Subject: animated png: a new format for scientific animations Posted by pgrigis on Wed, 21 May 2008 14:28:23 GMT

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Hi folks,

production of animations (i.e. movies) is one perennial subject of discussion in this group. One of the main difficulties is the large number of mutually incompatible formats, not always equally well supported by different platforms and softwares.

Furthermore, scientific animations are not well suited to lossy compression schemes (i.e. jpeg, mpeg etc.) such that the quality is in general low, or the file size huge when higher bitrate is used.

For still images, the alternative png format has been available for some time, and has become the format of choice for plots etc. So it seems quite logical that png animations should be the way to go. The mozilla folks have come up with a new specification for animated pngs that is supported in firefox 3. I tried out the new format and I can confidently say that the quality is much better than any other movie format I have ever seen, and the file size is quite reasonable.

I've put up an example, but bear in mind that to be able to see the animated png you'll need the firefox 3 beta (release candidate)!

The web page show the animated png and 3 quicktime movies of increasing quality (and file size!).

http://hea-www.harvard.edu/~pgrigis/scianim/index.html

Of course, the availability (finally!) of a good format specification for scientific animations does not mean that it is easy or convenient to use. The main problem now are the fact that only a few player and encoders are available.

On the other hand, you can play the movies with firefox 3 and you can endcode the images using

a (cosed source) command line java utility (http://www.reto-hoehener.ch/japng/), therefore at least a minimum of multiplatform support already exist.

Anyway, if you are willing to live with the limited support for the format, it will probably give you the best quality for your scientific animations (and arguably is still a better solution than having IDL open and issuing for i=0,100 do tv,img[*,*,i];-)

Ciao, Paolo