Subject: animated png: a new format for scientific animations
Posted by pgrigis on Wed, 21 May 2008 14:28:23 GMT
View Forum Message <> Reply to Message

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
