Multiple object video tracking for the radiotherapy treatment room supervision : focussing on the model

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Abstract

In this paper, we present a numerical model capable of containing information of various kinds, coming from various formats (e.g., DICOM, VRML...), and organized into "descriptor files" in the XML format. After setting the parameters for each case at hand, this model provides as accurate as possible a virtual environment of the patient, the staff, and the treatment room and its equipment, related to the treatment or not, provided they are all included in the formal description given as input. This virtual environment will then be operated by an external model-based video control module.

Keywords: Augmented and virtual reality, modeling, geometric reconstruction, tracking.