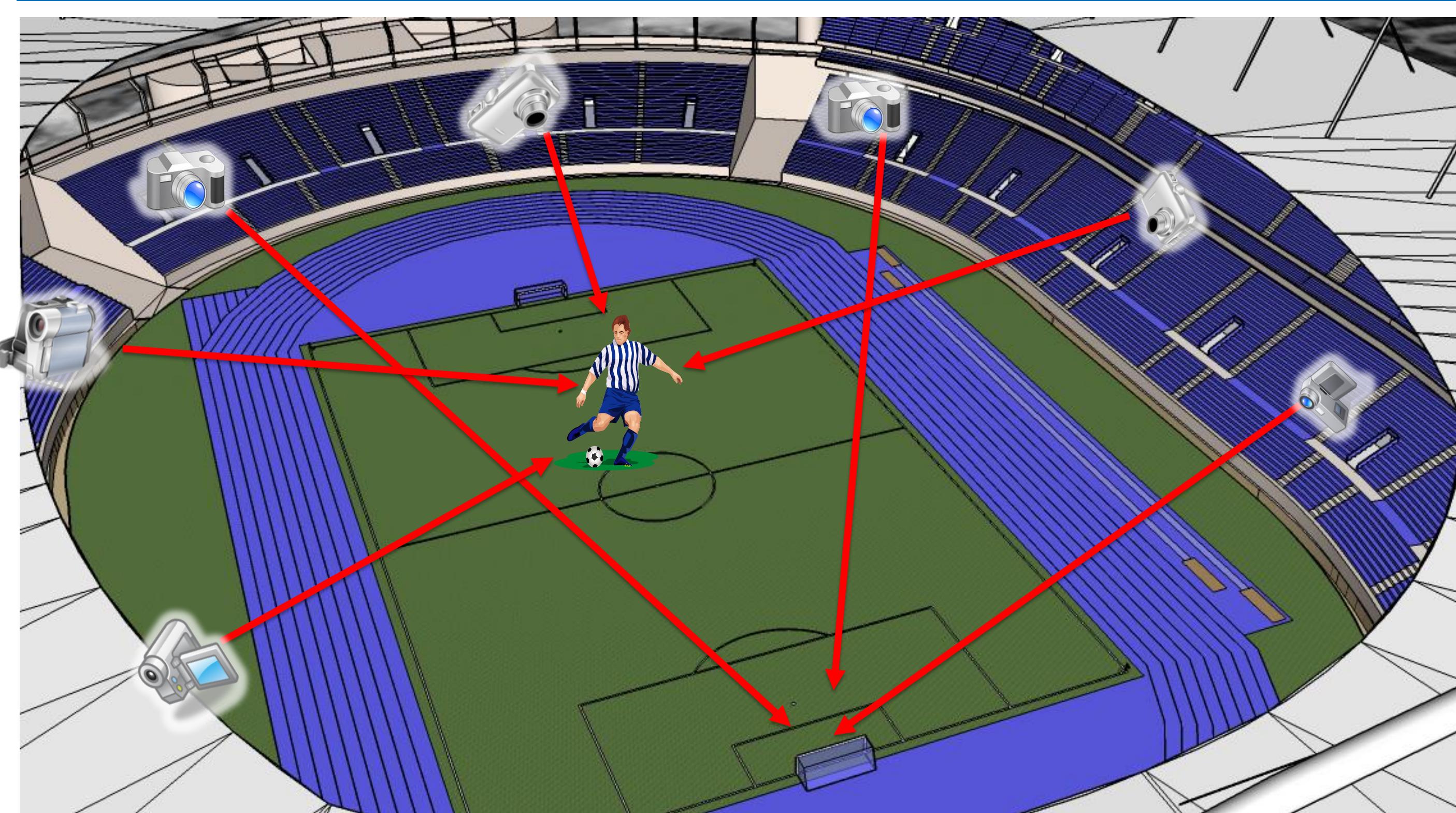


FOCUS: Clustering Crowdsourced Videos by Line-of-Sight

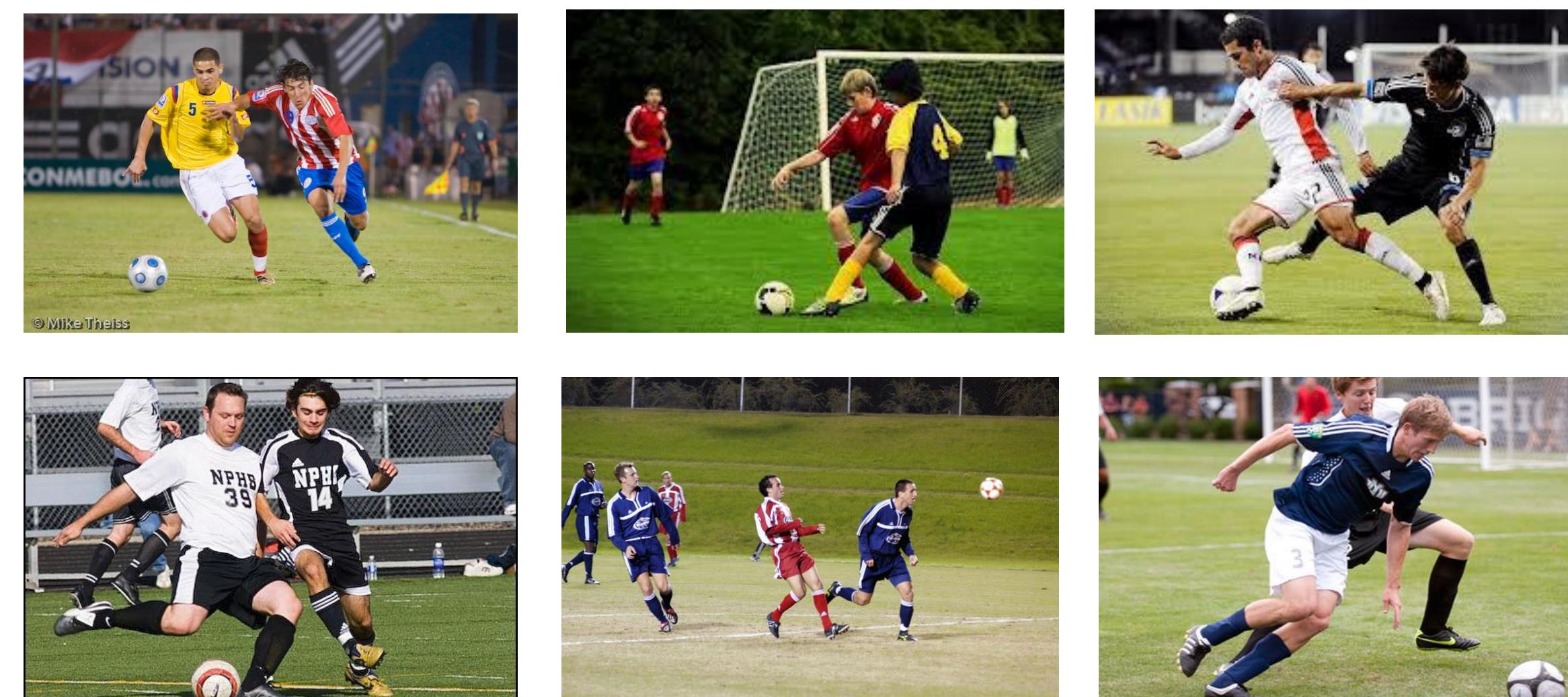
Puneet Jain, Justin Manweiler, Arup Acharya, and Kirk Beaty

IBM Research Duke
UNIVERSITY

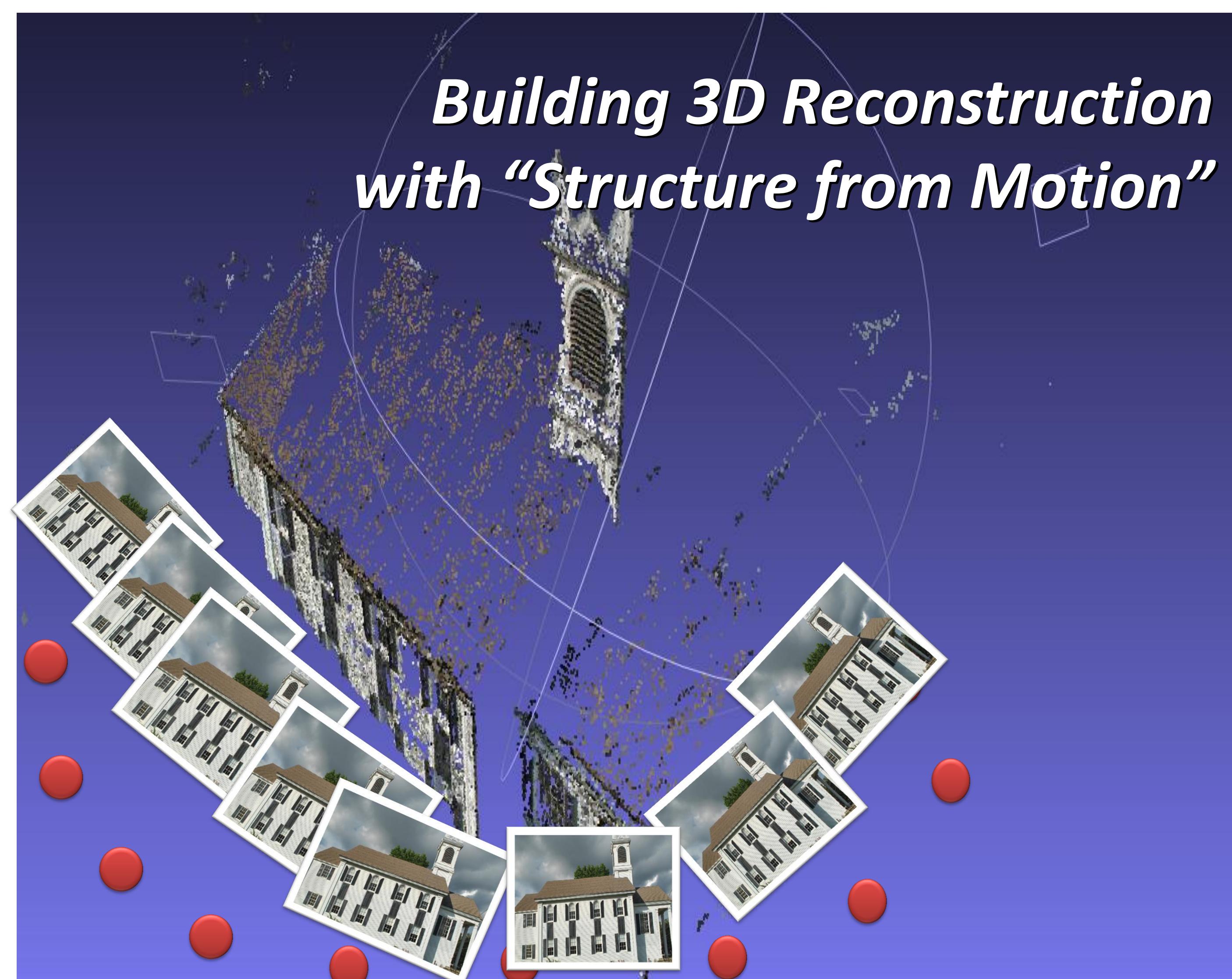
Motivation



Live Dashboard

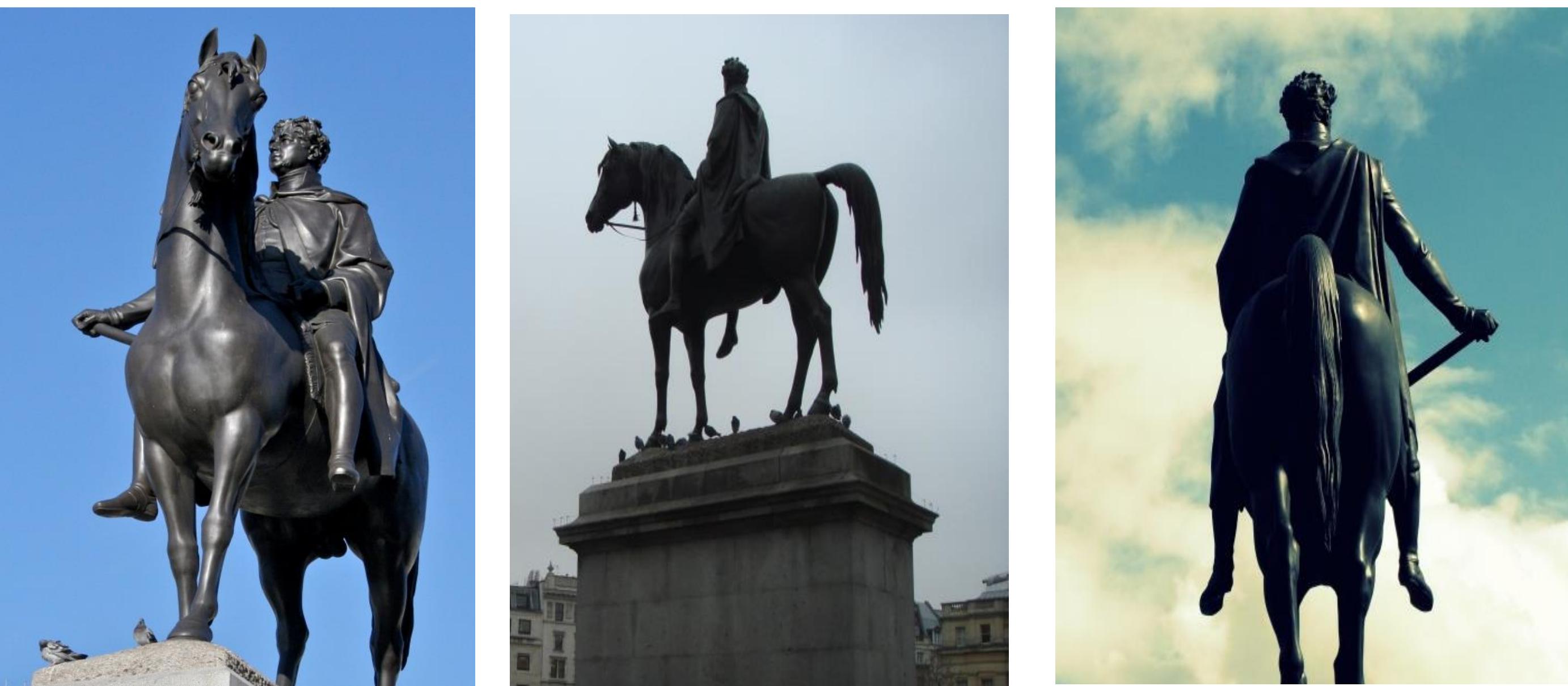


Possible to infer *camera pose* precisely:
deducing observer *location + angle of view*



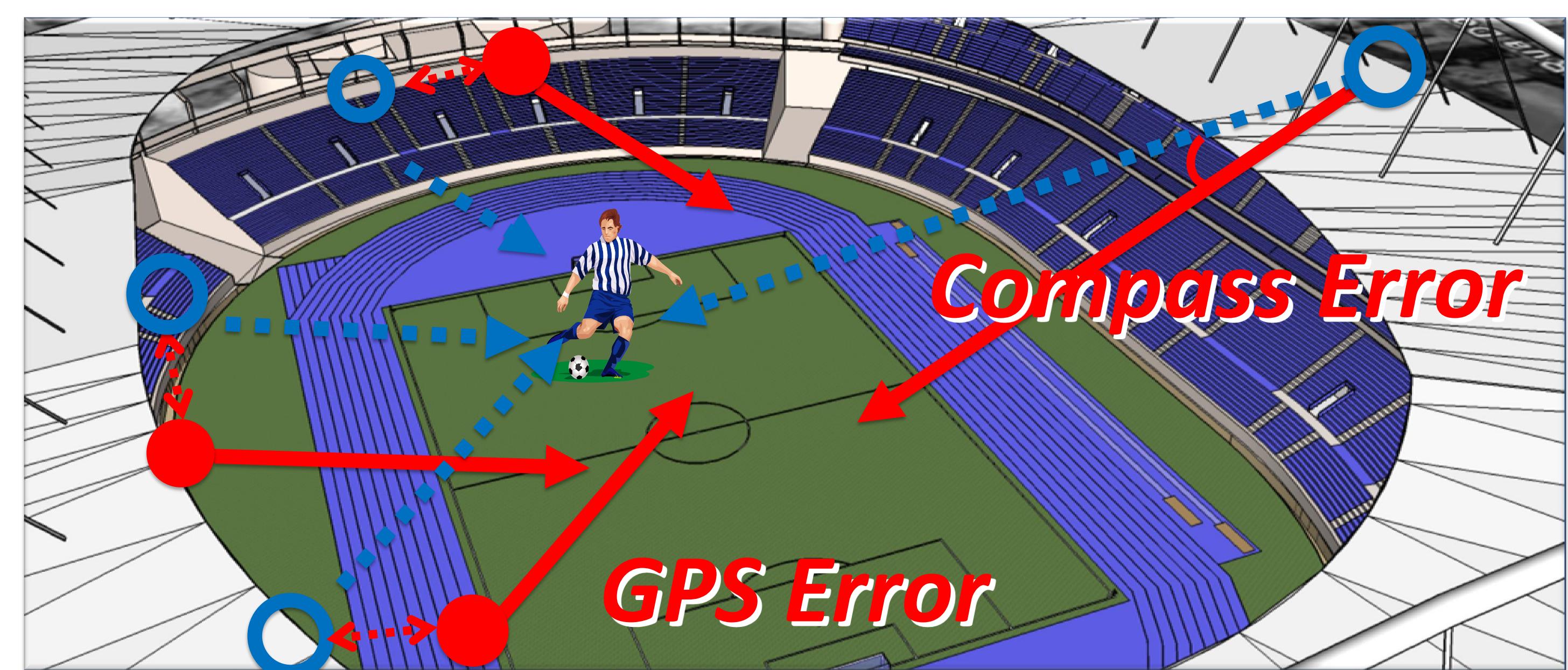
Building 3D Reconstruction with "Structure from Motion"

Visually different, yet similar



FOCUS Challenges

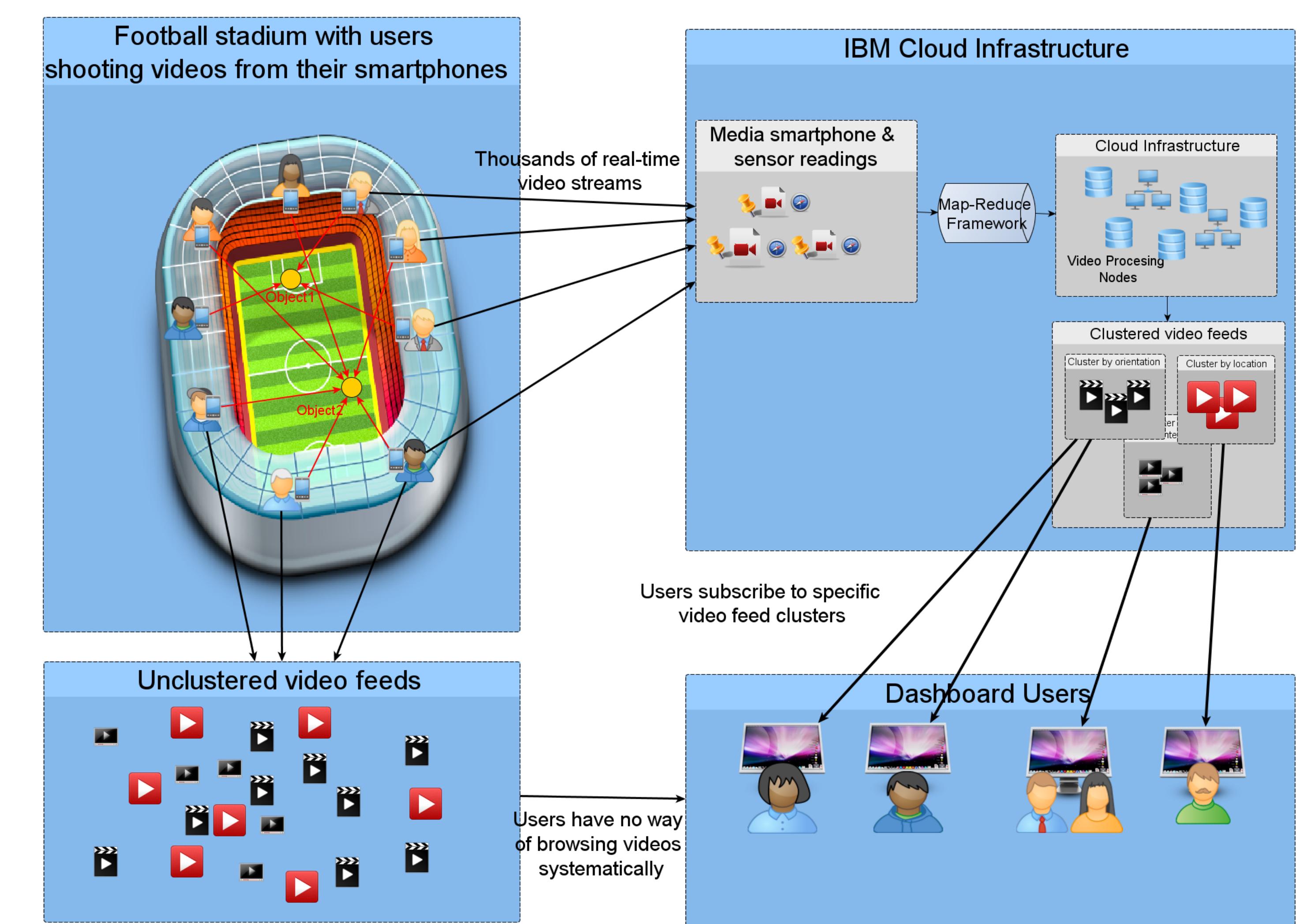
Triangulation does not apply



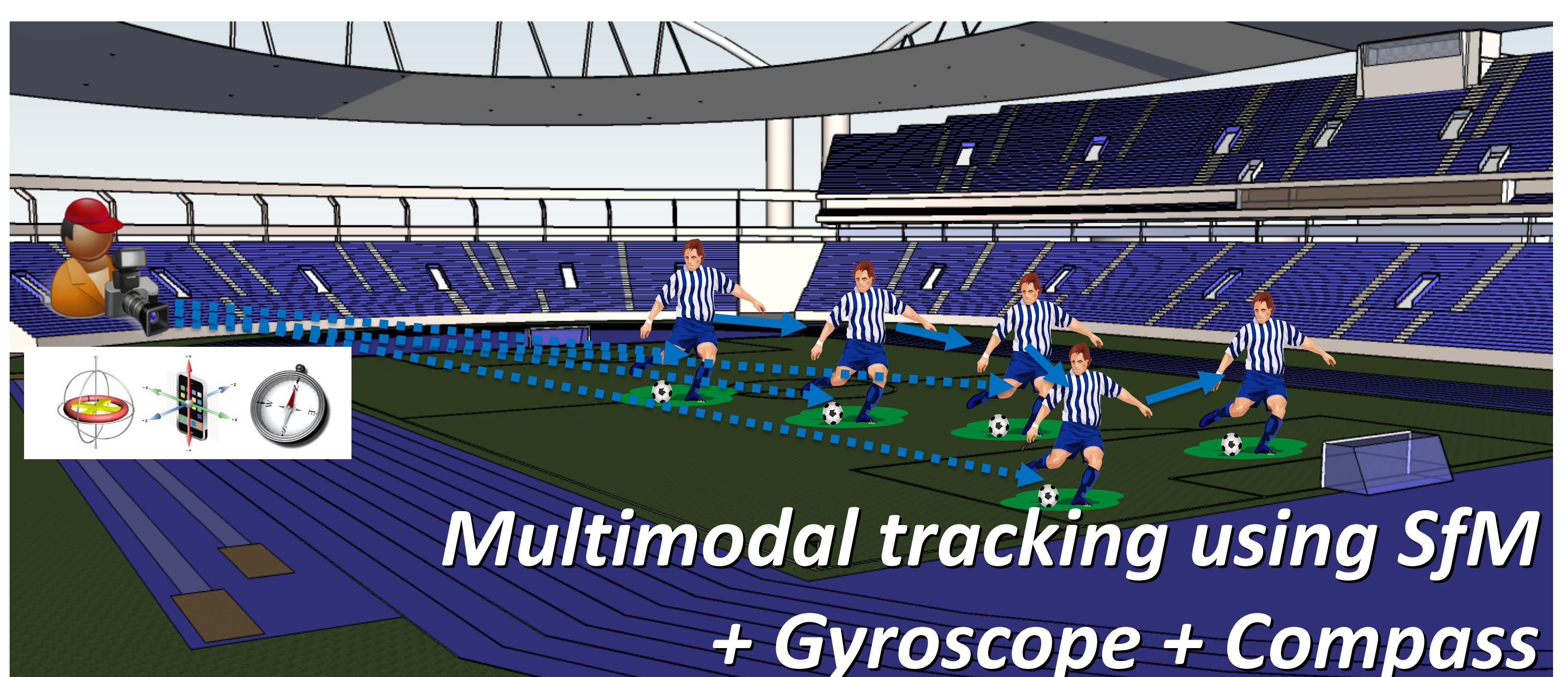
Visually similar, yet different



FOCUS informs clustering on video streams with spatial and temporal correspondence



Combining *computer vision* and *sensing* to match *contextual similarity* across time



From a known 3D geometry, can reason about shared content

