Subject: Re: Drawing vector fields with New Graphics
Posted by Phillip Bitzer on Tue, 02 Jul 2013 18:15:00 GMT
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On Tuesday, July 2, 2013 12:54:36 PM UTC-5, Gordon Farquharson wrote:

> I'm not so scared by this note. The length of a vector in the vector field doesn't have anything to do with the spatial coordinates in which the vector field is plotted. One typically scales vector lengths to make the vector field pretty (easy to read). As I understand it, this automatic scaling is what the vector routine is doing quite conveniently, so I can see that this automatic scaling is useful for a single vector field because it makes the vector field fit in the area nicely. But the second vector field should use the same scaling factor, or at least, there should be an option to reuse the scaling factor computed form the first vector field.
>

Chacun a son gout, I guess. I would like to have some sort of control of the length of the vectors, using vx, vy.

>
> Did you mean something like:
>
> vmag = mean(sqrt(vx^2 + vy^2))
>
>
> vx /= vmag
> vy /= vmag
>
> v2.length_scale = 2
>
> This version produces vectors in v1 and v2 that are the same length! The scaling does not seemed to be maintained between calls to vector.
>

Not exactly what I was thinking. Defining v1 sets the "units" of the length_scale. You then set the "unit" to be 2 tics with v1.length_scale=2

If instead of dividing the vx, vy by the magnitude, instead try

v2.length_scale = 2/vmag

I think this is what you're looking for....at least for this example.