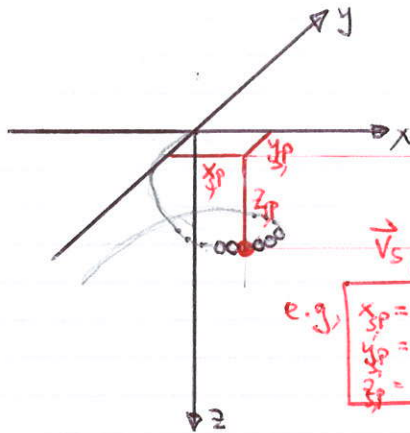




Spiral scan

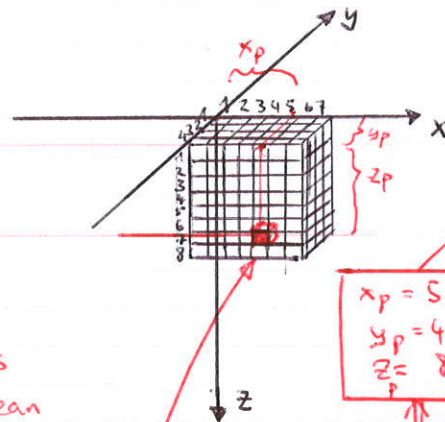


e.g. $x_p = 5.34$
 $y_p = 4.87$
 $z_p = 8.91$

feedback
coordinates
of spiral scan

- n colour channels
- 3 position channels

reference stack



$x_p = 5.31$
 $y_p = 4.92$
 $z_p = 8.88$

feedback
coordinates
of ref stack

$x_v = 5$
 $y_v = 4$
 $z_v = 7$

Voxel with best matching
position feedback
coordinates has the
voxel coordinates **5/4/7**

Algorithm

I. For a repetition of the 3D spiral walk through the voxels. For each voxel:

1. Look up the position feedback coordinates $\vec{V}_{s,p} = (x_{s,p}, y_{s,p}, z_{s,p})$

2. With $\vec{V}_{s,p}$, go into the position channels of the ref. stack and find the voxel with the best match ($\vec{V}_{r,p} = (x_{r,p}, y_{r,p}, z_{r,p})$)

This automatically gives you the corresponding voxel coordinates \vec{V}_v .

3. With \vec{V}_v go into the segmentation stack and look up the corresponding object $O(\vec{V}_v)$.

4. Assign the fluorescence intensity value of the functional channel of the spiralscan to the object $O(\vec{V}_v)$.

use feed search algorithm

II. Once your done with all voxels, calculate the average of the intensity values of an object for all objects.