Migrating from iPhone to Android...

without losing anything!

Some people prefer Apple iPhones, while others prefer Android phones. But what if you decide, for whatever reason, to switch from the iPhone you've used for a few years to an Android model? You could 'start fresh', discarding your history including text messages, app data etc. But that can be very inconvenient. You can bring most of this data across from one system to the other, but it isn't easy, and there are lots of different ways to do it. Read on to find out just how . . .

There will likely never be a resolution to the eternal debates of which phone system is better: Apple iPhone (iOS) vs Google Android-based phones (made by numerous manufacturers).

The point of this article is not to convince you one way or the other. But after many years of using an iPhone, I decided to switch to Android, and found that it wasn't that easy to make a seamless transition. Before I describe what I had to do to make the switch, I'll briefly describe the reasons why people choose one system over the other.

Proponents of Apple point to extremely tight integration between the hardware and operating system as a benefit, whereas Android offers more hardware competition between devices. This is mostly because Google allows other manufacturers to use their Android operating system. Apple has very tight control over its Apps, whereas Google exercises less control.

Apple has traditionally had an excellent reputation against unauthorised intrusion by hackers, although there have been some infamous intrusions, especially with iCloud data.

While Android systems also emphasise security, quite a few Apps have been pulled from the Google Play Store when malware was found lurking within.

Apple offers excellent hardware quality, but higher-end Android devices are competitive. However, Android phone quality varies wildly, with some cheaper devices being markedly poor.

Regarding hardware, Apple also makes PCs, watches, tablets and other phones and so can offer consistent and integrated performance between the devices. But in the Android world, it is really only Samsung that offers a full range of such devices.

Apple users seem to prefer relative simplicity, tight integration and strong support from the manufacturer. In contrast, Android users seem to prefer lower cost (or better value) devices, easier expandability and more hardware flexibility. But some Android vendors also offer excellent support (eg, Samsung, based on my experience).

by Dr David Maddison

Samsung DeX with phone plugged into docking station allowing keyboard, monitor, ethernet, USB ports and mouse functions to provide desktop-like functionality. This illustrates the flexibility of the Android OS.
Image credit: Maurizio Pesce, Creative Commons Attribution 2.0 Generic license.

Despite apparent differences, both iOS and Android have similar origins. Both are based on Unix-like operating systems. iOS started with the open-source Darwin (BSD) system, while Android is based on a modified Linux kernel running a 'virtual machine'.

I hope that the following description of my transition will help others who wish to do the same. But note that my experiences may or may not be directly applicable to your particular situation.

Before I get to the actual migration process, I will describe what motivated me to make the switch, and go into more detail on some of the key advantages and disadvantages of the two platforms.

My motivation to change

I initially used the iPhone because that was supplied by an organisation I used to work for, as it was the corporate standard. After leaving that organisation, I needed to upgrade my phone, so I decided to purchase a newer iPhone (a 64GB iPhone 6S), as that was the simplest upgrade path.

It was easy to transfer all of the data such as contacts, memos, pictures etc from the old phone to the new one.

That new iPhone was fine for a while, until the stored data had filled most of its available memory. I then found it necessary to start deleting Apps and transferring data such as photos off the phone, to make room.

This is where a major difference between the iPhone and Android operating system became apparent. My preferred option was to keep this data on the phone rather than maintaining one set of files on the phone and one set off the phone. But iPhones do not offer the option to add more storage with a micro SD card. Nor, it must be said, do **all** Android phones. Most do, but there are exceptions!

My phone's memory was mostly full of photos I had taken, along with map data. I didn't want to migrate this data to Apple's iCloud storage system, so I stopped using the phone

Warning!

The information in this feature is presented as a guide only – any procedures you undertake are entirely at your own risk.

The success of the procedures described in this article cannot be guaranteed, as devices and software – even two apparently identical phones – can be subtly different, not to mention almost continually changing.

SILICON CHIP cannot be held responsible for any data loss incurred following any procedure described here. Please do plenty of research beforehand and make sure to back up all data before attempting any transfers.

You can find instructions on the Internet about how to find the location and file name(s) of your iTunes backup on your PC to make an extra copy if necessary.

Note also that there is software available that can extract data such as photos, messages and contacts from your iTunes backup but the backup MUST NOT BE ENCRYPTED.

Everything we've read suggests that is close to impossible to extract data from an encrypted iTunes backup (presumably that's the whole point of encryption!).

Another competitor to iOS and Android?

Apart from Android and iOS operating systems, another phone OS on the horizon is the open-source Harmony OS from Chinese company Huawei. This was speculated to replace Android OS in its phones due to US Government sanctions.

But it now appears it will be used not in phones, but in "Internet of Things" (IoT) devices.

And regardless of its intended use, recent (November 2019) media reports suggest it is "years away" from availability.

Other operating systems for mobile devices include Windows 10 Mobile, BlackBerry 10, Tizen, Sailfish OS, Ubuntu Touch, Plasma Mobile, PureOS, PostmarketOS and KaiOS.

as a camera and started using a dedicated camera instead.

To liberate space to keep using this phone, I deleted numerous Apps such as OSM street maps (which I used to view maps 'offline'), various unused pre-loaded Apps from Apple such as GarageBand and KeyNote (1.7GB and 630MB respectively) etc.

I then became alarmed because as I deleted Apps to liberate memory, the spare memory would continue to 'disappear'. This was despite the fact that I had disabled automatic updates for the operating system and nearly all my Apps.

The continual battle to free up storage on my phone, plus the positive experiences of friends and associates with Android devices, lead me to consider making the switch. The most crucial difference for me was the ability to add extra internal memory with an internal micro SD card, something that Apple phones do not allow. I also like the more open and accessible file system on Android devices.

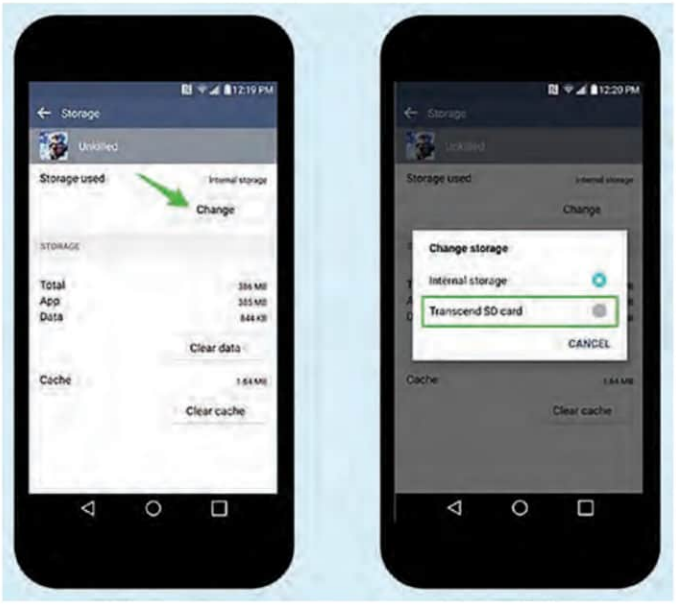
Note that not all Android phones have micro SD card slots, which is a pity, as many of them are otherwise excellent devices. But for me, the lack of expandability is a deal-killer.

You generally pay a lot more for a phone with more internal storage, than a similar amount of storage on a micro SD card would cost. And often, after you purchase a phone, higher capacity cards become available, allowing you to expand the storage to a level that was not available at the time of purchase.

I purchased a Galaxy S10 with 512GB of internal storage (a 1TB version is now available in Australia). The highest internal capacity currently available in the iPhone is 512GB.

More on SD cards

These internal micro SD cards can be used to generally increase the storage of the device. But they are most useful for holding the photos and videos you take, which tend to take up the majority of the flash storage space.



Moving an App from phone memory to SD card memory where supported by App, phone and Android version.

Another application where SD card storage of data is handy is the Open Street Maps (OSMAnd) App. An OSM map for Australia is several hundred megabytes, while for the United States (and other similarly populous countries), it is several gigabytes.

I use such maps for travelling, as I might not have a data connection. The ability to store such memory-consuming data on a removable and replaceable card instead of in the phone's memory (or to shift it offline) is obviously a big advantage.

While many Android Apps can be stored and run off a memory card on earlier OS versions, fewer support this in later versions.

This is generally not such a good idea, since the SD card is usually slower than the internal storage, and you lose access to the App if you swap cards.

To see if an App can be transferred to SD storage on your Android phone, go to go the Settings menu, then select the App and then the Storage tab for that App. If your version of the App, the phone and the OS supports moving an App to the SD card there will be an option to "Change storage to the SD card" (or change it back) – see above

On my new phone, apart from OSMAnd, Apps that can be transferred to the SD card include AliExpress, AvenzaMaps, Google Earth, Epson iPrint, GPSLogger, Photos, Shazam, Sky Map, Google Translate, Waze, and Wikipedia.

SD card capacity

The highest capacity SD card available will soon be 1TB.

RS-232, Android and iOS

As an example of the difference between interfacing hardware with the two types of phones, consider RS-232 serial connections. Contrary to popular belief, many devices still use RS-232, such as many astronomical telescopes, amateur radios, point-of-sale devices, microcontrollers, scientific instruments, data loggers, RFID readers, irrigation controllers, fire alarm panels, glucose meters and many other specialised devices.

It is relatively easy to interface an RS-232 device to an Android phone, but with iOS, a special Lightning-to-serial cable is necessary. Such a cable is made by Redpark (http://redpark.com/), with the intention you write your own software for it with a supplied SDK (software development kit). Apple won't approve any App for the App Store for use with this cable or any other RS-232 devices!

In general, any device to be connected to an iPhone has to be made under license of the MFi program (siliconchip.com.au/link/aawu).

The other option for connecting more hardware to an iPhone is to 'jailbreak' it.

Plugging a hard disk into your Android phone

You can connect an external hard disk to your Android phone with an OTG adaptor. The disk should ideally be formatted with exFAT so it can be recognised on Windows, Mac and Linux and there are no realistic file or volume size limitations.

Some external hard disks already come with that format.

Android also natively supports the FAT32 file system (4GB file size limit), but there are Apps to support NTFS (the default Windows file system) as well.

If using an external hard disk for an extended time, you may need to use an externally-powered OTG cable to keep the phone charged. Otherwise, it will drain the phone battery quickly if the disk is powered via USB.

Incidentally, SD cards are typically formatted with FAT32 up to 32GB, and exFAT for 64GB and beyond.

I've seen sites allowing pre-orders for such cards at around US$450. Android theoretically supports cards up to 2TB, but not all devices have this capability. According to Samsung, their recent phones (such as the Galaxy S10) support SD cards up to 512GB.

With SD cards, storage is essentially unlimited because as soon as one SD card is full, you can swap in another. You can keep the old card(s) so that you can still view older photos and videos etc.

However, swapping cards is a bit impractical (if not downright unfriendly is some phones!) so you are generally better off using the largest card you can. If larger cards become available, you can transfer the data from one to the other using a PC.

But the small physical size of SD cards does mean they can be easily kept in a wallet etc. So you can cart a few around, to show others the media stored within.

In my case, I installed a 64GB card in my new phone, which cost about $20. This isn't a huge expansion to the already large memory on my phone, but as mentioned above, I can easily expand this later if I run out of space.

For convenience, it is best (at least initially) to buy a micro SD card with an adaptor to suit a full-size SD card slot. That may make it easier to connect to a laptop or desktop computer.

Some brands of micro SD cards include the SD adaptor as a bonus.

Like Apple, some Android providers also offer free or paid-for cloud storage. For example, Samsung in Australia offers 5GB of free storage for new accounts with no current option for extra paid storage beyond 5GB. (Accounts created on or before 31 May 2019 had 15GB).

With Android or iOS and a Google account, you get free unlimited storage of photos up to 16MB in size and videos up to 1080p (1920 x 1080 pixels).

Apple has consistently refused to add internal SD card support to their phones. It seems that they would rather have people upgrade their phone to another Apple model with more memory or purchase extra iCloud storage, beyond the 5GB included free with every phone.

Extra iCloud storage is offered in sizes of 50GB, 200GB and 2TB for A$1.49, A$4.49 and A$14.99 per month at the time of writing. That works out to around $17.88 per year for 50GB of iCloud storage.

By comparison, 50GB of SD card storage has a one-time cost of around $14.

SD card 'virtual memory'

For Android users, there is a way to use an SD card on a phone as though it was regular phone memory (rather than in the form of extra storage space). However, this is not generally recommended, and not all manufacturers support it. It is called "Adoptable Storage" and the SD card becomes part of the phone OS and cannot be removed without resetting the phone.

In other words, if your phone had 128GB of internal memory and you added a 128GB SD card configured appropriately, you would effectively have a 256GB phone.

As mentioned above, one of the biggest problems with this is that the SD card storage is generally a lot slower than the internal storage, so this could slow the phone down significantly. But it might be worthwhile doing if you have an old phone with a small amount of memory, and you want to give it a new lease of life.

USB OTG (Android) and Lightning (iOS) connectivity

Many Android devices also support USB "On The Go" or OTG. This is a standard that enables a device to use its charging/communications port to also connect a USB device such as a flash drive, hard drive, keyboard, mouse, printer, camera etc.

Some memory storage devices and SD card adaptors are available for the iPhone. These connect via the iPhone 'Lightning' connector. But in general, external hardware connectivity is much more limited on the iPhone, even though Apple provides specifications for prospective manufacturers of such devices (see **siliconchip.com.au/link/aavz**).

Some iPhone adaptors are described as "OTG" devices which "convert" a standard Apple Lightning connector to USB, but these do not provide true OTG capability. There are also official Apple products such as Lightning-to-USB

An Apple Lightning to SD Card Camera Reader adapter.

A Samsung OTG adapter. It connects to the phone with a USB-C male and has a USB female connector on the other end. It acts as a USB host, enabling a wide range of accessories to be connected.

This shows the SDR Touch App with a cheap dongle used as a software defined radio (SDR), connected to an Android phone with an OTG adapter and an external antenna. Screen grab from a YouTube video *"SDR Touch with RTL SDR (RTL2832), HTC One X, Android 4.1 Jellybean"* https://youtu.be/QArle2hHO54 There are many Apps available for SDRs (which are directly connected to the phone rather than remotely controlled on a network) on Android but not iOS.

camera adaptors for downloading photos from an external DSLR camera to the iOS device, or for reading from and writing to an SD card.

Ultimately, though, the USB port used on Android phones from many different manufacturers means that a greater number of accessories are available.

Transferring from Apple to Android

Many people who have considered migrating from Apple to Android have nixed the idea, due to the difficulty of transferring data from the old to the new device. For many people, this is the main factor inhibiting them from making the change; this was certainly the case for me.

Having said that, when some people purchase a new phone, they have no desire to preserve old data and therefore, these concerns do not apply.

Or in some cases, you might only wish to transfer basic data such as contacts, which is not difficult.

Most Android phones come with proprietary software (or free downloads thereof) to enable common categories of data to be transferred with ease. This typically includes contacts, messages (SMS and MMS but not iMessages), photos and videos. This transfer software may also copy typed memos, voice memos, voice mails, documents, favourite web sites and calendar entries.

Videos on an iPhone are in the form of MOV files. This is a different format than the MP4 standard, which is used by Android devices. So to use them on an Android phone, you have to convert them to a compatible format. Or you can do as I did and install the free VLC media player, which can play MOV files as well as many other formats.

In my case, the Samsung "Smart Switch" software copied the MOV files to my new phone, but I had to install VLC to play them. I also had to spend a little time looking before I found where they had been stored on the new phone.

Apple's "Live Photos" are not supported by Android. These are photos recorded in the form of short video segments.

CopyTrans (www.copytrans.net) is PC software which is billed as an alternative to iTunes. This lets you backup and manage your iPhone data on a PC, but does not handle transfers to Android.

But it does claim to enable you to change the Live Photo format to one that can be used on an Android device; see siliconchip.com.au/link/aaw0

Two of the greatest difficulties in transferring data from iPhone to Android are with WhatsApp chat messages and Apple iMessages. This will be discussed in some detail later.

Apple users will not be used to having an accessible file system. It is helpful to use a supplied or downloaded file manager to have a look around your phone to see where various files are stored in the Android file system. Files can also be seen if you connect the phone to a PC and you will see its internal directory structure and file names.

Transfer software

Some programs can transfer data directly from an iCloud or iTunes backup to a new Android phone. This can be especially helpful if you no longer have the original iPhone, eg, if it was lost, sold or destroyed. Manufacturer-supplied transfer software supplied with new phones are as follows:

- Google Pixel devices have built-in support for transferring data; see siliconchip.com.au/link/aaw1 Data that can be transferred includes SMS messages and iMessages, phone and iCloud Contacts, phone and iCloud Calendars, photos and videos (except HEIF photos), Apps (if available for Android).
  Most music will transfer but not if it has iTunes Digital Rights Management (DRM) protection (usually bought before April 2009). Music downloaded from Google Play won't either but see siliconchip.com.au/link/aaw2 for more details.
- HTC uses a software product called Sync Manager installed on a PC to transfer data from an iTunes backup to a new HTC Android phone (siliconchip.com.au/link/aaw3). Data that can be moved includes iPhone contacts, calendar, SMS, photos, videos, wallpaper and bookmarks.
- Huawei Android phones can have data imported from an iOS phone with Phone Clone (siliconchip.com.au/

One item I couldn't transfer across

I have a thermal imaging camera, the FLIR Systems FLIR One. At the time of purchase, one could choose either a Lightning connector to suit the iPhone or a USB connector for an Android phone. I purchased the Lightning version, but it's now quite useless to me, as there is no adaptor available for it to connect to a USB socket.

link/aaw4). Also see https://consumer.huawei.com/au/emui/clone/

- LG phones can import data from iPhones with the LG Mobile Switch (Sender) App (siliconchip.com.au/link/aaw5). Note that software has to be installed on both the old and the new phone. For more detail, see siliconchip.com.au/link/aaw6
- Motorola US documents refer to a Migrate App on the Google Play Store, although it appears not to be present at the time of going to press. According to this link, it has been retired siliconchip.com.au/link/aaw7 See also siliconchip.com.au/link/aaw8 and siliconchip.com.au/link/aaw9
- Nokia has no official information on their website about transferring iPhone data to one of their Android phones, but relevant information is provided by Vodafone Australia, at: siliconchip.com.au/link/aawa
- Oppo phones suggest using Clone Phone software to transfer information from the old iPhone to their Android phones, see siliconchip.com.au/link/aawb
- Samsung phones can use Samsung Smart Switch Mobile on the new Android phone for phone-to phone-transfers (siliconchip.com.au/link/aawc). Also see www.samsung.com/au/apps/smartswitch/ for transfers via a PC or Mac.

Data that can be transferred from iOS includes contacts, calendar entries (device content only), messages, photos, music (DRM-free content only, not supported for iCloud), videos (DRM-free content only), call logs, memos, alarms, WiFi settings, wallpapers and documents.

In my case, I found that a direct transfer between phones (iPhone to Android) gave the best results. Make sure the batteries of both devices are fully charged before proceeding. Samsung state that Smart Switch requires 500MB of free space on the old phone. However in my case, I did not have that amount of free space, and it still worked.

- Sony Xperia phones can use Xperia Transfer Mobile (siliconchip.com.au/link/aawd). The following data can be transferred: contacts, calendar events, call log, text messages (SMS), multimedia messages (MMS), photos, music, videos, documents, Apps (not supported from iOS) and App data (will be transferred if the App allows it). Transfers can be made from an iPhone via USB, WiFi or iCloud.

Third-party phone data transfer software

- Phone Transfer for Windows (siliconchip.com.au/link/aawe) can transfer contacts, call logs, text messages, music, photos, movies and calendar data.
- iSkysoft Phone Transfer for Mac (siliconchip.com.au/link/aawf) also runs on Windows and can transfer contacts, messages, calendar entries, photos, music and video.
- Phone Transfer (siliconchip.com.au/link/aawg) is available for Windows or Mac.
- RecoveryAndroid (www.recovery-android.com) for Windows or Mac can transfer contacts, photos, videos, music, messages and calendar data. There is a special version for Motorola phones at: siliconchip.com.au/link/aawh

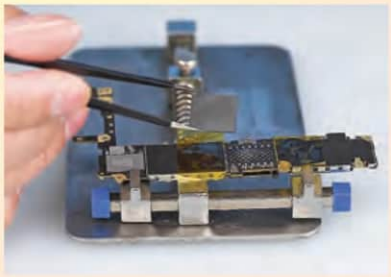
Expanding iPhone memory

While no extra memory such as an internal SD card can officially be added to an iPhone, some people have replaced the memory chip in an iPhone with a higher capacity version. This procedure requires extremely high levels of skill, experience, equipment and risk. It is not recommended for the faint-hearted.

One video documenting the procedure of increasing the memory of an iPhone 6S from 16GB to 128GB titled *"Upgrade iPhone 6S 16GB Storage to 128GB"* can be viewed at https://youtu.be/v5WDDZqhn2s

You can also get this procedure done in the markets of Shenzen, China, or buy equipment to do it yourself. See Fig.8 and the video titled *"How I Upgraded My iPhone Memory 800% - in Shenzhen, China"*; see https://youtu.be/rHP-OPXK2ig (it documents the desoldering and resoldering process of the memory chip, and practice attempts, and uses a different memory reflashing process than the previous video).

If you attempt such a procedure, you must have secure backups as you will need to copy the data back to the new (blank) chip.



- dr.fone Switch (siliconchip.com.au/link/aawi) allows a variety of transfers to be made between different phones. It can transfer a total of 15 file types: photos, videos, contacts, contact blacklist, messages, call history, bookmarks, calendar, voice memo, music, alarm records, voicemail, ringtones, wallpaper and notes. Transfers can be made either directly between devices or from an iCloud backup to Android. There is also a desktop version of the software, which requires both the old and new phones to be plugged into the computer.
- MobiKin (siliconchip.com.au/link/aawj) allows the transfer of contacts, SMS, music, videos, photos and books from an iPhone to a new Android phone.
- Android Switch (www.android.com/switch/) is the method provided by Google to transfer data from an iPhone; however, it appears to only transfer calendar, contacts, and photos.

There are many other Apps to transfer either partial data from phone to phone, as well as techniques that don't require any extra software.

My experience

I initially decided to use "Syncios" for my phone swap, because of its claimed ability to transfer iMessages as well as other user data.

While it initially seemed to transfer data, including iMessages, I noticed that it had caused my phone to start resending old messages to various phone contacts. This included messages that were many years old!

As soon as I discovered this, I deleted the transferred messages and started again, only to have the same thing happen again. Needless to say, this was highly embarrassing.

I contacted Syncios support, but my queries went unanswered. Syncios has a money-back guarantee, but after about two weeks of no response from them, I had to seek

"Rooting" your Android device

"Rooting" an Android device is the equivalent of "jailbreaking" in the iOS world. This means making unauthorised firmware modifications to the device to enable you to install software or perform other operations not normally permitted by the factory-issued device.

Both processes are to be strongly discouraged unless you are highly technical and know what you are doing. If done incorrectly, this may result in:

- loss of warranty of the device
- the possibility of "bricking" the device, ie, rendering it unusable and unrepairable
- exposing the phone to security threats.

a refund of the US$29.95 (around AUD $45) I paid from PayPal. Fortunately, this claim was successful.

I then decided to use Samsung Smart Switch – with success, although it doesn't transfer iMessages.

Transferring iMessages

iMessages are difficult to transfer from iOS to Android. iMessages are a proprietary Apaircradfple form of text and media messages, for use between iPhones.

These messages appear in the same App as regular text and media messages.

An iMessage can be distinguished from a regular text (SMS) or media (MMS) message because it is in a blue rather than green bubble on the iPhone texting App. iPhones transfer text or media messages in the form of iMessages using an internet connection rather than the phone system.

While regular text and media messages can be transferred from iOS to Android by many methods, iMessages use a proprietary storage method and are not so easy to transfer.

As I mentioned above, Syncios claimed to perform that task but caused me serious problems, so I had to abandon it.

Most iOS-to-Android transfer software will copy all your standard SMS and MMS messages, but you might not get iMessages.

If you have essential iMessages, you could keep them on your old iPhone, or they can be extracted from iPhone backups using one of several iPhone backup viewing and extraction tools.

Losing iMessages when transferring from an iPhone can be a big deal for some 'power users'. See the article titled *"Apple trapped me on iOS — perhaps forever"* at **siliconchip.com.au/link/aawm** for the experience of one user. Also see *"iPhone's blue bubble won't let me stray to the Galaxy S8"* at **siliconchip.com.au/link/aawn**

We haven't tested either method, but you can copy iMessages off the phone to a computer (but not another Android phone) using iMazing (**siliconchip.com.au/link/aawk**) or iSMS2droid (**https://isms2droid.com**).

If you are planning to move to Android in the future, I suggest that you turn off iMessages now, so that your phone number will be deregistered from the iMessages server. You will receive regular messages instead (which can easily be copied later), and your correspondents will get used to you not having iMessage.

This last point may be important since without iMessage enabled, others will no longer be able to send you messages in places where there is no mobile service, but there is internet access, such as on some aircraft.

If you don't turn off iMessages and you move to Android, people with iPhones will think that they are sending you messages.

But you will never get them, since they will be sitting in Apple's iMessage servers! So you need to remember to switch this off before getting rid of your old phone.

To turn off iMessages on your iPhone, go into Settings and then tap Messages and then toggle iMessage to off. Turn of Facetime at the same time. You can also deregister iMessages if you no longer have your phone but have the same number; see **siliconchip.com.au/link/aawl**

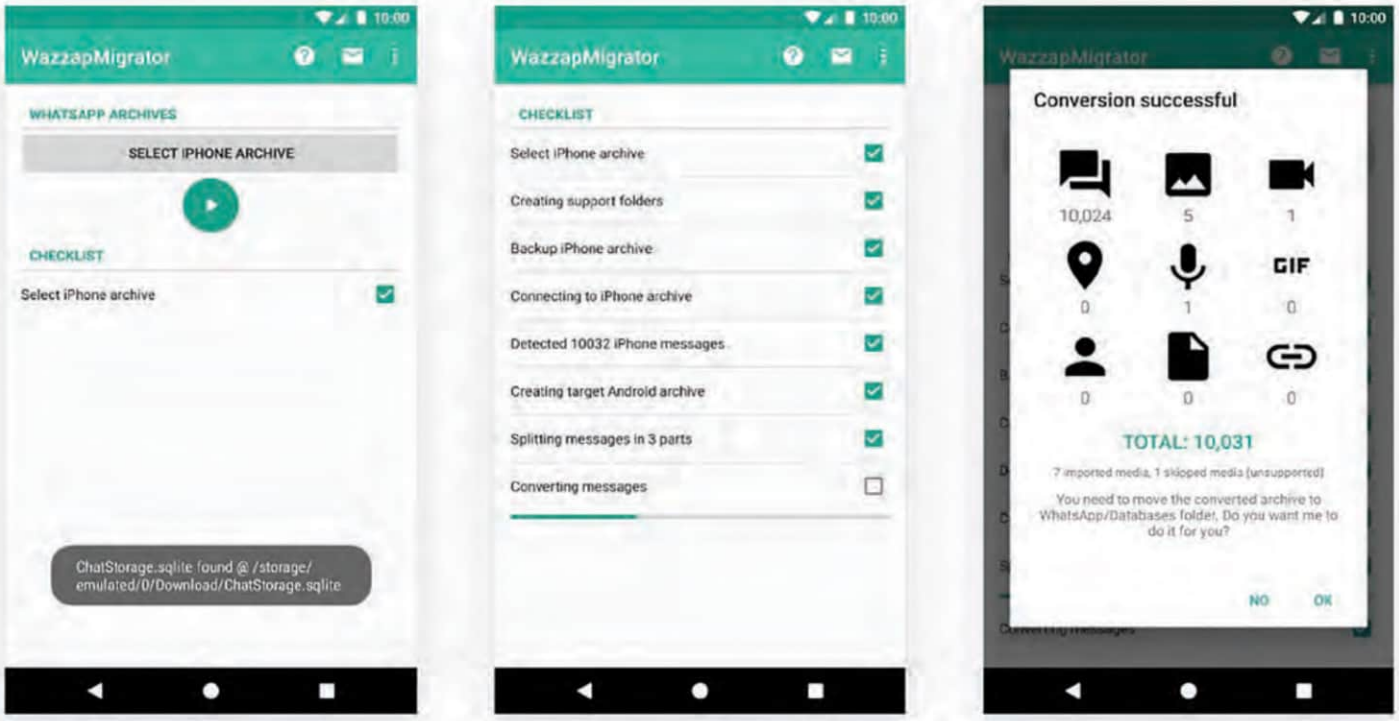
Build your own phone?

If you are not satisfied with any commercial phone offerings, you could try building your own, or source one from a non-mainstream manufacturer. There is a Kickstarter project called "MAKERphone" which is intended for educational purposes. See above and their website at **siliconchip.com.au/link/aawv**

See also the video titled *"Build Your Own Phone with MAKERphone"* at **https://youtu.be/S702qykR9zs**

The Fairphone (**www.fairphone.com/en/**) is a modular phone that is specifically designed to be easy to repair, "sustainable" and based on materials that are ethically sourced. The latest model is the Fairphone 3, which runs Android 9. It is currently available on pre-order for approximately €450.00 (around AUD $730) plus shipping from Europe.

Someone was keen enough to build their own iPhone from spare parts. See the video titled *"How I Made My Own iPhone - in China"* at **https://youtu.be/IeFuF-zoVzA**



Some WazzapMigrator screens

There is an Android App called PieMessage (siliconchip.com.au/link/aawo) that enables iMessages to be used on an Android device; however, it appears to be no longer under active development. It also requires you to have an OSX device such as an Apple Mac and it requires an expert level of knowledge to set up. See a 2016 review of PieMessage at siliconchip.com.au/link/aawp

Migrating WhatsApp messages

One of the trickiest Apps to migrate data from the iPhone to Android is the popular messaging software WhatsApp. The developer of this App has made no special provision for data migration, and it is not merely a matter of copying across data.

It is complicated since WhatsApp can only be registered on one phone at a time for a given user.

It used to be possible to transfer WhatsApp data from iOS to Android, but those older methods no longer work. The only way I found to migrate this App data without losing past messages and multimedia files was with the aid of a paid App (A$9.49) called **WazzapMigrator**; see www.wazzapmigrator.com

WazzapMigrator works as follows. You make an unencrypted iTunes backup (the process will not work if it is encrypted). You extract a file from the backup on your PC or Mac called ChatStorage.sqlite, plus a folder called Media.

Any iTunes data extractor can be used for this job, but a free one is supplied on the WazzapMigrator website, and it also has links to others.

You then connect your Android phone to your PC or Mac and copy these two files to the Download folder on the phone. You first uninstall WhatsApp from your phone if it is installed. Then you install WazzapMigrator from the Google Play Store onto the phone.

When you run that App, it should find the iPhone backup files in the Download directory of the phone and you then just follow the instructions. When finished, go to the Google Play Store on the phone and install WhatsApp Messenger, activate it with your phone number and press the Restore button of the WhatsApp Messenger App. All the chats and media from your iPhone should be there.

As with any software installation, things can go wrong. So you should browse the WazzapMigrator website and chat forums on that site before proceeding, as well as watching the installation videos.

One problem I encountered is that I was locked out of WhatsApp App for about ten minutes. This was because the WazzapMigrator tool internally uses an old version of WhatsApp, and they don't like an old version being installed, even temporarily.

This doesn't always happen, but I did get my valuable messages and media across. Judging from the forum activity on the WazzapMigrator website, support for this App seems extremely good. I, for one, was very happy with the result.

Note that these instructions are current at the time of going to press but follow instructions from the WazzapMigrator website in case there have been changes.

Other possible methods of transferring WhatsApp messages that we haven't tested are using:

- **dr.fone - Restore Social App** (siliconchip.com.au/link/aawq)
- **Backuptrans iPhone WhatsApp to Android Transfer** (siliconchip.com.au/link/aawr)
- **iCareFone - WhatsApp Transfer, Backup & Restore** (siliconchip.com.au/link/aaws)

There are other reported methods which appear to be more complicated.

You can read the official WhatsApp FAQ on the subject (siliconchip.com.au/link/aawt) which states "Note: You can't migrate your messages across different types of phone". SC