

**Hermes Partnership workshop on
Nano Communication and Technology for Autonomous, Ultra Miniature, Ultra Low Power,
Multi-Functional Wireless Systems**

Lund September, 9/10 2010.

Abstract of presentation of Andrew Holmes, Imperial College

In this talk I will outline some of the areas we (Imperial) would be interested in pursuing within a future Nanocom project. On the ultra-low-power radio side we have been working on oscillator transmitters where a loop antenna is co-designed into the oscillator circuit. This concept allows for very simple, short-range transmitters that can operate at microwatt power levels, and it can also potentially be extended to transceivers, but there are numerous open questions. On the energy harvesting side, I will briefly review the main obstacles to further development and downscaling of energy harvesting devices.