A SYSTEM AND METHOD FOR ALIGNING AN ELONGATED TOOL TO AN OCCLUDED TARGET

ABSTRACT

A system and a method for aligning an elongated tool to an occluded target are disclosed. The system comprises an adjustment mechanism configured to adjust an angular orientation of the elongated tool relative to a pivot point spaced from the target; an imaging device configured to capture one or more X-ray images of the elongated tool and the target; and a processor communicatively coupled with the adjustment mechanism and imaging device, wherein the processor is configured to: extract Euclidean vector data of the elongated tool based on image data of an X-ray image received from the imaging device; and control the adjustment mechanism to iteratively adjust the angular orientation of the elongated tool based on the Euclidean vector data to align a longitudinal axis of the elongated tool with the target and the pivot point.

FIG. 1