



## Tech Talk

### Modular Smartphones ©

by Max Farrington & Pascal Grierson

Every day, millions of electronic products are thrown away. And it's usually only because one component is broken. In fact, we throw away more functioning electronic devices, than broken ones. This is particularly the case with mobile phones. This, is where something called "Phone Blocks" comes into place.

Phone Blocks is an open source modular Smartphone concept, created by Dave Hakkens. It's not the first of its kind, but the most famous and the closest to ever being brought to market. Essentially, there is a main processor board that cannot be changed; users will then be able to personalize the Smartphone by adding 'blocks' to it. These blocks can be extra memory, camera lenses, more battery, an audio jack, GPS, or even Wifi. You could look at it as building your favourite Lego item.

Of course like many innovative tech start-ups, it attracted the big guys and Google more or less took over with something called "Project ARA", initially through Motorola, who they owned at the time. Lenovo has since purchased the Motorola name and hardware division, leaving Google free to push forward. The release date for Project ARA was initially early 2015; but since then has been pushed to sometime in 2016.

For the moment there are only 3 frames: Small, with a rear module slot of 2 by 5cms, Medium with 3 by 6cms and Large with 4 by 7cms. The larger frame will be as large as a Samsung Galaxy Note 3. The objective of this product is to fight waste; to create a modular hardware ecosystem. Electronic products are not meant to last. With this modular smartphone, whenever something breaks, or goes wrong you simply replace it without changing the entire phone, and in the end this will turn out cheaper.

The prices suggested seem fairly cheap, for the moment anyway. A frame should cost \$15, and then the price increases according to the modules chosen. It is said that the first "pack" will cost \$50, which is still cheaper than nearly all the phones on the market. The main question is will it work? And will the phone be powerful enough?

The concept has received mixed reviews. The possible lack of feasibility and the lack of working prototypes may be a problem. The phone will also be a bit larger and heavier than most smartphones, but it might be worth it when you take into account the added flexibility.

This might be the future of phones and indeed of all electronic products. Computers for example are already built this way. When your computer ceases to function it is often because only one component is broken – however it is replaceable. The idea of combating programmed obsolescence is also interesting and there are many debates around the issue. A great example of this is the ink cartridge. The printer will say that there is no more ink and that you have to buy more. Whereas, there is actually often 50% of the ink left. This printer message

forces the user to go out and buy a replacement therefore consuming more and more, adding to the electronic waste, or e-waste, that is today's fastest growing waste stream.