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Director of Product Management
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Director of Business Services – Technology
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WHAT WE WILL TALK ABOUT

• Intro to Mobile ID
• Survey says…
• Mark Brown of Vanderbilt will talk about their mobile journey
• Survey of Mobile ID technology and products
• HID AND Genetec commissioned a report

• *HID Global commissioned* SecurityInformed.com *to produce this document, which is based on research conducted jointly by HID Global and Genetec*
BIGGEST CHALLENGE WITH YOUR PACS

- Existing system near end of useful life: 7.84%
- Missing features/applications available in new technologies or products: 21.24%
- Need for improved user experience for students and faculty: 34.64%
- Known security vulnerabilities that need to be patched: 12.75%
- Lack of comprehensive data insights due to disparate security components: 11.11%
MOST CONVENIENT ASPECTS OF PACS

- Not integrated with all technologies/applications used on campus: 3.36
- Lack of ability to use mobile device as a credential: 3.13
- Difficulty of use (e.g. access control, network login, vending): 3.03
- Need to carry multiple credentials for different applications: 2.74
- Requirement to physically report to receive a new credential upon loss or theft: 2.74
LOST ACCESS CONTROL CARDS EACH YEAR
Drivers to Upgrade PACS

- Improve user convenience: 58.75%
- Response to breach or failed security audit: 24.17%
- Need for compliance to new regulations or policies: 25.00%
- Expansion or consolidation of facilities: 42.08%
- Increased pressure from parents for a more secure environment: 17.50%
- Existing system near end of useful life: 24.58%
- Take advantage of features available in new products: 45.42%
- Make security administration easier with digital processes: 40.00%
- Better integration with other security systems/components: 43.75%
- Other: 6.67%
### Which Benefits You Seek From New PACS

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to use</td>
<td>5.35</td>
</tr>
<tr>
<td>Ability to add or support new technologies in the future</td>
<td>4.77</td>
</tr>
<tr>
<td>Support for more advanced and higher security features</td>
<td>4.32</td>
</tr>
<tr>
<td>Ability to use smartphones, tablets, wearables as a credential form factor</td>
<td>3.9</td>
</tr>
<tr>
<td>High-quality warranty and extended support services</td>
<td>3.4</td>
</tr>
<tr>
<td>Integration with existing/planned security components</td>
<td>3.66</td>
</tr>
<tr>
<td>Support by existing service providers</td>
<td>2.6</td>
</tr>
</tbody>
</table>
BIGGEST OBSTACLE TO UPGRADE

- Cost
- Disruption to daily operations
- No current solution meets requirements
- Training/learning a new system
- Lack of compelling ROI/Business priority
- Other (please specify)

0% 10% 20% 30% 40% 50% 60% 70% 80%
ORDER BY IMPORTANCE

1. Off-Campus Spending
2. Financial Aid
3. Meal Plans
4. Network Access
5. Point of Sale/Cashless Vending
6. Secure Print
7. Mobile Access

Most Important

Least Important
VANDERBILT UNIVERSITY AND MOBILE ID

Mark Brown
• Parking deck
• CBORD customers have signed NDAs w/ CBORD and Apple
• Big drawback with Apple is full compliance
• ID in ApplePay
• VU has 500 mobile users
  – No students bcs Res Life folks are concerned about multiple credentials
• Apple has an edge – can only have mobile credential
• Pricing – Bb, CBORD – pay for number of users – annual subscription
• Apple – has visual phone ID, no need for card
• VU has security guards in res halls at night
• CBORD has made API available for 3rd parties – Mobile ID
• Cards or Apple IDs – only
SURVEY OF MOBILE RIGHT NOW AND WHAT YOU CAN DO RIGHT NOW

Or at least, some options to consider
• BLE and NFC credentials
  – BLE only on iPhone
HID Mobile ID portal (Origo) business model:

– New subscription portal
– Credentials can be pulled back from phones
  • Expired, lost, revoked
– Old model - one-time credential purchase
  • No replacement credentials
  • Losing or replacing your phone requires new credential
– New model
  • Annual subscription
  • Credential per cardholder lasts all year, regardless
HID READERS FOR MOBILE

• Readers are ordered with BLE modules
  – They can also be added later
• HID Reader Manager app for phones
  – No more flash cards!
• BLE and NFC, one or both
• BLE up to 8 ft. – good for parking
  – Can be dialed down to short range, or turned off
• Runs on both phone OS
Technically, NFC refers to using the secure element tied to the NFC chip in a mobile device.

In 2013, Google introduced (Host Card Emulation) as a pretty secure way to store data in phone storage:
- Not actually on the NFC chip, which the phone service providers (Verizon, ATT) had locked down for their own use
  - Which never actually happened
- Does iPhone use HCE too?

BLE stores encrypted data (ID number) in phone storage, which remains encrypted until it hits the reader.
• Unique encryption key for each site or institution
  – In both credentials and readers
• Keys
  – Encryption key is like a password that protects data
  – Any data can be encrypted
  – Key has to be known by reader
• Mobile credentials and readers can be even less interoperable than contactless smart cards
  – But phones can carry multiple credential apps
ALLEGION SCHLAGE MOBILE

- Introduced in 2013
- NFC on Android only
- Works on Schlage locks and wall-mount readers
- Schlage NDE and LE locks have BLE
  - Only for configuration and updates with mobile device
  - Not for access credentials
  - Access is by cards - prox, MIFARE, DESFire
• Only Blackboard has access to Apple NFC
  – NFC only, no BLE
  – Apple credentials only work on Blackboard readers
    • Encryption key
• Rumor of full compliance across campus
  – University provides properly configured NFC readers everywhere cards are read
  – This solves a lot of interoperability problems!
• NDA…
• Mobile app with BLE
• Sabre Decal
  – Converts Bluetooth to prox signal
• Sabre replacement reader covers
  – Turn almost any legacy reader into BLE mobile
  – Prox, iCLASS
• Issuance portal with additional features
  – Tracking of mobile credential use
    • Geo, time, date
• SafeTrust wallet for multiple credentials
SafeTrust provides BLE to:
- WaveLynx readers
  - LEAF
- RF Ideas readers
- ISONAS readers
- MIFARE, DESFire EV1

Logical access dongle for Windows, Mac, Linux
There seems to be some confusion

- NFC is a broad standard
  - Two standards, one for passive cards (tags) and one for powered devices
  - Readers can read NFC from phones and some or all of these:
    - MIFARE
    - MIFARE DESFire EV1 and EV2
    - HID Seos
    - iCLASS SE
    - iCLASS
    - Prox
    - BLE
WHY BLUETOOTH LOW ENERGY?

- BLE
- Supported by all mobile platforms
- Range – inches to 30 ft.
- Does it burn more battery?
- No fees to Mobile Network Operators
- BLE is open, but data can be encrypted
OTHER MOBILE PROVIDERS

• Lenel BlueDiamond
  – Issue credentials from OnGuard
  – BlueDiamond readers
  – Cards – Prox, MIFARE, DESFire
• Bluetooth module for SALTO locks
  – Can be added without removing lock
  – Readers can still read cards
• Card is visual image on phone
• Moving visual elements
• Remote management  
  – Expire, renew, revoke
• Barcode show and scan
• Front and back
• Selfie
• Offline and online
HID VISUAL CREDENTIALS FOR MOBILE

- HID has a large government secure credential manufacturing business
- goID – Mobile visual credentials
WOULD YOU CONSIDER MOBILE ONLY?
FLASHBACK - MOBILE SHORTCOMINGS

- Lack of visual identification
- Sense of belonging with ID card
- Legacy Mag and Barcode Systems
• Mobile
  – Phone
  – Watch
• Card too?
WHAT DO YOU THINK OF DUPLICATE CREDENTIALS?
In many cases, mobile credentials and/or readers can be more expensive than a traditional card.

Current hardware decisions need to be made with mobile in mind.

Work with Partners who are familiar with these technologies and can provide complete solutions.
University of Texas student government pines for mobile ID

News of Apple devices now supporting mobile credentials on the iPhone and Watch has turned quite a few heads. Now, a student government push at the University of Texas at Austin wants to usher in the era of mobile IDs.

As reported by The Daily Texan, the university’s student government has started an initiative to bring mobile IDs to UT after being inspired by an article detailing the Blackboard Mobile Credential at Duke University, the University of Oklahoma and the University of Alabama. A representative for Texas’ student government has even gone so far as to reach out to Apple directly to find out how to incorporate mobile IDs on UT’s campus.

WHAT DO WE KNOW?

- Strong interest in convenience over security
- Cost is an obstacle
- There are many options
- Hardware replacement and integration can be big projects
- A campus could leapfrog to mobile from mag stripe or prox
- Mobile apps can provide access to multiple systems in ways cards can’t
DO YOU THINK YOUR CAMPUS WILL ADOPT MOBILE?
THANK YOU