

Integration of positional information from camera in Motion Viewer

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Overview

- Orients alone provide only posture
- Step tracking: relies heavily on scaling of body model
- *Alternative approach*: use a camera to extract positional information, then combine this with joint rotations to obtain translated body model

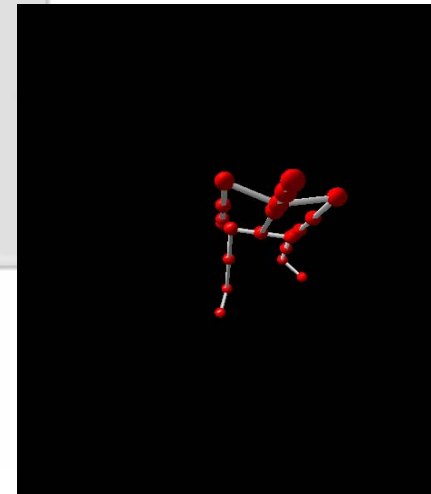
This is NOT the same as camera-based motion capture

- Studio motion capture = many expensive cameras
- Motion Viewer + positional information = one (cheap) camera



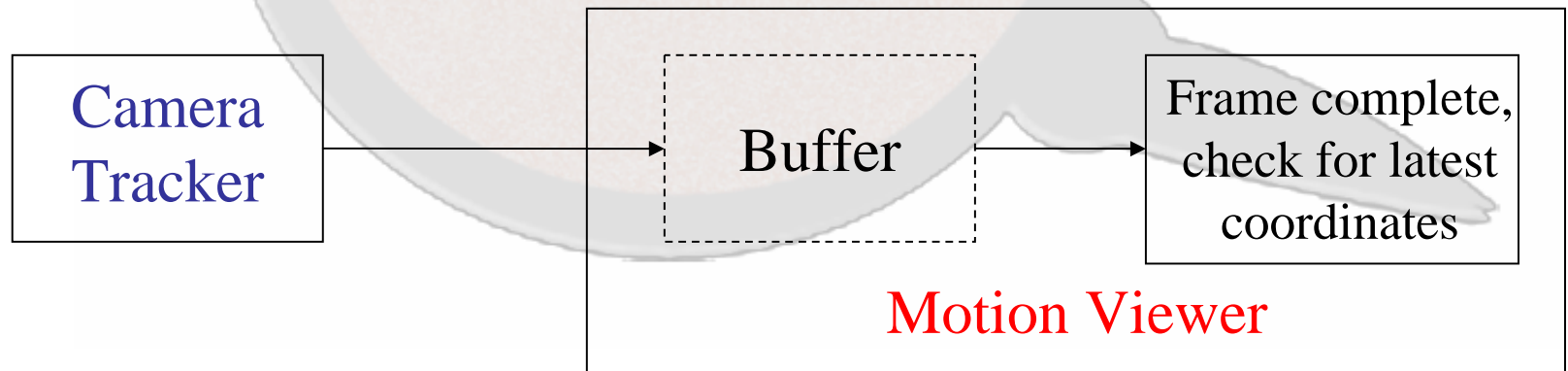
How it works

- Take a panoramic screenshot
- Select colour(s) to be tracked
- Start video, at each frame identify pixels of input colour(s)
- Vision algorithms used to filter out noise and obtain object position



Integration with Motion Viewer

- The camera tracker is kept entirely separate from Motion Viewer
- Position information is communicated over a socket
- When Motion Viewer has a complete frame, it checks for the latest object position and translates the body model accordingly



Conclusions

- Main disadvantage: not very portable -> experiments carried out in Speckled Applications Centre
- Area captured by camera very small
- Caters for different kinds of movements (e.g. sliding movements), does not accumulate error