

Evolution of ID Cards, Physical Access Control & Two-Factor Auth Deployments

Common Solutions Group,
Fall 2008

How this all got started?

"...the use of access control devices are primarily to increase convenience not so much to increase security. If someone really wants to get past a door, using a sledgehammer is quicker and cheaper than hacking the technology."

Story 1

One school's ID card had many uses including debit card for dining halls and some off site locations. It was discovered that a student was duplicating the cards including the mag stripe to be used as 'backup' for their fake ID. Due to faults in the implementation this was **considered a credit card breach** and was reported to the effected community under the new applicable state law. This event triggered a review of the use of cards and applying the appropriate use to them.

Story 2

A school realized that many temporary cards and duplicated cards could open some exterior dormitory entrances. They began a project this past spring to recard the entire campus population with an iClass smart card and replaced many access systems to require two factor entry.

Story 3

At least one school has ID cards that can be used as a debit card with on campus vendors. Unlike most debit cards, the remaining balance on the card is display on the point of sale terminals. This means that other patrons waiting in the checkout line, as well as the cashier, is able to see the remaining balance on the debit card when the payment is being made.

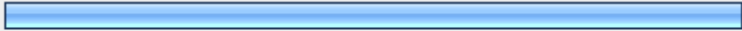

Story 4

One school was working on a project to let the campus ID card also act as a transit pass with the local municipality. The local municipality halted that project when a student project regarding the security flaws in the transit pass system received widespread publicity.

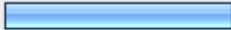
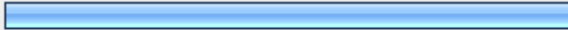
Responses from:

Comment Text	Response Date
1. University of Virginia	Fri, 9/26/08 11:00 AM
2. Harvard University	Fri, 9/26/08 10:26 AM
3. Columbia	Fri, 9/26/08 8:06 AM
4. Penn State	Fri, 9/26/08 7:41 AM
5. Carnegie Mellon	Fri, 9/26/08 7:04 AM
6. MIT	Fri, 9/26/08 6:58 AM
7. Georgetown	Thu, 9/25/08 11:00 PM
8. University of Chicago	Thu, 9/25/08 5:46 PM
9. USC	Thu, 9/25/08 5:11 PM
10. Brown	Thu, 9/25/08 5:08 PM

1. Does your organization use a single identification credential (ID card) to serve multiple purposes(identification, authentication, authorization, accountability, assurance)?

		Response Percent
yes		93.3%
no		6.7%
		<i>answered question</i>
		<i>skipped question</i>

2. Are multiple cards typically issued to people at your organization by different departments?

		Response Percent
yes		28.6%
no		71.4%
		<i>answered question</i>
		<i>skipped question</i>

3. Which department issues ID cards at your organization?

		Response Percent
Central IT		13.3%
Campus Police		6.7%
Registrar		0.0%
HR		0.0%
Athletics		0.0%
housing		13.3%
view	Other (please specify)	66.7%
		<i>answered question</i>
		<i>skipped question</i>

Displaying 1 - 10 of 10 responses

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Comment Text	Response Date
1. Cards are issued by the hospital and Auxiliary Services. Central IT issues 2-factor authentication tokens that are in a USB form factor.	Fri, 9/26/08 11:03 AM
2. Campus Services	Fri, 9/26/08 7:06 AM
3. Enterprise Services	Fri, 9/26/08 6:59 AM
4. Card Office issues cards which address applications, Campus Police issue temporary cards, Housing issues room key cards	Thu, 9/25/08 5:12 PM
5. ID Card office.	Thu, 9/25/08 5:10 PM
6. Combined entity under Student Affairs mgmt	Thu, 9/25/08 5:00 PM
7. A card office that used to be affiliated with Housing, but is supposedly stand alone now.	Thu, 9/25/08 4:58 PM
8. Wisconsin Union	Thu, 9/25/08 4:51 PM
9. separate ID card office	Thu, 9/25/08 4:47 PM
10. Card Office	Thu, 9/25/08 4:44 PM

4. If multiple departments issue ID cards, which departments are they?

		Response Percent
Central IT		60.0%
Campus Police		40.0%
Registrar		20.0%
HR		20.0%
Athletics		20.0%
Housing		60.0%
Facilities / Physical Plant		0.0%
 Other (please specify)		80.0%
		<i>answered question</i>
		<i>skipped question</i>

Displaying 1 - 4 of 4 responses

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Comment Text	Response Date
1. Also Auxiliary Services and Hospital	Fri, 9/26/08 11:03 AM
2. Hospitals. Also, the Housing cards are limited to door access for some dorms and not general identification.	Thu, 9/25/08 5:42 PM
3. Card Office	Thu, 9/25/08 5:12 PM
4. Parking	Thu, 9/25/08 4:45 PM

5. Are physical ID cards the only form factor used for identification purposes?			Response Percent
yes			66.7%
no			33.3%
			<i>answered question</i>
			<i>skipped question</i>

2. Do you have governing body for your ID card policy?			Response Percent
yes			53.3%
no			46.7%
			<i>answered question</i>
			<i>skipped question</i>

3. Is the ID governing body authorized to implement new services?			Response Percent
yes			50.0%
no			25.0%
not applicable			25.0%
			<i>answered question</i>
			<i>skipped question</i>


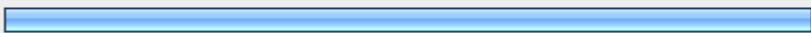
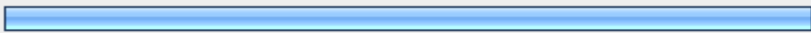
4. Does your card services governing body review privacy concerns when new services are to be added to the card?

		Response Percent
yes		66.7%
no		33.3%
		<i>answered question</i>
		<i>skipped question</i>

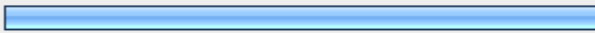
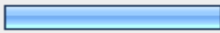
5. Does your card services governing body review technology choices and issues?

		Response Percent
yes		46.2%
no		23.1%
not applicable		30.8%
		<i>answered question</i>
		<i>skipped question</i>

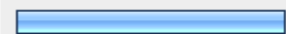
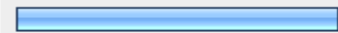
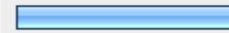
6. Does your card services governing body address the following issues?

		Response Percent
Risk Management		100.0%
Vulnerabilities and threats		100.0%
Impacts and probabilities		100.0%
		Optional comments 
		<i>answered question</i>
		<i>skipped question</i>

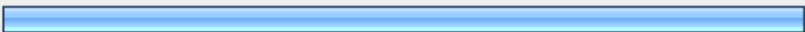
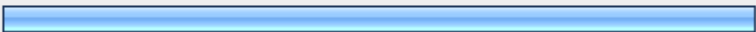
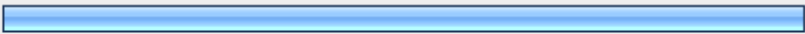


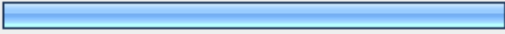



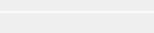
7. Are ID card technologies aligned with business objectives and risk mitigation needs?

		Response Percent
yes		73.3%
no		26.7%
		<i>answered question</i>
		<i>skipped question</i>

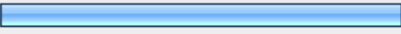
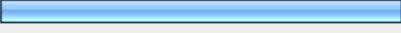
8. Are there business units on your campus that require people to leave their ID card at a service desk in order to use services example, does a student have to leave the card at the dorm desk in order to borrow a vacuum cleaner, or leave the card at the desk to obtain a towel?

		Response Percent
yes		33.3%
no		40.0%
don't know		26.7%
		<i>answered question</i>
		<i>skipped question</i>



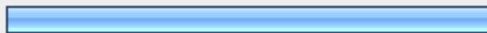
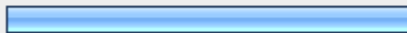
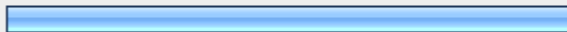
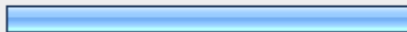
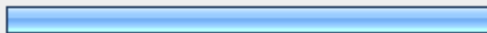
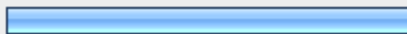
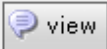
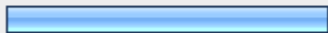
2. Please select the functions that your ID cards support

		Response Percent
Picture ID		100.0%
Library Services		93.8%
Athletic Services		100.0%
Dormitory Access		87.5%
Office/Laboratory Access		100.0%
Parking Access		62.5%
Purchasing (internal items and services)		68.8%
Purchasing (selected vendors)		50.0%
 view Other (please specify)		18.8%
		<i>answered question</i>
		<i>skipped question</i>

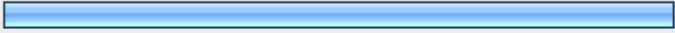

3. Do you have one type of ID card for all members of your community?




		Response Percent
yes		50.0%
no		50.0%
		<i>answered question</i>
		<i>skipped question</i>

4. If you have multiple ID cards for different communities, what are the card types?

		Response Percent
Faculty		60.0%
Students		70.0%
Staff		60.0%
Contractor		50.0%
Affiliate		70.0%
Alumni		50.0%
Spouse / Child / Family member		60.0%
Library patron		50.0%
 Other (please specify)		40.0%
		<i>answered question</i>
		<i>skipped question</i>

Comment Text	Response Date
1. Academic vs. Hospital. The card swipes are coordinated so they do interoperate.	Fri, 9/26/08 10:59 AM
2. one type for staff/faculty/student, one type for "other"	Fri, 9/26/08 7:03 AM
3. University Police - Active University Police - Retired Lab School Faculty Associate (distinct from Affiliate!)	Thu, 9/25/08 5:51 PM
4. Faculty, staff and students are all of one "type".	Thu, 9/25/08 4:53 PM

5. How do you decide what type of card to issue to someone that fits into multiple categories?		
		Response Percent
business rules determine the outcome		83.3%
the customer may self select		16.7%
		<i>answered question</i>
		<i>skipped question</i>

6. If the individuals are able to choose what type of card is issued to them, are there any monetary incentives to influence their choice? For example, suppose that someone is a staff, spouse of faculty, and alum. If the athletic fee will be cheaper for alum than staff, would the person be likely to ask for an alumni card.		
		Response Percent
yes		28.6%
no		71.4%
		additional comments 
		<i>answered question</i>
		<i>skipped question</i>

Additional comments: Some people have multiple cards.

At the end of the discussion Klara Jelinkova of Duke University and William D. Badertscher of Georgetown University agreed to create a wiki space to capture information about ongoing efforts to evolve ID cards by the various member organizations.