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Subject: Re: YUV file format

Posted by [hahn](#) on Tue, 30 Jul 1996 07:00:00 GMT

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e113@ipp-garching.mpg.de (Janpeter Wolff ) wrote:

> Hi there,

> does anybody know, if it is possible to read in Files that have the  
> format .YUV? It doesn't appear in the docs, but nonetheless it would be  
> nice if it were possible. Maybe someone has already added something  
> to idl in this  
> respect?

> Thanks,

Unfortunately there are several standards to encode YUV (NTSC, PAL, CCIR 601). The latter is for encoding digital TV signals:

$$Y = 0.299 * \text{red} + 0.587 * \text{green} + 0.114 * \text{blue}$$

(in accordance with NTSC analogue). The color encoding differs, for digital you can have 8:4:4 and 8:8:8. While 8:8:8 says that you use 8 bits for luminance (Y) and 8 bits for u and 8 for v the more common encoding averages two adjacent points and encode for odd numbered pixels 8 bits Y and 8 bits U as an average of two adjacent dots while the even numbered pixels contain 8 bits Y and 8 bits V.

Now, U and V are derived from  $U = 0.713 * (\text{red} - Y)$  and  $V = 0.564 * (\text{blue} - Y)$

Unfortunately I don't have test data to verify these formulas....

Hope this helps  
Norbert

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