

## IDIoT !

### (I.D. for the Internet of Things)

Everyone is talking about the Internet of things:

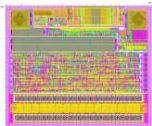
Everything talking to everything.... Potentially.

Most developers are tackling the Internet of Things from the high end: Internet-connected devices that can control your home from your phone, cars talking to cars, fridges talking to supermarkets, and the like.

But does everything need to be so smart? Making everything intelligent is likely to be costly and impractical, at least for the foreseeable future.

The intelligent devices are smart enough to make decisions and act based on their surroundings, as long as they know about that environment.

The minimum requirement that an object needs to be able to influence the world around it is to have an identity.



The IDIoT  
(~100 X scale)

Enter the IDIoT. The IDIoT is intended, in its simplest form, to be a device that provides its identity when asked for it, and does nothing else. It does this using radio waves. No batteries. It is powered by low energy radio signals sent by the intelligent device.

This can be done at a very low cost. Silicon cost can be well below 1cent per object because it is smaller than 0.03 sq mm, and the cost of attaching a suitable label (which also acts as an antenna) is coming down rapidly as new techniques are developed.

At this cost there are thousands of everyday items that could viably be given their own unique identity and characteristics (per item, not just per product) and so could influence the smart devices that surround them.

It may well be useful for your fridge to know that it has a container of Brand X milk sitting in its back corner that is due to reach it's expiry date in a couple of days. The fridge can be smart enough to add that to your shopping list (or buy it for you if you are brave enough to let it), but the milk itself does not need to do anything other than let the fridge know it is there and provide the "use by" date, when asked.

You can add pedigree to your products using the IDIoT, by providing additional information about them: If you are a winemaker, you might like to record quality-related information such as fermentation and storage histories, for example. This can be done at the item-level so that customers at the bottle-shop can seek out the "good stuff" using their NFC-enabled phone to read the identity.

Imagine toys or other objects that exhibit different behaviours based upon what their owners have collected or purchased. Build up a DNA structure of features by combining wanted characteristics to allow individualised products to be developed.

There are a huge number of opportunities for this technology in areas including loyalty rewards programs, promotional, security, anti-cloning protection, etc.

The basic IDIoT may not have enough capability for some applications but features can be readily added. For example, sensors for temperature or humidity would allow additional information about the environment to be recorded. Or add memory to allow more data to be stored, or encryption to allow secure transactions. Adding features increases the cost of course. There is a trade-off of features vs cost that should be made for particular applications. The extensible architecture of the IDIoT provides for this.

RADLogic has designed the building blocks to build personalised devices to suit the needs of your applications.

For more information on the IDIoT or product derivatives, including technical information, please contact [info@radlogic.com.au](mailto:info@radlogic.com.au).