Annotating Sensor Data to Identify Activities of Daily Living

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Abstract*. DANTE is an application, which supports the annotation of ADLs captured using a pair of stereo cameras. DANTE is able to interpret the position and orientation of any object that is tagged with a special marker. Offline, users navigate frame-by-frame through captured scenes to annotate onset/completion of object interactions. The main utility is supporting the development of large annotated datasets, which is essential for the development and evaluation of context-aware models to interpret and monitor occupant behaviour within smart environments. DANTE only records scenes during which 'tagged' objects are interacted with therefore significantly reducing the amount of redundant footage recorded. The current study has extended the concepts of DANTE and has used it to support the annotation of additional sensor platforms. Results demonstrated both the capability of DANTE to support annotation of other platforms along with reducing the amount of time previously required to manually annotate such data by more than 45%.*

Keywords*: Data Acquisition, Multi sensor systems, Video Recording, Optical Tracking, Data Annotation.*