

## Expanding mobile wallets committee

### TEAM MEMBERS

- **Trevor Jerue**, Knowledge Manager, DoIT (*Chair*)
- **Jeremy Parrott**, Deputy Chief Information Security Officer, DoIT (*Co-Chair*)
- **Aisha Haynes**, Assistant Director, Center for Teaching Excellence
- **Eric Vejerano**, Assistant Professor, Environmental Health Sciences, Arnold School of Public Health
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### PROBLEM STATEMENT

As the University of South Carolina continues growing, so does the need for increased mobility and access to technology 24/7. Our community is rapidly adopting mobile devices to make tasks like checking email, messaging other students, and accessing class notes more convenient. However, not all things on campus can be done through a phone. All students, faculty, and staff, are issued a wallet-sized ID card, called the CarolinaCard. The CarolinaCard currently serves as a university member's "key to the kingdom" and is used for building access, payments on and off-campus, dining halls, and more. Unfortunately, there is limited access to this functionality on mobile devices, which resorts to needing a physical CarolinaCard to access many things on campus, such as for access to housing or parking garages, which arguably fragments the campus experience. Other institutions, such as the University of Alabama have recognized an opportunity to improve the digital experience for their community and have begun using Apple Wallet along with other emerging technologies to enable ID cards on smartphones. Our committee aims to make recommendations on the following items:

- Viability of using Apple Wallet with the CarolinaCard
- Alternative options for mobile student ID's for Google/Android or other mobile OS users
- Other opportunities to improve the digital experience at UofSC

### INVESTIGATION METHODS/DATA/CONCLUSIONS

We began our investigation by discussing the implications behind mobile wallets and initiatives undertaken by other Universities. In the Summer of 2018, a partnership developed between Apple and Blackboard to expand Apple Wallet to campuses through Blackboard's Mobile Credentials offering. To date, three Universities have offered this feature: Duke University, University of Alabama, and University of Oklahoma, with three additional universities: John Hopkins University, Santa Clara University, and Temple University preparing for implementation before or during 2019. All Universities currently involved are Blackboard Transact clients. Blackboard Transact provides Campus ID credential

transactions; when a card is held up to a reader, a “handshake” occurs between the reader and the issuing provider to grant access or complete a transaction. Similar functionality exists today with the CarolinaCard. Blackboard has provided participating Universities with NFC card readers, which are compatible with both iPhone (iPhone 6 and iOS 12 or later) and Apple Watch (Series 1 and later). Universities currently partnered with Blackboard’s Mobile Credential Support also feature a similar product lineup that we offer, such as Blackboard Learn, Tegrity, Respondus Lockdown Browser, etc.

We then reviewed current functionality the CarolinaCard offers around campus. The CarolinaCard office has made most information about their ID cards available online through its website: [https://sc.edu/about/offices\\_and\\_divisions/carolinacard/index.php](https://sc.edu/about/offices_and_divisions/carolinacard/index.php). In terms of mobility, the CarolinaCard features two user portals: the GET application, and the mobile version of my.sc.edu/carolinacard. Both allow students, faculty and staff to check account histories, make CarolinaCash deposits, and more. Student dining can take advantage of contactless student ID’s with the GET app, or through Tapingo, a mobile ordering solution that can be used with the CarolinaCard to place food orders.

The CarolinaCard uses HID iCLASS technology, providing enhanced security and encryption features. To further understand the underlying technology behind the CarolinaCard, we contacted the CarolinaCard office requesting the following information:

- My CarolinaCard from 2010 is an HID iCLASS Px D6H – is this still the same model used today?
- Is the CarolinaCard NFC based or RFID-HF? They both use the same frequency band but I can’t make heads or tails of which tech is used in our cards. Or, does the card work using the HID Prox system at 125kHz?
- I have noticed new readers being installed around campus, in my building particularly at 1244 Blossom St. Which model are these?
- Is there an estimated cost amount to replace an individual reader? Or an average cost to outfit a building with updated readers (such as 1244 Blossom St.?)
- Finally, are there any plans to incorporate contactless Student IDs through Apple Wallet or Android Pay? I have noticed there is a HID Mobile Access app, however I have also noticed ASSA ABLOY has partnered with HID to provide this solution.

We are currently awaiting a response from the CarolinaCard office. However, during this investigation it was noted many large institutions and Universities use HID iCLASS technology as it cannot be easily replicated. HID has partnered with ASSA ABLOY to investigate mobile wallet technology. While the Apple Wallet SDK is available to all Apple developers, its primary use is for payment cards and passes. Contactless student IDs is a relatively new approach and use case for a truly mobile wallet.

## **EXECUTIVE SUMMARY**

We believe most core technology to expand the CarolinaCard to Apple Wallet is already in place, mobile initiatives with the CarolinaCard should be promoted, with involvement from DoIT as necessary. Due to the differing technologies between Blackboard's NFC readers and HID's proximity RFID readers, upgrading all readers for a quality-of-life initiative (when existing infrastructure is in place) may not be viable. While the CarolinaCard office has been updating HID readers across campus, that is not to say improvements cannot be made to the existing systems that can provide similar benefits. Our recommendations are listed as follows:

## **RECOMMENDATIONS/ACTIONS**

- Consolidate the mobile experience into one location, preferably redirecting users to the GET app for consistency
- Distribute wallet cases that can hold student IDs, like those distributed to students during Orientation.
- Consider updating card readers around campus so functionality is consistent across the entire campus (e.g. access to dorm rooms)

## **RESOURCE REQUIREMENTS AND STRATEGIES**

We recommend focusing on specific verticals that impact student life the most. Building access is not ubiquitous across campus, e.g. only certain dorms can enter their rooms via CarolinaCard. Payments would be the next target for expanding mobile wallets, improving transportation, etc.

Input from students is crucial to success. DoIT, CarolinaCard, and Student Government can continue relationship building by gathering feedback on trending technologies and investigating if demand warrants.

CarolinaCard resources are not standardized across campus. It is our understanding for Dining, Aramark has used their own equipment which may or may not be ready for expansion. We recommend agreeing upon equipment via contract renewals.

## Sources:

### Apple partnership with Blackboard:

- <https://www.apple.com/newsroom/2018/10/apple-adds-support-for-contactless-student-id-cards-in-wallet/>
- <https://www.prnewswire.com/news-releases/blackboard-announces-support-for-student-id-cards-on-iphone-and-apple-watch-300722740.html>
- <https://www.insidehighered.com/news/2018/06/06/apple-launch-student-id-cards-iphone>
- <https://support.apple.com/en-us/HT208965>

### HID and ASSA ABLOY partnership:

- <https://www.assaabloy.com/en/com/press-news/news/2014/hid-mobile-access-signals-new-era-in-security-solutions-/>

### Higher-Ed case studies:

- Arizona State University case study:  
[https://www.hidglobal.com/sites/default/files/resource\\_files/hid-asu-mobile-access-cs-en.pdf](https://www.hidglobal.com/sites/default/files/resource_files/hid-asu-mobile-access-cs-en.pdf)
- University of Hull case study: <https://www.youtube.com/watch?v=NfbidiYCOOM>