Zebra Your Edge Podcast

Host:

- **Matt Van Bogart, Zebra**

Guest:

- **Ben Parkyn, Cobalt Systems**

Transcript

00:00:00:00 - 00:00:33:23
Matt
Hi, Welcome back to the Industrial Automation Insider Podcast. My name is Matt Van Bogart and I'm part of our machine vision business unit where I oversee strategic business development activities. Today, I'm very excited to be joined by Ben Parkyn, who is the barcode solution sales manager at our premier partner, Cobalt Systems. Cobalt Systems is a partner that provides fixed scanning, machine vision, and print and apply solutions across multiple industries and categories.

00:00:33:26 - 00:01:06:18
Matt
Today we want to talk a little bit about the intermixing of fixed scanning and machine vision as it pertains to print and apply systems, workflows, etc. And so we've asked Ben to join us as part of this conversation to share some of his insights, things that he sees when he's out visiting customers, and then talk a little bit about some of the ways that Cobalt Systems approaches printing systems, workflows, automation, scanning and machine vision.

00:01:06:19 - 00:01:11:11
Matt
So with that mouthful, Ben, thank you for being here.

00:01:11:13 - 00:01:13:23
Ben
Thanks very much, Matt. It's good to be here.

00:01:13:25 - 00:01:41:12
Matt
Fantastic. So I want to start by talking a little bit about a project that you recently worked on with Zebra. I should say it was actually for Zebra, if I understand correctly, where Cobalt and your team built a custom print and apply solution that used some pretty interesting and novel techniques to get a label onto on a product as well as check to make sure that the label was placed correctly.

00:01:41:13 - 00:01:49:25
Matt
Can you walk me a little bit through that particular solution so I can understand a little bit more about exactly what you guys did for us?

00:01:49:27 - 00:02:14:13
Ben
So we've been purchasing media from Zebra's Preston facility for a very long time now, and supply that to a lot of our customers, in fact, most of them. So at the facility, you produce the cartridges for the Z-Band products. So in this solution, what we basically did is took it from a fully manual process to a semi-automated one.

00:02:14:16 - 00:02:39:28
Ben
So what happens is there is a print and apply machine, which is our Cobalt NEXUS. In that machine there is a ZT51 printer, which is the print engine that actually does the label itself. So what we do is we take that cartridge, the operator puts it in a jig, and then

what happens is that automatically triggers the print of the label for the cartridge.

00:02:40:01 - 00:03:02:27
Ben
So basically, as the label's applied, there's a fixed scanner, which one validates that the label data is correct and also checks that the quality is sufficient. So then that is applied to the product. Once we're happy with that, then this makes its journey up a bit the conveyor. So when it gets to the top of it, the operator can check that the cartridge is functioning as you'd expect.

00:03:02:29 - 00:03:25:26
Ben
But earlier on in the process, as that's coming up, the label data for the case is also made up and then applied to the case before it's erected within the machine. So what can happen then is the operator can then take the case and fill it with the associated cartridges. So you've got a process which intertwines all that data and merges it all up together really nicely.

00:03:25:28 - 00:03:38:05
Ben
So we were pretty happy with that. It seems like Zebra benefited quite a lot from it as well. And we also got an innovation award for it. So we would like pleased with it as a solution.

00:03:38:07 - 00:04:08:28
Matt
That's awesome. Cool. Well, I know that you guys have been in the print and apply business for many years, and you have been working on incorporating fixed scanning, machine vision...you talked about inspection, making sure that the label's correct, information is accurate, etc.. What do you see in terms of next steps in terms of marrying these two technologies: the print and apply, the validation, the verification.

00:04:08:28 - 00:04:33:14
Matt
Is this something that you are seeing customers asking for in terms of making sure that labels are not only printed, but making sure that they're accurate? And so using a machine vision system helps you provide that type of solution to your customers. Is this something that you're starting to see, Ben, as a growing trend?

00:04:33:16 - 00:04:57:21
Ben
Absolutely. Yeah. I mean, we've been using verification and validation in our systems for quite a while. It's been a bit of a game changer with the fixed scanning and the machine vision from Zebra. It's at a price point which is very competitive and works well for a lot of our customers. And we can we can put it in applications which before might have been cost prohibitive.

00:04:57:23 - 00:05:19:00
Ben
So things like verifying that you've got the kind of quality label being applied so the barcode itself is readable. That's really good for a lot of our customers. I mean, especially in pharma or in that kind of industry where they just have to be compliant. We can check that all at the point of application and printing.

00:05:19:02 - 00:05:42:28
Ben
So that's one aspect of it. Also validating that the right label has been applied to whatever product it is. So, you know, you've already mentioned this, but you can apply a good quality label. Fine. What if it's the wrong one? Then it's not really any good. So, thus, that's kind of one aspect of it. The big one that we've seen in a lot of industries is when it comes to SCC labeling for the pallets.

00:05:43:01 - 00:06:07:18
Ben
So they have to adhere to a GS1 standard for a lot of our customers. So when that actually gets to their customers' sites, so say it's a food manufacturer that's delivering to a supermarket of some type, if they get one bad label - so they scan the first pallet - if that's a bad pallet, then they get fined and all kinds of stuff, generally speaking.

00:06:10:26 - 00:06:12:14
Matt
Yeah, exactly.

00:06:12:14 - 00:06:29:25
Ben
So before that actually even makes its journey off to that customer site and they get any of the problems that might go along with that, we've already checked that the right labels have been applied. They're compliant with GS1, they're readable for these sorts of things. It just gets rid of all those problems for the store.

00:06:29:28 - 00:06:57:08
Matt
Yeah. So it's really quality assurance that really doesn't take any additional time out of the process but helps in terms of peace of mind to make sure that all the labeling is accurate because, you know, from what I understand about the chargeback scenario is

that not only are the original manufacturers responsible for the chargeback, but they also need to handle the material possibly even being returned to them.

00:06:57:08 - 00:07:22:11
Matt
And then the cost of getting it back to their customer can be can be massive. So, yeah, those are all issues that have serious implications that can be remedied by a relatively straightforward and somewhat low-cost solution. So that's great. So I know the NEXUS print and apply system is very flexible and can be configured

00:07:22:14 - 00:07:48:17
Matt
I'm sure in many different ways, as can fixed scanning and machine vision. What kind of questions should customers be asking themselves when they're starting to research this technology and kind of help me understand, you know, how do you walk customers through this journey in terms of identifying, knowing the need but also potential solutions?

00:07:48:20 - 00:07:55:15
Ben
Well, to a lot of customers, it's one of those things that seem straightforward. You know, it's like, “I just need a label on a box.”

00:07:55:21 - 00:07:57:23
Matt
Yeah, “I just need...”

00:07:57:24 - 00:08:33:08
Ben
Exactly. I mean, sometimes that's the case. Sometimes it is that straightforward. But, honestly, it's rarely the case that it is that straightforward. There's all sorts of factors they've got to consider. So, for example, with the Z-Band solution, we’re applying a label to a curved surface and we have to have a consistent sort of application area. So, you know, in certain applications - say if you're just applying paper labels to cases - then you can use a sharp air blast and basically blow that label on. With the Z-Band, solution because of that curved surface,

00:08:33:08 - 00:08:55:08
Ben
If we were to blow that on, unlikely that that would hit it especially consistently. So in that case, what we use is a foam to actually press in slightly so that we've got a good adhesion to that product. So that's one that's sort of one consideration you need for that. And then another bit is the sort of compliance side of it.

00:08:55:08 - 00:09:20:03
Ben
So do we need to be GS1 compliant? I mean, we're always trying to go by best practices, so to make our customers GS1 compliant from the get go. So if they have demands from their customer, they don't need to think about that. We've already built in. But if there are these certain factors, then we need to make sure that we're doing things like label validation and so on, so that they can remain so.

00:09:20:05 - 00:09:50:10
Ben
So that's one thing. And speeds is another big factor. So, you know, when we're applying labels to pallets, it's rarely the case that we've got hundreds flying down a conveyor every minute. Same can't be said for different products and cases, especially in fast moving consumer goods. So if we're applying over 100 a minute, which is the case for some of our customers, then there's certain machines that will work for one application that just won't work in that.

00:09:50:12 - 00:10:14:27
Ben
So if they're going very, very fast, we tend to use something like a continuous operation system where there's that constant firing. We can do it sort of 24/7 and make sure that there's that constant uptime. So things like label replenishment we've got a solution for that. Obviously labels need to be replenished using machine. So we can take one machine out which will automatically trigger the other one and so on.

00:10:15:00 - 00:10:23:06
Ben
Depending on the speeds and the throughput, we can also add multiple machines into that to make sure that there's no point where you're not applying labels.

00:10:23:08 - 00:10:48:07
Matt
Yeah, I was on LinkedIn yesterday, doing some updates to profiles and such, and I saw a very interesting video of a parallel robot that was picking labels off of the Zebra printer and applying it to odd form packages moving down a conveyor. So there is an inflow on one side, probably reading some type of code.

00:10:48:10 - 00:11:20:02
Matt

That code initiated the print job. The print job was served amongst one of four print systems, and then the parallel robot went and grabbed the label. There was a vision system that was looking at the package, telling the robot to apply the label at a certain Z height - so flat package or like a box - and the system integrator that built the solution was saying that system can do something like 2800 packages an hour or something like that.

00:11:20:05 - 00:11:57:15
Matt
I mean that's something that you could not do through manual types of processes. You need to incorporate all that automation to happen. And of course, this is primarily being adapted to high volume package sortation/e-commerce types of types of fulfillment applications. So it's interesting to see the evolution of of this technology and what we consider some of the significant leaps in terms of all of these systems being able to integrate together to provide a a very compelling solution for customers.

00:11:57:15 - 00:12:25:06
Matt
Pretty interesting. Now with some of that being said, how does your team approach some of the very specific prolem solving with your customers to determine what's the right type of technology, either thermal print or CIJ, which is continuous inkjet for those of you that may not know that acronym. Automation, moving things around. You talked a little bit about a fixture.

00:12:25:08 - 00:12:35:17
Matt
So how do you and your team approach figuring out what's the right mix of technology for each specific application?

00:12:35:20 - 00:13:03:02
Ben
So our sales, our sales process, it's always been a consultative one. So it's mostly a case of if we're discovering an opportunity to improve any sort of process, we basically need to get the key stakeholders involved as early as poble, make sure that we're getting different departments speaking with one another. So it's like, okay, you know, engineering has some goals, so does production, so does procurement.

00:13:03:02 - 00:13:22:26
Ben
So we need to get those guys together and make sure that everybody is singing from the same notesheet And then from there we can basically start figuring out the solutions. So, you know, what are all of the problems that this particular customer or prospect might be facing and how can we best solve that with our solutions?

00:13:22:26 - 00:13:42:17
Ben
So then we can actually put that forward and we can see whether that's feasible in the first place. So we're sort of constantly working with our customers throughout this because, you know, you come to us with a with a sort of specification of what you think you might need. And by the time you've asked a few questions, that thing totally changes.

00:13:42:20 - 00:14:09:22
Ben
So yeah, we basically need to make sure that everybody is aligned and understands where we're trying to get to with our solutions. And we're also trying to make sure obviously to the best of our ability, we can't do it every time, but we're also future proofing. So whether any sort of compliance is coming in, anything like that, do you need to make sure that you're sort of logistics are more robust with the sorts of things that we're dealing with in the world?

00:14:09:24 - 00:14:23:10
Ben
So we try our best to sort of bring all these factors in ahead of time. And then whatever solution we present to that has considered all these. And we're also looking forward.

00:14:23:12 - 00:14:51:05
Matt
Yeah, that's interesting that you mentioned future proofing because I don't think that's a topic that we talk enough about in terms of some of the technologies because it's in most cases, a lot of these investments in automation are capital expenditures. And so the expectation is that their ru lifecycle is going to be multiple years, if not maybe a decade or so.

00:14:51:05 - 00:15:28:04
Matt
And so being able to have systems that are not only scalable but also flexible. So, for example, you know, so some of the Zebra machine vision cameras have the ability to add capability via a license - if you need to increase the functionality of that product. Likewise, a lot of products in the Zebra portfolio have a relatively long product lifecycle, which means, you know, we don't launch new products and then obsolete the previous products every year.

00:15:28:04 - 00:16:02:03
Matt
A lot of our products sit around in their available state for many years. I think that's very insightful that you point out kind of the whole lifecycle and how to make the system so it can adapt and be flexible as customers' products change, the mix changes, form factors, etc. So I certainly appreciate those insights.

00:16:02:05 - 00:16:22:17
Ben
It's also something that we consider with our print and apply solutions as well. So we kind of try our best to make them as modular as possible. So, say this is an example that we've had quite a few times now...so people labeling cases, let's say to begin with, they might just need to be labeling one side of the case.

00:16:22:17 - 00:16:43:03
Ben
But for whatever reason, maybe that customer demands it, they might need to start applying to two adjacent sites. And this has happened many times now. So for us, generally speaking, we can do that with just a tool change. You don't have to overhaul the entire system, you just change the application tool. So that's something that we try and build in to our product development as well.

00:16:43:06 - 00:17:13:24
Matt
Yeah, Yeah. Good, good. So a couple more questions here before we wrap up. From your perspective, you've been doing this for a long time, you have seen many, many customers and walked them through this this journey. What are some common misperception you hear in in the field either around print and apply, industrial automation technology, fixed scanning, machine vision?

00:17:14:00 - 00:17:25:12
Matt
What are some of the things that you continue to kind of hear from customers? And then how do you kind of overcome some of those misperceptions?

00:17:25:14 - 00:17:53:01
Ben
Well, I mean, first off is the obvious one of thinking that a lot of these jobs are straightforward. You know, this was one thing that came across a lot when the machine vision range came out. So people thinking about them as if they're human eyes. So it's like, okay, “just make this find a glass on a table.” I wish it was that straightforward. So that's one thing that takes a bit of education just about the possibility of these things.

00:17:53:01 - 00:18:18:13
Ben
It's not as if that example isn't possible. It's just about what level do you need to go to before you can make that a reality? So that's kind one of the things we have to consider. But there's a lot of different factors as well in terms of, you know, where's data going? So, you know, you're applying labels or you're printing labels, where's that data coming from in the first place for that label?

00:18:18:16 - 00:18:37:00
Ben
Is it the right data? Where is it getting sent to after that? How are we checking that it's been applied correctly and it's good quality? All that kind of stuff before we talked about. So there's lots of different factors like that and things like the environment as well. You mean you might think, “Okay, well we can just tape this label here.”

00:18:37:04 - 00:18:54:24
Ben
It's like, well, if it's humid, if the labels are going to get - paper labels get - all crunched up in humid environments and so on, we need to consider these things. So this is where this sort of previous point of taking our customers and prospects through this consultative route and making sure we've uncovered all these things in the first place.

00:18:54:26 - 00:19:10:29
Ben
That's why that's so important for us. So it kind of helps us address these things throughout the process. So you don't just assume that something can do something that it can’t. We can discover that to begin with and then present the right solution for it.

00:19:11:02 - 00:19:39:16
Matt
Yeah. So you said something again, Ben, that I think is pretty interesting. One is, you know, the data, the data flow, the data flow into the system and the data flow out of the system. One of the things that I continue to hear when I'm out visiting customers and visiting partners and being at industry events, etc., is the importance of the data part of a lot of these solutions.

00:19:39:19 - 00:20:11:00
Matt
So I think up until maybe like the last five years, we've all considered perhaps the data as a byproduct and something that comes in, something that is used to manage a process in flow, label printing or, you know, check status, pass fail, etc. and then it moves on. What I am starting to hear from customers is like, “Hey, we have all this data and information.”

00:20:11:02 - 00:20:53:05
Matt
“How do we use analytics and use this information to improve our processes or yield a throughput of the factory, the velocity of stuff coming down our lines?” I think more importantly too, is: “How do we leverage that data to understand where are the repetitive

issues that we're having either in our process or even with our parts? Then how can we use that information to go back to our suppliers and say, 'Hey, you know, your part fails 5% of the time. If you can produce a part within maybe a stricter tolerance, we'll have less issues.'"

00:20:53:08 - 00:21:19:13
Matt
"Our processes flow better. You sell us more parts." So on and so forth. I know that's a gross oversimplification of things, but I continue to see this become more and more of an issue. And I think this is really in part being driven by cloud computing, cloud data storage, big data, etc. It's something that's been used in other parts of business.

00:21:19:15 - 00:21:46:01
Matt
And I see this convergence, IT/OT convergence, really allowing the IT side of the business to help bring analytics and solutions to the OT side of the business. Want to maybe just get your thoughts real quick and I'm kind of rapid fire throwing a bunch of stuff at you. What are you seeing in terms of this big data?

00:21:46:02 - 00:22:02:09
Matt
Are customers talking about it? Are you guys looking at providing solutions? Are you already providing the solutions in that space? Help me understand kind of what you're seeing as someone that's probably closer to more customers than I may be?

00:22:02:11 - 00:22:25:20
Ben
Absolutely. So, I mean, it depends what side of the business we're talking about. So, especially in manufacturing spaces, we're finding that they like to lock down the manufacturing itself. So if there's any outside influence and malware, things like that, that could potentially take down production lines, that's a big problem for these businesses. So they like a lot of that security with handling that data.

00:22:25:23 - 00:22:52:05
Ben
So that's something we have to be very mindful of when it comes to installing our projects so we can take data from the central systems, but we have to receipt it back and so on in a very secure way. So we're definitely seeing a lot more of that and that quality aspect as well. You know, especially we're seeing a lot in the UK with sort of labor shortages and things which no one particularly likes to talk about, but it's definitely a fact we need to consider.

00:22:52:05 - 00:23:15:13
Ben
So those efficiencies, people using data to their sort of advantage and making sure that they're having fewer quality issues and so on by using machine vision and things like that. Yeah, we're seeing a massive uptick in it and you know, for good reason. Quality checks, whether we like it or not, if you're stood over a line checking the quality of things, it's a monotonous task.

00:23:15:15 - 00:23:29:27
Ben
It's prone to error. It's quite boring for a person to do it. So if they can be put somewhere else on a more important, more interesting task, that's where we would prefer them to be and so would our customers,

00:23:30:00 - 00:23:57:16
Matt
Yeah. Yeah. Excellent. Well, good, good. I just. I wanted to give you an opportunity, Ben, to provide any closing thoughts in terms of where do you see this technology going? What do what does this market look like, say, in five years? If you could kind of project yourself out five years in the future, kind of where do you think this will go between here and there?

00:23:57:18 - 00:24:23:01
Ben
Well, I mean, definitely on this sort of scanning side of things, we're seeing a huge uptick in the sort of presentation and scanning things like that. It's amazing what an increase in efficiency you can get from just taking away that factor of picking up a scanner and instead just presenting your box to it. That has been a huge increase that we've seen and it's bringing massive efficiencies for a lot of our customers.

00:24:23:03 - 00:25:04:17
Ben
So that's one factor. Those quality checks are another one. Just being able to do that quickly, deploy the solution fast. That's a big one that we're seeing a lot of customers taking a lot of interest in. Also the traceability aspect. So I mean, in the past few years, we've been using these systems to essentially, especially in things like food manufacturing, if you've got, say, 20 different food production lines and you've got products coming all the way down them from different places, what we've been using them for is basically to scan in real time to see which production line, which product was produced on before.

00:25:04:17 - 00:25:29:18
Ben
It is then conglomerated into fewer pallet lines. So we know that a pallet is made up of these three boxes that came from line one, these two from line seven and so on. And we can make up pallet labels which are GS1-compliant and made up of all those things that we've previously scanned. So that traceability aspect...we know exactly what line it came from, at what time and so on.

00:25:29:21 - 00:25:56:06
Ben
That, especially in food manufacturing, has been a big one. So we've also seen it in some some quite strange applications. So one of them was using machine vision to basically check electrical terminal boxes at the point of manufacture. So that was a very easy mistake that was happening for this particular customer where they they use a label and there's three different spaces you can put it in.

00:25:56:06 - 00:26:21:17
Ben
So it has big ramifications if it's done wrong though, because basically there's a lever. And when you put this lever in different positions, it says whether the unit is on, it’s live or it’s grounded. You can imagine if you're working on this and you think it's off, but actually it's throwing through a lot of power, you could potentially be in a pretty sticky situation.

00:26:21:17 - 00:26:46:07
Ben
So we're using vision systems to check that the labels are in the right place before they move along to the next stage of production. So that alone is kind of removes the problem with just safety, I suppose, which is a bit of a weird one, but it was cool and another one was checking stages of modular homes being produced.

00:26:46:07 - 00:27:12:13
Ben
So for the government there's modular homes that are produced for social housing and we can check at each point of this which stage it's gone through. So, has it gone through heat treatment? Is it ready for assembly? And so on. So we can track that, the whole way through the process, using fixed scanners. So we're seeing them used in all kinds of weird and wonderful situations where, you know, the cost of doing it before might have been a bit of an issue.

00:27:12:15 - 00:27:22:24
Ben
You wouldn't have been able to see the ROI. Now you can see the ROI very quickly. So yeah, I've seen a big expansion, let's put it that way.

00:27:22:27 - 00:27:56:24
Matt
Yeah, we're seeing fixed scanning evolving into industries that maybe 10 years ago I would have never considered as am expansion opportunity for fixed scanning and certainly in machine vision is as well. So, Ben, I really appreciate those insights. So I just want to wrap up here. Ben Parkyn from Cobalt Systems, Thank you again for for being here and sharing your insights and wisdom.

00:27:56:27 - 00:28:18:20
Matt
I also want to encourage our listeners to visit the Your Edge blog, click on the podcast tab and catch up on any and all past episodes of the Industrial Automation Insider podcast. I'm Matt Van Bogart, signing off until next time. Thank you. Awesome.

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