TAG INFRASTRUCTURE TALKS: ATL1, ATLANTA INFRASTRUCTURE AND MORE WITH BRANDON
PECCORALO OF DATABANK
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Alan Poole:

Welcome to The TAG Infrastructure Talk Podcast. My name's Alan Poole. I'm a board member of
The Technology Association of Georgia's Infrastructure Society, and I'm also the host of this
podcast and a partner at Troutman Pepper. I'm very excited to have with me today Brandon
Peccoralo, VP of Sales and Account Management at DataBank. Brandon has over 15 years of
experience in the data center and related industry, and he was a key player in the development
of DataBank's ATL1 Data Center here Midtown Atlanta in the Coda Building. Brandon, thanks so
much for being here.

Brandon Peccoralo:

Yeah, absolutely. Thanks for having me.

Alan Poole:

Yeah, absolutely. Excited to have you. To get us started, give us and our listeners an idea about
your background and about DataBank as a company.

Brandon Peccoralo:

Sure, so I am a computer science degree from college major. Always have been a programmer,
always been a nerd, for lack of better words, and I just kind of followed that path throughout. I
lucked out by being in a incubator/startup as I was in college, and that company was entrenched
in the data center marketplace in the early two thousands, which was, you know, data centers
were a big secret back then. They were private properties, no signs, no sales, no marketing.
Google and search engines really wasn't a thing at that time. There was no Google Maps. All of
that was kind of starting up. We were building the first dynamic data center marketplace mapping
software where it made it easier for people to find and locate data center vendors.

I kind of got my computer science degree. Interned at what was called Interact and then evolved
into Colotraq, and then from there post-9/11, everybody was rushing to established disaster
recovery plans. Get your servers out of the office building, get your servers out of the server
closet. Overnight, data centers were immediately imperative to business operations, IT
operations, so we found ourselves in the epicenter of IT managers looking for data center space,
or aka collocation. We went from a five-person startup in not quite literally a garage, but not a
great location, 26 people. I was kind of there for the birth of what we all know now as this very
competitive data center landscape and marketplace.

From there, I had my pickings. I knew all the data center providers, and so I then jumped into a
data center provider that I liked and loved at the time because it was big wholesale data center.
There was a compute aspect to it, which was my core competency, but also manufacturing. They
also manufactured their own modules and pods and components of the data center, so I had a
trifecta education inside manufacturing, operations, sales, and compute. From there, I became
the supercomputer guy. I don't know how or why, but I stepped in it and I did my first
supercomputer project right outside of Princeton, New Jersey.

From there, the DataBank team picked me up to bring me down to Atlanta to spearhead the Georgia Tech liquid-cooled supercomputer project in Midtown Tech Square, formerly known as Coda. That was it, packed my bags, flew down to Atlanta. You know, just three blocks up was a hole in the ground started, and now it's a flourishing ecosystem that was and is pivotal to the city.

Alan Poole:

Yeah. It's a really exciting thing to see the Coda Building. It's still called Coda Building-

Brandon Peccoralo:

Yeah.

Alan Poole:

... isn't it? Yeah. It's exciting to see it fill up again. I know that the timing of it was a little difficult because things were supposed to get started right around the coronavirus, but the social side of it really does seem to have picked up in terms of people going to the food halls and stuff. Let's go back to the beginning of the-

Brandon Peccoralo:

Sure.

Alan Poole:

... project. At what stage were you brought in? Step one planning? Groundbreaking?

Brandon Peccoralo:

Sure, so... and to take one more step back, DataBank is a privately held, privately owned data center and cloud computing company. We made some strategic acquisitions along the way, and we picked up a company by the name of Edge Hosting, who was just absolutely massive in hosting from web hosting all the way up to sophisticated IT environments. It was one of our best if not our best acquisition. What that gave us was a heavy practice in data center, cloud computing, private computing, and also cybersecurity. We got all the way up to FedRAMP impact level 2 on our cybersecurity practice, which is incredibly high. I think we're top five in cybersecurity for data center owners and cloud providers that own their own data center, so from the chiller to the chip we say. I think we're up in the top five or top 10 with the big boys.

Now, what does that mean? Georgia Tech, they're also, obviously, heavily entrenched with the government in cybersecurity. We have these accreditations that made Georgia Tech comfortable. Georgia Tech went to the market with a very rigorous RFP. They know their stuff, so they put out a very robust RFP. They scrubbed the market. We battled it out and we had what DNA Georgia Tech wanted from a landlord provider, from a data center operator provider, from a cybersecurity and just overall security provider, and then from a people provider. That was kind of a step back of how DataBank got involved.

When I came here, we had won the bid and we had to go out and effectively sit down with Georgia Tech engineers, construction folks, designers, architects, engineers. It was a beautiful project. It was absolutely amazing to learn how to erect from nothing a building going seven stories deep, all the way up completely segregating the data center from the high rise on the physical side, but connecting them through high-speed fiber optics, air gapping them to the public so the government can operate there. Connecting to all of the plethora of fiber that Atlanta

has to offer for the public customers that we have, bring jobs to the city, bring attraction to the city, but also the main kind of concept was stop losing the Georgia Tech, Georgia State, Emory talent. All these folks that are getting these great degrees, stop losing them to Silicon Valley Bay Area, stop losing them to New York City, Nashville, Austin. Keep them in the city.

That was really the brainchild of the project was move over Route 75. Build this incredible technology ecosystem and have the Georgia Tech students rub elbows with the likes of the Ciscos, NCRs, Home Depot, Coca-Cola. We've got such a beautiful array of Fortune 2000 companies headquartered here. Let them all rub elbows.

Alan Poole:

Tell me about the use that Georgia Tech gets out of ATL1, because, A, it's sort of like the anchor tenant and, B, it's one you-

Brandon Peccoralo:

Right.

Alan Poole:

... can actually talk about because it's because it's public.

Brandon Peccoralo:

Yeah, so just the new building, the modern building itself is the most kind of rudimentary way I could put it. The compute speed, the amount of data storage, all these different things have excelled so quickly over the past few decades. Most recently with artificial intelligence and machine learning, it has accelerated at speeds we've never seen before, so you need that back-end computational power. You need those huge databases for those huge data sets. The way that Georgia Tech, like everyone else, they've operated out of facilities that they were always in five, 10, 20 years ago. Those buildings are not ready for this. They need to have a plethora of power in a small amount of space, which is going to generate a massive amount of heat, which they need to cool or get rid of in a very green way.

This is very important to Georgia Tech, so the buildings that they were existing in physically couldn't handle the power delivery, couldn't handle the cooling, and physically it was just too small to do that when they would have needed hundreds of thousands of square feet to do it with the resources that they had.

Alan Poole:

I see.

Brandon Peccoralo:

The building that we built is an ultra-modern, ultra-high-density building in coordination with Southern Co. and Georgia Power to pump in an exuberant amount of power while also liquid cooling the Georgia Tech supercomputers. Just to give you an idea, one cabinet, floor to ceiling, of compute that Georgia Tech runs, supercompute, whether that's x86 or INVIDIA GPUs, they're getting anywhere from 35 kilowatts to a hundred kilowatts of usable power that they do use inside just one cabinet.

Now, if you think your house, you know, think of your house, your apartment, you're probably drawing 2 to 5 kilowatts for your house, so think about... Extrapolate that to your neighborhood

and then compare that to one cabinet in the data center, which can do 35 to a hundred kilowatts, multiply that out by thousands of square feet of these and you'll make your head explode. It's so tough to conceptualize. Well, if you walk through that data center, you'll hear it. It's incredibly loud. You have to have ear plugs because we have to cool it, and you can't just cool that with brute force air. You need to get more creative.

Believe it or not, to this day the best way to cool something is still through thermal dynamics, through water. We basically have a bunch of high-tech radiators on the backs of these supercomputers sucking all of that hot air or waste energy off of the chassis of these servers, off the GPUs, off the CPUs, sucking all of that heat or waste energy, converting it to water. Then, we immediately have to expel that water out and do something with it. The project of Georgia Tech said, "While we're at this, we want to be as green as possible," so they engaged the sustainability and the green team and we've got... I mean, I could go on, but a whole nother story about that.

They needed to get out of their old building infrastructure. They needed to advance. They wanted to compete with the likes of the NYUs, Yales, UCLAs of the world, and they wanted to have their own supercomputer. Just their first deployment, just their first deployment with the NSF, the National Sciences Foundation, was maybe nine cabinets. You could physically see that. It's not a room, just nine cabinets. It was the fastest supercomputer to date that Georgia Tech built.

Alan Poole:

No kidding.

Brandon Peccoralo:

Yeah. Now, it's much, much faster and bigger now, but-

Alan Poole:

Yeah.

Brandon Peccoralo:

... it was their first deployment. They were able in nine cabinets to do more than they've ever done in the history of Georgia Tech with the National Sciences Foundation, so yeah, it's a ultra-modern building.

Alan Poole:

Tell me about what you do with that. I Know there's an interesting story behind what you do with some of that heated water.

Brandon Peccoralo:

The City of Atlanta is named... Their streets are all named Peachtree this, Peachtree that, Ted Turner, John Portman, and then all the numbers, so it was... You could tell it was built up quickly and there was not a lot of thought. Well, there's one road that there's a purpose behind, and it's from North Midtown to Downtown, and that's Spring Street. Why is Spring Street called Spring Street? Well, under... along Spring Street there's aquifers. There's springs underground, so as we're drilling seven stories deep, we hit a spring. Water is pumping out at 150 gallons per minute, and as you deplete an aquifer, you create kind of a reverse vacuum and sinkholes, so that did happen.

As we're at the table of an absolute emergency with our construction company, the city, and Georgia Tech, in walks a sustainability team again from Georgia Tech and says, "How can we capture the water from the spring and utilize it to cool the liquid-cool of supercomputers?" Their concept has always been, "Use whatever clean resources we can get, and whatever waste we produce, repurpose it." They saw this as an opportunity. Well, again, you can't take water out of the spring. You'll cause a sinkhole again.

As they erected the high-rise, they put drains on the roof like you always would, but those drains go through a filtration system, and then get dumped into the spring on Spring Street underneath our building, or the aquifer. Then, as that has an overflow threshold, we fill up a supplemental belly tank of conditioned rainwater and springwater. From there, we have to recondition it again because this is Georgia, so you have Georgia clay. You have to recondition that water.

We then take that water, pump it into our chilling system, and we can actually chill the liquid-cooled supercomputers for Georgia Tech. From there, again, through that thermodynamics we were talking about, that water's coming in at about anywhere from 68 degrees to 73 degrees, really depending on the time of the year. We can take that water, barely have to chill it, believe it or not, run that through the system. We will heat I up with the entire data center, and we take that water now at anywhere from call it 88 degrees to 92 degrees and we can repurpose it.

In the wintertime, if you drive by the data center, it's not a big steam plume coming off the building. When you drive by buildings in the winter and you see steam, that's the roof chillers kind of emitting evaporation as they're cooling the water using almost air-to-air cooling techniques, evaporative cooling. You won't see that with our building. Why? We're taking that hot water, we're pumping it into the high-rise, and the high-rise as a gas is taking that heat element out and heating the building for civilian use. They're removing the heat from the water, our water that we just heated up. They're taking that heat out and they're effectively cooling our water, so it's a closed loop system. They get to send that chilled water right back, and as long as we get it anywhere from 68 to 73 degrees, Georgia Tech's happy.

They also don't use diesel generators, Georgia Tech, for their research hall, so there's all sorts of green initiatives. No batteries. They won't use UPS batteries. They have to have flywheels, so Georgia Tech just knocked it out of the park with this building, so arguably we can't say it for a fact, I can't say that to you and say this is a fact, but we want to say it's one of the most green data centers the United States has. We'd love to say it's the greenest data center on the East Coast, Southeast, we don't know if that's true, but we say it.

Alan Poole:

Mm-hmm. Well you can certainly describe some great steps that you took to meet that goal and, I mean, taking into consideration just the really high-power computation that you are doing in that center, I think that sort of displays the point in and of itself. One of the questions on my mind is, what makes Atlanta... Obviously, there's the Georgia Tech use case, but that's not the only way that DataBank makes money or can make this building viable. What makes Atlanta such a great place for data centers generally?

Brandon Peccoralo:

Great question. That happened after the 1996 Olympics. There's generally if you look at different markets all over the world, technology was never a if you build it they will come, which is interesting because that's typically textbook. It was accidental that we built it and then they came. The cable landing station, fiber optics, these are all... Ran subsea cables, hit the United States. Everything blossomed out of Ashburn, Virginia, after the internet was invented for the

government there, and telecom was run through train tracks and major highways. That was if you build it, they will come, but in the particular micro use case of Atlanta, it was build for the Olympics, so it wasn't built by design. The technology, underlying infrastructure for telecom in Atlanta.

1996 happens, the Olympics come, and they just light... No pun intended, they light the city up with a plethora of fiber. It was at the perfect timing. It was another kind of cosmic timing event because The Telecom Act of 1996 happened, which opened it up for competition, and so it was beautiful. You saw fiber being laid everywhere inside the city as well as outside the city, all the way up to Alpharetta. Atlanta just became very recently in relative terms, The Cloud of the South. What does that mean? That means if you're in Alabama, you're in Tennessee, you're in Georgia, and you hit enter on that keyboard, or if you're a tech guy or gal, you do a trace route.

Eventually, you're going to wind up in the epicenter, the nucleus of Atlanta where the peering exchanges are, the IXs are, and the Comcasts, the AT&Ts, the Verizons of the world, that's where they all talk with one another and they say, "Okay, this is for you, Troutman. It's on your server, they're on your website and this person's coming from Nashville, and that's where it's all kind of back in the day, you got the operator on the telecom. The modern day network operator, that's in Atlanta, so there's one mega facility in Atlanta, which is very to us in the industry, we all know of it, but it's very confidential to everybody else due to the sensitivity of that location.

From that location in Atlanta, all of the data centers sprouted outside of that and they all carved their own fiber pathways into it so we can talk with it. Then, we all run our own private practices of collocation, cloud computing, storage, the cybersecurity, whatever that service.

Alan Poole:

I remember when we were talking a little bit to get ready for this, I remarked how so many of the data centers you're you're hearing about are out in Douglasville or up in Alpharetta, as you say, with huge square footage. To be put in Midtown comes with such such challenges, some of which we've talked about, and I wondered why, and you said something along the lines of, "It's got to be here."

Brandon Peccoralo:

Yeah.

Alan Poole:

This is just where the computing's happening. This is just where the computing's happening.

Brandon Peccoralo:

That's right.

Alan Poole:

You can't get away from that. Maybe you can talk about this a little bit, but I've been following closely the trend of decentralization of data centers and computing into what we now know as edge computing. I know that the ATL1 isn't exactly that, but it's kind of along the same philosophy. It's got to be close due to current data demands.

Brandon Peccoralo:

Yes, so... and that's like a loaded question and here's why. The cities are where you collocate your servers, your infrastructure, your applications if they need it to be just incredibly low-latent, so just high speed. I can't have any proverbial hour glasses spinning. You can imagine that's Georgia Tech.

Alan Poole:

Of course.

Brandon Peccoralo:

Right. They're pushing the limits of everything in all different verticals, and it's from government to healthcare to cyber.... just everything. Not many companies really need that, so what you'll see is credit card processing. That has to be in the city hyper local to the exchanges, things like that. If you're in Manhattan, you need to be doing high-frequency trading with Wall Street. That's where you see these ultrasensitive applications. What people will do is they'll build core network inside the cities, and then they'll go where it's cheaper in the burbs, land, taxes, tax incentives if they can tolerate this small of a difference in round trip time, which everybody can. It's really... I mean, with the fiber optics and the hardware we have today, it's... You can go pretty far out and be just fine.

Nobody's having a problem in Auburn, Alabama, or Birmingham. They're not really noticing latency, but if they hit enter on Netflix, which is here in Atlanta, it would take just a little bit longer, but they won't notice it as humans. As am application, if you're talking to a database, you will know that. You will notice that, so you will see megatechnology companies building out here with innovation, software development. That's what Georgia Tech is and wants. That's what Atlanta wants is software development, innovation, where you can push the limits. If you go outside of this area too far, really can't push the limits.

Alan Poole:

You mentioned earlier, your majority owner company Digital Bridge-

Brandon Peccoralo:

That's right.

Alan Poole:

... and that's a company I've been following. I'm really interested in their strategy and their success shifting from commercial real estate to digital real estate-

Brandon Peccoralo:

Yes.

Alan Poole:

... if you will. I'd love to hear your knowledge and perspective on that company.

Brandon Peccoralo:

Sure. Yeah, and I've taken a particular liking and following to Digital Bridge, obviously for obvious reasons. I work at DataBank. I want my job to be forever, but just in general, I just love their strategy and what they see in the future. They're a real estate investment trust. They're publicly traded. They got out of the business of properties like hospitality and other things that, as we saw during coronavirus, took a major hit, strip malls, things like that, hotels, and pivoted into digital infrastructure. We're not going to go back to those 4 x 3 TV sets. We're not going backwards in technology. The trajectory is only going up and into the right, and so they saw that. They saw the need for data centers. They saw how healthy we are on, on our balance sheets, how profitable we are.

It's I like to call it a get rich slow program. It's nothing quick, but in the long term, it's all monthly recurring revenue, very healthy, very stable people. It's very sticky business. They were attracted to that, and what I like about Digital Bridge is it's not just the data center and the cloud. They want to encapsulate as much of data transmission and possible, which I thought was brilliant. There's kind of four or five key market segments that they've capitalized in and have majority ownership in, and those are in fiber, excuse me, cell towers, small cell, fiber optic companies, the glass in the ground, the data center, and what I call The Chip, the compute part, the cloud computing.

If you are hitting on the keyboard, or you're going to YouTube on your cellphone, whatever that might be, you're hitting enter on that keyboard and it's going out. It's being captured by the cell tower. It's being transmitted in the ground or over aerial by glass, which is the fiber optic companies. It's hitting the data center real estate, and it's being processed inside the data center and then sent back out.

There's all these different pieces of the puzzle. They're just putting them all together is what they're doing, and effectively they're attempting to own as much of your transmission of your data as physically possible in not just major markets, but all over the country. They are... When we talked about the edge, it's the most harmonic example of that between all these different companies because if we can... As DataBank get out and push out our facilities and our real estate and our compute, well, the fiber and the connectivity, it's going to follow as well.

Alan Poole:

Today, Coda's not your full-time job necessarily anymore. I think it's cash flow positive and kind of up and running. Is that fair to say?

Brandon Peccoralo:

Yes, we got the building cash flow positive from Georgia Tech from government bids but also from just doing textbook sales as DataBank, selling the data center space to people that wanted to be close to the project, selling virtual space, so cloud computing, storage. Now, the building, just three floors of it, the bottom floor's all Georgia Tech, research and OIT. The second floor and third floor are DataBank to sell. Second floor's full, and now we're pre-leasing the third... Well, actually, we're leasing the third floor.

I think we kind of sold quicker that we might have thought we would have. I'm sure everybody would have loved to sell faster, but we did a really good, good job through another acquisition. We acquired 44 more data centers from a telecom provider. That gave us two more data centers in Atlanta, Now, we're up to three Atlanta data centers, but ATL1 is one of a kind.

Alan Poole:

Fantastic, and congratulations. That's a-

Brandon Peccoralo:

Thank you.

Alan Poole:

... I mean, that's a huge accomplishment. As a closing question, let's take the next five years as the example window. What's the most exiting challenge or opportunity that you'd love to see yourself or DataBank tackle?

Brandon Peccoralo:

I don't know how much crazier or luckier my career could be personally, but right now I've moved on to not just being the... I was the General Manager of The Coda Project, the data center Coda project. Now, I've moved on and I manage a team on the West Coast to bring the DataBank culture to the company as we're growing, so make sure we keep our cultural DNA to make sure we are who we are.

We're still privately held, so we're nimble, we're flexible. We're easy to work with. We want to be easy to work with, so my job now is kind of an outward evangelist for Georgia Tech still. That will always be something, whether I'm at DataBank or not. I'll always love that. I'll always take these podcasts. Always give tours to anybody that wants to come and see it as long as you're not on a no-fly list or-

Alan Poole:

Fair.

Brandon Peccoralo:

... bench warrant out for your arrest.

Alan Poole:

Yeah.

Brandon Peccoralo:

DataBank, as it stands for DataBank's kind of plans, we just want to safely grow steadily. To answer the question, I would suspect more acquisitions, more greenfield deals coming from DataBank from the ground up. I would expect us to keep pushing the limits of our cybersecurity practice so we can maintain our leadership in that space. Then, just doing new cool stuff that publicly traded companies can't do. A lot of what we heard why we won the Georgia Tech project and four other massive supercompute projects were because we could think outside the box. Not everything is a cookie cutter approach.

If you want us to kind of sit down with you and design something with you that is not normal, we're open to that. We're open to that. iF you want us to heat up a high-rise with hot water from your super computers that it's sucking out of a spring on Spring Street? Let's give it a shot. Yeah, we're that... I'm a part of that. I'm very proud to say I'm a part of that company.

Alan Poole:

Well, this is just a fantastic conversation. I learned so much and I got to imagine anybody that listens to this will feel the same way, but thank you so much for your time. We're really excited to have you here.

Brandon Peccoralo:

Yeah. Thank you for having me-

Alan Poole:

All right.

Brandon Peccoralo:

... and if anybody has any questions, again, I'm that evangelist, so if you're in Atlanta, if you want to come see it, please contact me or somebody at DataBank. If you want to just have a phone conversation or email exchange, bounce some ideas, we had the founder CEO of AUBix, which is Auburn's data center that they're building. They just came by during the week and said, "Everybody's been talking about this. Can you just give us some best practices?" It's an amazing project, and our doors are open, but not literally, to people, so if anybody wants to contact me, I'd love to help.

Alan Poole:

I may have to take you up on that. That's-

Brandon Peccoralo:

Oh, you're coming.

Alan Poole:

... that sounds like a good time.

Brandon Peccoralo:

You're coming.

Alan Poole:

Great. Well, thanks so much.

Brandon Peccoralo:

Yeah.

Alan Poole:

Thanks, everybody. IF you like this content and want to hear more, please make sure to follow us, both Troutman Pepper and The Technology Association of Georgia on LinkedIn to hear more. Thanks very much.