Subject: Re: inverse gradient
Posted by pgrigis on Fri, 28 Nov 2008 16:14:02 GMT
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If the original poster has a gradient image A and wants to compute
the image B whose gradient is A, then it seems odd to me that a
sparse approach would work.

Ciao,
Paolo

Jeremy Bailin wrote:

>>
>>
>>

>>
>>>> > "inverse" meaning what for a vector-field?
>>
>>>> > Paolo
>>
>>>> "inverse" is the opposite operation for gradient.
>>>> The inputs are 2D gradient images (dX and dY), where high values are
>>>> large changes in the "inverse gradient" image, and zeros are stable
>>>> (no changes) in the "inverse gradient".
>>
>>>> Eran
>>
>>> I would never use this in production code, but here's a hack that will
>>> give you something to look at:
>>
>>> scalarfield = total(dX, /cumulative, 1) + total(dY, /cumulative, 2)
>>
>>> The real solution is to replace those totals with actual integrals.
>>
>>> -Jeremy.
>>
>> Thanks,
>>
>> It's the simplest way. it's basicly works but with errors.
>> I found few articlies about "inverse gradient" on the web, and the
>> problem is very complex and the simple MATLAB function (from matlab
>> exchange) is expensive (memory).
>> The main problem is to solve A*F=V where A is M*N matrix, V is vector
>> and we look for F.

>> but it is slow and have memory problem. please note that most of A
>> matrix are zeros...
>>
>> Any ideas?
>
> Oddly enough, that's the second time sparse arrays have come up in one
> week!
>
> You want LINBCG, which takes as input a sparse matrix created using
> SPRSIN. The help pages on them are pretty decent - give them a read.
>
> -Jeremy.
