Using3D Body Scan Data to Construct Structured Body Model

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ABSTRACT: The human 3D scan technology has been developed for a long time in the world. However these huge unstructured data can't be used directly. Therefore this study will construct a structured human model as a robotic model for many kinds of application like motion replication. Data preprocessing will filter the noise and rotate scan data to its principle axis then segment data into several parts that will structured in the later process. Human scan data structured process will divide into four parts, which are: head and neck structure, torso structure, arm and palm structure, leg structure. Each part has their own feature and structure processes are based on these features. In this study we have structured human data, these data structure like longitude and latitude of the earth which called body geodesic coordinate system(BGCs), every structure points have their signification, and this kind of data can be widely used in many research and manufacture. We always hope this data structure can become the standard architecture in the future.

Keywords: **Human model, structured human model, human landmark.**