



WICYS

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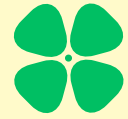


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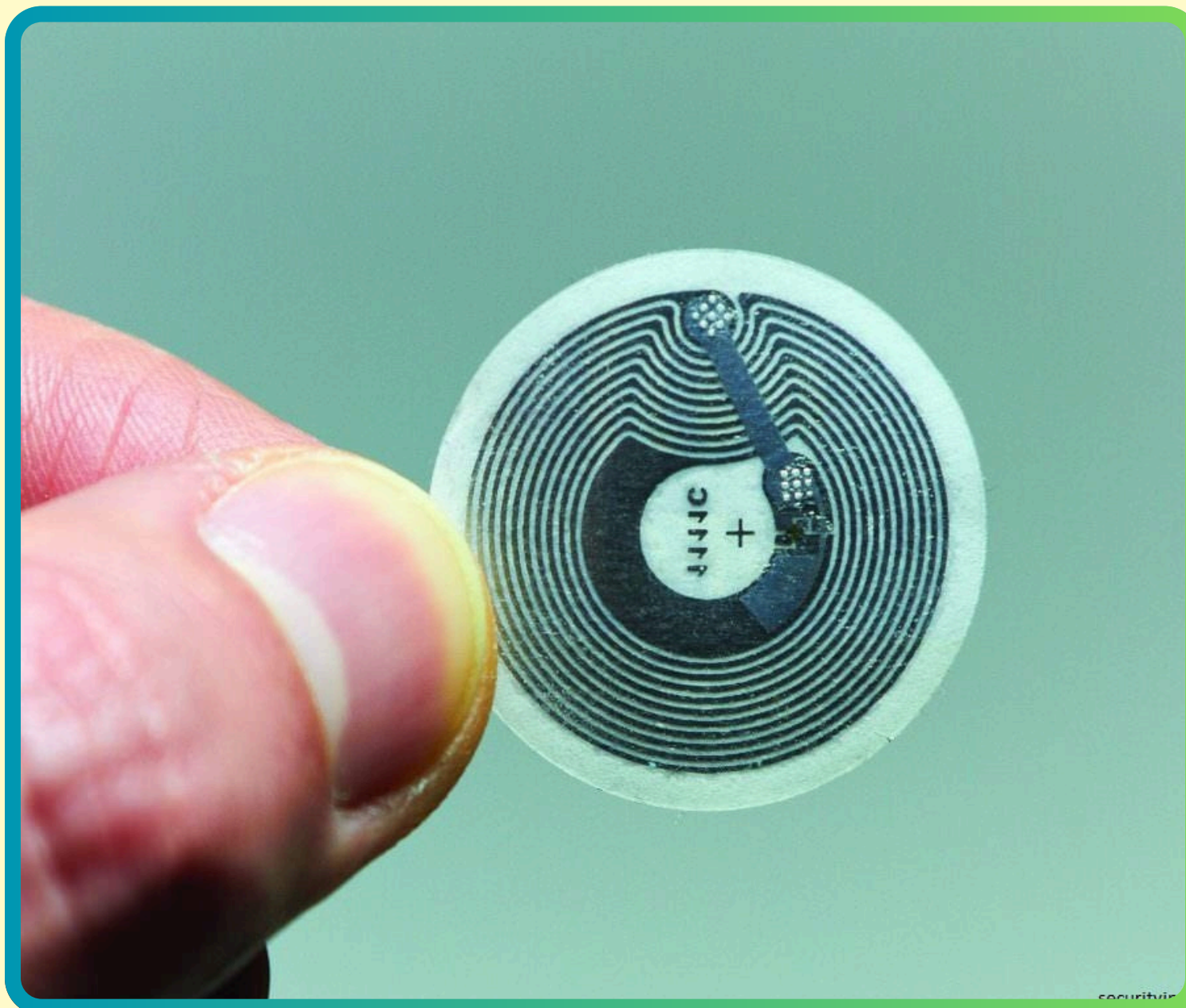
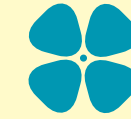


TEXSAW NFC CARD MAKING

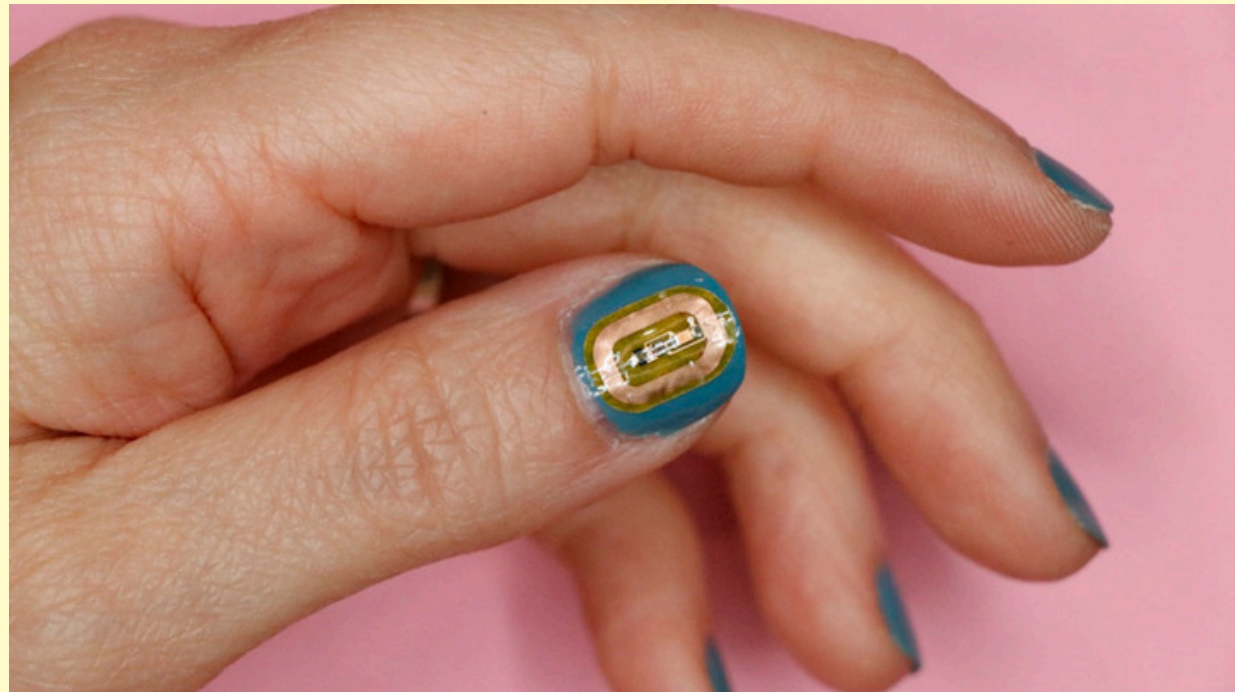
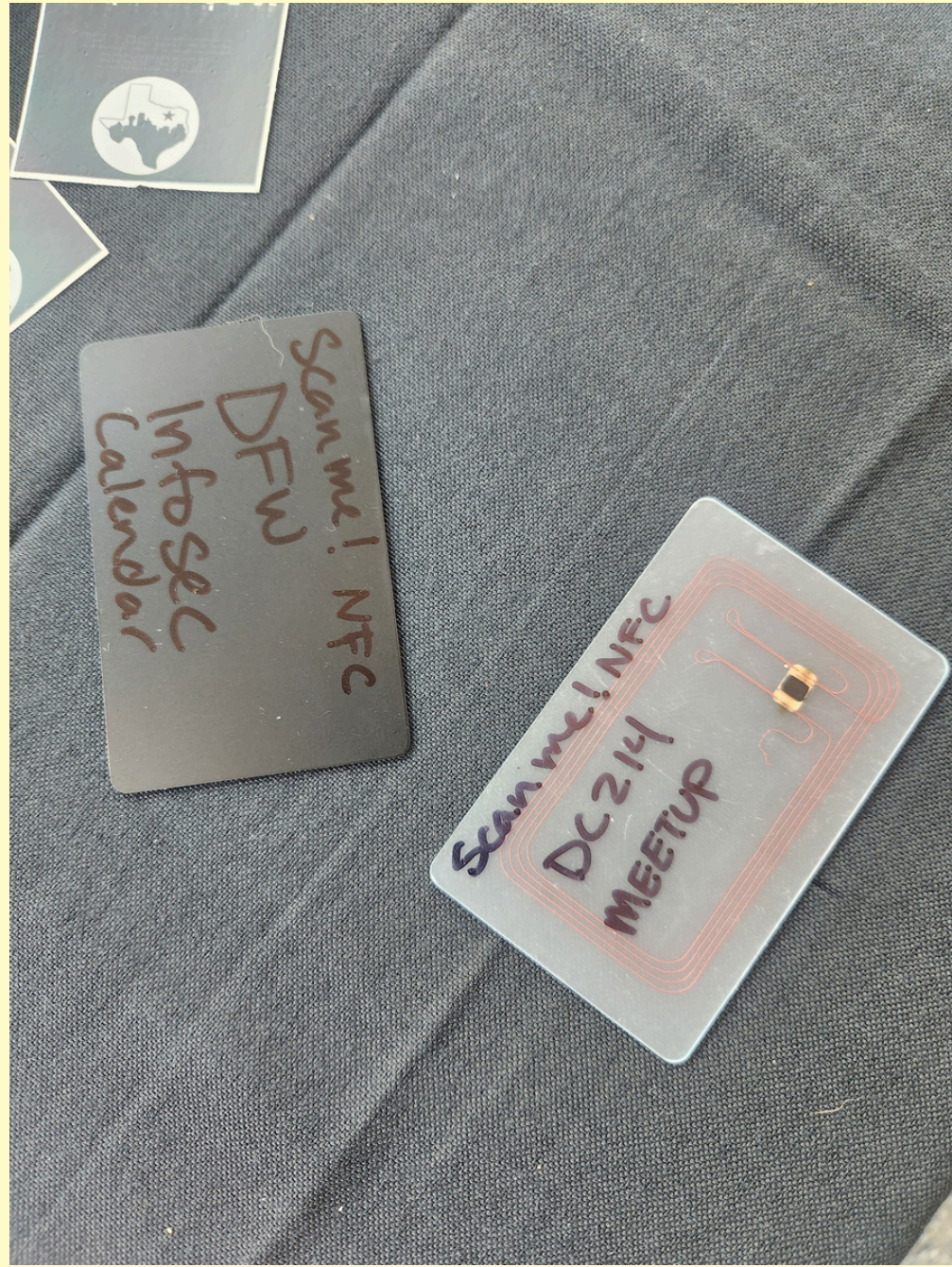
Presented by Coy



WHAT ARE NFC'S?

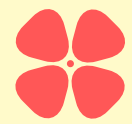


- NFC stands for Near-Field Communication
- Allows for short-range **wireless** communication between the NFC and a device, allowing you to share small payloads of data between devices.
 - Has **read/write** capabilities
 - Can come in many different forms such as tags or chips



NFC VS RFID VS BLUETOOTH

WHAT'S THE DIFFERENCE?



RFID (Radio-Frequency Identification)

- Has longer communication range than NFC
- Usually uses one-way communication
 - can only send data in one direction
- can be used for inventory management and asset tracking
 - Think of scanning a barcode
- Usually unencrypted

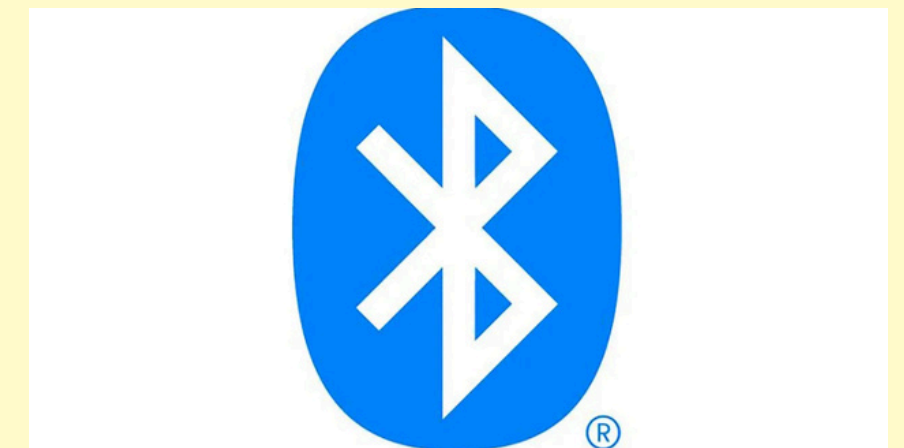


<https://www.autoexpress.co.uk/tips-advice/353560/what-bluetooth-car-connectivity-tech-explained>



Bluetooth

- Has longer communication range and is wireless
 - More vulnerable to interference
- Usually used for connecting devices over a long distance



<https://www.autoexpress.co.uk/tips-advice/353560/what-bluetooth-car-connectivity-tech-explained>

PRACTICAL USES FOR NFC'S



NFC's are prevalently used in our daily lives

It is likely you are are carrying an NFC on you right now.

- Credit cards
- Student ID Badges
- Hotel Room cards
- Smartphones and smartwatches

OTHER USES FOR NFCS

- Turning lights on or off in a smart home
- Anti-counterfeit measures in handbags
- Opening garage doors
- Sharing media
- Business cards
- And more!



<https://www.softobotics.com/blogs/seamless-integration-enhancing-your-smart-home-with-third-party-services/>



<https://advancetitan.com/opinion/2022/02/09/should-social-media-be-used-for-news>



**LET'S GET
CRAFTING**



NFC READING/WRITING

1

Download the NFC Tools app (available on Android and iOS)

Play Store

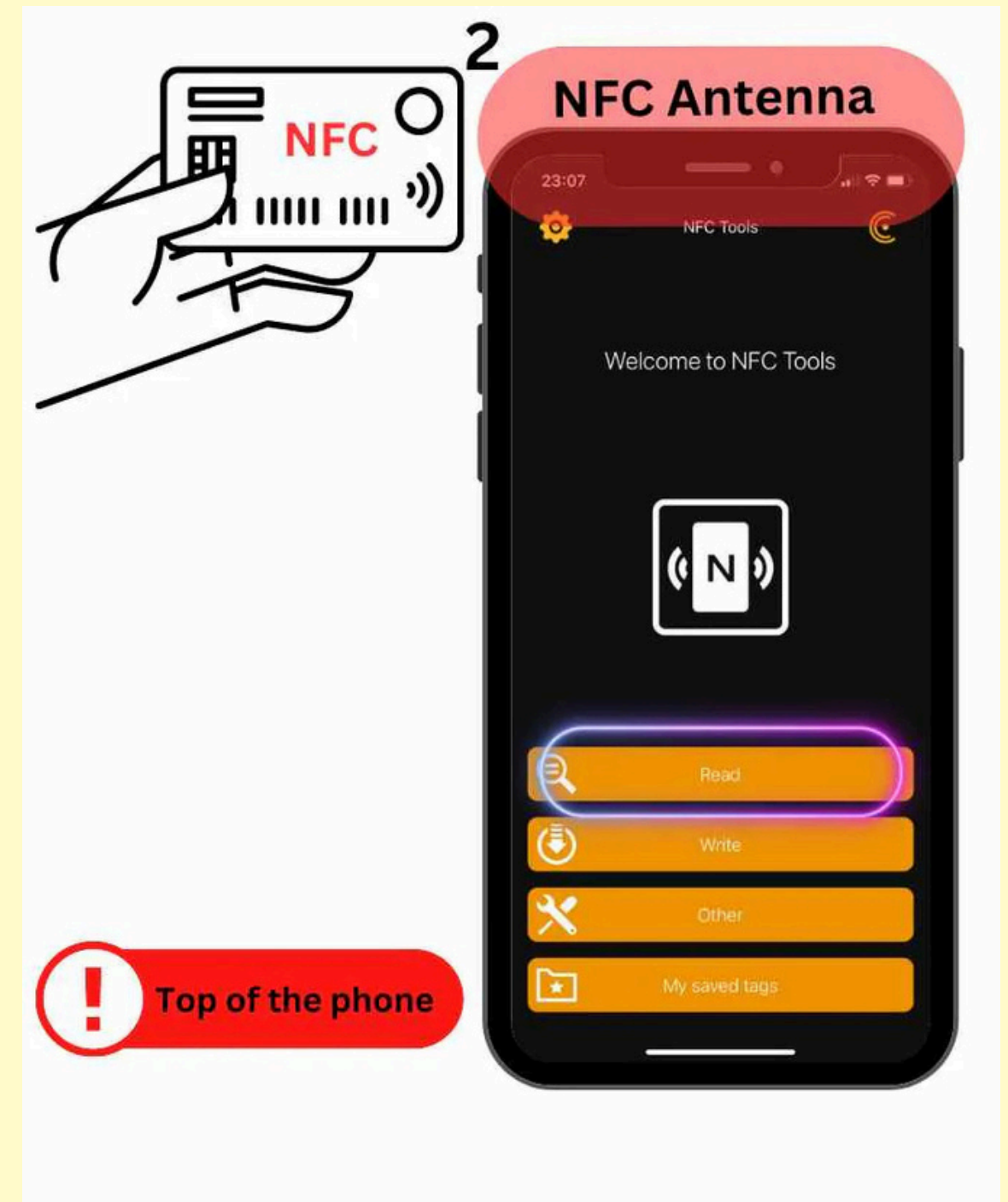


App Store



Scan your NFC on the Read tab in NFC Tools app

- Place the NFC card at the back of your phone
 - Ensure NFC is enabled on your device
 - It may take some adjusting for the NFC antenna to be able to read the card
 - The NFC antenna could be at the top or middle of your phone depending on the model
 - For Apple, it is at the top backside of the phone
 - For Android, it is at the middle backside



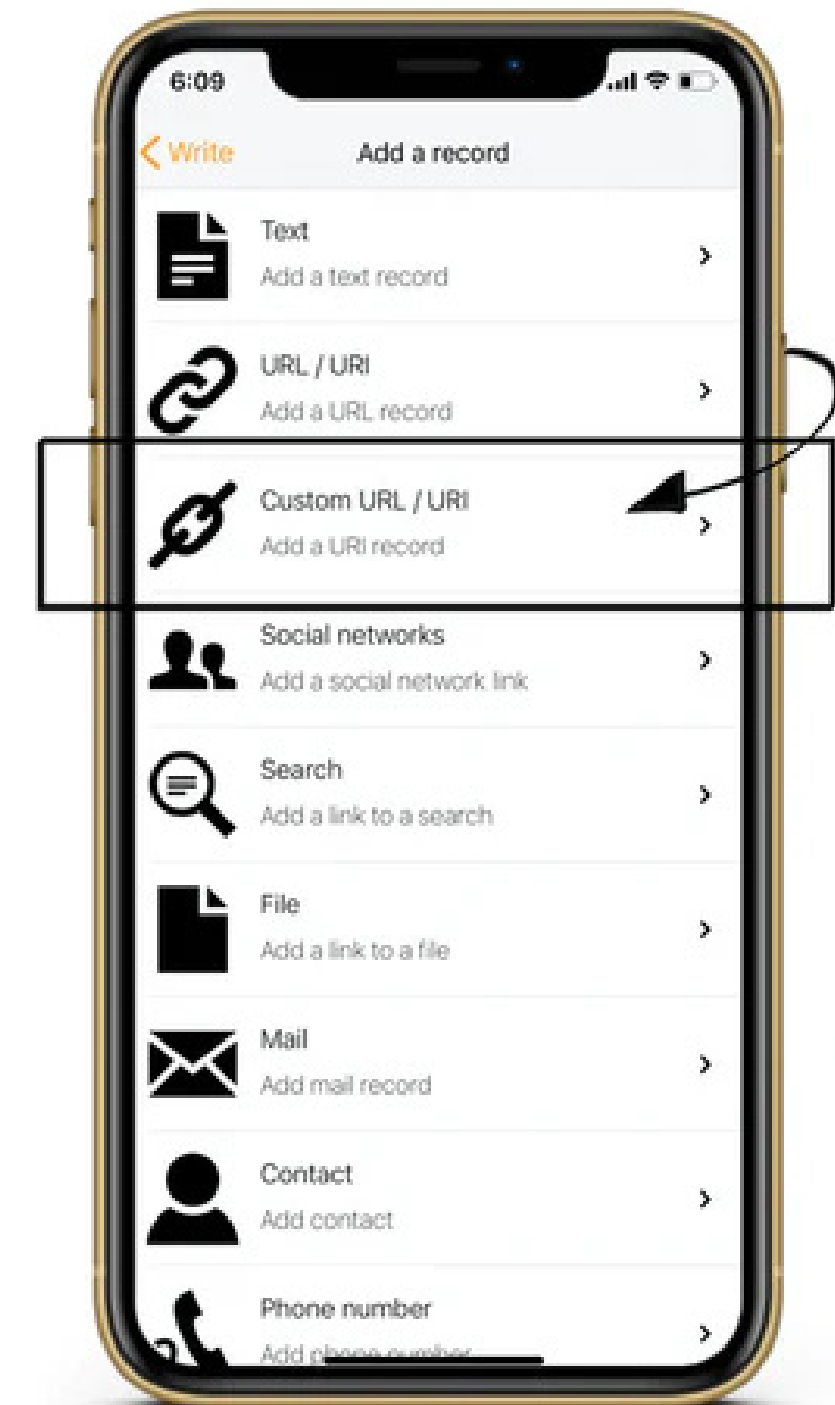
Switch to the Write tab and select 'Add a Record'

- There are many options you can choose from and it is up to you on how you use it!
- For the purposes of this workshop, however, we will be linking a personal website or LinkedIn to our NFC Business Card.
 - This can be changed later



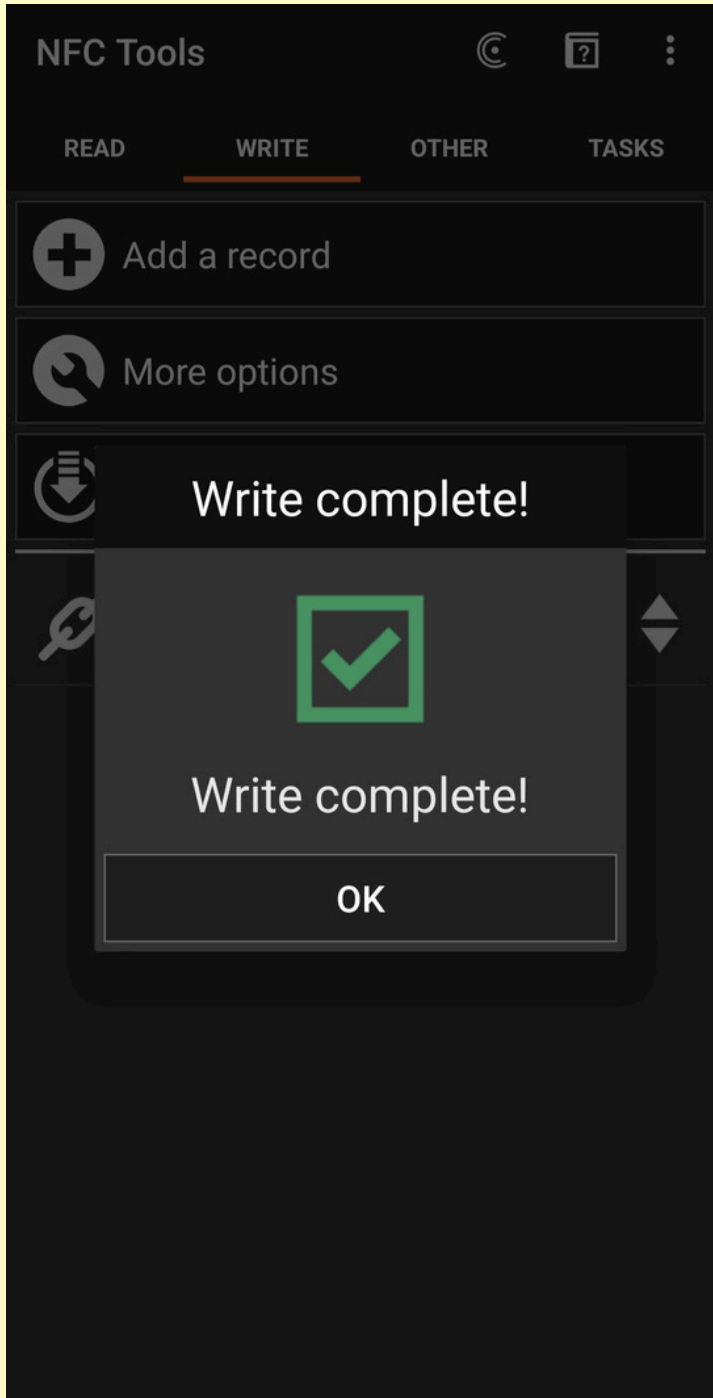
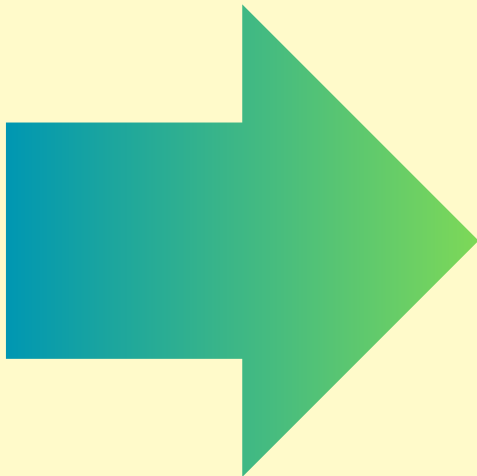
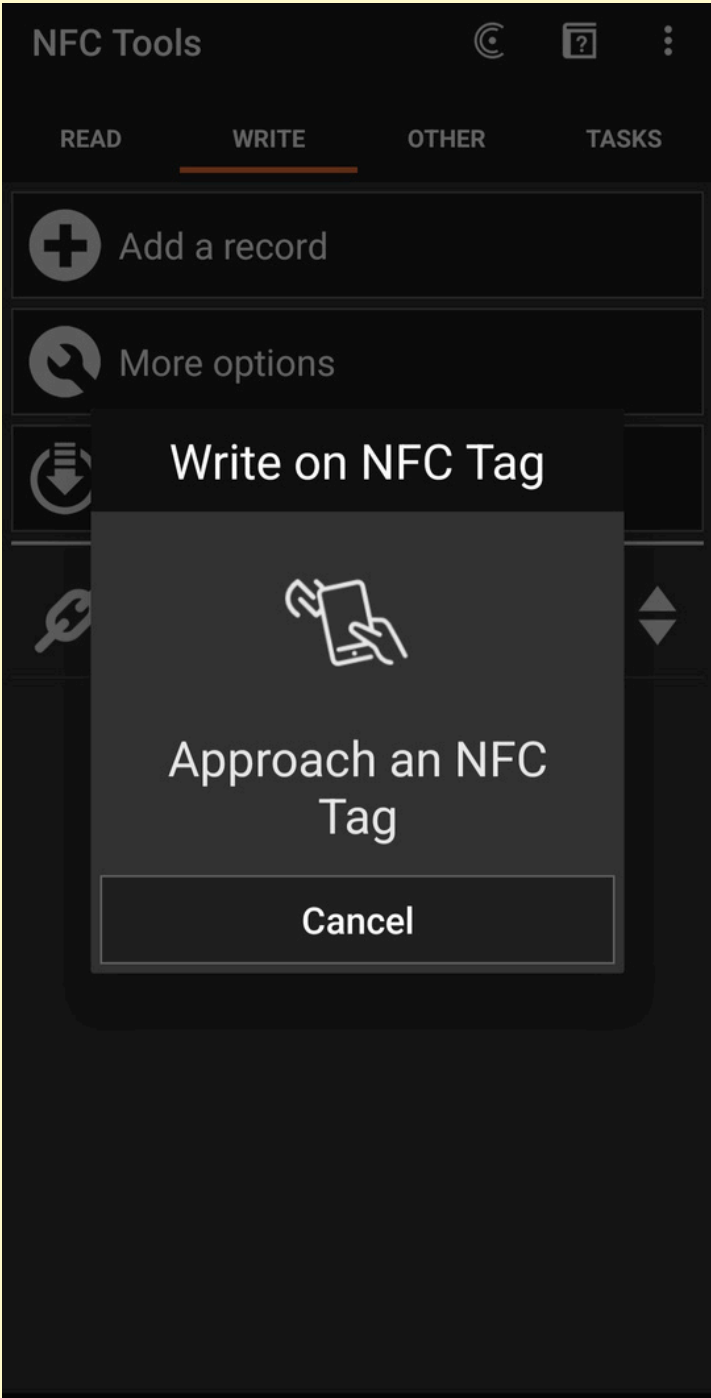
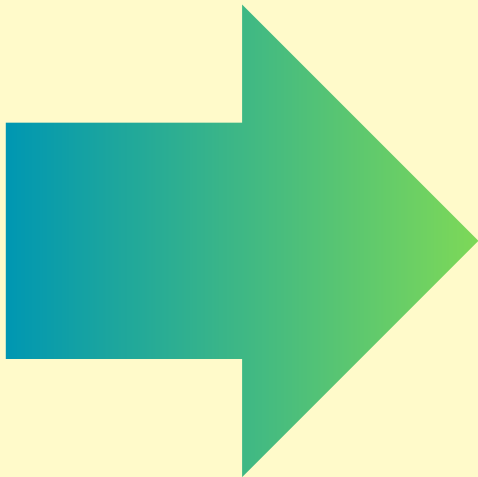
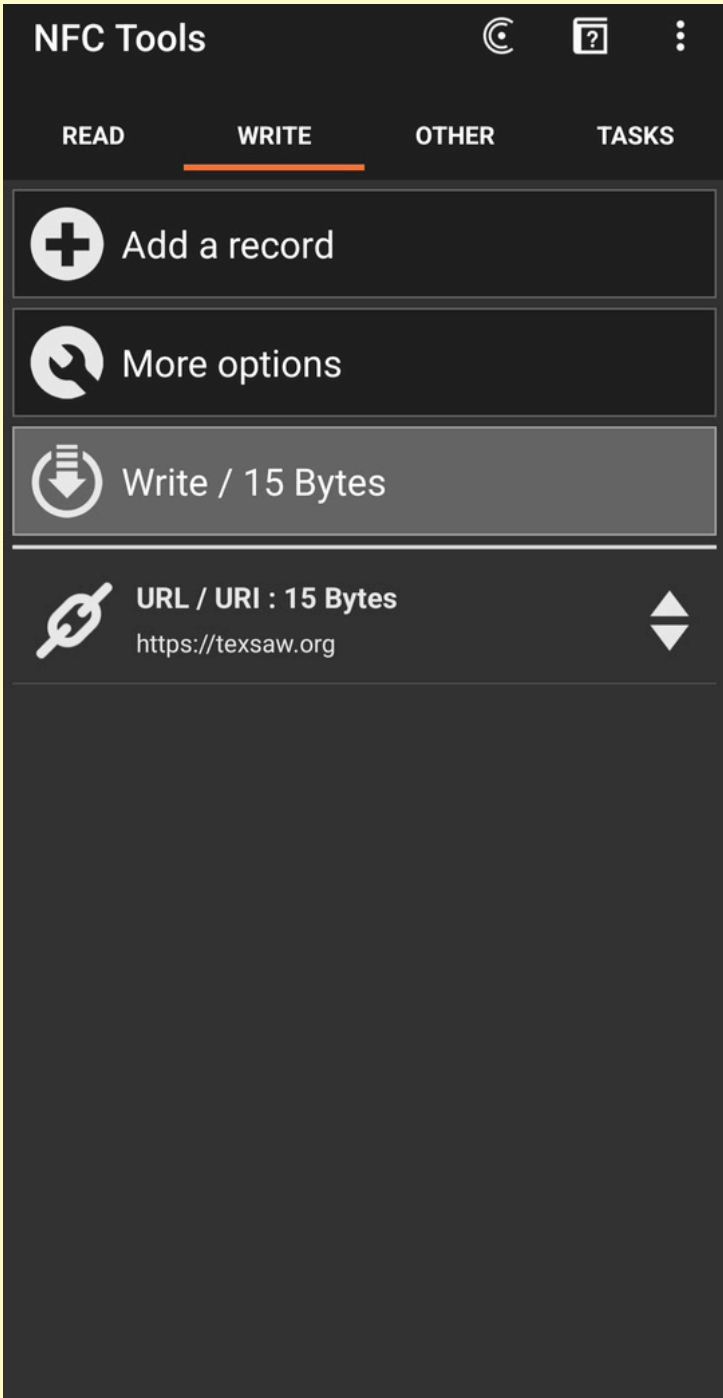
Select 'Custom URL/URI'

- This is the recommended option to choose as it is the option that will work with all smartphones.
- Copy and Paste in your URL from your personal website or LinkedIn then select Write
 - NOTE: the link must be under 888 bytes to work!



Write to your NFC!

Select Write and follow the instructions on the screen



NFC READING/WRITING

6

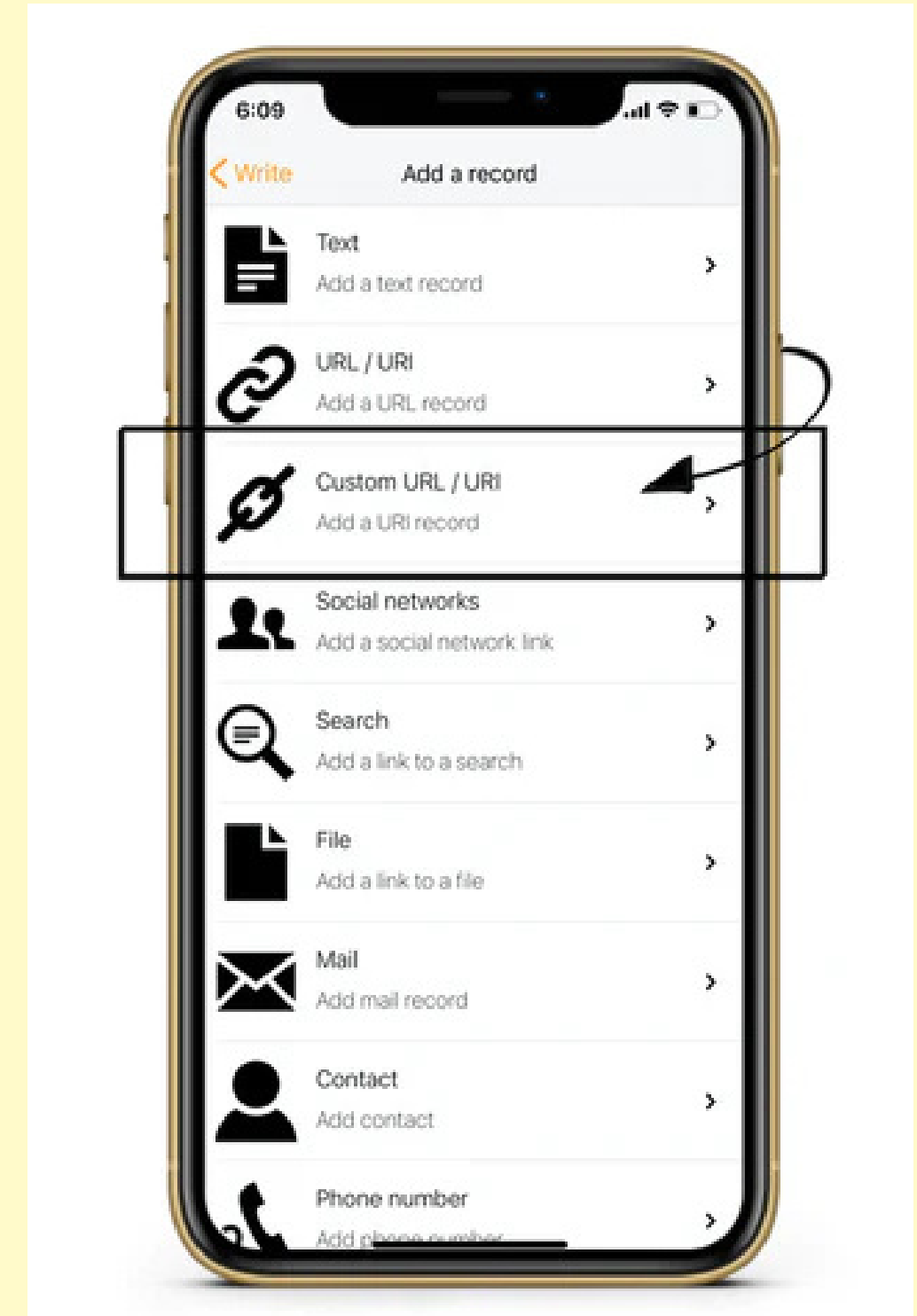
Don't forget to lock or set a password to your NFC

Go to the Other tab

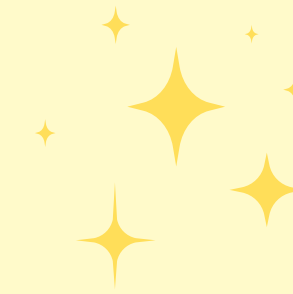
- Select Lock tag or Set password
 - **WARNING: LOCKING TAG IS IRREVERSIBLE**

CONGRATULATIONS!!!!

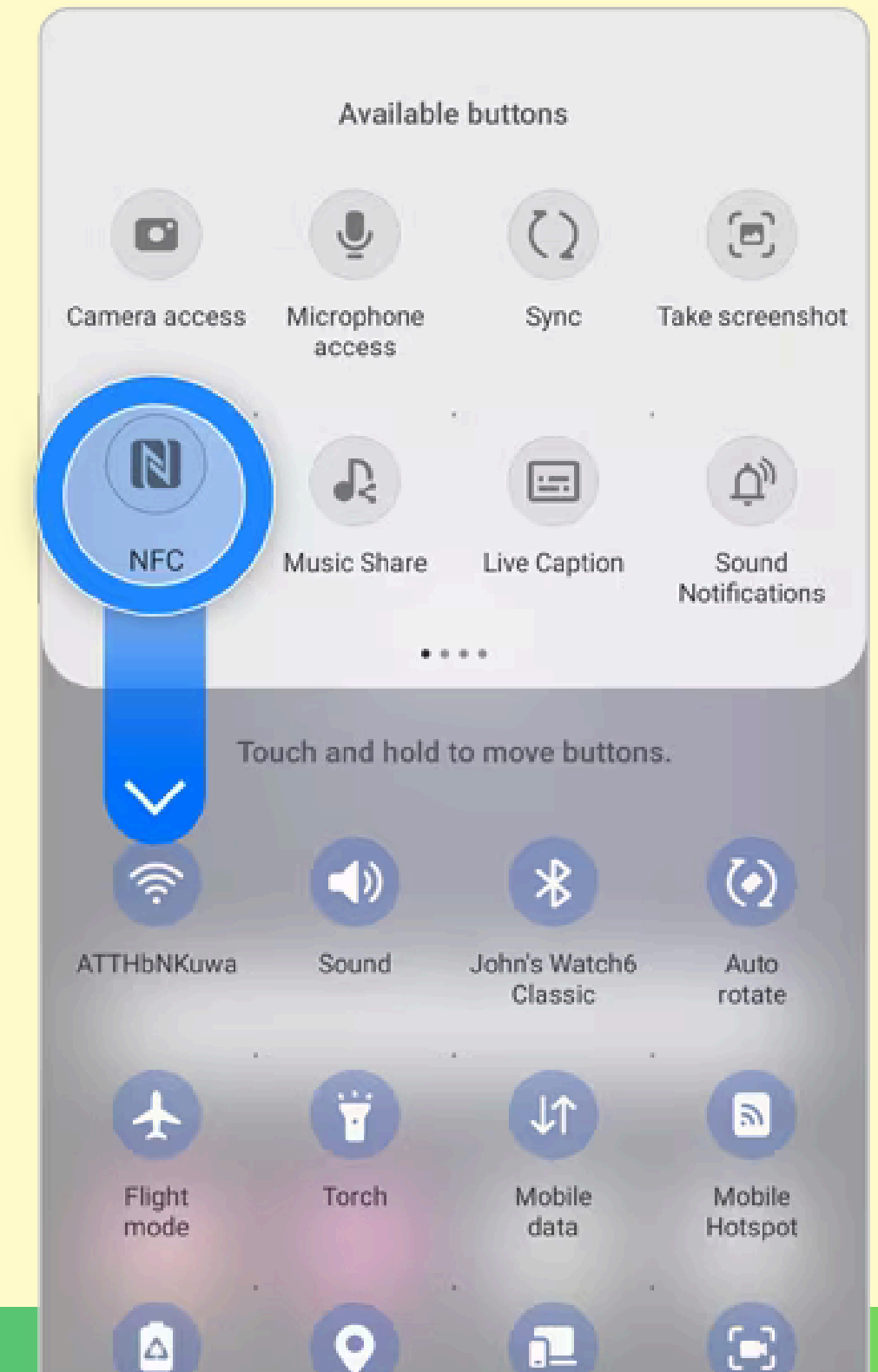
You have created your own fancy business card!
Now use it to connect with others at this event!



TROUBLESHOOTING NFC CARDS



- Ensure NFC is enabled on your device
 - This is usually configured through your device settings
- Check your positioning
- Remove your case
- Your phone model may not be compatible :(
- Your NFC may be a dud. It happens sometimes and is a reason why we can't trust the internet



BUGS

ANDY GREENBERG

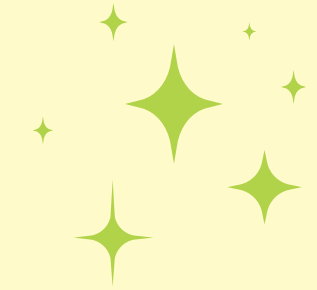
SECURITY JUN 24, 2021 2:32 PM

NFC Flaws Let Researchers Hack ATMs by Waving a Phone

Flaws in card reader technology let a security firm consultant wreak havoc with point-of-sale systems and more.



By combining NFC flaws with ATM bugs, the researcher was even able to make some machines spit out cash. PHOTOGRAPH: ALVARO BUENO/ALAMY



CONCLUSION

FOLLOW OUR SOCIALS



JOIN US ON DISCORD

<https://discord.gg/XXucJC8G>

CHECK OUR LINKTREE

linktr.ee/wicys.utd

APPLY TO BE AN OFFICER



FOLLOW US ON INSTAGRAM

[@wicys.utd](https://www.instagram.com/wicys.utd)

Presentation by Celina Rodriguez

 **THANK YOU** 

<https://www.linkedin.com/in/celina-rodriguez-1773201b4/>

Sources

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