Improving the Student Experience with a Unified Credential

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VP Market Development
Blackboard Transact
93%

High school students who say campus technology is a key factor in their college selection
Higher expectations for campus experience

Students who feel a sense of engagement and connection to their campus community have an 80% higher chance of persisting.

(Noel-Levitz)
Student retention and progression are not only influenced by what takes place in a classroom ... but also the depth of engagement outside of the classroom.
Campuses are thinking holistically across a portfolio of solutions to facilitate student engagement, reduce friction, and support fundamental access to education.
• Adoption of different ID tech, at different times, by different depts result in multiple credential types and limited interoperability on campus.

• This increases risk, requires students to carry multiple cards for multiple systems creating confusion, friction and a diminished user experience.

• Adoption of a single mobile credential for the entire campus becomes incredibly difficult or practically impossible.
A commitment to a standard credential is critical to mitigating risk across campus, while also enhancing the student experience.
Why does it matter?

• Ubiquitous use, superior user experience
  – Tap and go becomes wave and go
  – Focus on user benefit, not technical accommodation
• (Significant) Administrative savings
How do we get there?

• Commit to ISO standard credentials and infrastructure

• Cultivate and leverage executive support
ISO, NFC, and Cards.
Lots of cards.

• ISO-18092 = NFC Communication standard

• Includes card emulation for Mifare, DESFire, and FeliCa

• 7 billion+ compatible credentials shipped worldwide = significant price compression for all

• Card sourcing from whomever offers best value

• Wide acceptance among a variety of terminal manufacturers
# Card tech comparison

<table>
<thead>
<tr>
<th>Feature</th>
<th>FeliCa</th>
<th>Mifare Classic</th>
<th>DESFire</th>
<th>HID iClass</th>
<th>Proximity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Compatible with ISO 18092)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>13.56 MHz</td>
<td>13.56 MHz</td>
<td>13.56 MHz</td>
<td>13.56 MHz</td>
<td>125 Khz</td>
</tr>
<tr>
<td>Speed</td>
<td>212 kbps</td>
<td>106 kbps</td>
<td>up to 848 kbps</td>
<td>26 kbps</td>
<td>26 kbps</td>
</tr>
<tr>
<td>Memory Size</td>
<td>4 K</td>
<td>1 and 4 K</td>
<td>2, 4 and 8 K</td>
<td>Up to 4 K</td>
<td>100 Bytes</td>
</tr>
<tr>
<td>Application Areas</td>
<td>12</td>
<td>16 to 40</td>
<td>Varies</td>
<td>2 to 16</td>
<td>0</td>
</tr>
<tr>
<td>Read / Write Capability</td>
<td>Read /Write</td>
<td>Read /Write</td>
<td>Read /Write</td>
<td>Read / Limited Write Capability</td>
<td>Read Only</td>
</tr>
<tr>
<td>Read Range</td>
<td>Up to 3 inches</td>
<td>Up to 3 inches</td>
<td>Up to 3 inches</td>
<td>up to 4 inches</td>
<td>varies</td>
</tr>
<tr>
<td>File System</td>
<td>Fixed</td>
<td>Fixed</td>
<td>Flexible</td>
<td>Fixed</td>
<td>N/A</td>
</tr>
<tr>
<td>Cryptography</td>
<td>3 DES</td>
<td>Crypto 1</td>
<td>3 DES (AES)</td>
<td>HID Proprietary (3 DES available)</td>
<td>None</td>
</tr>
<tr>
<td>Evaluation Assurance Level (EAL)</td>
<td>EAL 4+</td>
<td>N/A</td>
<td>EAL 4+</td>
<td>n/a - never evaluated</td>
<td>N/A</td>
</tr>
<tr>
<td>Common Criteria Certification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near Field Communication (NFC)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Duke University
Prepping for what’s next

• Mobile Credential Option
  – Mobile credential issuance “over-the-air” directly to student mobile device
  – All NFC capable phones running Android Kit Kat or later are supported
  – Supported in all Bb contactless devices
• Strategy to ensure a ubiquitous user experience for transactions across all major transaction areas
• Expanding array of NFC-compatible consumer devices
• Commitment to NFC-compatible terminal devices
FAQ’s

• What about BLE?
  – Bluetooth Low Energy
  – Relatively new to market
  – Limited devices and use cases
  – Refinement needed to resolve use more broadly

• What about Apple?
  – Significant event Oct 25 in Tokyo Japan
    • First use of Apple NFC other than Apple Pay
    • All iPhones and Apple Watch since 2014 are NFC enabled
MOBILE CREDENTIAL
Mobile credential

- Convenience of phones as IDs
- Direct read for fast transactions
- Contactless technology
- No special sleeve or case
- Streamlined usage—no app to open
- Fewer lost cards = fewer lines
- Make quick changes remotely
- Authentication and authorization “over air”
Questions?
Thank you!
What used to be a magstripe-centric usage environment has become one of ISO-standard contactless options, paving the way for NFC-compatible mobile credentials.