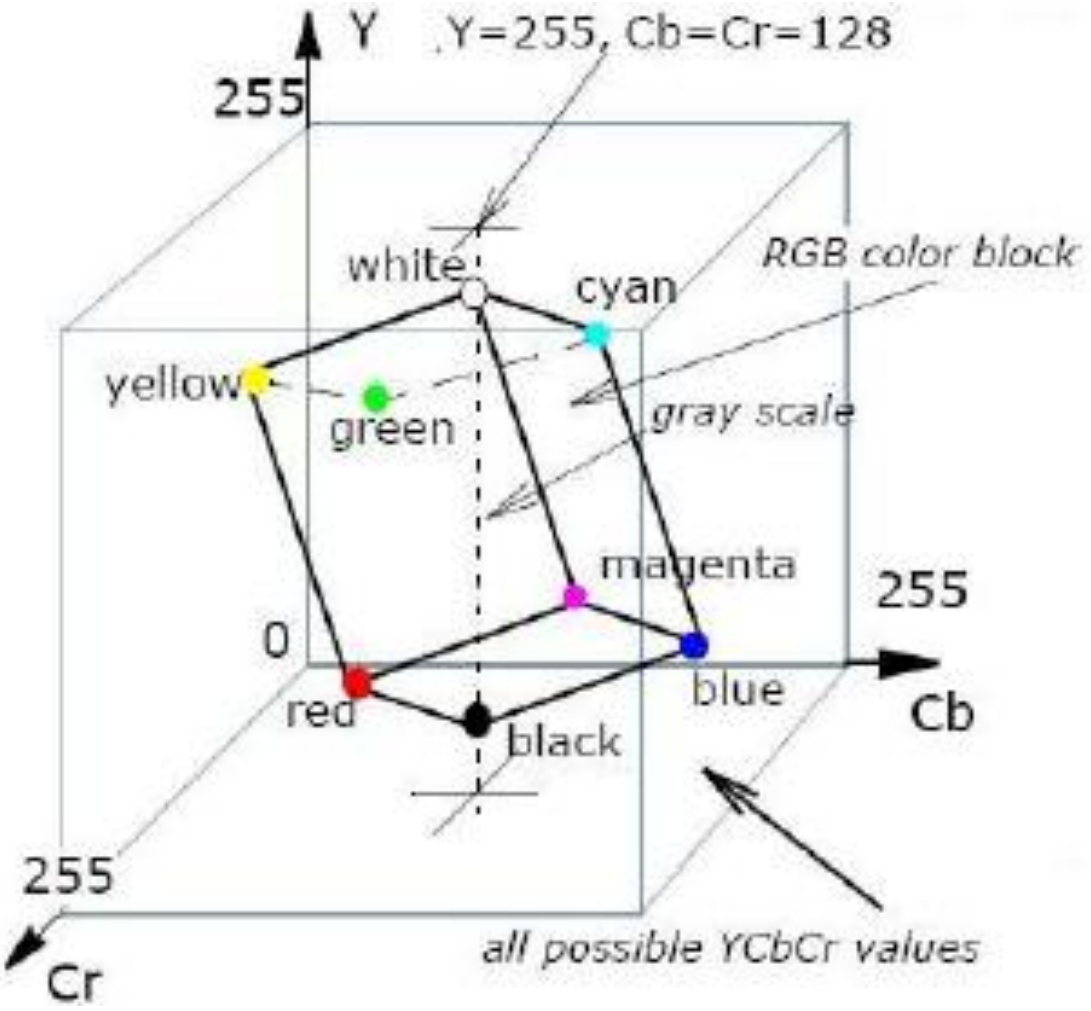
- Introduction
- YCbCr Color Space
- Edge Detection in YCbCr Color Space
- Results
- References

Introduction

- Edge detection plays an important role in image processing, pattern recognition and computer vision applications.
- The edge can defined as a boundary between an object and the background.
- Most of edge detection schemes are based on finding maximum in the first derivative of the image function such as Roberts operator, Sobel operator, Prewitt operator.
- The others seeking in the second derivative zero-crossing to edge detection, such as LOG operator, Canny operator.
- In grayscale images, an edge is termed as discontinuity in the grayscale function.
- There are plenty of different definitions are proposed for color edges. G.S Robison in 1976 said that the intensity image contains an edge only when the edge exists precisely in the color image.

YCbCr Color Space

- It s … pace.
- Th … se they do no …
- Th … ch closely to … give color inf …
- Th … crease the eff …
- YC … l video.
- Th … ble colors in …



Edge Detection in YCbCr Color Space

- Determine the standard edge detection operator that will to be applied.
- The RGB image is sub divided into R,G and B layers of the image.
- R,G and B values of the image are Transformed into its YCbCr intensity values using the conversion formula.
- The edge detected Y will be present the edge detected image.

Results

Original RGB

Original YCbCr

Y Component

Standard Laplacian

Laplacian on Y Component

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Thank You!