Decawave enters production with its 'locator' chip

Production has started on the first of Decawave's ground-breaking ultrawideband chip for real time location systems (RTLSs) and wireless sensor networks (WSNs).

The company, which employs 24 people plus 10 subcontractors, completed tape out of its MPW2 DW1000 chip, and sample silicon will be made available to customers from November 2011. Already it has three clients signed up: Aeroscout, an Israeli firm that is a market leader in WiFi-enabled location devices for the healthcare industry; Microstrain, which will use the chips to monitor the movement of aircraft components in real time, and LG, which plans to use the chips for electronic shelf labelling that allows dynamic pricing of goods for features such as 'happy hour' 10 per cent discounts.

"In the medical sector, the chip can be used for more than asset location," says CEO Ciaran Connell. "It can be used to track how long a doctor spends with a patient for more accurate billing. There is a host of applications for this technology, and we're coming up with new ideas all the time – it can be used to support independent living, where if an old person living alone stops moving, their carer can get an SMS alert indicating a possible problem. You could fit a chip to your TV so that if it starts moving you get an alert telling you your house is probably being burgled.

"Luckily, we are an IP-rich company: we have essential patents that allow us to ensure that the technology works and we have a host of implementation patents."

The DW1000 is an IEEE802.15.4a-standard chip that can be used to locate objects indoors to a precision of 10cm, and to communicate at data rates up to 6.8Mbps from a range of 450m with line of sight and 45m non-line of sight. In addition to being very competitively priced, the chip is very energy efficient – transmitter power consumption is about seven times lower than that of narrowband 802.15.4 transceivers. [Cian Molloy]