TPA 9: Motion compensation based automatic tracking of object silhouette, under camera movement

Problem Statement: Automatic tracking a single foreground object from a video shot having unconstrained camera movement. Camera movement types can be assumed to be pan, tilt, zoom and translatory along a linear/curvilinear path.

Input:

- Moving camera video shots containing a single object.

Expected Output:

- The object in motion being tracked.

Hint for excellence: Special Credit will be given if the designed system could able to (i) automatically track the silhouette without manual initialization and (ii) detect the object from a video shot having a combination of canonical camera movements (e.g. translation and zoom).

References

1. Online Moving Camera Background Subtraction, Ali Elqursh, Ahmed Elgammal, ECCV 2012