



Alan German & Chris Taylor

Ottawa PC Users' Group

April 27, 2022

Follow-up

Connecting a hard drive to an Android tablet

- Following Bob Walker's presentation last week on portable 4TB drives, I asked if such a drive could be used with an Android tablet
- Bob suggested that if the tablet supported a USB flash drive then it should also support a portable, external USB drive...



Bill Bradwin

How to Use a USB Flash Drive with Your Android Phone or Tablet



CHRIS HOFFMAN [@chrisbhoffman](#)

UPDATED JUL 27, 2016, 1:36 AM EDT | 4 MIN READ

“Most modern Android devices support standard USB drives, so you can plug in a flash drive just like you would on a computer.”

<https://www.howtogeek.com/129800/how-to-use-usb-drives-with-the-nexus-7-and-other-android-devices/>

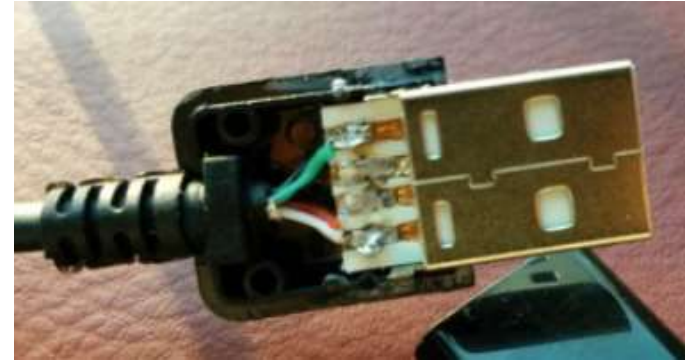
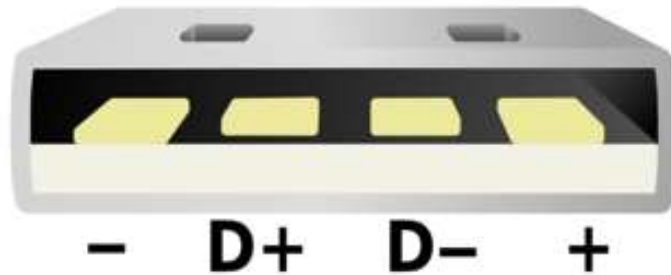
Step-by-step:

- (1) Get a USB OTG (On-The-Go) cable (USB to micro-USB adapter)
- (2) Format the USB drive to FAT32 for maximum compatibility (Android does not support NTFS - at least not easily!)
- (3) A notification will indicate that the drive is ready “for transferring photos and media”. An “Explore” button will allow you to browse the files on the drive, and an “Eject” button will allow safe removal of the drive.

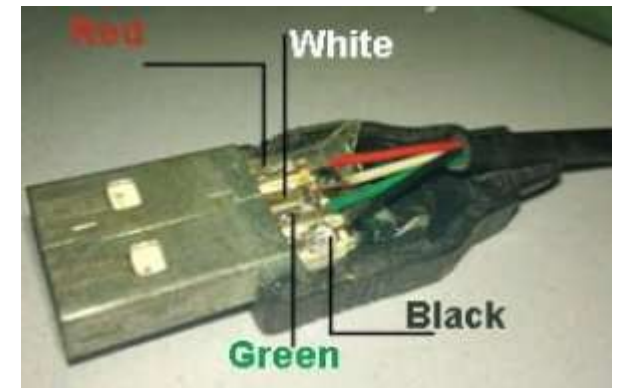


Why an OTG adapter and not just a USB charging cable?

- Charging cables have two wires, plus and minus, for electrical power

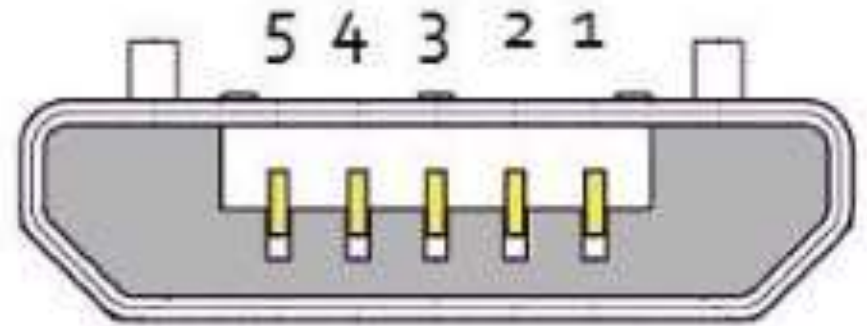


- Data cables have four wires, two for supplying power, and two for transferring data



Micro-USB Type B

- Has **5 pins**; two power, two data, and **one ID pin**
- The electrical state of the ID pin tells the USB controller if the connected device is a host or a peripheral



USB Micro-B

Pin	Name	Cable color	Description
1	VCC	Red	+5 VDC
2	D-	White	Data -
3	D+	Green	Data +
4	ID	n/a	USB OTG ID
5	GND	Black	Ground



OTG adapter/cable allows:

- Connect an Android device to a:
 - keyboard or mouse
 - printer
 - USB flash drive or external USB drive
- OTG provides dual-role support for a device (device can function either as host or peripheral)
- Transfer files directly between the Android device and a connected drive (i.e. without using a PC)
- Specific device must support OTG (not all Android devices do)
- Device must provide sufficient power (or use drive with an external power supply)

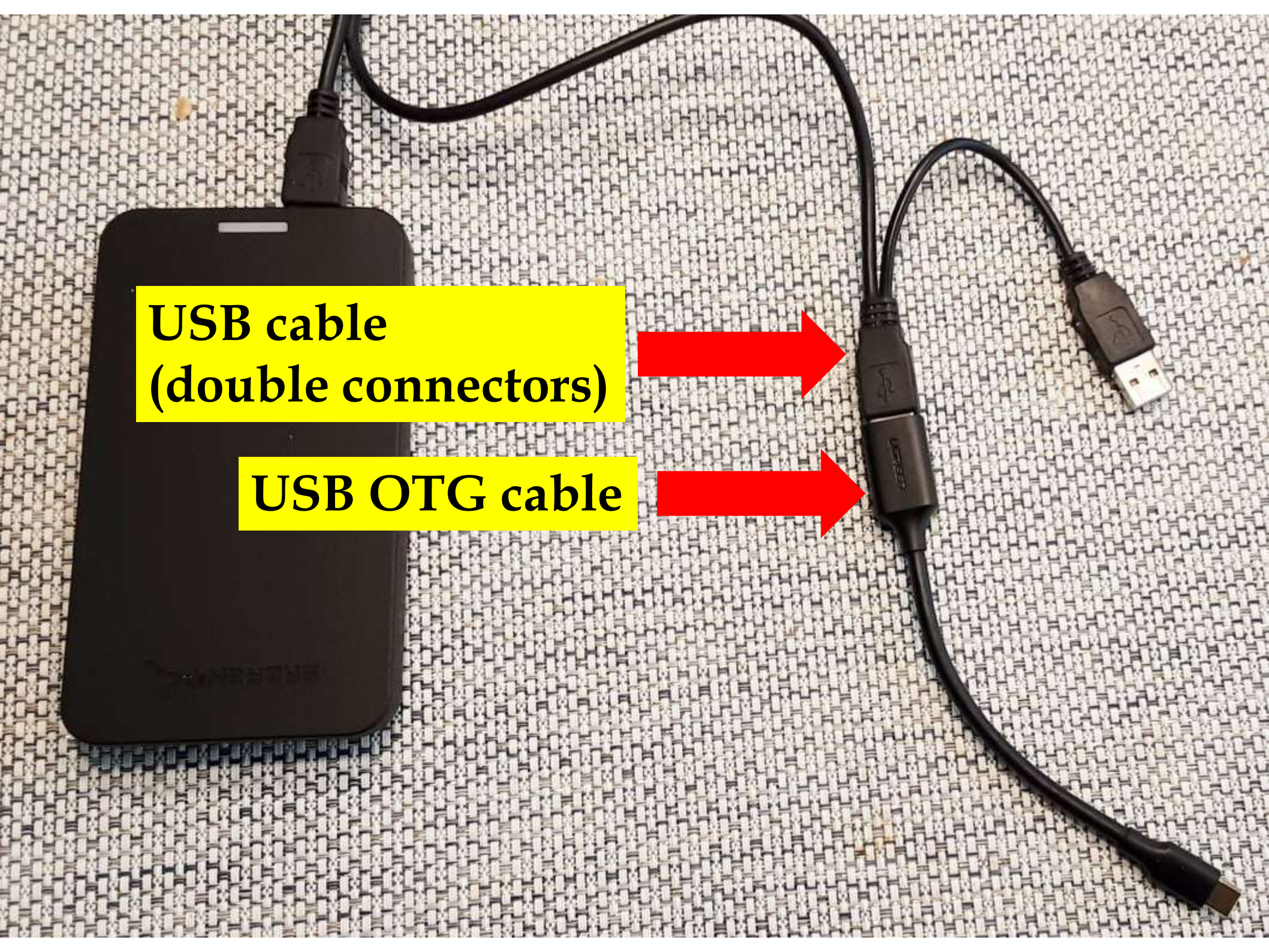




80 GB USB drive

750 GB USB drive





**USB cable
(double connectors)**

USB OTG cable



Share

Google Pixel 6 Pro



- 210 grams
- 128GB 12GB RAM
- 30 W to charge
- Pure Android!



6.45
inches

2.99 inches

Share

Google Pixel 6 Pro



- \$1179, deposit of \$379, remainder over 24 months. New charger \$45.
- \$100 trade in value on Samsung Galaxy S8
- Monthly data charge: \$41 for 4 GB data, speed up to 150 mbps, free long distance in Canada, unlimited international texts.
- Seamless transition to set up new phone but \$50 admin fee for new plan.

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Pixel 6 Pro camera features

- Three camera lenses including
 - 24 mm – primary – stabilization
 - 16 mm - ultra wide
 - Tele lens - 51 mm or 102 mm (2x and 4x times optical zoom from the primary) - stabilization
- 50 MP – 48 MP – 12 MP – ignore these!! Output is always 12.5MP.
- Screen resolution: 1440x1320, 512 PPI
- Extensive shooting and editing features.

Share

Pixel 6 Pro camera –optical zoom



Share

Pixel 6 Pro – further crop



Share

Pixel 6 Pro – close-up



Share

Pixel 6 Pro – close-up + zoom



Close+zoom+crop



Share

Pixel 6 Pro – now for something pretty!



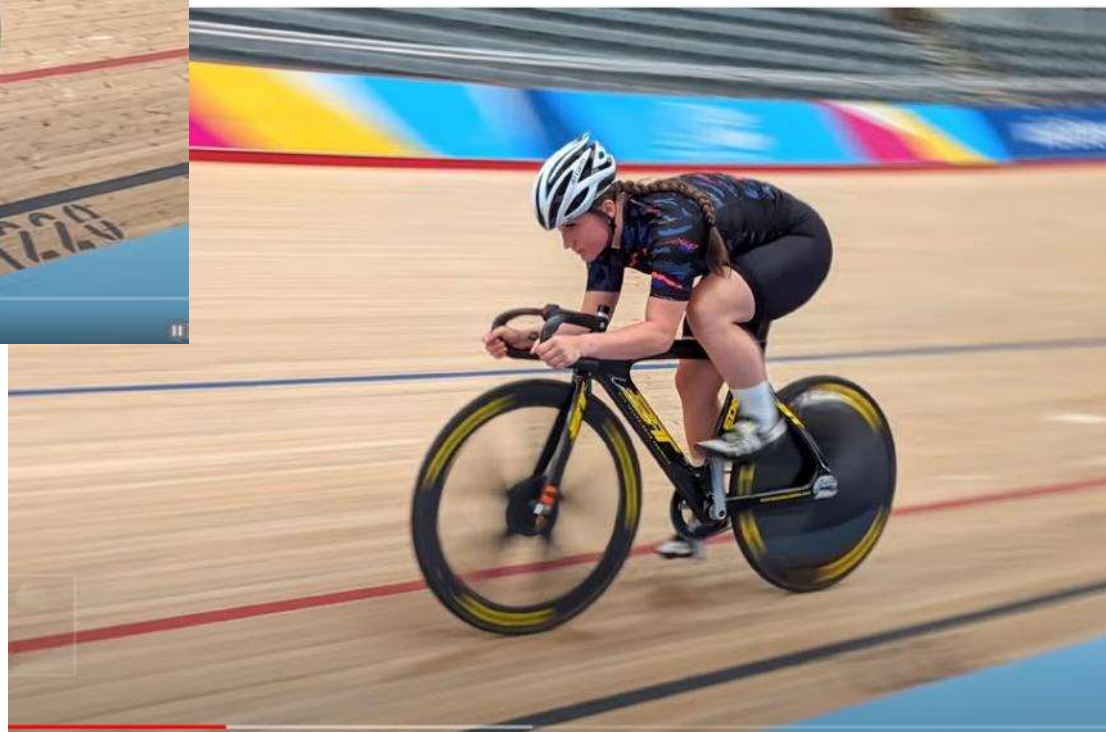
Share

Pixel 6 Pro – portrait mode



Share

Pixel 6 Pro - motion



Share

Pixel 6 Pro – adjustments while capturing a photo

- Overall brightness
- Tint
- Shadows, highlights
- Grids – 3x3, 4x4, golden ratio
- Level (horizontal & vertical)
- Point of focus, focus tracking
- Can shoot RAW and JPEG

Share

Pixel 6 Pro - Editing

- Cropping – including standard sizing for prints
- Perspective control
- Smart erasure
- Automatic background blur
- Lighting and colour adjustments
- Dynamic contrast, etc.

Share

Pixel 6 Pro - Blur



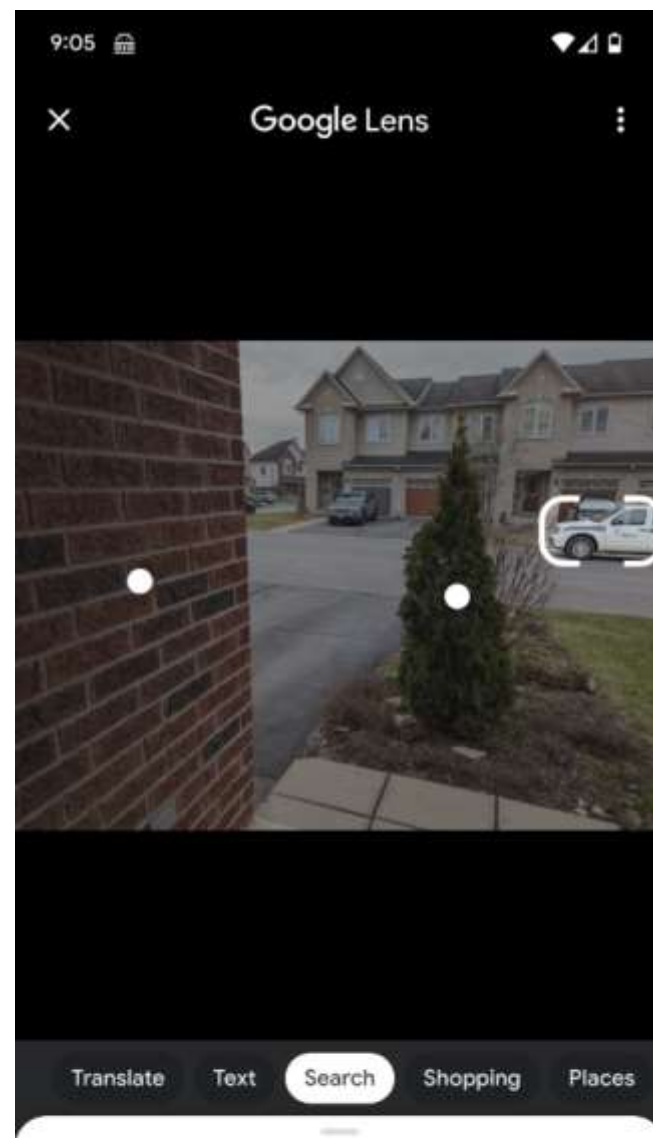
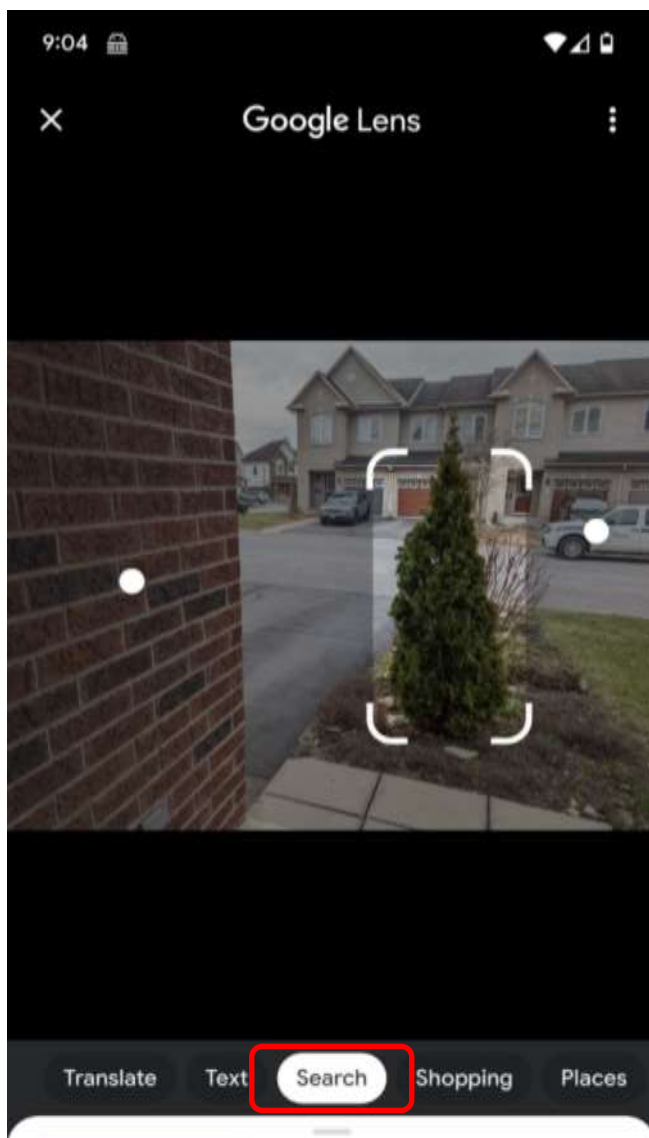
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Pixel 6 Pro – Magic Eraser



Share

Pixel 6 Pro – Google Lens

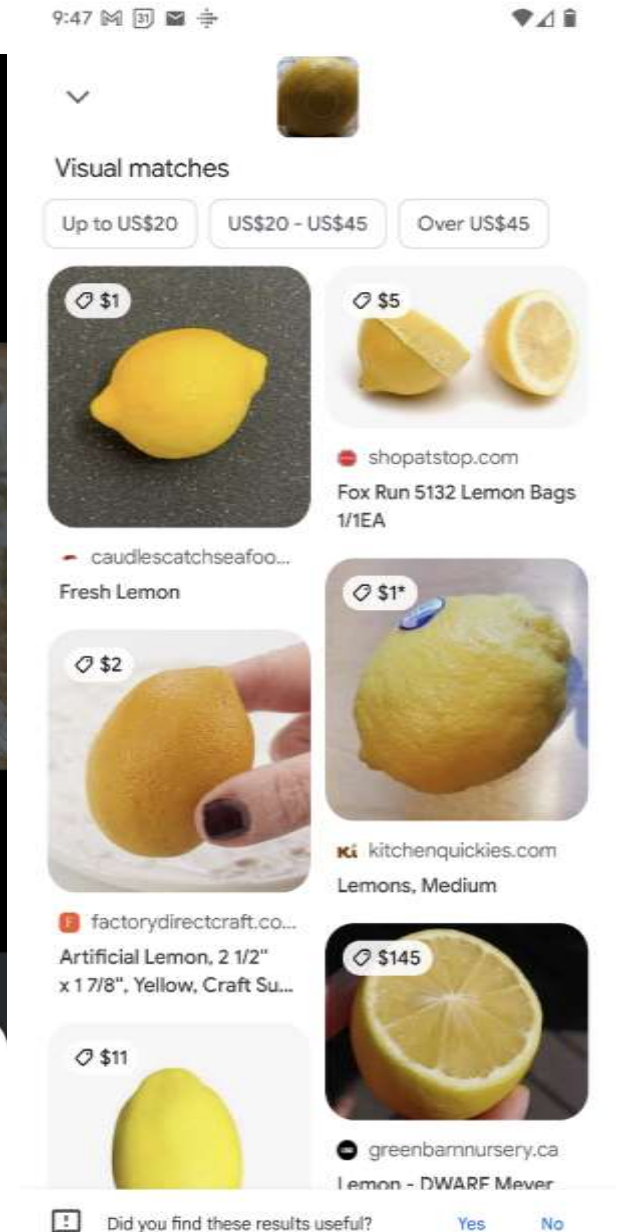
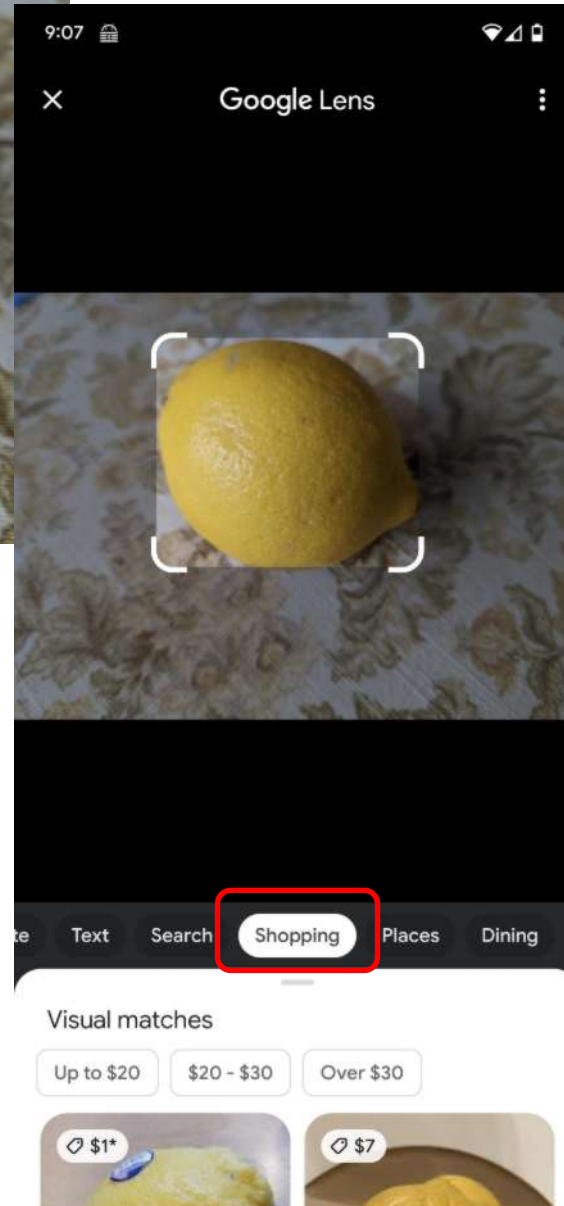


Visual matches



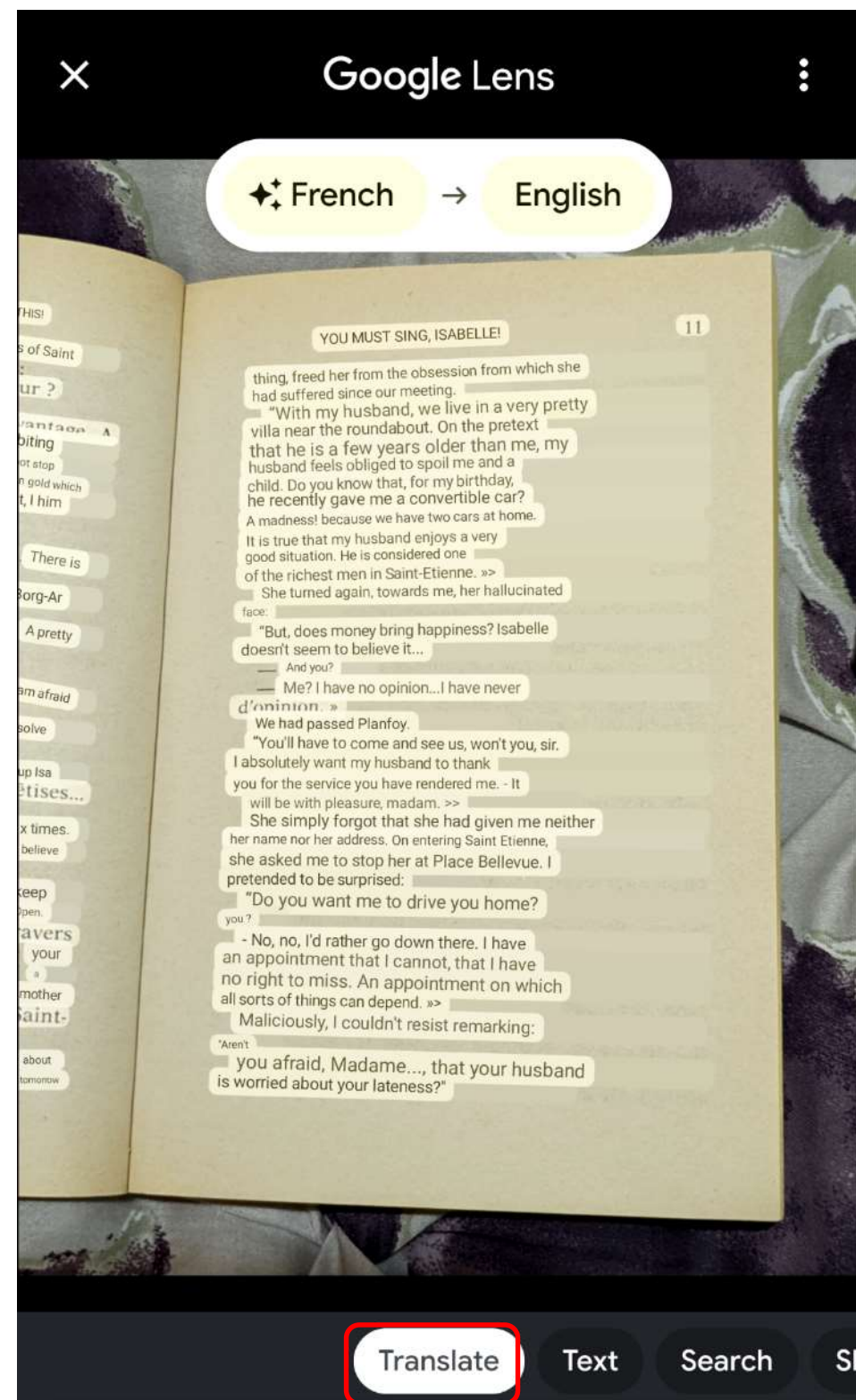
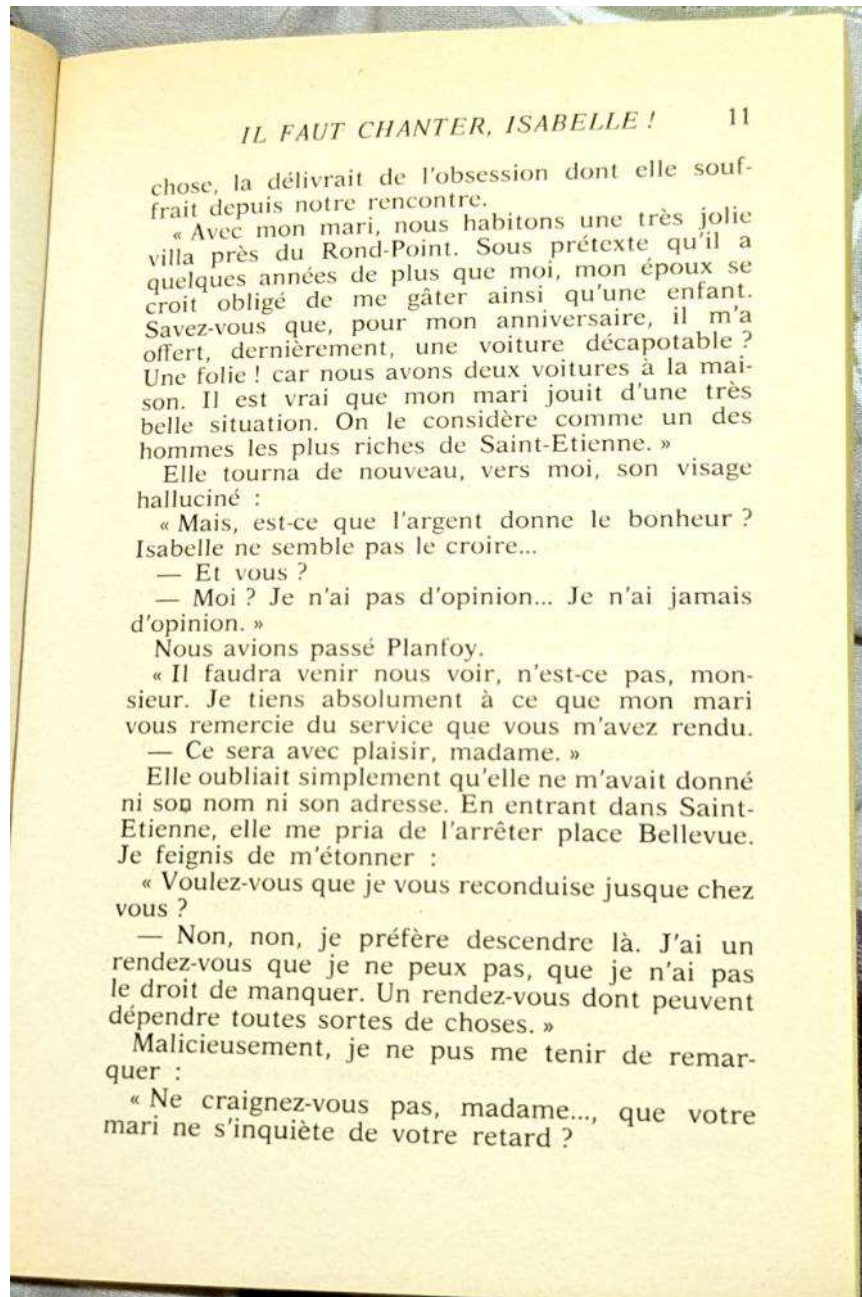
Share

Pixel 6 Pro – Google Lens



Share

Pixel 6 Pro – Translate



Share

Pixel 6 Pro – Night photography

- Best smartphone available right now to capture night skies images.
- Great for night videography
- Voice enhancement for video to reduce background noise.

Share

Pixel 6 Pro – Night shots



4x zoom, 1/25 sec

no zoom, 1/60 sec



Share

Pixel 6 Pro – fast action at night



4x zoom,
1/25 sec
Not a lot of
“noise”



Some Useful Info On USB Flash Drives



USB Flash Drives

- **USB flash drives ('USB Sticks', 'USB Thumb Drives', USB Jump Drive, USB Key, etc.) are great to use for storing digital files and have largely replaced CDs & DVDs as the preferred storage media of choice.**
- **Flash drives are portable, durable, and some have incredible storage capacity (currently up to 512GB with 1 terabyte starting to appear).**

https://en.wikipedia.org/wiki/USB_flash_drive

USB Flash Drives

USB flash drives can be used for:

- **Storage and transport of data (e.g., documents, pictures, videos), application installation software, firmware update software, etc.**
- **Bootable operating systems - Most current PC firmware permits booting from a USB drive, allowing the launch of an operating system from a bootable flash drive.**
- **Application carriers - Flash drives can be used to carry and run applications without requiring the application to be installed on the host computer.**
- **Operating system installation media (e.g., Windows, Linux)**
- **Backups (backup data, backup images)**

Software On The Drives

- Many USB drives, especially those from premium manufacturers like SanDisk and Kingston, come with backup, encryption, data recovery and other software.
- If you already have backup, encryption, data recovery and/or the other software that you use in your technology ecosystem and you're happy with it, you can ignore what comes on the stick and use your regular stuff.



Life Expectancy of USB Flash Drives

- Like Solid State Drives (SSD's) and SD cards that use similar technology, the life expectancy of a USB Flash Drive is largely dependent on the number of write and erase cycles.
- Typically USB flash drives can withstand between 10,000 to 100,000 write/erase cycles, depending on the memory technology used and the quality of the manufacturing.
- 'Read only' cycles don't cause nearly as much wear as write and erase cycles.

Life Expectancy of USB Flash Drives

- If you simply write data to a USB flash drive and put it away in a safe place for 10 years, it will in all likelihood work again and all the data will still be there. But if you continue to use it over and over and over again, it will wear out eventually.
- As with any flash storage, data loss may occur due to prolonged lack of electrical power, and could make it unsuitable for long-term archiving of data.
- The ultimate long term life of flash drives is expected to be from 10 to 100 years.

Life Expectancy of USB Flash Drives

- Unlike 'spinning' drives, which are more likely to fail gradually or at least give some warning, Solid State Drives (including USB flash drives and SD cards) are more likely to fail suddenly and catastrophically.
- DO NOT defragment Solid State Drives (including USB drives). It causes excessive wear and tear for no advantage. Defrag is for 'spinning' drives.

Life Expectancy of USB Flash Drives

- You get what you pay for. Cheap USB drives are great for limited use or for giveaways. If you plan to subject a USB drive to heavy use, buy a premium model from a premium brand*
- Some brands offer 'ruggedized' lines with features like rubberized housings that make them more resistant to shock and physical damage, as well as being water resistant.

Patriot Memory 'Supersonic Boost XT' ruggedized drive -



* - Some premium brands: SanDisk, Kingston, VERBATIM, Patriot Memory, Lexar, Samsung
Keep in mind that even some premium brands have 'budget' models.

Fraud Alert!!!

- **BEWARE** of unknown brands offering high capacity (1 and 2 TB) for ridiculously low prices!!!
- These are typically low capacity USB drives whose flash memory controller firmware is modified so that they emulate larger capacity drives (for example, a 32 GB drive being marketed as a 2 TB drive).
- When plugged into a computer, they report themselves as being the larger capacity they were sold as, but when data is written to them, either the write fails, the drive freezes up, or it overwrites existing data.
- There are several of these on Amazon and Facebook!!!

Tips for Caring Your USB Flash Drive

- Treat it gently, keep it cool, keep it clean, use the cap.
- Remove the drive from your device using the '*Safely Remove Hardware and Eject Media*' (Windows 10) or similar function, and try to avoid power failures (e.g. use a UPS* or a laptop/tablet with a battery). If you interrupt a write cycle, you could lose the data that you're writing (at best) or lose the drive altogether (at worst).
- Keep some empty space so that your computer can practice 'wear leveling', which means your computer will write equally often to all of the available spaces on your USB flash drive. This keeps some cells in your drive from wearing out faster than other cells.
- Just like every other drive, **BACK UP YOUR FLASH DRIVES REGULARLY!!!**

* - See https://opcug.ca/ga_recordings/20210901_PowerPoint.pdf for more info on UPS's (Uninterruptable Power Supplies).

<https://www.flashbay.ca/blog/life-expectancy-of-a-usb-flash-drive>
<https://kruptos2.co.uk/blog/protect-usb-flash-drive-extend-lifespan/>

Physically Small High Capacity USB Drives



- Physically Small USB Drives are great for use in laptops so you can put the laptop in its carrying case with the USB Drive still in place.
- Great for other applications where you don't want the USB Drive protruding out, like for some car infotainment systems.
- Also great where the USB Ports are stupidly close together like on far too many laptops.



Physically Small High Capacity USB Drives



A High Capacity USB Drive allows you to have all your current data in one place for easy transfer between devices.

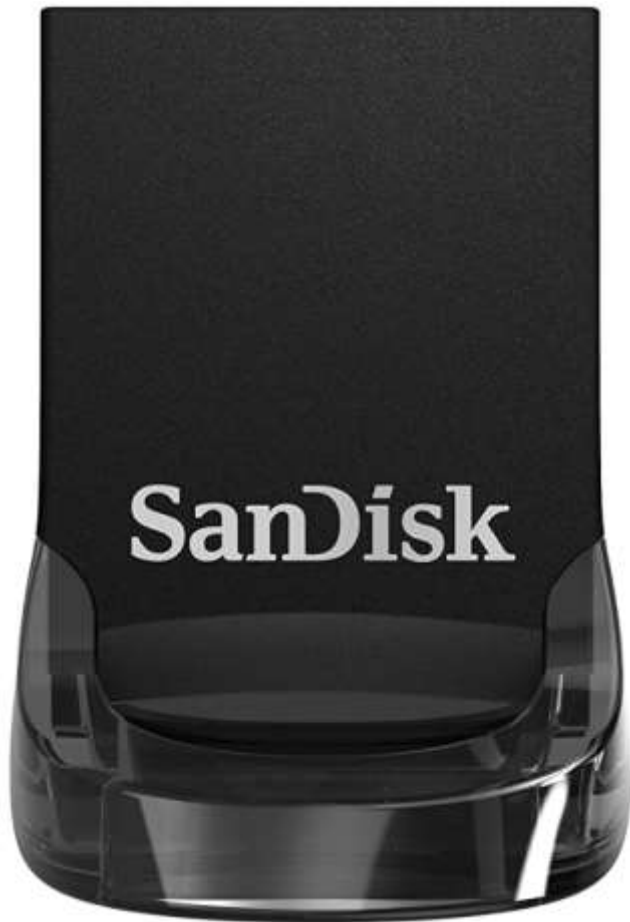
***‘Physically Small’ and ‘High Capacity’* together is a good thing, but be careful because they are easily misplaced.**

Physically Small High Capacity USB Drives

If you frequently use several computers (e.g., personal laptop, personal desktop, work computer, tablet) you can use a High Capacity USB Drive for the working files of all your current data as you move from device to device.

When you go to remove the USB Drive from the current device, you should copy the drive data to the device as a backup (maybe using an app like *'Free File Sync'* that Alan has featured in past presentations).

SanDisk Ultra Fit USB 3.1 Flash Drive



A great example of *Physically Small High Capacity* USB Drive is the SanDisk Ultra Fit line.

- 16GB \$10.57
- 32GB \$10.49
- 32GB \$27.00 (3-Pack)
- 64GB \$13.40
- 128GB \$23.85
- 256GB \$34.60
- 512GB \$67.99

(Prices from amazon.ca on 23 April 2022)

Kingston DataTraveler Micro USB 3.1 Metal Case Flash Drive



Another great example of Physically Small High Capacity USB Drive is the Kingston DataTraveler Micro line.

- 32GB \$21.98**
- 64GB \$31.45**
- 128GB \$41.39 (sale \$36.65)**



(Prices from amazon.ca on 25 April 2022)

Kingston DT Microduo USB



- Another handy type of USB drive is the Kingston Microduo line (as well as some of the Kingston Data Traveler models).
- One side has a USB-A connector, the other side is either a USB-C or a Micro-USB connector.
- The flipable cover protects the smaller connector (on some models the cover can protect either connector).
- Useful for transferring data between your computer and your smartphone.

Cheap USB Multi-Packs



- Cheap USB Multi-Packs are available with a variety of number of drives, a variety of drive capacities and from various brands.
- Prices are as low as \$3 a drive.
- Great for when you want to give someone data on a drive but you don't want to worry about getting the drive back.

Novelty USB Drives

A collage of various novelty USB drives. The drives are shaped like a multi-tool, a Coca-Cola can, a wrench, a car, a dog, a burger, a camera, a panda, a watermelon, and a Swiss knife. The drives are arranged in a circular pattern around the central text.

Share

Power requirement calculators

- A PC that a friend had assembled and gifted me, quit - twice!
- After the second failure I gave up trying to resuscitate the beast and began stripping it for good bits
- I wondered just how balanced it was and began researching the PC's parts on the net
- I discovered a reference to several power supply calculators
- I understood one enough to find that the PC I had was somewhat undersupplied with power
- Other folks may find the calculators helpful too.

<https://graphicscardhub.com/pc-power-supply-calculator-psu/>

Stewart Bruce

Share

Microsoft Build 2022

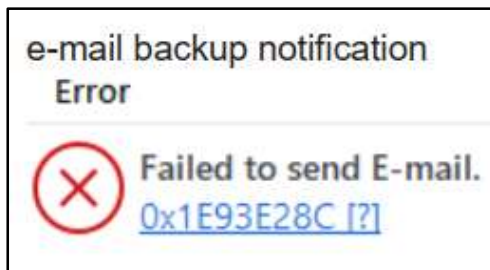
- Microsoft's developer-focused conference
- May 24–26, 2022
- Free – last year over 300 sessions
- Open now for registration
 - <https://mybuild.microsoft.com/en-US/home>
- Interesting historical tidbit:
 - in-person Build in 2016 (US)\$2,195
 - sold out within one minute of the registration site opening



E-mail notifications



- I use EaseUS Todo Backup
 - Good for you! *Everyone* should be doing image backups!
- It is supposed to be able to send email notifications
 - upon successful or failed backups
- Fails when trying to send a test notification to my Rogers email address



A Email notifications



- Some email providers don't allow programs to send emails using the normal password
- Require an *app password*
- Rogers (Bernie's email provider) is one
 - Gmail is another
- Solution
 - your email provider can generate app passwords
 - Google for *Rogers* app password
 - Replace *Rogers* with your email provider e.g. *Gmail*
 - use the app password rather than your normal email password
- App passwords should not be required for any email programs that use OAuth authentication

A Email notifications



- Some email providers don't allow apps to send emails using the normal password
- Require an *app password*
 - *app passwords* should not be required for programs that use OAuth authentication
- Rogers (Bernie's email provider) is one
 - Gmail is another
- Solution
 - your email provider can generate app passwords
 - Google for *Rogers* app password
 - replace *Rogers* with your email provider e.g. *Gmail*
 - use the app password rather than your normal email password

SMTP settings

Server name:		Port:	
Username:		Display name:	
Password:		☒ SSL/TLS	Send test message

use app password

use normal settings

A Getting a Rogers app password

My email client requires an App Password.
How do I generate one in the Member Centre?

1. Go to the [sign in](https://rogersmembercentre.com/) page. (<https://rogersmembercentre.com/>)
2. Enter the Rogers Yahoo! email address and password for the account you'd like to create an App Password for, then select **Next**.
3. **Mobile:** Select  in the top-left corner, then **Account Information**.
Desktop: Select **Account Information** in the top-right of your browser window.
4. Select **Authorized Applications**.
5. In the **Name your password** field, label your App Password with the name of the mail client it's for, then select **Generate**.
6. Write down the randomly generated app password or copy it to your clipboard.
7. Enter the password, where indicated, in your email client. When you're finished, select **Done**.
8. If you have another email client that needs an App Password, select **Add Another**.
Or select  to delete an entry.



Smartphone Basics

- Although I've had a smartphone for a few years now, I basically just use it as a phone, for text messaging, E-mail, and reading eBooks when I'm out and about
- Both of you guys are much more adept at smartphones, so can you maybe put together a mini-series on Android smartphone use?





Twenty (actually 21) questions...

I find smart phones very difficult to use
and to understand

13. How do you move frequently
used links to the home screen?





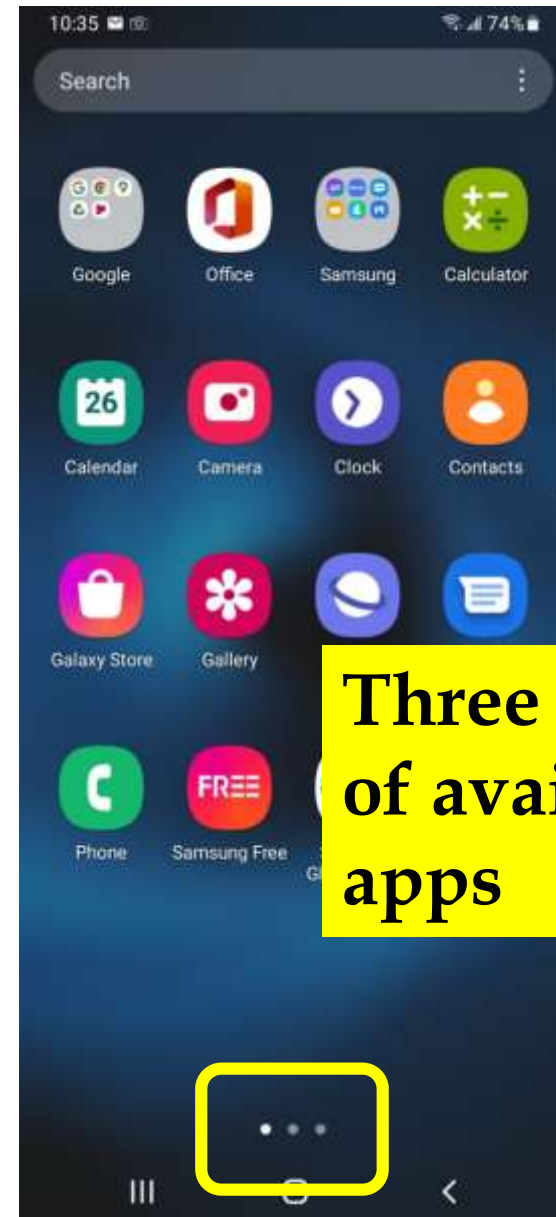
Managing On-Screen Apps

- Tapping on an icon opens the app
- Long-press (hold your finger down) will bring up an action menu
(dependent on device manufacturer's customization and/or Android version)
 - Remove* – Don't display the icon on screen
 - Uninstall* – Remove the icon and delete the (non-system) app from the phone
 - Disable* – Remove the icon; “pause” the app
 - Drag-and-drop* – Move the icon to new location

App Drawer (Android 11)



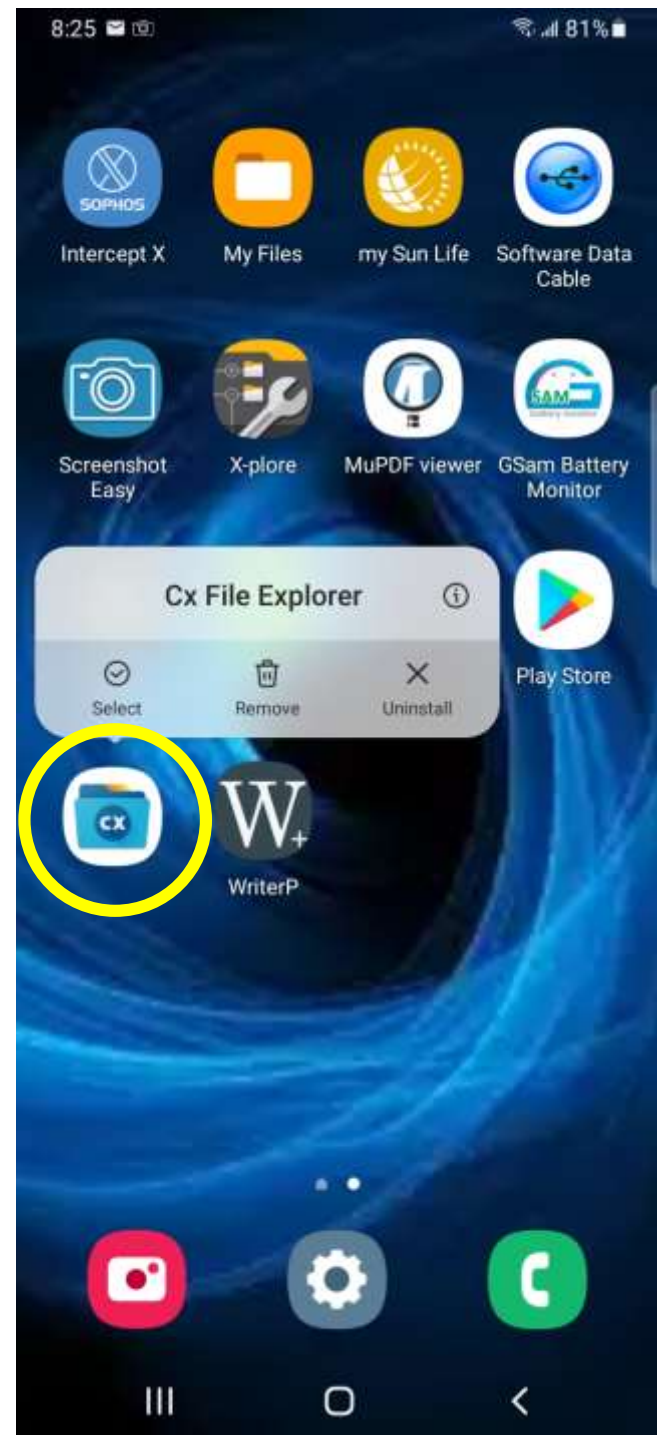
**Slide-up to
display
icons for
installed
apps**



**Three screens
of available
apps**



- Replace MyFiles by Cx File Explorer
- Move Galaxy Store to second screen
- Add Writer Plus to Homescreen

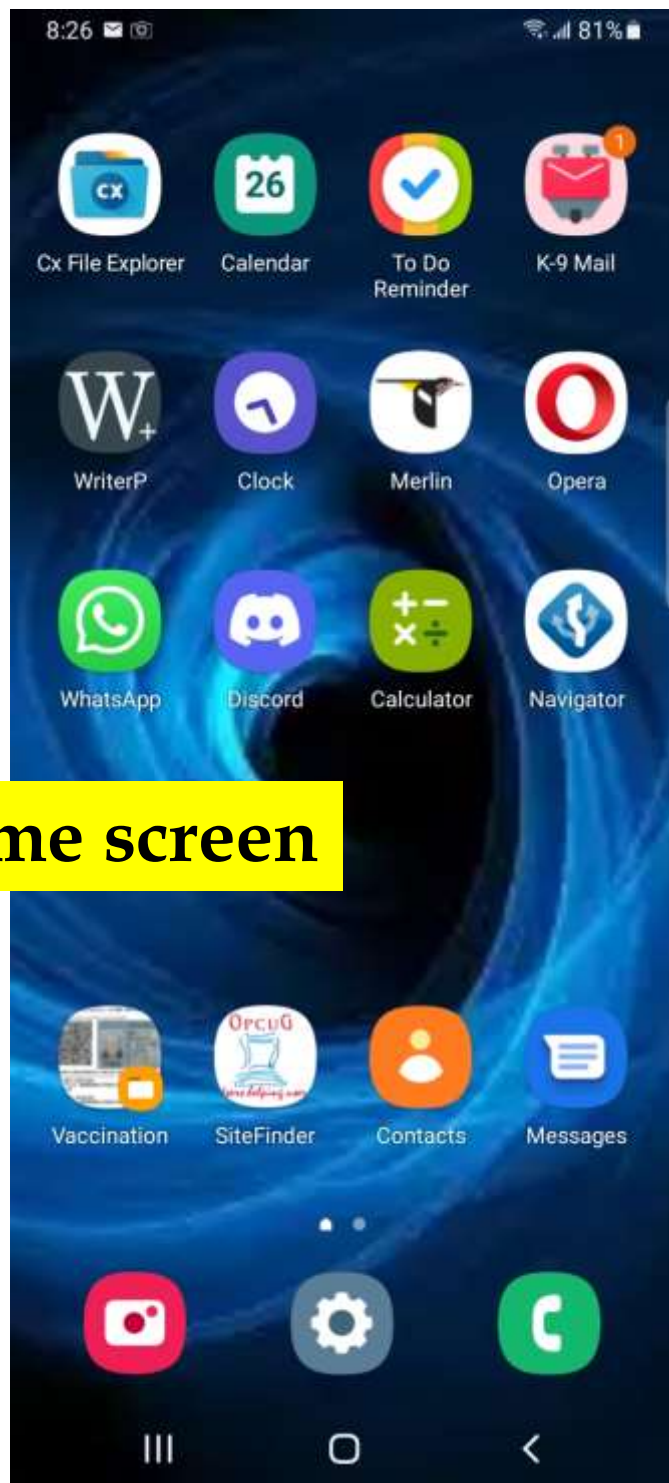




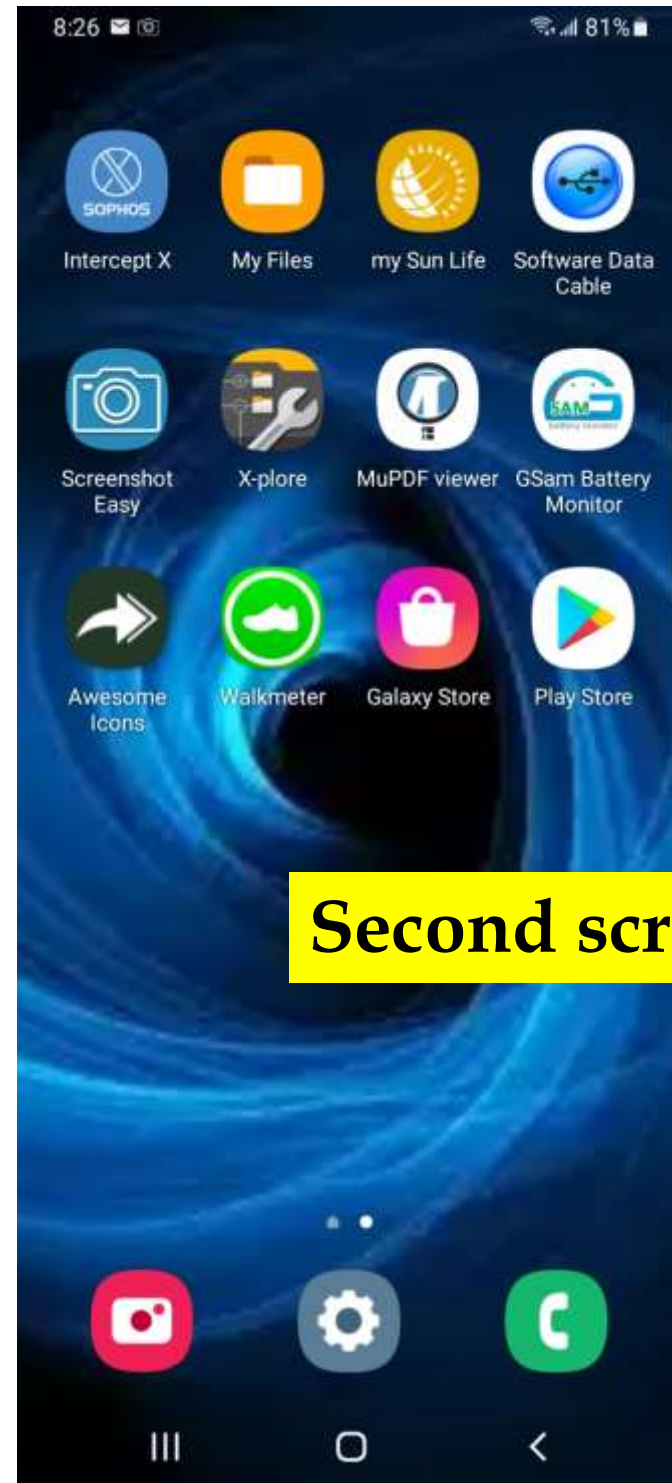


**Long-press,
Drag, and
Drop**





Home screen



Second screen

Generic Shortcuts

Page 4

PRODUCT REVIEW

Create Shortcuts to Files on an Android Smartphone

by Alan German

At a recent Q&A session there was much discussion about Ontario's vaccine passports and how to have the associated PDF files displayed on Android smartphones. Surprisingly, creating a shortcut on the home screen isn't built into the operating system. Consequently, various techniques were suggested, including using Google Drive, to achieve this (See: [Enhanced vaccine certificates](#)). However, my preferred solution is to use an app.

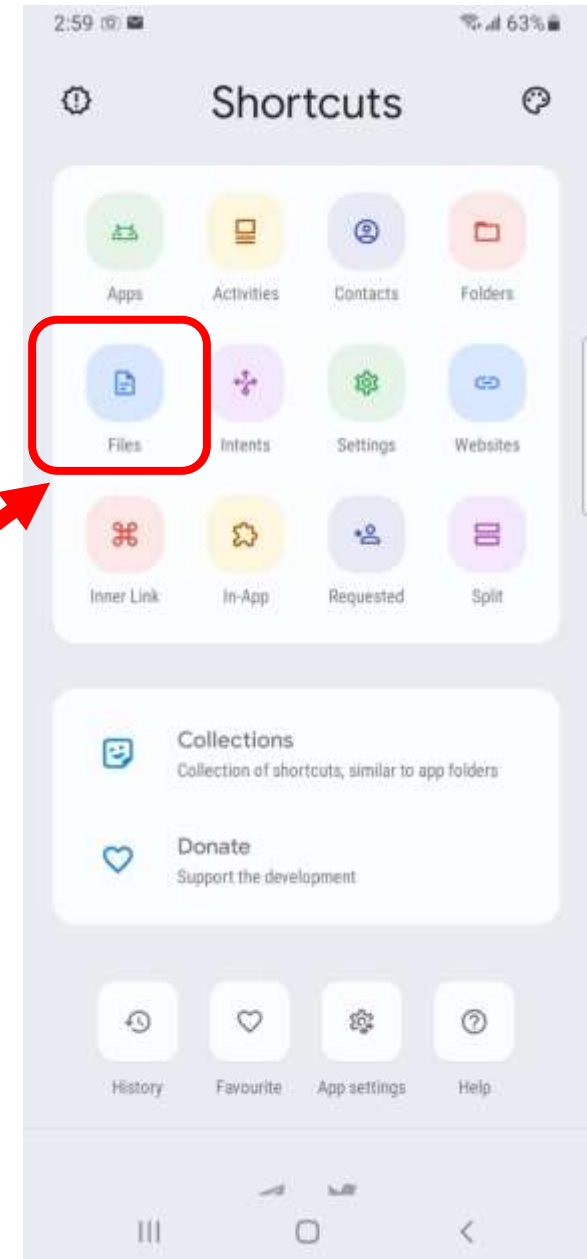
Shortcut Maker is available on Google's Play Store. It has been downloaded more than a million times and has an overall rating of 4.3 stars out of five. In my view the app deserves this high rating. It is extremely easy to use and allows shortcuts to be produced for any type of file, and a number of other items such as contacts and websites.

One minor downside is that the size of the associated icon that can be produced is limited to that of a regular screen icon. This is a pity since being able to display a larger portion of a text file or image as the shortcut icon would assist in readability.

<https://opcug.ca/Articles/2203NEWS.pdf>

Create a shortcut to any file*
using *Shortcut Maker*

* Can also select folder, website,
setting...



Generic Shortcuts

Page 4

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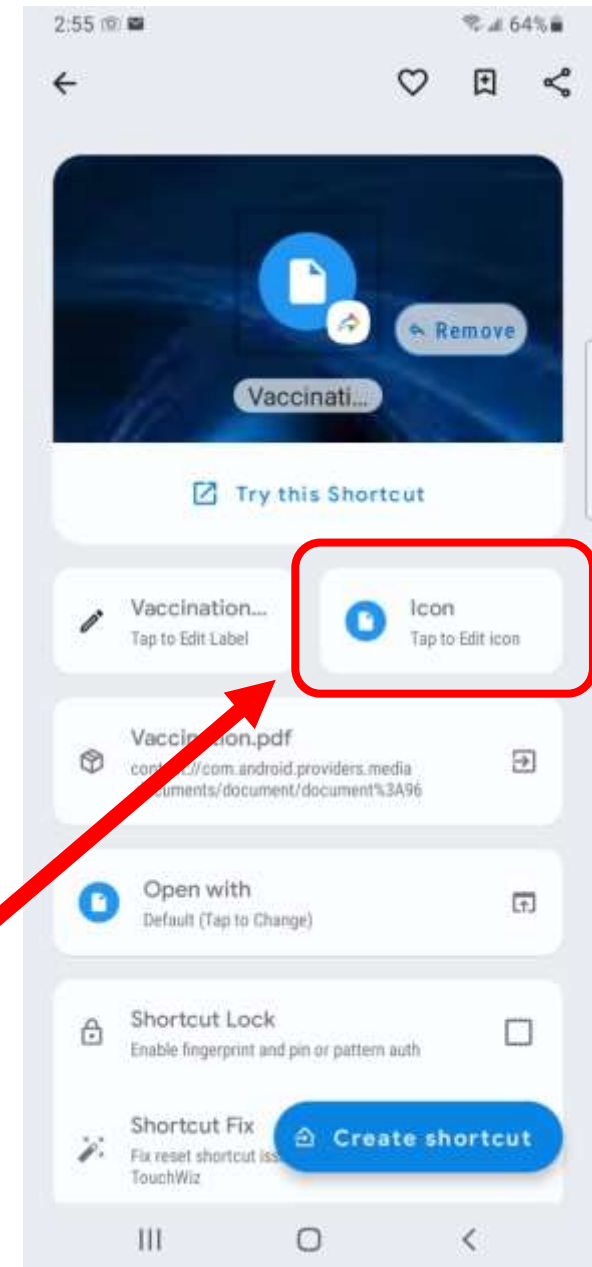
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<https://opcug.ca/Articles/2203NEWS.pdf>

Create a shortcut to any file
Using *Shortcut Maker*

Change the icon that is displayed





**Any other:
Questions
Comments
Shares?**

Basic photo editing

May 2nd, 7:00 pm

How many times have you looked at a photo and wished you could brighten just the main subject? Or perhaps you had an image printed and don't like how the store cropped it. Are the colours in your photo less vibrant than they were in person?

Lynda Buske will show how all these issues can be addressed using free photo editing software available for both Windows and MacOS.

Full details at:

<https://opcug.ca/events/photoediting/>



Last call for this Monday!



Lynda Buske

Registration required

*Free for OPCUG members
\$20.00 for non-members
(including one-year membership)*

May Meeting

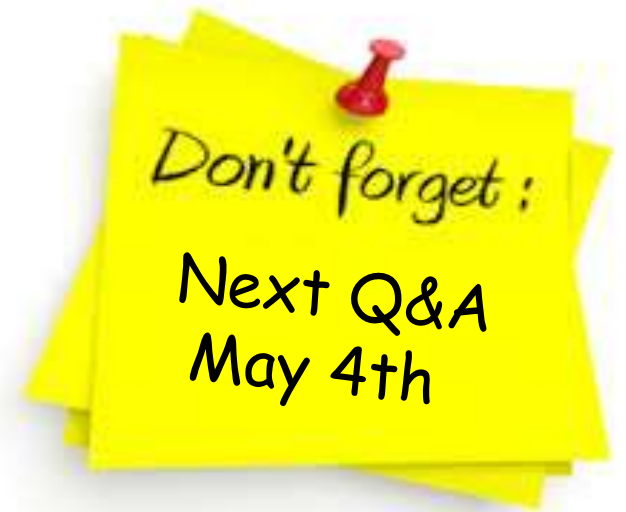
Me & My Mac

Gillian Villeneuve, MUGOO
(Macintosh User Group Of Ottawa)

May 11, 2022

7:30 pm





**Send your questions,
answers, and topics
you wish to share to:**

SuggestionBox@opcug.ca

