u3a Computing Group

Alan Hopwood, 7 April 2022

Agenda

15:00	Welcome, Safety & Administration
15:10	Collect Current Issues and Questions
15:20	Topic List
15:25	Using Smart Phones
16:05	Current Issues and Questions
16:25	AOB and Next Meeting

Topic List

Topic	Votes
Using smart phones	7
Financial applications (replace Microsoft Money)	5
Linking Android systems	4
Blockchain, Bitcoin and NFTs	3
Computer alternatives - Windows vs Chromebook	3
Which apps are great?	3
How to Select text on a tablet for later use	3
Solid State Drives	2
Thunderbird email (or alternatives)	1

Presentation
Smart Phones

Smart Phones - not just smart, they're Magic!

Any sufficiently advanced technology is indistinguishable from magic.
Arthur C Clarke's third law

Question areas

Smart Phones

- Communications
- Managing Apps
- File Systems
- ad hoc
  - app or webpage?
  - touch id
  - one time password
  - browser tabs
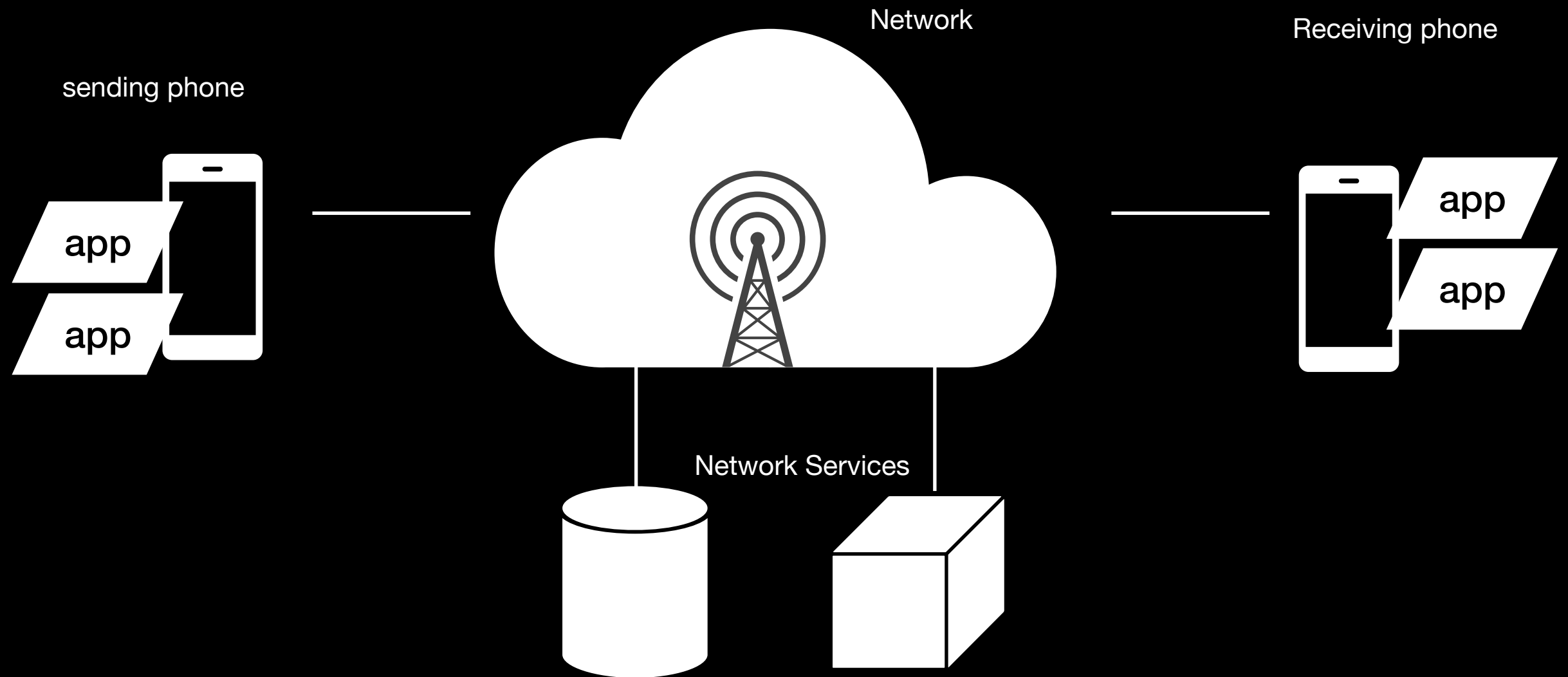- Navigation

Communications Questions

Smart Phones

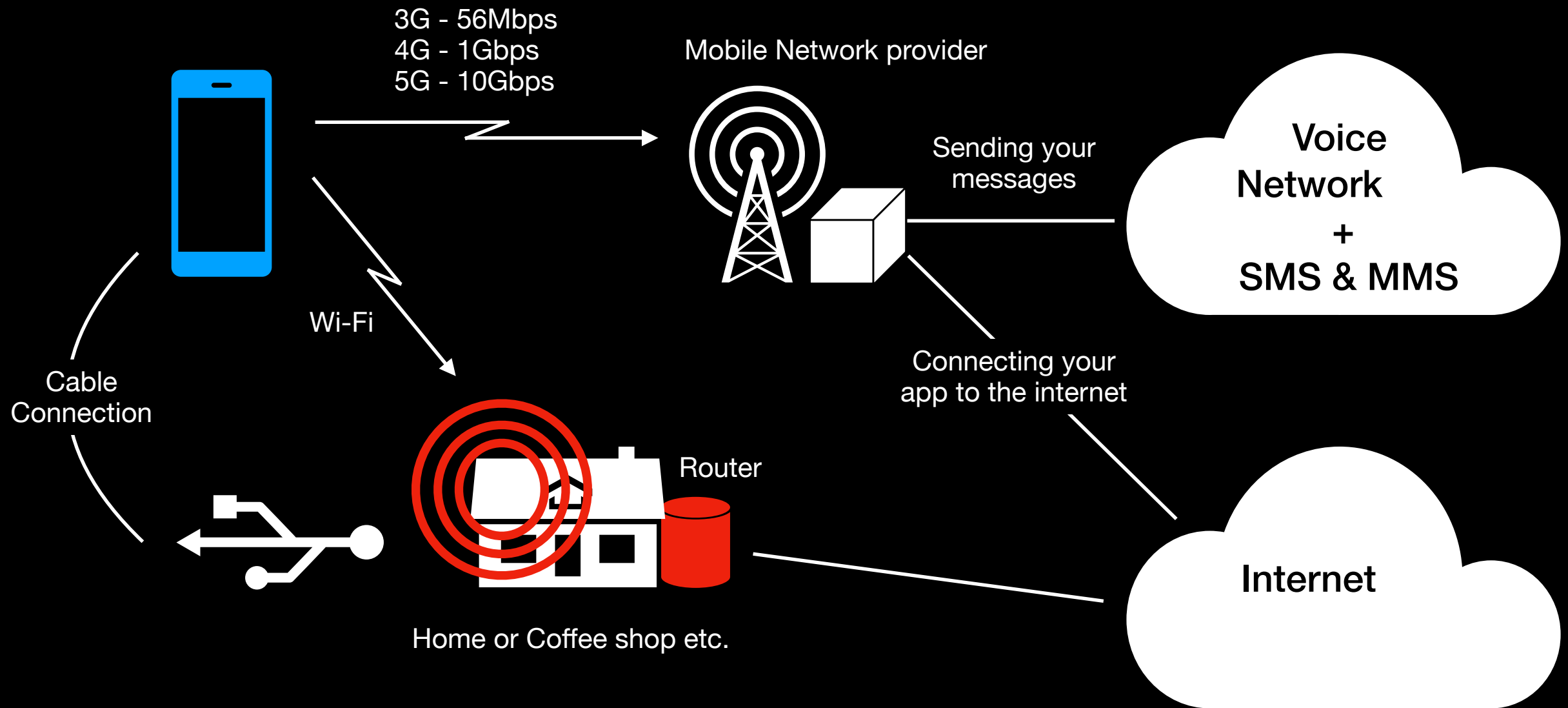|	
Which **protocols** are used for SMS, MMS, video etc.	
What needs **mobile data rather than wifi**?	
Reception of images attached to texts sometimes needs wifi or mobile data switched on. (why?)	
I can call using telephone, video (facetime), or WhatsApp. Which should I chose?	
I currently have plenty of capacity for my needs using "packs" from EE costing £5 per month for data, minutes & texts and it gives "boosts"of additional capacity after you have bought a pack for 3 months. But I am interested in **how access works.**	
If someone calls me it seems to come through on whatever app they have chosen. Presumably if it is a phone call they **pay for it**. If it is via an app presumably it uses data which I am paying for? If I am at home I assume that it goes through my home broadband?	
I have discovered that **sending photos** using the telephone text messages is very expensive and outside my "Pack".	
I also use an app called Signal which our family technical expert said was more **secure** than WhatsApp for text discussions within our family group.	

Communications

Smart Phones

Network

Receiving phone

sending phone

app

app

app

app

Network Services

Smart Phone Communications

Smart Phones

3G - 56Mbps
4G - 1Gbps
5G - 10Gbps

Mobile Network provider

Sending your messages

Voice Network + SMS & MMS

Wi-Fi

Cable Connection

Connecting your app to the internet

Router

Home or Coffee shop etc.

Internet

What Mobile Networks Provide

Smart Phones

Service	Provision	Charges
SMS (texts) **Short Message Service**	Text only. Up to 160 characters	per message
MMS **Multimedia messaging Service**	>160 characters 40 secs of video images	per message
Internet Access	data (connection)	per Kbyte

How Channels Are Used

Smart Phones

Apps	Transmission	Notes
Message (ios) **Messages (Android)**	SMS MMS	The network checks that the receiving device can accept message type.
Message (iMessage) **Messages (RCS)** **WhatsApp** **Signal** **Telegram** **Skype**	Data over internet Proprietary protocols.	Functionality set by service: messaging, voice calls, video calls - see others typing etc. Each service has own addressing and routing network servers. Must have same app on receiving device

Communications Questions
Smart Phones

Which protocols are used for SMS, MMS, video etc.	SMS and MMS are protocols. Video tends to be carried by proprietary protocols
What needs mobile data rather than wifi?	Nothing
Reception of images attached to texts sometimes needs wifi or mobile data switched on. (why?)	SMS does not allow for images. MMS has a 300KB size limit.
I can call using telephone, video (facetime), or WhatsApp. Which should I chose?	WhatsApp & FaceTime need same apps at the receiving end and use internet links (wifi or mobile data). Telephone is universal and uses the telephone network
I currently have plenty of capacity for my needs using "packs" from EE costing £5 per month for data, minutes & texts and it gives "boosts"of additional capacity after you have bought a pack for 3 months. But I am interested in how access works.	Explained already?
If someone calls me it seems to come through on whatever app they have chosen. Presumably if it is a phone call they pay for it. If it is via an app presumably it uses data which I am paying for? If I am at home I assume that it goes through my home broadband?	yes/yes/yes. smart phones link to the internet via wifi in preference over mobile data. WhatsApp (for e.g.) has options in settings to lower data usage when on a mobile data link.
I have discovered that sending photos using the telephone text messages is very expensive and outside my "Pack".	MMS size limit 300KB
I also use an app called Signal which our family technical expert said was more secure than WhatsApp for text discussions within our family group.	WhatsApp has end to end encryption of all content, text, voice etc. Signal also encrypts meta data so no-one can find out who you message.

Communications Settings
Smart Phones

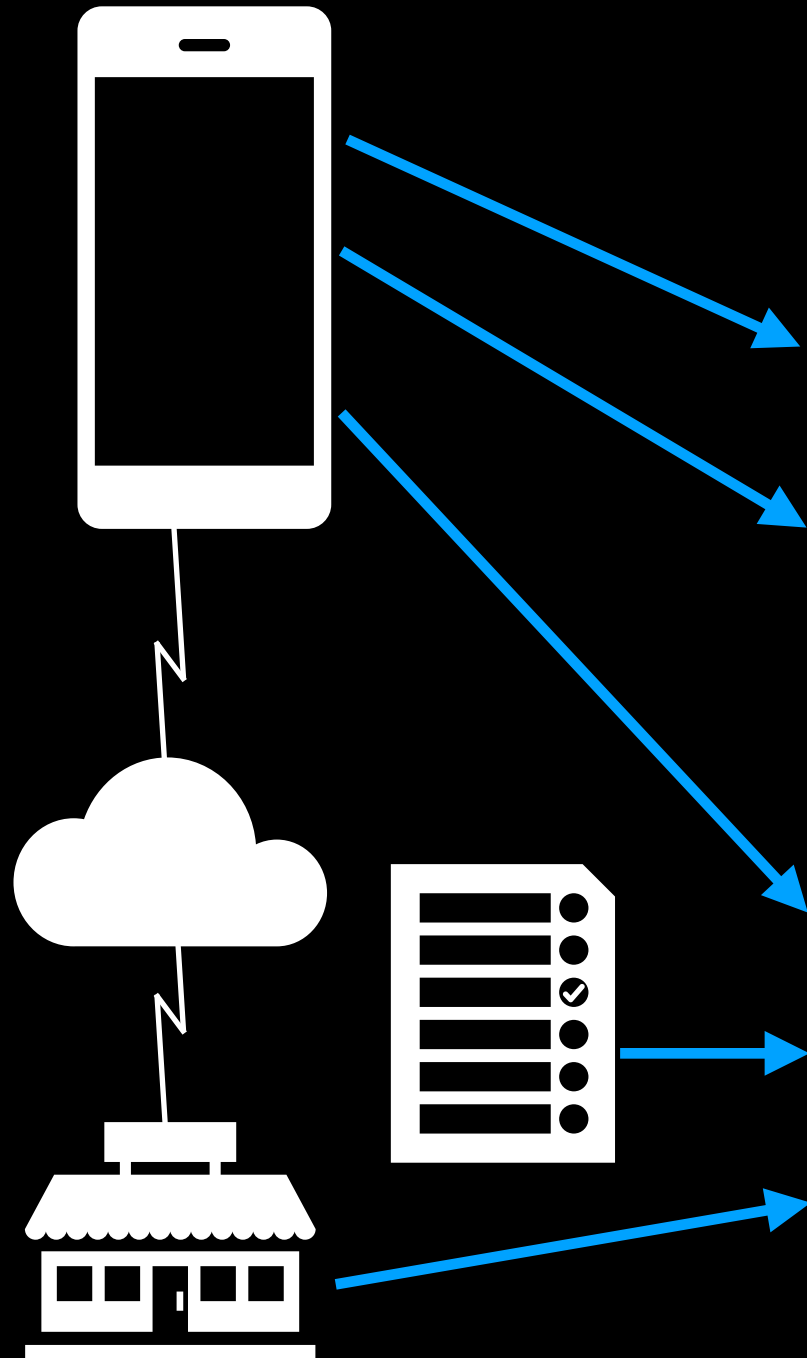|		IOS	Androi
WiFi	All WiFi systems are local. Phone WiFi settings allow you to connect to WiFi network	✔	✔
Mobile Data/ Data usage	Enabling allows phone to use mobile network (chargeable) connection to internet	✔	✔
Data Roaming	Setting ON allows phone to use mobile data services from network other than yours (expensive outside UK)	✔	✔
Low Data Mode	Stops updates and some synchronisation happening when using mobile data.	✔	
Data Saver	Prevents *some* apps running in the background from sending or receiving data.		✔
Wifi calling	Setting on allows you to connect to your mobile service via internet to make a telephone call.	✔	✔
Mobile data app settings	Each app can be independently allowed or disallowed from using mobile data.	✔	✔

Managing Apps Questions

Smart Phones

It appears that many apps sit there in the background tracking various things about you and presumably using phone capacity. How do you tell that this is happenning?	*Already covered preventing apps from using mobile data.*
How do you see what apps are resident (as opposed to just available to load when you need them? Get rid of a resident app without deleting it completely?	
When I got the phone I deleted a lot of apps which I thought that I would not need by pressing the home? button at the bottom to show a minus sign against the icon. Touching the app then enabled the app to be deleted or removed from the home screen. I am not sure of how to get it back again.	
I have about 50 apps on the phone, most of which I rarely use but don't want to delete. How can I stop automatic updates and stop dozens of 'Notifications'?	
Identifying redundant apps is difficult. My Samsung A10 flashed a message about apps which had not been used for some time but when I selected the list nothing was shown. These since found and deleted by searching around in settings.	

App Status
Smart Phones

App Status	Characteristics
Open & in the foreground	On screen and linked to keyboard. Priority on other services.
Open & in the Background	Some data used. Can link to phone services, e.g.: • Music to speaker • Maps to location
Installed	Available to open
Bought	Available to download (again)
Available in store	Android allows multiple "stores"

App Controls
Smart Phones

Action	IOS 15	Samsung Android 10
Check what is Open	Swipe from bottom to middle / don't lift off	Press III (swipe from bottom?)
Close Apps	From above status, swipe app to top	From above status, swipe app to top
Delete Apps	press and hold app to see pop up menu. Select Remove App.	Settings / apps / select app / uninstall.
Limit access to phone services	in settings, find & select app.	in settings / app find and select app / permissions
Manage Notifications	in settings/ notifications select app	in settings / app find and select app / notifications
Manage Updates	in settings/ general/ background app refresh - set by app.	In Play Store: Google acc profile picture/ settings/ Network preferences …
Identify Redundant Apps	in settings/ general/ iPhone storage. apps listed by storage use, but also show last used date.	Files app by Google has clean up functionality.

File system Questions

Smart Phones

The files/documents in my "One Drive" App on my phone bear no resemblance to the files/documents on my PC "One Drive" folder. Any idea why?	Same account? synchronisation set up?
It appears that all photos created by or sent to my phone are automatically stored on my phone. Am I going to run out of memory?	iphone: Settings/ iCloud/ photos/ - use iCloud or not - optimise iPhone storage or Download & keep originals Android: Gallery / cloud sync

Ad hoc Questions

Smart Phones

It seems that many emails and similar try and get you to install their particular app rather than simply taking you to their web page.	Yes….which is better depends on the implementation.
It has touch id so, in theory, you don't have to keep entering your passcode but I have found that this reduces in effectiveness over the months.	Yes… fingers change.
When a 'One-time passcode' is sent how can I copy/ paste it into the original app without leaving the app?	Often, new text messages appear on screen for a few seconds. Otherwise, you need to leave the app.
I use safari for looking at web pages. I have just discovered that I have 82 tabs! Most are useless. It seems that they are every page I have looked at. What are they for? How do I use them to look at at number of related web pages?	Most browsers have tabs to allow keeping multiple webpages "open". Safari: square on square icon/ touch x on each tab your want to delete Chrome: square with number shows number of tabs. touch square to see & delete any unwanted tabs.

Navigation Questions
Smart Phones

I have got a number of GPS apps to help me navigate either in my boat or when walking or cycling. The Maps app seems to work reasonably well for walking but I think that something called Outdoors GPS may be better. For the car the built in sat nav does everything I need. I think it must be connected to my phone as it tells me where there is congestion. For my local sailing I have not found anything on my phone more suitable than my old Garmin GPS72. It does not hold maps or charts and has no mobile signal but tells me my speed, direction of travel, and holds waypoints marking points of interest in my sailing area and provides direction and distance to these. I would appreciate something that did this overlaid onto a map or chart but have not found it at a reasonable cost yet.	Car sat navs often have a sim card. Outdoors GPS looks good. for boat nav apps: https://www.pbo.co.uk/gear/14-tablet-navigation-apps-17096 I have Navionics but…. All cost money
I have installed the RYA SAFETRX application on my phone in case of emergency but I am very concerned that my lack of knowledge experience or simple "finger trouble" could generate a false call.	Can Select Track only mode (doesn't send SMS to emergency contact) Call for help has 2 stages. second stage is very clear

Thank You