Thesis – Lit Review Rough Notes and Structure

# Swarmanoid



* Effectively a proof of concept in heterogeneous swarming and a demonstration of how it might work and how it might be utilised
* More can be achieved using a larger robot in combination with smaller swarms
  + Paper used “foot”, “hand” and “eye” bots to create an ecosystem of different abilities
  + “foot” and “hand” are similar to BOLT and RVR while “eye” is like the Vicon
* Uses IR and radio communications for both localisation and sharing of sensor data through TCP-IP protocol

# PSO Based Strategy for Heterogeneous



* Based on PSO algorithm and passes through ORCA algorithm to ensure collision free, decentralised and only local perception
  + Far/near IR signals on BOLT and RVR?
* ORCA – velocity obstacles type algorithm
* See paper for math

# ARGoS

* Simulator built for heterogeneouse swarms