



VIEWPOINT

THE FUTURE OF ID CARD ISSUANCE TECHNOLOGY



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INTRODUCTION: Hi, and welcome to Schools in Focus, an 1105 Media podcast. I'm Matt Jones, senior editor for *Spaces4Learning* and *Campus Security & Life Safety*. My guests today are Mike Mans, Senior Product Marketing Manager, DTC Printers, Secure Issuance; and Tiffany Renz, Sales Director - North America, Secure Issuance, both with HID Global. We'll talk about how schools can get the best bang for their buck with ID-card and badge-issuance technology. We'll cover topics like the best benefits of different technologies on the market today, ways to increase the longevity of physical ID cards and badges, and how to streamline the issuance process for these types of credentials. We'll also talk about the place of physical ID cards in a world of mobile credentials and smart access control. Today's episode is sponsored by HID Global.

SPACES4LEARNING: Tiffany, Mike, thanks so much for being here with us this morning.

MIKE MANS: Thanks, Matt. Thanks for having us.

S4L: Can you tell me a little bit about yourselves? Mike, would you like to go first?

MIKE: Sure, absolutely. So, as you said, I'm the Senior Product Market Manager for the direct-to-card, and now also responsible for a lot of our retransfer printers. Within the secure issuance business here at HID Global, I've been with the organization for—gosh, seven or eight years now. It's hard to keep track of time with the pandemic and everything. But, been here a while, certainly got a lot of experience with the team we've got here and the technologies we're working with. So, it's been fun.

TIFFANY RENZ: Thanks, Matt. Thanks again for having us. So, Tiffany Renz, I am responsible for sales in North America for our secure issuance business within HID, so that

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encompasses all of our FARGO card printers, HID FARGO Connect, and our consumable business, as well. Haven't been here quite as long as Mike, been at HID about three years, But, I have been in the industry for over a decade, so definitely have some experience, as well. But appreciate the time today, and looking forward to the podcast.

S4L: Yeah, we appreciate you both being here, thanks a lot for taking the time! Let's go ahead and jump right in. Our first question of the day is: When it comes to badge and ID issuance in an education environment, what are some of the key benefits of the different technologies on the market today?

MIKE: That's a great question, Matt. I'll start off on that one. So, in kind of the legacy world of badge and ID issuance, I would say ribbon-based print technologies have really kind of been the mainstay. They've been the mainstream technology and the mainstream process in terms of, how do you apply face, name, background—you know, any of that information—to a traditional, PVC-style card? And in today's environment, there's been certainly some technological advances in different methods, as well. So, some complementary methods that are now looking more towards inkjet, as well as lasers for certain markets. And really, there's some nice benefits to all of them. The ribbon-based printers, they offer a great benefit in terms of doing inline personalization, having different configurations of ribbons, different



ribbon panels. For example, if you want to have some special unique colors, or metallic looks to the card, ribbons are still a great option for that.

In terms of different inkjet technologies, there's some opportunities to use a solvent-based inkjet. So, something that looks and feels very similar to home-based inkjet printers. So, what you'd have for your home office with a paper printer, very convenient, little easy-to-use ink cartridges that just snap in. And when they're depleted, you can take them out and dispose of them, just like you would normally do any ink cartridges at home—or recycle them.

And then there's also a different inkjet technology that utilizes UV-curing inks. And the benefit to that is really a high level of durability, as well



as a high level of security, based on the technology itself and the barrier to counterfeiters to access a lot of that equipment. So, there's a lot of opportunities to differentiate your IDs and your badges with different technologies, and really find a solution that fits your environment: whether it's an op at the office that has badge issuance every day, or maybe it's a front desk space where you have a number of different workers that rotate in and out. And so, the training and the opportunity to use them isn't quite as daily of an occurrence. And so maybe you want something that's very simple to use, and doesn't require a lot of technology or a lot of integration.

So, you can get everything from those very simple, solvent-based, inkjet printers that are super easy-to-use; ribbon-based printers, I think so many of our audience have used them, seen them, been exposed to them in the past. They function very well; they have a really good lifetime; they print a very nice card. And then you get up to the UV-curing inks. Those are a little bit more—probably in the higher-ed space, I would say you may start to see some of those, because you've got a really high level of durability of those cards. And you can print a lot of cards in a pretty short period of time.

So, they all have their benefits—certainly, depending on where your environment is, is really going to help dictate your decisions of what technology you may want to choose.

S4L: And then that last point that you made about longevity kind of segues into our next question really well. For an ID that's intended to last for multiple years, what are some of the attributes you would recommend users keep in mind as they're researching their solutions?

MIKE: Yeah. So, when you look at a lot of the technologies that I kind of outlined, the solvent-based inks, in terms of overall longevity, I would say that, at this point in time, they probably



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have the least number of options that give you a card that's going to last a duration of a university student's time at a college space. So those solvent-based inks, they're going to give you a shortest timeframe, in terms of that longevity; you're gonna have a couple years out of the card, but it's probably more focused around that kind of couple-year timeframe. It's got very, very good resistance to UV fade, and some of those other light-exposure characteristics that we classify in terms of durability and abrasion.

If you look at the ribbon-based technologies, those are probably the most mature in terms of having lamination solutions. So, if you want a card, I would say—historically, in the higher-education space—where they're going to last, you know, three to five years. Typically, a lamination patch on top of that card is going to get you, really, to that timeline that you're looking for. So that's predominantly the most commonly used. So, anything that gives you an option to laminate that card is really going to give you that life that you're probably expecting or hoping for. But when you look at the new UV-curing ink cards, those are also going to give you a very high degree of abrasion resistance. So that's commonly

how we classify if a card is sitting in somebody's wallet, or inside their pocket, or rubbing inside a coat pocket for a number of years—how is it going to withstand that type of wear and use?

The UV-cured cards are certainly starting to show characteristics that are going to lend themselves to having a good opportunity to provide a strong card in those longer spaces. So, again, if you're kind of circling back; if you're looking at something for visitor management; if you've got visitors into your facility, your schools—faculty, guests, you know, maybe you've got some substitute guests, teachers, contractors—a lot of those opportunities would be really well served with solvent-based inks, inkjet printers. I would say predominantly students for their multi-year cards, direct-to-card printing, retransfer printing, those are still going to be very good options for those. They give you that opportunity to put laminate patches—so, it's basically a polyester patch that gets adhered to the top of that card. That's really the best tool to give you that, really, multi-year card life.

So, that's where I would point you. And if budget allows and you're really looking to advance into some additional new technologies, the UV-curing inks



on the higher-end space—those will certainly provide a lot of what you’re looking for, as well.

TIFFANY: Yeah. And if I could just chime in there quickly too. Mike, I don’t know that you touched on, just, the quality, too—you know that historically, many DTC and HTP printers have been that 300 DPI quality, and I know with the ink technology, we’re kind of excelling right off the bat with 600+ DPI as well.

MIKE: Yeah, yeah. You’re getting that 600, 1200 DPI—that much higher and higher print resolution that’s really achievable when we’re dropping ink on the card instead of utilizing print heads to fire through a print ribbon. Yeah, it does give you that opportunity to increase the resolution, increase the clarity, to really provide more of that photo-like print service.

S4L: We see customers using their badges to perform more and more tasks around their schools and campuses every year. I feel like I remember when I was in high school, we had our ID badges. And I’m not even sure it had a magnetic strip on the back. It really might’ve just been like a plastic card with—

TIFFANY: Picture only?

S4L: Yeah, picture and the school logo. And then, in college, my ID was everything. It got us into and out of the dorms. We used it to swipe into the dining hall to get meals. I think it was good at the vending machines and laundry machines in the dorms. They had it rigged up with even the city buses, the city of Austin buses, we could use it for bus fare. So obviously, it looks like the school IDs are performing more and more and more functions. Are there any of these other extra tasks or extra functions that are linked to ID badges from your perspective?

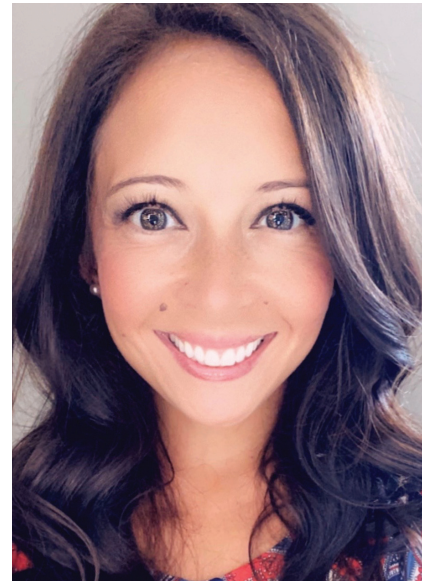
TIFFANY: Yeah, Matt, maybe I can start with that one. I mean, certainly, your experience and your college ID outlines a lot of them. But, as the

“But in the K–12 space, for example, I don’t think you’ll see badges going away for quite some time, unless all children are granted access to mobile phones. I don’t know that all the parents would like a mobile credential. So, areas like that, you kind of don’t think about that at first glance. But for a mobile credential to work, you’ve got to have a mobile phone.” — Tiffany Renz

technology has continued to advance, certainly the ability to take advantage of those becomes more and more important and top-of-mind—both in the K–12 and the higher-ed space. Everything from, like you mentioned—access control, cashless vending, laundry, secure printing, library, the local bus—it seems like more and more, there’s a new use every day for the ID.

I mean, when it comes to the printers themselves, there’s certainly ways to also streamline the actual issuance process. Doing something as simple as sticking an encoder in the printer and being able to activate that badge during the printing process eliminates a lot of manual processes on the back end. So, from a logistics and issuance process, there’s things that folks can do to make that process easier as well.

MIKE: Yeah, as Tiffany said, it’s surprising how long inline...we call it inline personalization, but really, the practice of having an encoder embedded inside the printer. It’s been around for many, many years, but we still see so many environments—colleges, K–12 spaces—a lot of them that still haven’t either been exposed to that—either their reseller partners, their integrators that they’re working with, either haven’t promoted it—or they just haven’t taken that leap to do it yet. So, they’ll have the encoder as a second step. So, you’re printing that badge, you’re printing that credential, and then they’re manually trying to program it as a secondary operation. You certainly



induce that opportunity for error; either somebody, you know, manually keys in the numbers or the card information incorrectly, which certainly can happen. Hopefully, it’s a small, small percentage of an occurrence. But, you know, there’s the tools and the mechanisms to do that all in a single step.

If you can embed the encoders inside the printer, you can program a magstripe. You can program a contact chip. You can program contactless chips. You can read and write all that information from the printer to the personalization software of your choice. So, there’s certainly ways to help, as she said, minimize those errors, streamline that process. It’s more of a single-click operation, and all that information—as it’s read and written to the cards—it



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automatically stores into your back-end systems. So, there’s stuff that we continue to educate the channel and the customers of what we can do. And hopefully, that adoption will continue to grow as people know that it’s available and see the benefit to it. I think there’s...certainly, from a costing perspective, it’s really no different. You’re either buying the encoder to sit on your desk or you’re buying the encoder to go inside the printer. From a price-point perspective, it’s pretty fractional, but the actual benefit to the customer is pretty significant.

S4L: In today’s world, we hear a lot about the cloud and how it’s already changed the capabilities of so many facets of our businesses. How is the identity issuance and management

space utilizing cloud and web-hosted solutions to improve user experiences?

TIFFANY: Yeah, maybe I can start with that one, Matt. One of the things that we’ve seen that’s been incredibly vital, I would say, during the pandemic/post-pandemic, from many of our customers—specifically in that higher-ed or K–12 space with multiple locations—is that ability to have a cloud or remote type of solution. Many people weren’t in buildings and on campuses for many, many months. It was important for them to have a solution, whatever that happens to be, that was capable of being able to enable remote printing—remote secure printing, as an example. There’s a lot of limitations that have plagued the ID-issuance process for many years, and we’ve spent a lot of time trying to

uncover those.

And there’s definitely some common themes: isolated workstations, as an example; having to have a specific PC, with its own software and its own dedicated printer. Those types of things had a big impact during the pandemic, when people weren’t sitting at their offices and at their computers. They were working from home. So there’s, you know, a slew of other things that kind of go along with that. But in general, I would say we are definitely seeing a push towards cloud—or even not necessarily cloud, but just the ability to print remotely. I don’t know if Mike has anything to add there.

MIKE: Yeah, you really touched on a lot of it. I mean, there’s so many benefits to a lot of these new solutions instead of having just a locally hosted software. And don’t get me wrong; we still use them every day. There’s great software that, if that fits your environment, it’s still a great solution. But there’s so many opportunities and so many environments where, as Tiffany said, people aren’t at that desk every day anymore. Or they’re not on site. Or maybe they have a central badge office that distributes cards or issues credentials to multiple sites. You can now have those printers at multiple sites without somebody physically being there. But there’s tools to enable...whether it’s authorized access, so you could send a print job to a remote office. But somebody has to be there, so that all you have to do is present a credential that says, you know, “I’m the new person’s manager, or I’m issuing a credential for a new student here at this site. I’m an authorized user of this facility,” and it will then release that print job.

There’s so many benefits to this. There’s the opportunity, now, to use tablets for capturing photos and information of those students, those temporary workers, visitors, any of that information. And being able to capture



that information; remotely process it; and send it to those printers, wherever they may be—really, selfishly, it allows printer manufacturers to have less reliance and ties to printer drivers. I mean, it sounds silly, but that’s one of the big challenges from a printer manufacturer. The world isn’t agnostic. It’s not one solution. There’s so many different operating systems, whether people have their solutions on servers, or remotely on Windows-driven laptops and PCs, Mac OS versions, Linux-based solutions.

Web-hosted and server- and cloud-driven solutions really kind of build that agnostic solution. It’s going to work with so many different capturing and processing tools that it really becomes a more elegant solution—and it becomes more, I would say, future-proof in terms of when your computers go through updates of OSs and new service packs, those sorts of things. It really prevents any of those things from creating delays and hiccups in your issuance solutions. So, I think there’s a few competitors on the market today, a few offerings.

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And I think you’re going to continue to see that grow in adoption and grow in feature sets of what’s capable from there, because I think it’s—it’s the way to go. It’s the wave of the future.

S4L: And I’m sure this goes both ways, but I’m kind of just curious. In a situation where you can have remote printing, where you can have the staff member who’s handling all of the logistics of it in one place, and then the actual printer in another place: Have you found that it’s handier to base that around the staff member, where they’re where they need to be in the office or at home, and you kind of base it around that and put the printers wherever they need to be? Or is it more common to put the printers where they need to be, and then to assign the credentials for them to a staff member who can be located wherever? Does that make sense?

MIKE: A little bit? I mean, we certainly have, we see it on both. I would say that in the education space, in general, it’s probably a little bit more prevalent on the higher-ed, I would say, than the K–12. Just based on additional facilities, different locations, things of that nature. It certainly is making sense for a badge-issuance manager to be remotely located, you know. They don’t have to be on site, per se. And as long as they can capture that information—whether it’s through submission of the information by the student, the visitor, somebody like that—if they can get that information, they can then process

and issue that credential to a printer that’s just located on their network. Or on a network, basically. And it makes it pretty streamlined. It makes it so as long as...if they want to have the control in place to say, you need to have a manager or a representative of our organization present to release that print job, that’s certainly a control that can be placed on it. Or, you could have it in just a secure room, and you grant access to that room to one person at a time, and they can go in there and grab their badges. So, there’s a variety of ways that it can be done without physically having to have a representative present at each location to issue those credentials.

S4L: And then, right now, there seems to be a lot of buzz around the word “mobile”—around smart IDs, mobile credentials. Do you ever think that physical ID badges will disappear completely?

TIFFANY: I can maybe start with that one. Well, I hope not, as a printer manufacturer. But it’s definitely an interesting one. And I think it varies. I think even between K–12 and higher ed, it varies amongst the different verticals that we see throughout North America, as well. But what we’re finding is that the mobile credential is actually more of a complement than, I would say, a replacement. And again, that varies depending on the vertical, of course. But in the K–12 space, for example, I don’t think you’ll see badges



going away for quite some time, unless all children are granted access to mobile phones. I don't know that all the parents would like a mobile credential. So, areas like that, you kind of don't think about that at first glance. But for a mobile credential to work, you've got to have a mobile phone. So, there's things like that to consider, as well.

In the higher education space, certainly, we see a trend towards having it as a complement. But then, what happens when the mobile phone dies, and they can't get into their dorm room? Being able to have both, I think, is definitely a trend that we're seeing.

S4L: Yeah, that does make sense. It's one thing to say that by the time it's 2022, that most middle-school and high-school kids probably have a cell phone. And it's another thing to say that a middle-school student needs to have a smartphone in order to make it through their day-to-day life at school.

TIFFANY: Exactly. Exactly.

MIKE: We can even, as a manufacturer, go back 20 years. And the thought and the buzz in the industry was, "Mag stripe is going away in the next three years." And that was 20+ years ago, and I think we can all see today mag stripe still hasn't gone away. In a lot of cases, it's still used in most vending states. It's still very prevalent in a lot of places. So, I would say it's a direction the industry is going, to be more mobile-focused, to be more mobile-friendly. And I think, as Tiffany perfectly pointed out, they're going to be very complementary for a very long time.

There's just so many attributes to a physical credential that will remain relevant. And I think there's benefits to them. There's certainly a key value proposition to physically having somebody wear it around their neck in a lot of environments to say, you know, "Here's who I am, here's why I'm here. And here's the thing that shows that I have access, or I have been granted

the ability to be here." That visual representation is certainly going to provide value, I think, for a very long time, especially in the K-12 space. You know, if you have guest speakers, workers on site, anything like that, it's very common for the institution to require their badge to be visible at all times. And that's a much more convenient, and less invasive, way than just walking around asking everybody to show me your phone, show me your badge. I think that's going to exist for a very long time.

S4L: No, that makes sense. It almost seems like the equivalent or an analogy would be, you hear so much about cybersecurity and hacking and things like that these days. But you also have services that need you to change your password every month, or three months, or something like that. And it's starting to feel like the most secure way to have a password is to change it and then to write it—like, physically write it down on a piece of paper to put in your desk or in your wallet. Because that used to be the easiest way to make sure it would get stolen. And now it seems like that's the easiest way to make sure that nobody can see it unless they're holding that physical sheet of paper.

MIKE: And in Minnesota, where I'm located, you've got the dead of winter, like we're in right now. And some of your phones still require a thumbprint or a fingerprint or something like that. And when it's so cold out, some of those things don't always work. So, there's multiple reasons. And I think there's multiple environments that cards are going to coexist for a very, very long time.

S4L: Before we wrap up for the day, were there any last words or thoughts that either of you would like to get in?

MIKE: I can chime in first. I really want to thank you, Matt, for having us on the show. I think it's a great opportunity for us to share what we see from an industry perspective. Certainly,

We've all had to navigate the challenges that have come with our new world and new era of working, and the card issuance process was not immune to these challenges. HID Global is reshaping the identity market in ways that hold the promise of optimizing security and improving efficiencies. HID FARGO offers comprehensive secure issuance solutions: from an extensive line of desktop ID card printers with a wide range of features and functions to cloud-based, secure and remote ID card printing. Solutions designed to fit your organization's security level, volume and aesthetic needs.

what we've worked on, I know a lot of our competitors are doing a lot of the same things. It's an exciting time in the credential issuance and management space, there's some really strong innovation taking place that really benefits the end users. And I hope that everybody has an opportunity to see what's available now, where it's going, and how it can benefit your organization.

TIFFANY: Yeah, and I can just echo those comments as well. And thanks so much, Matt and *Spaces4Learning*, for having us today. You've heard there's a ton of new technology and new advancements in the printing industry, as well as, you know, just trends that have resulted—not necessarily from COVID, but maybe have skyrocketed since COVID and this post-pandemic time. So we'll be interested to see—as the trends continue to evolve, and the technologies and the printers continue to evolve—where we are in a few years.