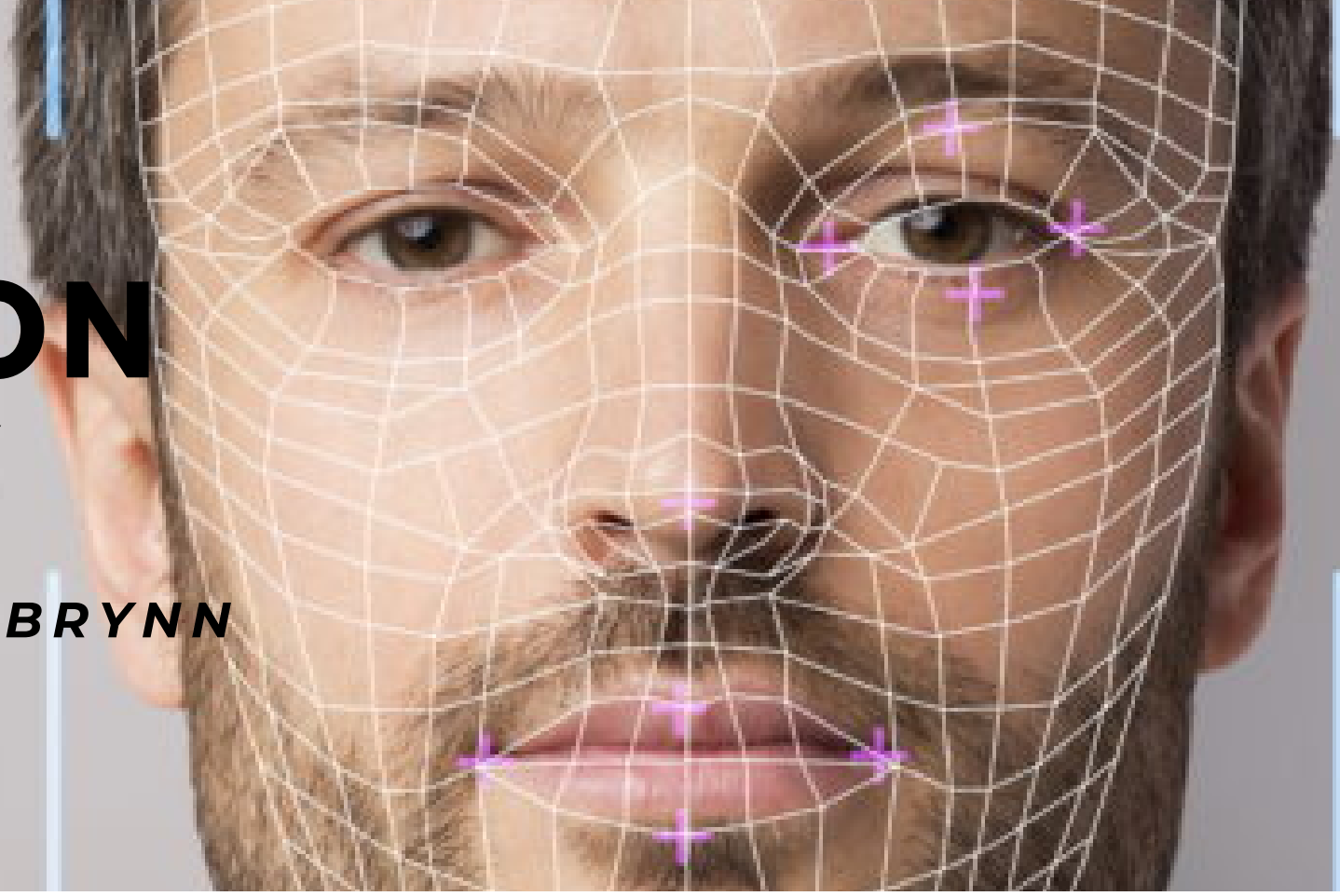


FACIAL RECOGNITION SECURITY

BY WILLIAM HOWELL AND BRYNN STAFFORD



OPPORTUNITY

We are looking to provide extra security precautions for online transactions. The customer we are trying to focus on is the banker/investor. People in this area need to make sure their security is top notch because without this they have no business nor assets. They need to be able to secure private information from physical and cyber threats like keylogging. This is where we have identified an opportunity for a solution in securing bank payments and all transactions through the bank.

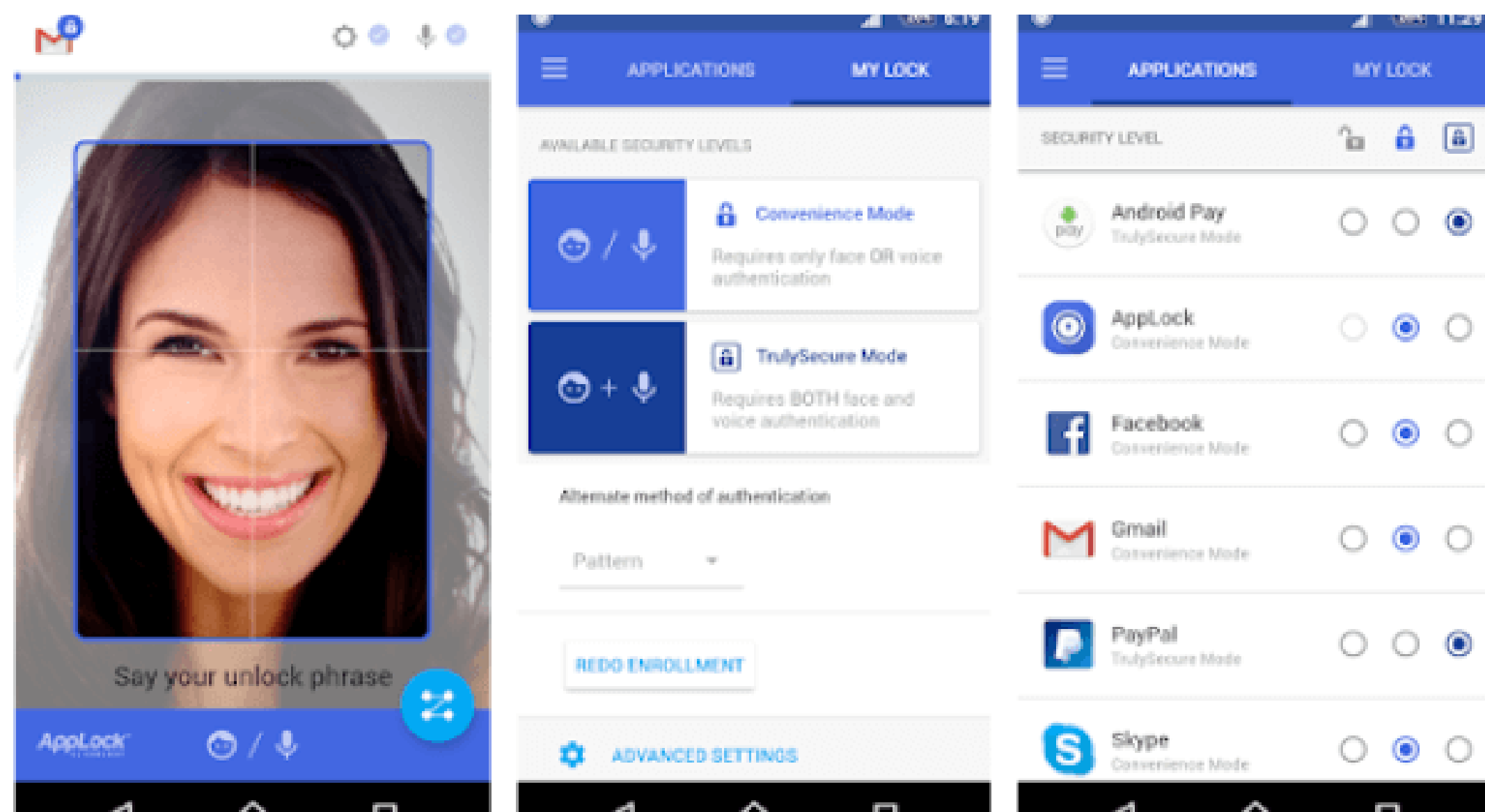


Figure1. Facial Recognition Process

ENABLING TECH.

[1] AWS Rekognition - Facial Recognition software

[2] AWS Serverless connection - does not require banks to host a server room

[3] Data Encryption - protects information by hiding it from people who shouldn't see it.

RESOURCES

[1] "Cryptographic Solutions Delivering Cloud, IoT, Blockchain and Digital Payment Security," nCipher Security. [Online]. Available: <https://www.ncipher.com/about-us/newsroom/news-releases/ncipher-survey-reveals-americans-trust-banks-most-their-personal>. [Accessed: 01-Nov-2020]. [2] "Barracuda Networks." [Online]. Available: <https://www.barracuda.com/glossary/cloud-firewall>. [Accessed: 09-Nov-2020]. [3] "Face Recognition," Electronic Frontier Foundation, 25-Aug-2020. [Online]. Available: <https://www.eff.org/pages/face-recognition>. [Accessed: 09-Nov-2020]. [4] "What Is Two-Factor Authentication (2FA)?," Authy. [Online]. Available: <https://authy.com/what-is-2fa/>. [Accessed: 09-Nov-2020]. [5] "Apple Security Platform" [Online] Available: <https://support.apple.com/guide/security/secure-enclave-overview-sec59b0b31ff/web> [Accessed: 07-Nov-2020] [6] "Man-In-The-Middle Attack" [Online] Available: https://owasp.org/www-community/attacks/Man-in-the-middle_attack [Accessed: 08-Nov-2020] [7] "Two-Factor Authentication (2FA)" [Online] Available: <https://www.investopedia.com/terms/t/twofactor->

SOLUTION

Our solution to this problem is using Facial recognition alongside 2FA. We want to protect you from keyloggers or any hacker monitoring your computer. With facial recognition we can eliminate keylogging threats by removing the need for usernames or personal information that might need to be typed for transactions. We want to do this by requiring a customer to show their face before a transaction is being made to confirm the users identity. Along with 2FA for maximum security.



Societal Impact

This solution could potentially create more business for bank owners/investors as customers may be enticed to switch to banks that have facial recognition technology that makes people feel more secure.

Potential Impacts:

- hackers would be more inclined to find weaknesses in facial recognition tech because it is newer and more susceptible to cyber attacks.
- keyloggers can no longer track keystrokes when monitoring online transactions.
- Could make facial recognition more mainstream solely for transactions as opposed to how we currently make payments.