



New Optical Tracker Hits the Spot in Radiation Therapy

Ascension Launches 3D Guidance spotLIGHT™ at Radiation Oncology Conference

BURLINGTON, VERMONT, USA; October 5, 2010. **Ascension Technology Corporation** will unveil **3D Guidance spotLIGHT**, its breakthrough optical tracker for improving radiation treatment outcomes at the American Society of Radiation Oncology (ASTRO) Annual Conference in San Diego, CA, October 31 -- November 3, 2010 (www.astro.org/meetings/annualmeetings/)



Ascension's new optical tracker, 3D Guidance spotLIGHT, precisely tracks passive, wireless markers for image-guided procedures.

The tracker dynamically bridges the gap between patient movements while on a treatment couch and the direction of a linear accelerator's radiation beams.

Misalignment of beams due to patient movement, respiration, organ motion, daily set-up errors, and mechanical tolerances of the LINAC machine is the primary cause of collateral damage to healthy tissue.

spotLIGHT takes advantage of state-of-the art algorithms and prediction to track the six degrees-of-freedom location of multiple passive markers on the patient to within one third of a millimeter at rates up to 100 times per second. Measurements are referenced to six miniature IR cameras that can be independently mounted at convenient locations in the LINAC

suite. Tracking range (cameras to markers) extends to 4 meters. The six-camera configuration offers significant redundancy to overcome line-of-sight errors; only two cameras must see markers to compute a solution. Additional markers can be mounted on movable objects in the LINAC suite for contact detection.

Operationally, 3D Guidance spotLIGHT will be interfaced to safety servo controllers, monitoring deflections of the patient and equipment from true “home positions” as determined by pre-treatment simulations. Its data can be used to stop and re-target beams, alert therapists to deviations beyond established norms, and to act as an independent system to protect both patient and equipment.

According to Ascension Vice President, Jack Scully, “**3D Guidance spotLIGHT** is a new cost-effective safety tool for keeping the patient and the radiation beam in precise alignment throughout a treatment regimen. Its job is to help therapists hit the center of the target 100% of the time.”

At ASTRO, Ascension will demonstrate spotLIGHT in **Booth #1943**. For more information about Ascension at ASTRO contact Trish Scott: tscott@ascension-tech.com.

About Ascension

Ascension Technology Corporation is a professional 3D tracking company specializing in navigation and guidance devices for medical instruments. Its optical and magnetic tracking devices are key enabling technology for image-guided procedures. For more information, please visit: www.ascension-tech.com.

spotLIGHT is specified for medical use only in compliance with all pertinent FDA/CE/IRB directives.

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