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technology roundup

Snap together modular smartphones: Project Ara

Just about 18 months ago, when rumours started to circulate about a modular phone, sniggers of laughter arose among most smug mobile technology commentators including myself. However, recent photos have wiped the grins of our faces as we see reasonable concepts.

Of course an Ara phone will not compete with the slimline profile of an Apple iPhone 5 or a Galaxy S5 but it is not as embarrassing as we feared.

The concept is to provide three differing sized (small to large) 'shells' where modules can be 'snapped' into place providing functionality.

So, for instance, if your camera breaks or you wish to upgrade in time, then you simply replace that module. Can we not do that already I hear you cry? Yes, but try getting your mum to replace the camera in the Apple iPhone 5 while you instruct her over Skype! But could you see yourself talking through module replacements in an Ara phone? Quite simply — yes.

Of course the fact that Google's Advanced Technology and Projects Division is behind this gives us hope that it might just succeed. They have done their homework. They are aware of the enormous market as they are the ones pushing Android.

Akin to the PC, it is a natural next step in the development of smartphones which leaves the level of building satisfaction to the consumer. The concept comes from the established open hardware system community where 'hackers' mix and match components such as high resolution displays,



Image: Courtesy of Project Ara

keyboards, GPS, Wireless modules, extra batteries etc. This advanced process of smartphone development offers real exciting potentials for consumers to enjoy the possibilities of creating their own device - and not pay for functionality not used.

So, you don't take photos — then swap that out and add an extra battery. Ok, you don't use GPS or 4G, then why not add another battery and hey presto — a phone that has a working life of seven days!

Dell, for instance, have used this mode of building PCs for consumers for 20 years now. It simply works. One size does not fit all anymore in a consumer savvy world. What actually

changed my mind was travelling to Mobile World Congress 2014 in Barcelona and agreeing with the vast majority of attendees that we have reached a point where no paradigm-shaping design is happening right now apart from additional pixels, larger sizes and more power underneath.

Basically, phone screen sizes cannot get much larger for practical purposes. Processor speeds are pretty fantastic for all the number crunching that we do, therefore before long we may reach an end to the hitherto never-ending race for added features.

In such a marketplace, a phone like Ara where consumers feel more secure in how to upgrade specific features "at a

- time they choose” and when we are entering a more austere time for consumers, could grab significant marketshare.

People are becoming fed up dropping £500 phones down toilets and cracking screens which cost £200 to replace. Yes, a phone like this will not only make some inroads in the third world, but in the first world as well.

The early adopters will be hobbyists and geeks but many of the more popular tech on display in homes today starts in this community. We can expect to see a whole new ‘Ara Module Eco space’ appear. What about the ‘Ara’ store where you browse through the ‘best camera’ for your particular uses?

At present, you have to simply accept what comes on each phone even if 80 percent of the components are ideal for you. Hobbyists choose to customise “because they can”, but now consumers can also customise.

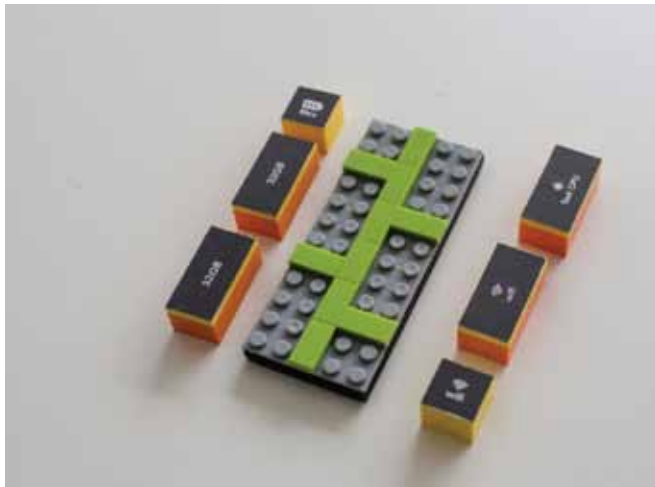


Image: © Asus. Shown: Courtesy of Project Ara

The difference now, however, is that we move the customisation away from the “bespectacled engineers” into the hands of some creative design types so we may be see some truly spectacular “hacks” making their way into mainstream phones. Ultimately, with an Ara phone, you finally have the choice of carrying around a phone with no ‘redundant’ components at all. AS they say, watch this space...

<http://motorolaara.com>

WiFi in the sky

United Airlines is launching a new in-flight video-streaming service in 2014 for iPhone and iPad users which will offer more than 150 movies and 200 TV shows for free.

The service will initially only be available to mobile passengers with an iDevice running iOS 7 but it should also work on laptops via the browser, too. On iOS, users will need to download the United Airlines app from the Apple iTunes Store.

Other airlines have been offering locked-down iPads with preloaded content for some time. It is not the most automatic system but it is certainly manageable. We can expect to see this being repeated by European airlines.

Having access to WiFi is becoming more of necessity for flyers and that can supersede the need to access a carrier’s in-flight entertainment. Currently, Virgin America is the only airline offering WiFi on 100 percent of its flights. Southwest offers WiFi on about 74 percent of flights. Delta provides it on 65 percent of all its flights.

Even if you are lucky enough to get a WiFi enabled flight, you may struggle to keep your device powered for a long period but now, some airlines such as Virgin, Delta, American and United have flights that offer both WiFi and in-seat outlets to power devices.

Most of the IFE cloud based systems basically use airports hubs to cache & update their content and then use on-board WiFi to transmit to mobile devices.

There is little in-flight content interactions with the cloud. There are good reasons for this as ultimately still, in-flight connections are often slow and unreliable.

For customers, the prices are high with prices around \$25 for a flight per device. This is not going to improve overnight. Carriers still rely on a network of 3G ground stations which communicate with the plane as it passes over. Total bandwidth for the plane can be less than 4MB which would be classed as ‘poor broadband’ to a person’s home. There is no way on earth an IFE could hope to download new content over such a connection.

An alternative mode of providing connection to the cloud

is by satellite.

For instance, using the Ku-band (12-18GHz) satellites would provide download speeds to the aircraft of around 50Mbps. In the future, it is expected that more airlines will move to the Ka-band (26.5-40GHz) satellites, which provide up to 100 times the capacity of regular Ku-band. This then would allow each passenger to receive a ‘reasonable’ amount of individual bandwidth.

This year we expect JetBlue to roll out such a service. This type of service would then make many in-flight entertainment systems — cloud based or not — superfluous to need...

www.southwest.com/wifi/
www.united.com/wi-fi
www.virginamerica.com/cms/fly-with-us/
www.jetblue.com/flying-on-jetblue/wifi/



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Securing your mobile world

There are a number of ways people can better protect themselves from revealing sensitive information.

Top tip

The most obvious tip is to employ a pincode on the phone. Surprisingly, only 50 percent of people put a lock code on their phone therefore any stolen phone can allow thieves to also burrow into all information on the phone.

Ignoring the identity theft aspect, thieves can access a

person's online bank account or paypal to transfer money or buy an online anonymous currency like BitCoin and you will never see that money again.

Protect yourself

For the first time in our history, banks and other financial institutions are beginning to offload the blame for an account being hacked onto the customer. They are claiming that customers should have had greater protection mechanism in place. For that reason alone, a pin is best practice. It is also possible to lock a SIM card.

Mobile apps should be obtained via reputable app stores.

Some mobile platforms let you install any and all compatible applications you find on the web, from any source, while others restrict the sources you can use to find software.

It is not a good idea to 'root' a phone so that other apps can be installed, as it can lead to an increased likelihood of installing rogue apps. Therefore it is usually a good idea to stick with your official app stores when downloading software.

If you use an iPhone, stick with the Apple App Store, on Android, use the Play store etc. These stores are not perfect but overall they are safer than using random software publishers.



Image: © Dawn Allynn | Dreamstime Stock Photos

- ▶ Android users can block the installation of non-Market applications by unchecking the “Unknown sources” option in the Android Applications Settings menu on their devices.

A new scam involves free versions of popular apps where hackers can inject malware into them. A simple way to protect against bad apps is not to download an app without thousands of downloads and mostly positive comments.

A key aspect is also to educate users on potential threats to smartphone security. For instance, the main reason we tell people to have anti-virus software installed is to protect

against programs designed for phishing — which is trying to trick people into giving out their personal information.

Several security companies, such as Lookout and Norton, have free security apps that will claim to protect a phone from becoming a nest for viruses and trojans.

Security suites on mobile phones are still limited however. The proper assessment of their capabilities has not really been carried out. It is well known that phones have been compromised whilst a leading mobile ‘security suite’ has been loaded on the phone.

The easiest way to protect yourself is to simply install the leading well-known apps and to steer clear of ‘recent uploads’. A time stamp is important, as most malware on phones is discovered but the first people to download it are the ones compromised.

It’s worthwhile for owners to familiarise themselves with app permissions. All installation of apps start with some sort of application “permissions” screens, which inform which potentially sensitive resources will be accessed by a new app.

Learn to spot if an app is asking for a strange request e.g. if a game requests access to your address book. The problem of course is that it can be difficult to work out whether an application really needs the permissions it requests.

Just like on a PC, recommended practice is to constantly allow all updates of software and apps. Developers will be actively patching the latest security vulnerabilities and rolling them out to customers. Likewise with the phone Operating System itself — do that update when it becomes available.

Finally, if a phone is stolen then apps like Apple’s Find My iPhone app or Lookout’s Android app can locate a phone and erase the data so the thief cannot access it. If the phone is turned off immediately, the most important thing is to very quickly contact the mobile phone provider to let them know about the theft. Then move quickly to change all passwords on sites that contain sensitive information which you have visited on your phone.

There is also the option that in cases where someone tries to enter a phone password more than say, 10 times, that the device will wipe.

www.lookout.com

www.norton.com

www.apple.com

<https://play.google.com>



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