

RANGE FINDER TO IMPROVE X-RAY IMAGE COLLECTION

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Technology Description

Researchers at Washington University in St. Louis have developed a device that automatically measures and displays body thickness to optimize X-ray image collection. This device will improve X-ray image quality and reduce the radiation exposure to patients.

The device estimates body thickness using a range finder attached to a camera, and the software output displays the patient's position relative to the automatic exposure chamber. The technologist can optimize positioning without taking multiple images, limiting radiation exposure.

Stage of Research

The researchers have built a working prototype of this device and tested it on patients. The software can be integrated with existing radiology systems, and existing gantries can be easily retrofit.

Publications

- MacDougall RD, Scherrer B, Don S. (2018). [Development of a tool to aid the radiologic technologist using augmented reality and computer vision](#). *Pediatric Radiology*, 48: 141-145.

Applications

- X-ray imaging: particularly impactful to pediatric radiology

Key Advantages

- Enables better patient positioning
- Reduces radiation exposure

Patents: [US 10,456,102](#) & [US 10,842,460](#)

Related Web Links: Don [Profile](#) & [Lab](#)