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- Thursday, September 5, 2002
  Biologically-inspired visual guidance of robot locomotion

  Rob Allison, Jia Wen and myself have spent the summer playing with a Nomad robot and Matlab simulations.

  We started with a simple idea regarding visual guidance of an observer to a target (maintaining egocentric target direction), a couple of fundamental visual variables (tau and crossing distance) and a few ideas about algorithms (dipole model) and control laws.
  We ended up with a system that intercepts static or moving targets whilst dodging static or moving obstacles. Its very simple and appears robust.

  We are at a loss as to why nobody has ever implemented a similar system before - which probably means we either just havn't read the robot literature properly, or theres a fatal flaw in our approach. There is of course the remote chance we have stumbled on something interesting. After we have outlined the ideas and shown a few demos, hopefully we might get some feedback...
  For the curious theres a web page with a bit of info and some movies
  (they are a bit rough - this is an early implementation) at:

  http://www.cs.yorku.ca/~percept/robot.html

  Jia Wen, Simon Rushton