Docket #: S07-332

A method of 3D position estimation with a single x-ray imager utilizing the target probability density

Several linear accelerator vendors have systems with single x-ray imager. A single x-ray imager presents a challenge to estimate 3D positioning. A method to estimate the 3D position using a single x-ray imager with prior information has been developed by Stanford researchers. This method has shown accuracy for prostate data that it has been applied to. A single imager can be used even for systems with dual imagers, such as in the case of an imager's view being obscured or to reduce radiation dose from the imaging systems.

Applications

- Radiotherapy

Advantages

- No such method currently exists

Publications

- Poulsen P R, Cho B C, Langen K, Kupelian P and Keall P, "Three dimensional prostate position estimation with a single x-ray imager utilizing the spatial probability density." *Phys Med Biol* 2008 Aug 21.

Patents

- Published Application: 20100172469
- Issued: 8,379,794 (USA)

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