

TRACKING USING AN ELASTIC CLUSTER OF TRACKERS

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority from U.S. Provisional Patent Application No. 60,733,398 filed November 4, 2005 which is herein incorporated by reference.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH

Not Applicable.

APPENDIX

Not Applicable.

FIELD OF THE INVENTION

[0001] The present invention is in the field of methods for tracking objects, which may be non-rigid objects, and that may be moving in complex, cluttered environments, especially in multi-dimensional situations where the object being tracked, any of the tracked targets, may be occluded by another object between the viewer or sensor and the target. Examples of objects to be tracked are humans, animals, vehicles, tactical military equipment, parts in a factory, and *in vivo* objects in tissue. Among such methods are those that pertain to tracking humans or parts thereof, or groups of humans in images, video scenes, or maps, which are generated by optical, electro-optical, radar and other sensor systems and devices.

BACKGROUND OF THE INVENTION

[0002] Tracking objects by optical, electro-optical, radar systems, and other sensors is important in security, surveillance and reconnaissance, traffic and flow control, industrial and healthcare applications. Common problems encountered in tracking objects, referred to as the targets, are the occlusion of the target object when another object is situated between the sensor and the target, the dynamic variation of the target morphology, e.g., the relative motion of limbs, head and torso while

