Budget Internet Access Using Mobile and WiFi Technology 15.10.18

Modern mobile phones now incorporate Internet access, via direct tethering to a PC or laptop, or, by acting as a hotspot, connecting to the Internet by conventional onboard wifi, or, external wifi, or, tethering hardware. Mobile phone usage pricing has also now become more reasonable, and, data rates as well, all usually offered in 'packages' of a renewable fixed duration. Also, be sure to turn off any unnecessary data consuming apps in the phone, plus adblockers, animations, and video sources, etc, in your browsers, whether in the phone, or, in a hot-spot-connected or tethered computer/laptop, etc.

Putting these two main factors together, the aspiring light-to-medium Internet user can now avoid both needing a home land phone line, and accompanying Internet access, via a Telecom provider. They can also have Internet and phone access on demand anywhere that their current SIM card is valid, usually within a national boundary. This is also good news for travellers who may plan to remain in a country for some duration, which makes purchasing a local SIM card worthwhile, eg, a SIM that covering the UK and Northern Ireland is a good example. Note that swapping SIM cards is only possible with unlocked phones.

Note also that Smartfone SIMs are not needed just to access wifi hotspots alone, in this situation, you could remove your SIM to be sure that there is no access to your data package.

Also now available for Internet access are street cafés, (in return for food and beverage \$ patronage), plus the localised 'hot spots', (including sometimes local phone booths), city library access, as well as community or urban blanket access, plus transport modes such as buses and rail, and, all of which are usually free, although some sort of access registration may be needed when using your personal laptop or smartfone. The Great Library, and on-demand universal individual personalised access, now both beckon, especially for those with a knowledge-based motive for use, beyond just seeking the commercially-dominated areas of the Internet.

Note that original iCafes (\$) are also useful, and should be supported occasionally, they should also have secure Internet access, as well as ancillary business services, such as phone, fax, p/c, plus, hardware systems, laptops, software, OSs, parts and repairs, plus sales. Your personal laptops, phones, and PCs can be used therein, of course, and, if pricing reason prevails, you usually just pay for what Internet time you use, plus other materials, as you leave.

Budget measures are thus important in a current Market climate preferring that consumers 'think not but consume', so, to stretch your Internet access \$\$, shop around for optimal Internet and phone 'packages', especially ones with carry-over of data and \$\$, plus, here are some extra important tips for Internet access using mobile and wifi technology:

Firstly, any mobile phone or similar device, regardless of price or 'newness', and, having current tethering and/or hotspot facilities, will do the access job effectively, and even if there is a weak battery, just being connected to the charger and mains will enable function. Your laptop or PC can then access the Internet via mobile USB tethering, or hotspot settings, and, more than one system can/should have potential hotspot access concurrently, depending on connection capabilities. Otherwise, note that any external local hotspot, anywhere, can be accessed with a PC, laptop, or, SIM-less smartfone, given extant wifi capabilities.

Note that, if using your actual mobile data package at any time, always ensure that any updates for computers, laptops, et al, are turned off, until you can access the Internet by other less expensive means.

2) Use a Linux O/S (f) on your laptop or PC, either via double/multi-boot, or, a dedicated Linux O/S installation. As long as you can match any PC or laptop system to a Linux O/S, an expensive system and/or OS outlay is not necessary, older systems may still be quite adequate, offering both smooth function, plus, the means to just boot up, connect to the modem in the usual way, then clicking on the Internet browser icon. Magically, no extra drivers are needed, especially for tethering to your mobile, or, for using the wireless to connect to any available hotspot. See also Linux User's Mini-Factfile

Thus, if you just need to browse, and access email online, (or via a basic desktop email app), Linux is for you, plus, other apps, such as for word- and picture-processing, are also duplicated in Linux O/Ss. Just Linux O/S discs alone can be booted and used. Note that these free Linux O/Ss, when installed, look after their own Housekeeping, and do not even require defragging. Apart from the initial installation update, and occasional subsequent update event, there will never be the drain on data allowance of Microsoft O/Ss for updates, including for security. (Your local iCafe would be pleased to provide occasional secure and reasonably-priced access just for this sort of Linux update purpose..?) Refer to DistroWatch for available Linux O/Ss and their descriptions, plus current popularity ratings.

3) Check settings on your mobile, PC, and/or laptop, for unnecessary or unwanted data access, so that emails are text-only, or, you have shortcuts/bookmarks direct to preferred sites, and/or that search engines are restricted as to History, Tracking, Cookies, ads, animations, images, etc. Google Maps use large amounts of data, use an alternative if you can. Do not resend large emails as replies, especially with attachments, unnecessarily. More advanced users could try Opera, which has data compression utilities incorporated. Note that tethering does not require wifi, but again, ensure that all potential updates are turned off. Uninstall any proprietary apps that automatically turn on Mobile Data/Bluetooth/WiFi.

Even restore smartfones, etc, to their original factory settings, after all, any corporate ISP has a vested interest in wasted data allocation. Then, reset anti-theft, GPS, background wifi on/off, mobile data 'on' with tethering, etc., as and if required. REPEAT: Uninstall any proprietary apps that automatically turn on Mobile Data/Bluetooth/WiFi. Note that re-setting mobiles will cause unlocking to revert, however, so unlock phones, if required, after all other adjustments have been successful. Use Airplane Mode to protect/conserve data, as well, or better still, turn off when not in urgent use. RTFM applies, even if you need to download this, OK!.

Re those 'packages' of a renewable fixed duration, though, even if 'rollover', beware that, just like a casino, the 'house', aka phone access provider, always will have a winning margin, and, remember that casino analogy at all times, OK! So, be very sure of what your package entails, and, whether the constituents can be manipulated, eg, more data for less phone time, and/or text totals, etc. So, again, be sure to turn off any unnecessary data-consuming apps in the phone, also animations and video sources etc., in your browsers, whether in the phone, or, in a tethered computer or hot-spot-connected computer. Note also that weather apps use global roaming as well, so, these should be turned off if not required, in that situation.

Once again, a SIM for each particular country is strongly advised, although a SIM is not needed for simple Internet access, via which you can access your online emails. Note that only the most expensive mobiles phones have the technology to operate in all world networks, with or without SIMs, wifi excluded.

For travellers, sensible cafes these days, all round the world, are unconditionally online, so, your customary cup of coffee can also include ad lib wifi access, for either laptops, notebooks, or phones, and, definitely no SIM required in this case......

If you are unaccustomed to online use of mobile wifi, Nofrillstech recommends trialling prepaid usage only, until you have an established and coherent pattern of data use, before committing to a 'package', whose terms are calculated to be so confusing that you easily lose track of where the \$\$\$ actually do go....? Plus, these new 'roll-over' mobile packages expire if not kept in credit. The newer adjustable mobile packages are an improvement, and, will require a newer phone, although do note that online connections, to ascertain balances, will be part of your own data usage, of course....! Best to phone for those remaining credit totals, in that case, using your package phoning allowance for that purpose...?

So, collectively, these few careful steps will definitely reduce data \$\$ 'waste'. As well as periodically checking your Internet use via connecting to the provider to access your credit level, you could make a rough estimate for data use totals, eg, 1 Gb pm data allowance -:- by 28, (package cycles are 28 days, more potential confusion, note!), useful whether you access the Internet daily, or just on occasion, and, such an exercise is easily habituated. (These factors are also applicable to Apple/Mac product users.) Look out also for free apps that can indicate data traffic totals for computers and laptops.

- 4) So, entirely up to you what laptop/PC system and OS you use, and, if in actual online conjunction via your mobile wifi, or, tethering with mobile data, though all the preceding recommendations do work satisfactorily. Plus, it is very pleasant and relaxing to be able, especially at home, to sit upright in a comfortable chair, looking at a sizable screen set at your ideal sight level, typing on a conventional keyboard, with lots of room around for papers, and, coffee cup set to one side, all while not having a permanent phone line. Viz, the ideal INDEPENDENT Home Internet access, without the shock of the usual landline Telecom bill, including line rental, especially that now a new connection and/or installation is never required, yet whilst still having reasonable and controlled smartfone email and Internet access, etc, and at a reasonable price..? Oh, Happy Days...?
- 5) As to travel, well, taking the trusty mobile, with or without needing a local SIM, plus, the smallest Internet-capable tablet/laptop/notebook you can buy, especially secondhand, nothing fancy that could be stealable, with a conventional screen and even a roll-up keyboard, that then fits easily and lightly into your shoulder bag or rucksack, would surely all be sensible choices for a budget traveller...? Ensure all 'phoning home', updating, and other unnecessary data-consuming apps and processes are turned off, unless there is 'free' access, and, do tweak those Web browsers, if you wish to use your 'sillifone' as a truly 'smart' Internet connecting medium.

6) Check your cables, as ever, travelling puts extra strain on cables and connections, always test both with known-goods. Note that waterproof smartfones usually cost \$500 or more, so, be sure to protect otherwise quite serviceable cheaper models from any moisture ingress, when in pocket, rucksack, handbag, and, at the beach, or swimming pool. Store such budget models in a warm dry place when not in use, plus, remove batteries for all smartfone storage purposes.

Finally, record your webmail u/n and p/w, suitably disguised, to hard copy, and keep this safe with your passport, or, use a password manager; note that current webmail security measures can be most unforgiving, if you fudge your logins....OK!!

Some valuable feedback from a Canadian Nft subscriber: As of 11/12/2018.

'As far as beating the bastards at their own game, in this case reasonable mobile bandwidth procurement, the best winning move is not to play. But few have, or want, that option, these days. My cell phone plan costs \$100 a year. It makes so little money for Bell that they no longer offer it to new customers. Every few months they try to entice me into "upgrading" to a more expensive plan. All their plans suck, and the competition isn't any better. The Flex plan for tablets starts at \$10 per month. Use any more than a few bits of data and the cost jumps to \$20, \$30, \$45 or more for that month. Put that SIM in a smartphone and it will let you make and receive phone calls for 50¢ or more per minute, and send and receive text messages at 30¢ a pop.

When travelling internationally, any electronics you carry should be considered disposable. The Electronic Frontier Foundation has a handy printable pocket guide at https://www.eff.org/border-search. It is US specific, but the tips would apply anywhere. The Wirecutter has excellent suggestions for inexpensive phones: https://thewirecutter.com/reviews/best-budget-android-phone/ for those going new. As for inexpensive iOS phones, Apple's motto is *Go Be Poor Somewhere Else*.

I have a Moto E4 Android phone, the Wirecutter's less than budget phone recommendation last year. It's actually Verizon branded with an unlocked SIM slot, I haven't needed to put a SIM in it yet. Everything except the phone, messages, and Verizon specific apps work without issue on WiFi.

CDMA seems to be a thing of the past everywhere except the United States (Verizon and Sprint). The Canadian carriers have all but shut down their CDMA networks. Smartphones that don't take a SIM card are from the Android Gingerbread era or earlier and not worth carrying around. Even earlier, I had no problem bringing a SIM-less cellphone from Singular (now AT&T) and activating it with SaskTel. However, they had to consult a technical manual to get the activation codes. These days it wouldn't be worth the hassle.

In the GSM realm, different carriers use different bands of the spectrum. Not all phones will support those bands. (see https://www.digitaltrends.com/mobile/smartphone-bands-explained/ and <a

Other potentially useful points:

- In keeping with disposable travel gear, you may want to try Chromebooks. They are easier to return to factory defaults.
- Given the capabilities of today's smartphones, a full fledged laptop, of any kind, may be unnecessary, and a matter, nowadays, of personal preference only.
- A folding keyboard can be bought for less than \$20 and takes up less space in a pack than a rolled keyboard.
- Oubes OS is worth a mention, it's what Edward Snowden uses.
- At least in Canada, all airports have free WiFi. Note, beware Hong Kong airport wifi, especially if using Gmail.'

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