## Subject: Translation Error Posted by B.C. Hamans on Thu, 20 Sep 2001 19:13:58 GMT View Forum Message <> Reply to Message

Hi Guys,

first thank you for your help on the initial rotation/translation problem. The rotation works great but with the translation I'm still off a factor of a few voxels (about 5 in each direction) Each voxel represent a volume of about 9.6x9.6x9.6mm so this is too much. I'm trying to match the images for detection of tumor growth, hart infarct development etc. So i need more precision. Can you tell me something more about the precision of the functions interpolate (cubic), t3d etc and precision? These are some pieces of code i'm currently using:

```
concode fill currently using:
<----Begin--->
;Get dimension of the volume
s = size(vol)
sx = s(1)
sy = s(2)
sz = s(3)

; Generate volume coordinates
i = lindgen(sx*sy*sz); This is a temporary array for vector indices
coords = [ [i mod sx],[(i/ sx) mod (sy)],[i / (sx*sy)],[replicate(1, sx*sy*sz)]]
; Reset transformation vector
```

; Set 3D transformation system variable

!P.T = matrix; This Matrix is an input from another program which i think works without any question

; i wan't to keep it this way for ease of use. I don't wan't to input the seperate trans or rotations

;Calculate new sample positions of voxels coords = temporary(coords)#!P.T ;temporary to save some memory

;Interpolate the voxels to the new coords trans\_vol = reform(interpolate(vol, coords(\*,0), coords(\*,1), coords(\*,2),cubic, missing=0),sx,sy,sz)

<---->

T3D. /RESET

Earlier in this discussion some of you guys talked about shift vs translate. I can't use shift because of pretty large translation in my patient dataset which would wrap-around and create false matches. (In the automatic registration mode.)

Kind rega	rds.
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Bob