Subject: superresolution
Posted by Helder Marchetto on Mon, 18 Aug 2014 08:15:03 GMT
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Hi,
I'm looking into generating a higher pixel resolution image from a subset of images of the same object sub-pixel shifted.
In other words, I have n-images of [nx,ny] pixels. Each is the result of a shift of 1/n. Do you know if there is any code out there to reconstruct an image of [nnx,nny] pixels? Obviously with nnx>nx and nny>ny.

I'm obviously looking into doing this in IDL, but also any info on how to do this in other coding languages or good literature references would be great.

Notice that the images are generated by a pixel size limited imaging system and therefore appear pixellated.

Thanks,
Helder

Subject: Re: superresolution
Posted by Moritz Fischer on Mon, 18 Aug 2014 10:36:31 GMT
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Hi,
I' not sure whether this suits your application, but the mathematical
basis for something like that is described in
"Brown: Multi-Channel Sampling of Low-Pass Signals, IEEE Transactions on
Circuits and Systems, 1982"
Unfortunately my implementation of this (related to SAR signal
processing) is highly specific and barely readable, so there's no point
in sharing it.
Good luck!

Am 18.08.2014 10:15, schrieb Helder:
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> a subset of images of the same object sub-pixel shifted. In other
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> Thanks, Helder
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