

CT-Reconstruction

Using Symmetric Multi Processors (SMP)

Outline

- ➊ Computed Tomography (CT)
- ➋ CT reconstruction
- ➌ SMP Assignment
- ➍ Programming SMPs

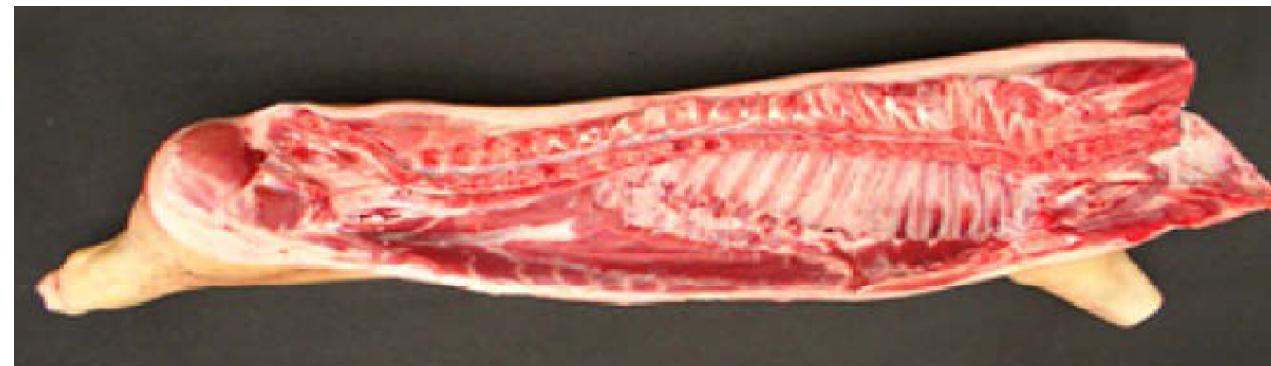
CT Scanning

We go to the hospital, right ?!?

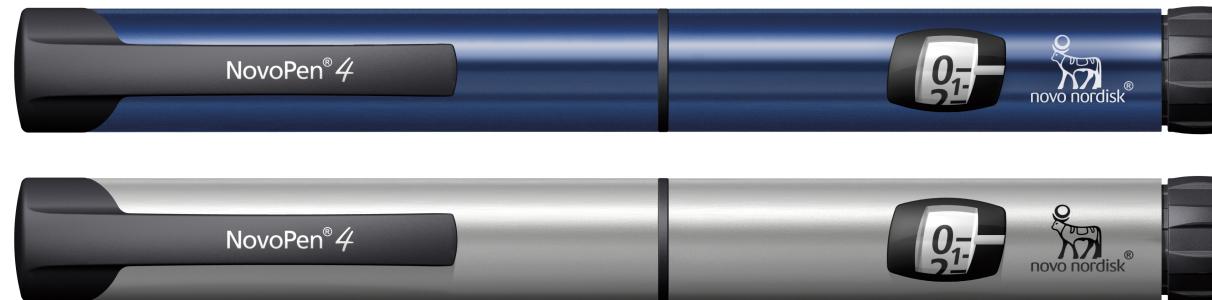
CT Scanning: Veterinary



CT Scanning: Danish Crown



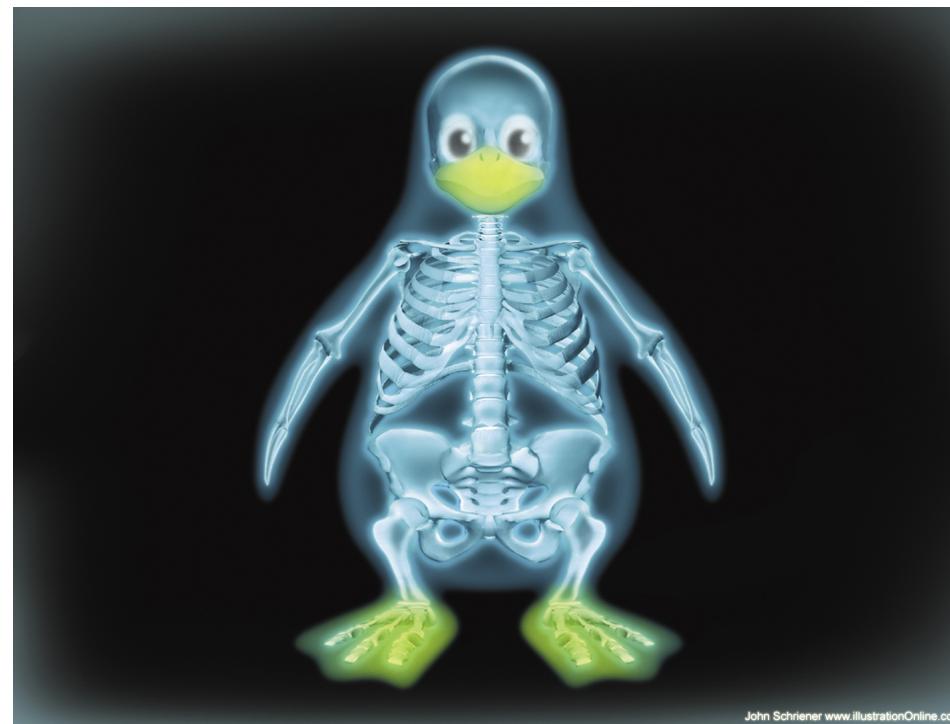
CT Scanning: NOVO



CT Scanning: Grundfos



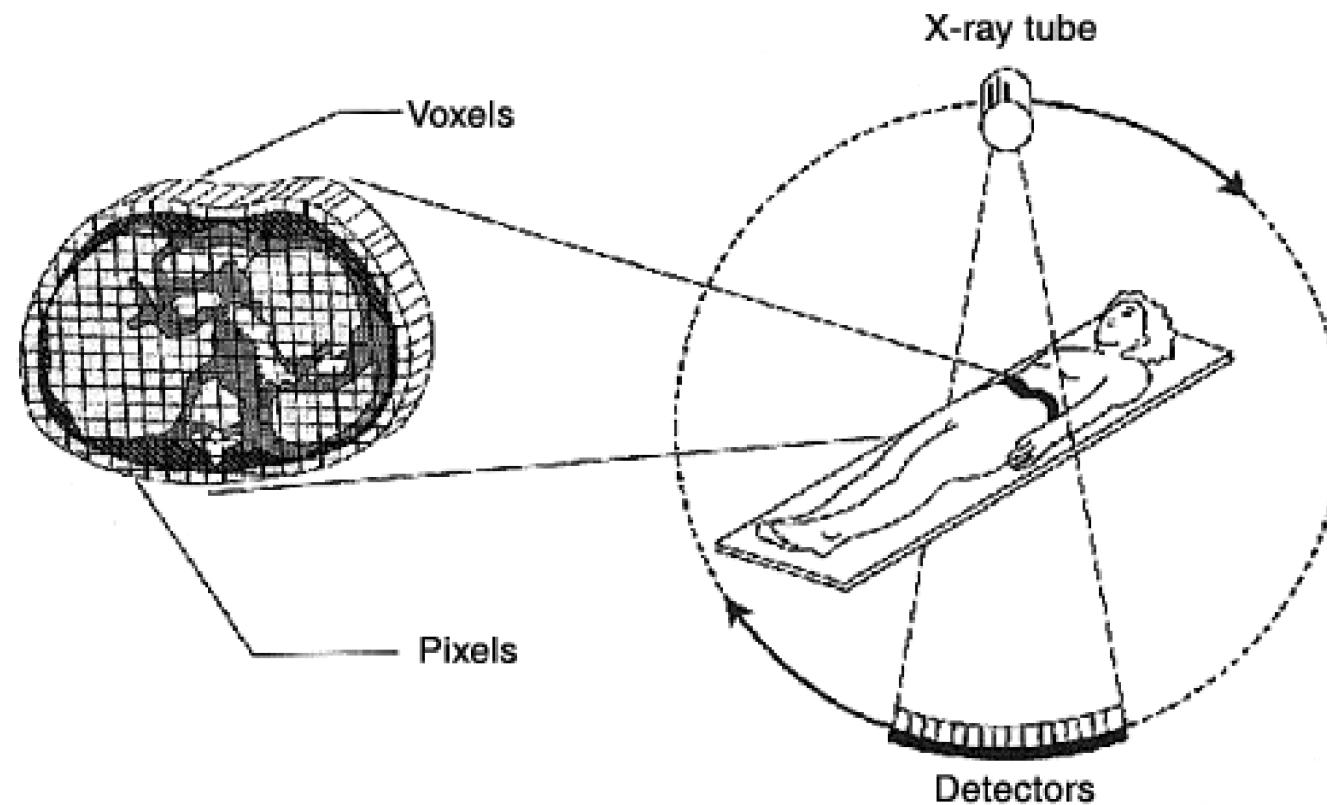
CT Scanning: NBI XRay



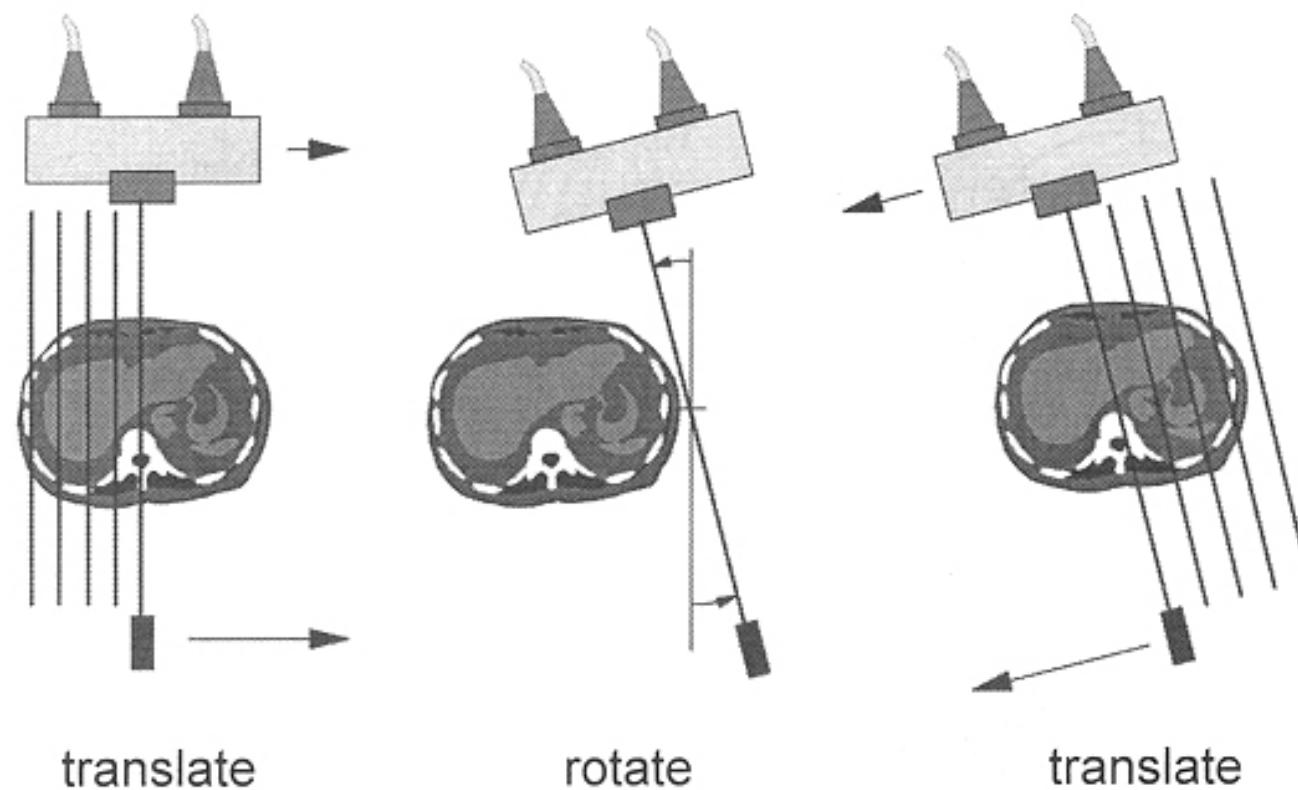
John Schriener www.illustrationOnline.com

Computed Tomography

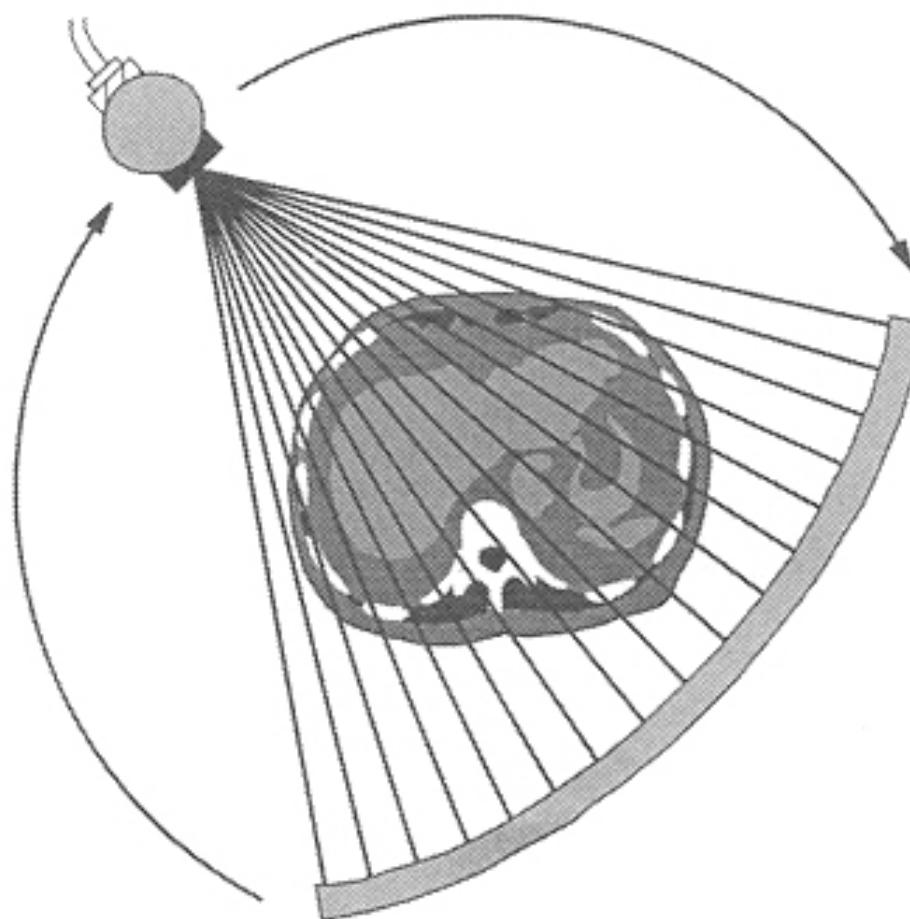
Overview



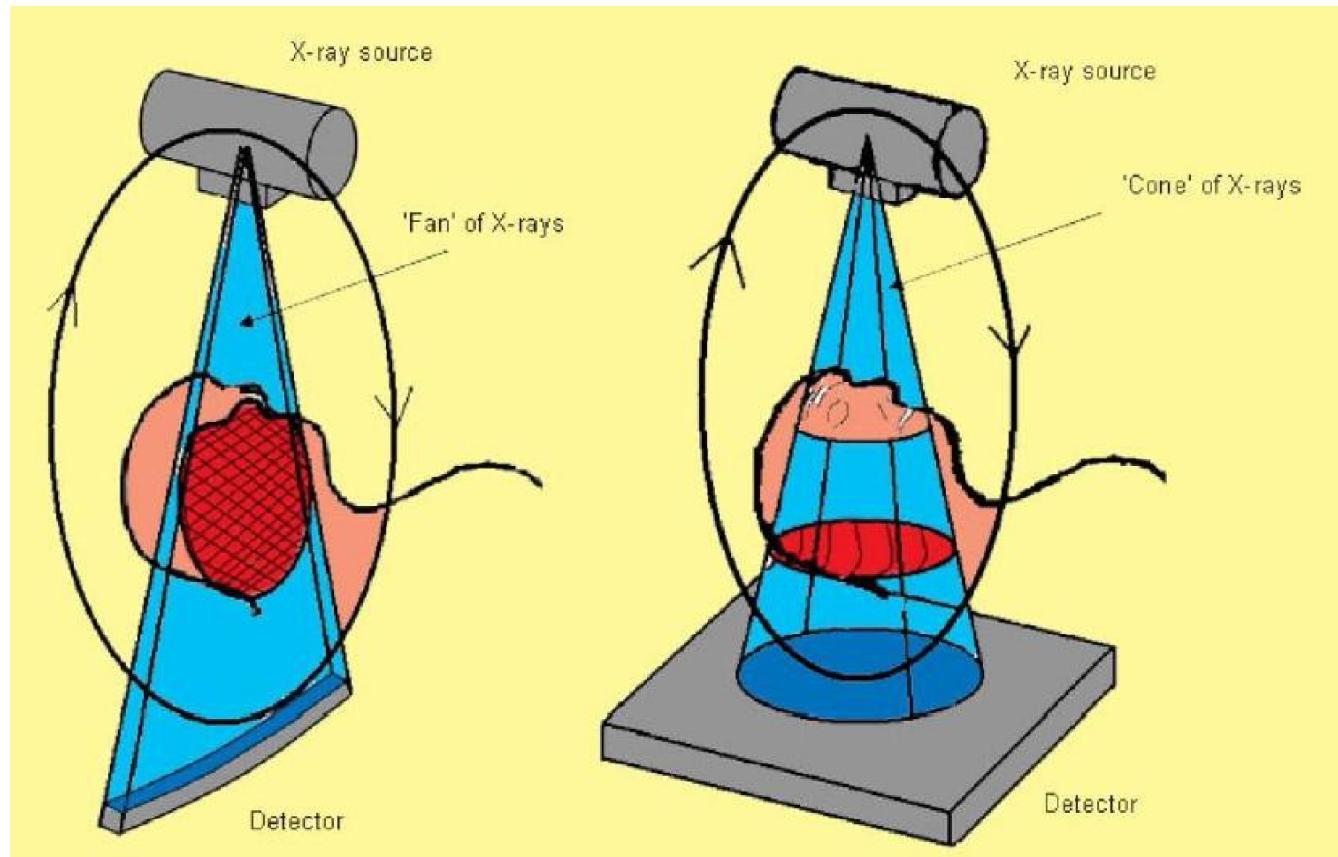
Parallel Beam



Fan Beam

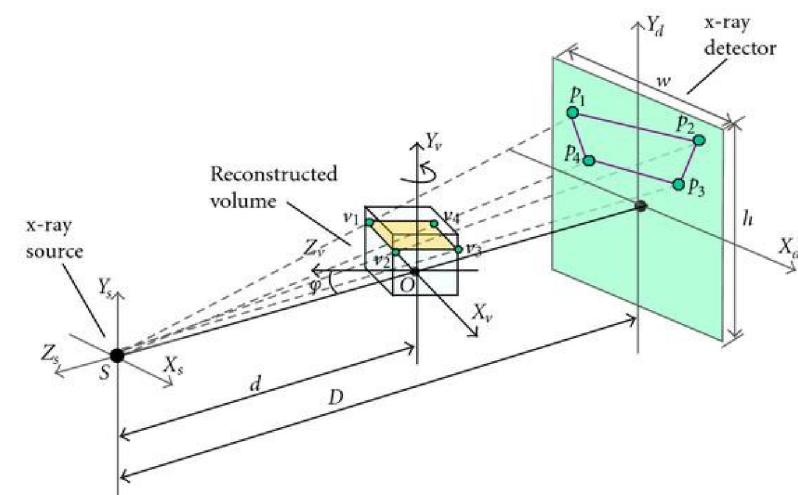
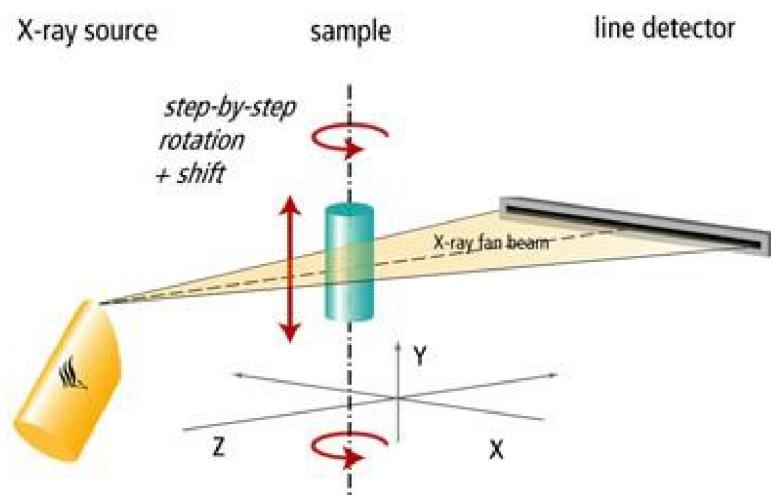


Fan vs. Cone Beam

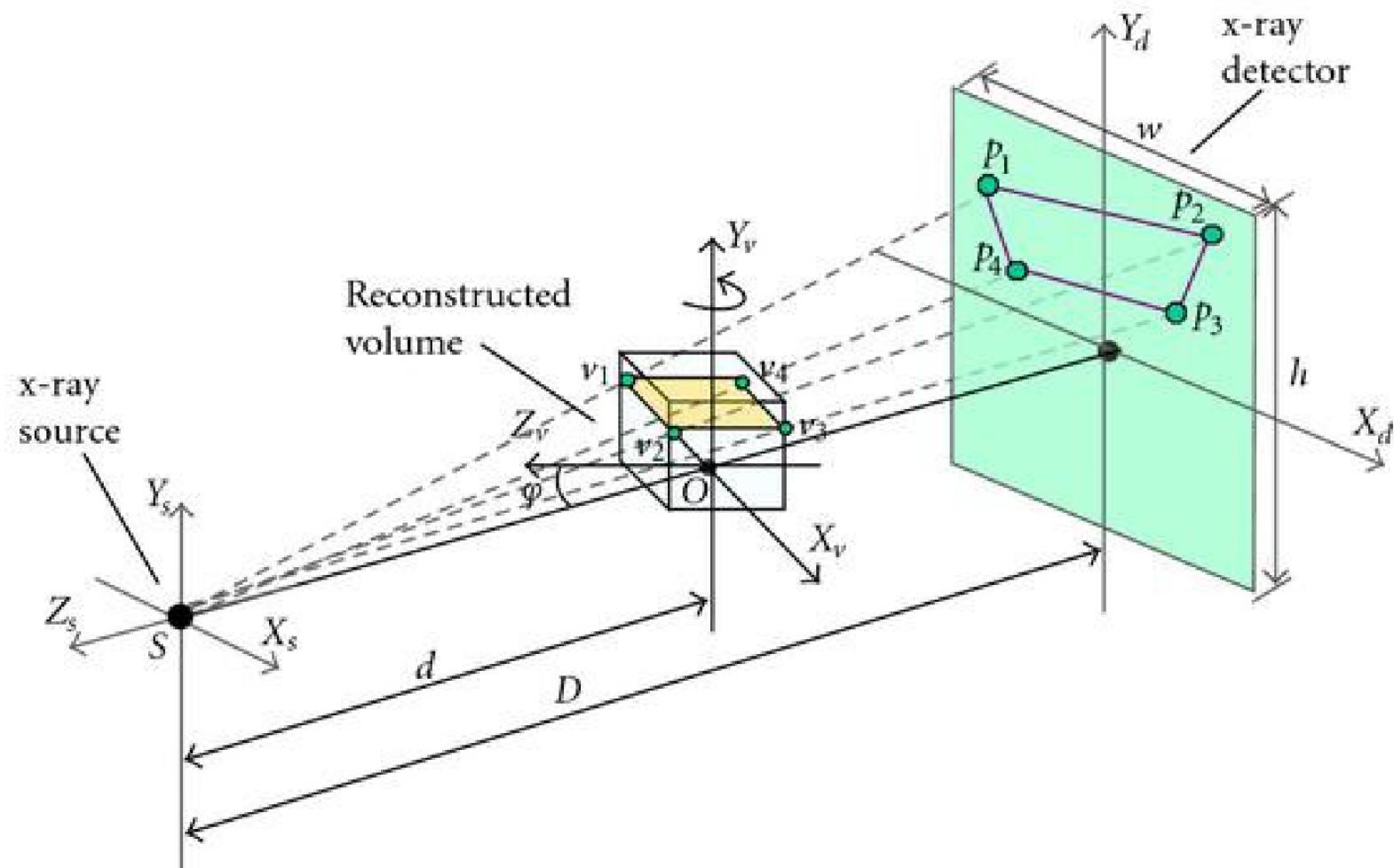


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Fan vs. Cone Beam

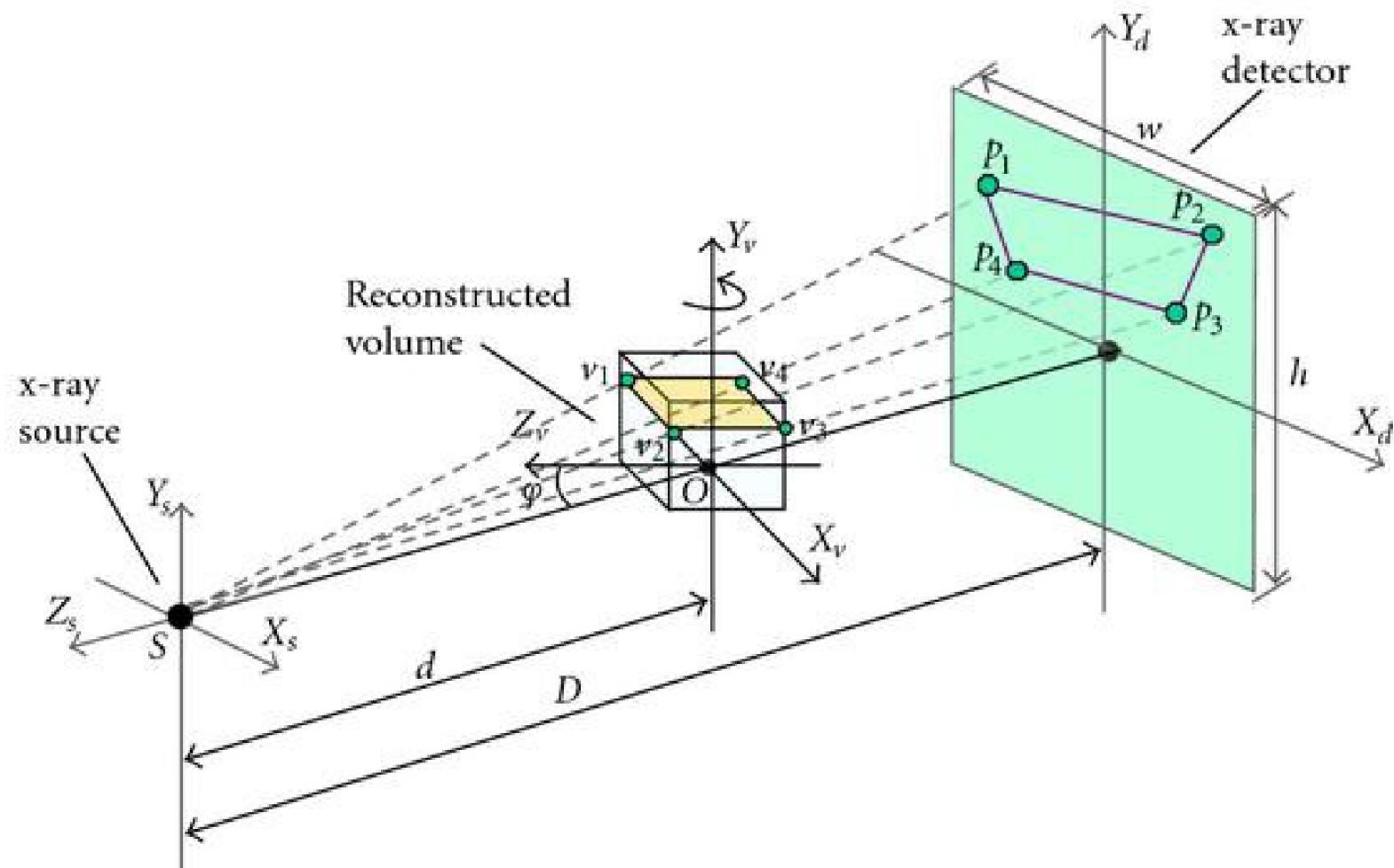


Cone Beam

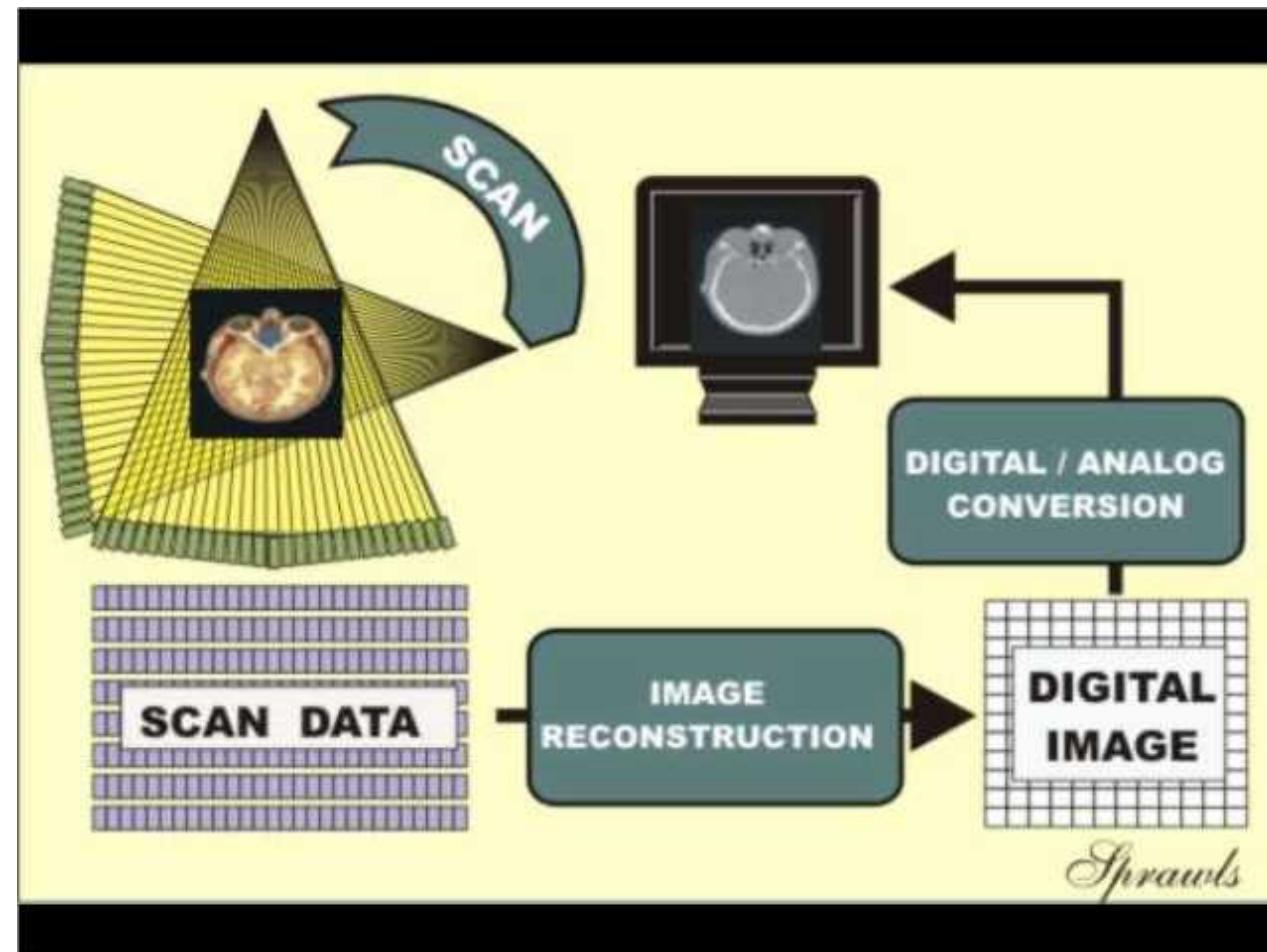


CT Reconstruction

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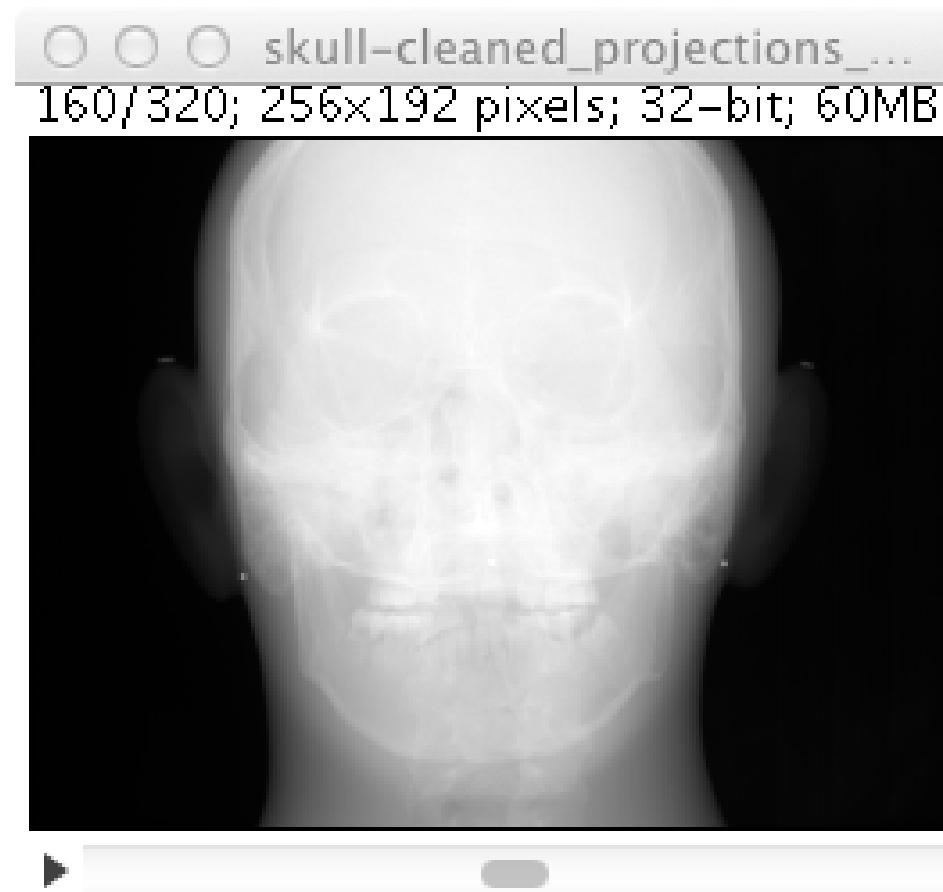
CT Reconstruction



CT Reconstruction



CT Reconstruction



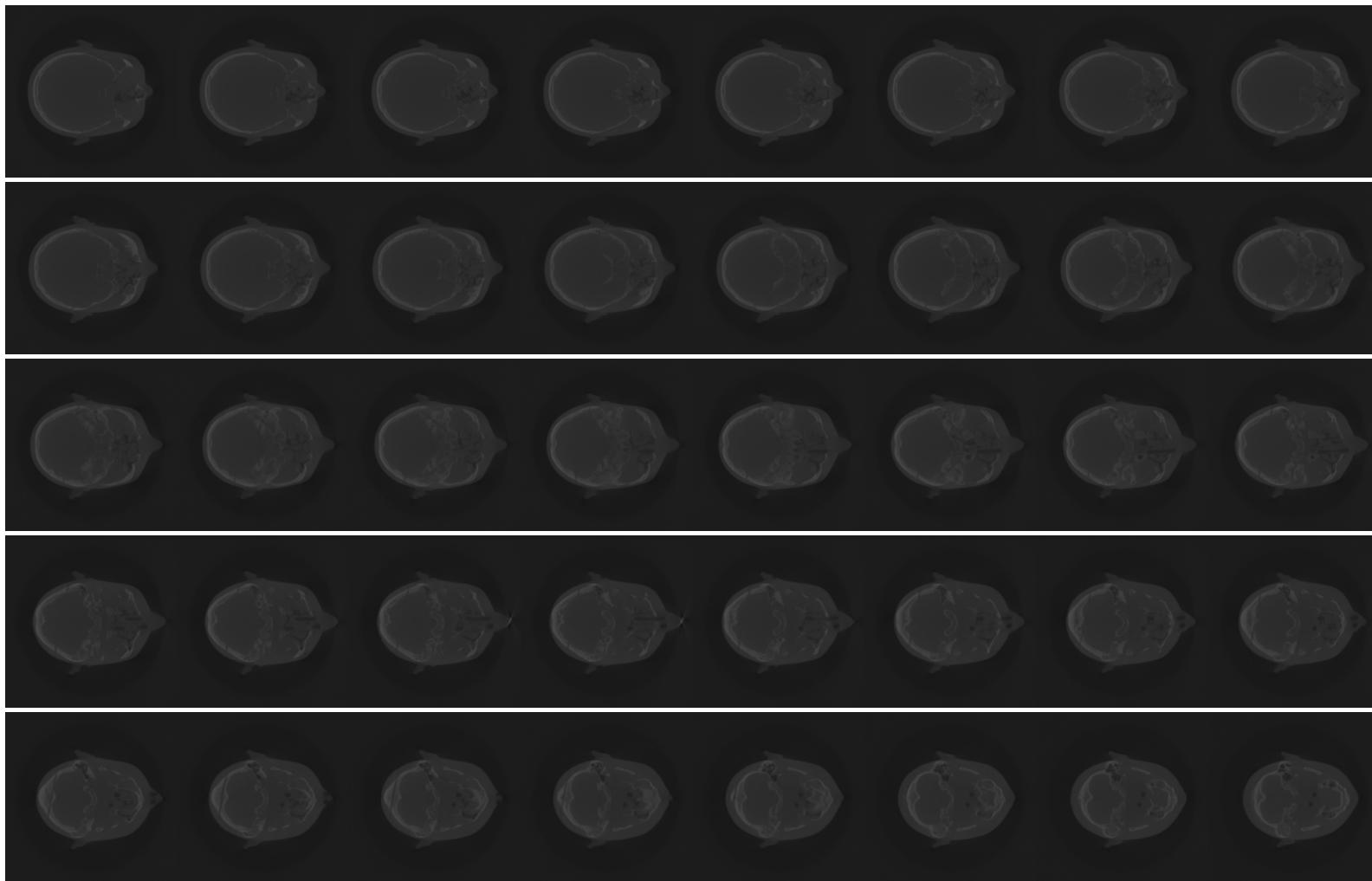
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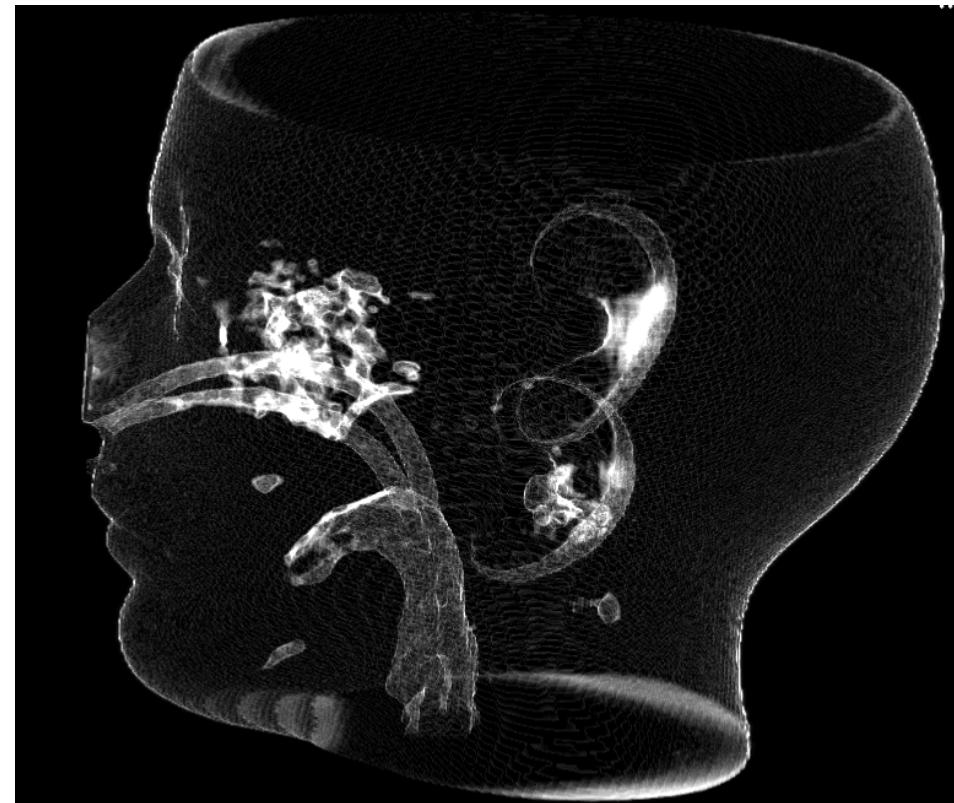
CT Reconstruction



CT Reconstruction



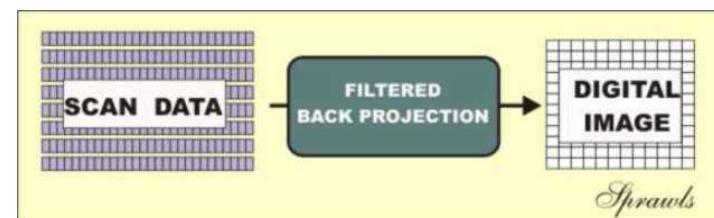
CT Reconstruction



Feldkamp, Davis, and Kress (FDK)

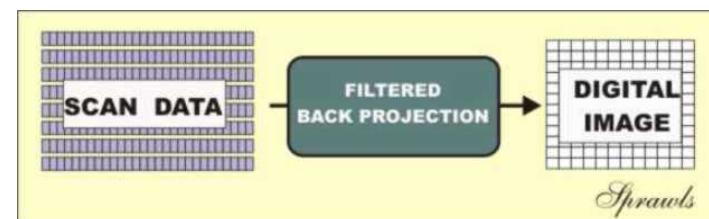
Cone Beam Reconstruction

- Projection Weighting
- Projection Filtering
- Back Projection
- Volume Weighting



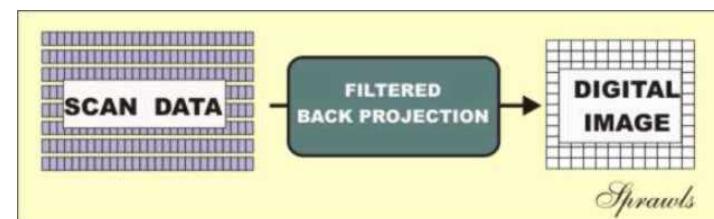
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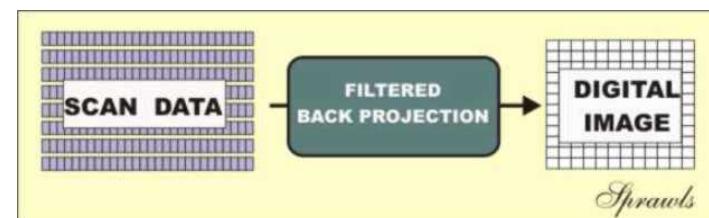
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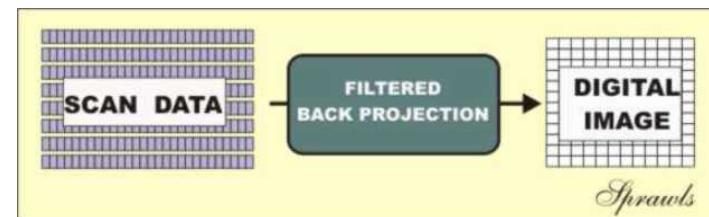
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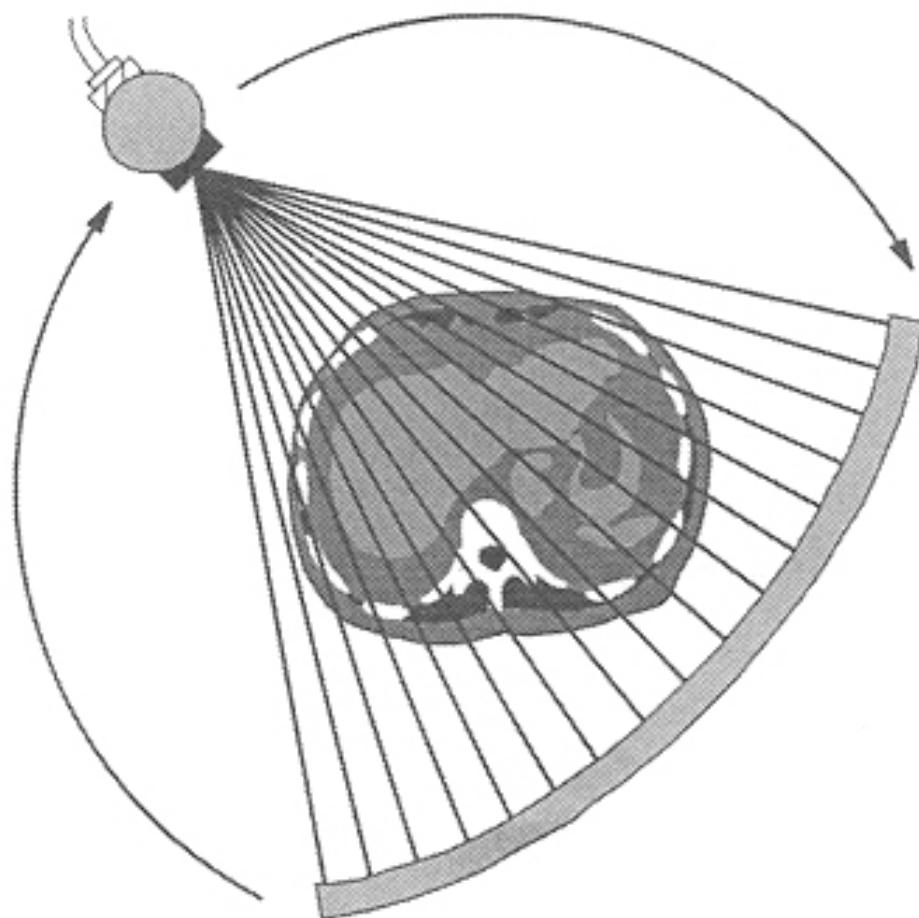


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Projection Weighting



Back Projection

