

Transcript of "[Matt Fronzak, Weather Portfolio Advisor and Principal Aviation Systems Engineer at the MITRE Corporation in McLean, Virginia](#)"

Clear Skies Ahead: Conversations about Careers in Meteorology and Beyond

February 9, 2021

Kelly Savoie:

Welcome to the American Meteorological Society's podcast series on careers in the atmospheric and related sciences. I'm Kelly Savoie, and I'm here with Rex Horner and we'll be your host. Our podcast series will give you the opportunity to step into the shoes of an expert working in weather, water, and climate sciences.

Rex Horner:

We are excited to introduce today's guests, Matt Fronzak, a Weather Portfolio Advisor and Principal Aviation Systems Engineer at the MITRE Corporation in McLean, Virginia. Welcome Matt. Thanks so much for joining us.

Matt Fronzak:

Pleasure to be here, but you said expert right up front, and that made me wonder if I'm really the correct person on here.

Rex:

We hope so and we think so, and let's find out.

Matt:

All right.

Kelly:

Matt, could you tell us a little bit about your educational background and what sparked your interest in meteorology?

Matt:

Sure. I have a theory about this particular topic that you brought up Kelly, and my theory is that there are two flavors of meteorologists in this world. There are those who knew they wanted to be meteorologists from the moment they left the womb and came into this world. And those are the folks by the way, whose moms instead of giving them a rattle, gave him the sling psychrometer. Then there are those who backed into meteorology by accident. I fall into the latter category. I hope that doesn't disappoint anybody, but it's true. I was a midshipman at the US Naval Academy in [the] early 1970s. We'll just leave it there, and an oceanography major. And as such, I took my first meteorology class as part of the oceanography program at Annapolis.

Matt:

After my sophomore year prior to start of junior year, I voluntarily separated from the academy, went back home. My parents said, well, now that you're back home, that's fine. But we had counted on you being at the Naval Academy for four years, and this not costing us anything, and now you're back home, so maybe you better go get a job. I went and got a job with Delta Air Lines, working in their cabin service department, which cleans airplanes and provisions airplanes and does stuff like that. A few months into it realized that if I didn't get myself back into school soon, I was going to be beguiled by this massive \$718 a month salary I was making back then and maybe never get back to school.

Matt:

This is up in the Boston area, I looked around to see what was available for somebody like myself and found that Lowell Tech at the time was offering some summer school classes. I went to summer school, decided I liked the school up there and determined to restart my college career back there. I looked at their course catalog and said, okay, I'm not a humanities person. I'm a STEM person. We can leave the humanities aside. Let's now look at what STEM things I might want to do. I like math, I could be a mathematician, but then what would I do afterwards? I don't know. Physics is interesting and some of the engineering programs are interesting, but they're likely to be pretty hard.

Matt:

Biology's interesting, but it's awfully messy. I know—here it is, I'll be a meteorology major. I've already taken a class at the Naval Academy. It wasn't too bad. I think I'm going to pursue that. And so I applied for acceptance at Lowell Tech in 19—I guess—75. The department head, Dr. Curtis, tried to talk me out of it. I wouldn't take no for an answer and finally he let me in. What I discovered after the fact, was that although meteorology wasn't messy like biology, it certainly was hard. I certainly could have used, with the benefit of hindsight, some of those humanities classes that I was trying to avoid, to help me communicate the message that I had as a meteorologist to the customers that I was serving.

Matt:

In any event, I graduated from then the University of Lowell in 1978 with a bachelor of science in meteorology, and then educationally, I did nothing for the next 30 years, or approximately. However, in 2005, I decided that it would be who've me, to go back to school and, and perhaps finish out, round out my education. I went back to graduate school at Embry–Riddle Aeronautical University, and a couple of two, three years later received my master's in aeronautical sciences degree from them. That's my background, and as I mentioned why meteorology? Well, for me, it was a bit of an accident, but I must say frankly, it was a happy accident.

Kelly:

Why did you advisor try to talk you out of it?

Matt:

He said that there were way too many meteorologists than there were jobs and you didn't get paid much money, and you're going to have a heck of a time finding a job after you get out of school. I'd mentioned to him that I was already working for an airline that had a meteorology department and maybe they'd be able to use me at that point. He just thought honestly that there were too many meteorologists and not enough jobs and there were better places for me to spend my time.

Rex:

Let's go back to 1978, you graduated from University of Lowell. What came next after your job in cabin service with Delta?

Matt:

Well, I was actually at the time then working on the ramp. I'd been promoted to a bag smasher from an airplane cleaner. I also, as I mentioned, knew that Delta had a met shop. And so while I was going to school full time and working at Delta, I reached out to the manager of the meteorology department, C.L. Chandler, and told him who I was and where I was and what I was doing, and if he happened to need any meteorologists that I was in the process of getting my degree and I'd be happy to try to help them out in that area. He said, well, that's good. I'm glad to hear this from you, but I'm going to strongly suggest that you continue with your education and keep in touch.

Matt:

But until you get your degree, there's probably not much that we can or would be interested in doing with you. And so, I let him know what I was doing as I was doing it and kept him apprised. And then in June of 1978, when I graduated, I told him that I had graduated. Later that month I got an internal company message that said, there's an opening in the meteorology department and if you'd to apply for it, feel free to send us your resume and the filled out application, which I did. Interestingly, my station manager in Boston at the time, Jerry Russo took me aside and said, hey, just to let they are very interested in hiring you down in Atlanta as a meteorologist, because frankly you will be the first person that they've ever hired from within the company as a meteorologist.

Matt:

Frankly, his words were, "This is your job to lose. So don't screw it up." I did get invited down for an interview and went down and was in the employment office, filling out the requisite paperwork. I was sitting next to this big, tall, handsome blonde-headed guy. I started a conversation with him, and I said, "Hey what are you down here for?" He said, "Well, I'm down here for a job in the meteorology department." And my heart sank, because I thought that this job was mine, and now here's this other guy that I'm now competing with. And so I said to him, "What's your background?" He said, "Well, I'm a former Air Force weather officer. And then after I got of the Air Force, I went back home to the state of West Virginia and worked as a state climatology officer for a few years."

Matt:

I thought to myself, "Dude, you are done. There's no hope for you now." What I didn't know at the time was that in fact, the met shop at Delta had not one but two openings and Ray Little who became a very good friend and I, were basically the prime candidates for these two positions. It was a little bit of a letdown at that point in time, but it all worked out well. In July of 1978, I started working as a meteorologist or what they call, the metro weather analyst for Delta Air Lines.

Kelly:

Wow. The timing was perfect. It's great that you kept those communication channels open with your contact at Delta, because that was super helpful.

Matt:

Yeah, absolutely. You may be the most brilliant person in the world, but if nobody knows about you, then you're just the most brilliant lonely person in the world at that point.

Rex:

That wasn't the only job you held at Delta, if I'm correct, you moved on to some other roles. Can you tell us a little bit about how those other opportunities came up?

Matt:

As I was three or four years into my tenure as a meteorologist at Delta, I began to wonder, what was next. The folks that we work with most closely at Delta were a group of people called aircraft dispatchers. Now, an aircraft dispatcher is an FAA licensed airman, if I had my wallet on me, I could show you my license, just like a commercial pilot is a licensed position. Dispatchers basically share with the pilot in command, jointly, the responsibility for operational control of every flight. In other words, when you go flying, if today we were flying like we were a few months ago, you know there's a pilot in the left seat of the aircraft and a first officer in the right seat.

Matt:

But there's also a third officer, if you will, attached to the flight, and that's an aircraft dispatcher who basically prepares all the flight plans, does the preliminary fuel load, which 99.9% of the time is the final fuel load for the flight. And then once the flight operates, follows the flight and provides to the pilot in command any changes to the flight plan that are material to the successful conclusion of the flight. That sounded to me like a very interesting job. And since I had actually grown up in an airline family, my dad was a station manager in Boston for many, many years for the Flying Tiger Line, which it was a cargo airline that ultimately was bought out by FedEx in the mid-1980s, late 1980s, if I remember correctly.

Matt:

I'd been bitten by an airline bug and really liked airline operations a lot, and figured I'd make a pretty good dispatcher. I went to the director of flight control, who owns all the dispatchers and I told him that I was interested perhaps in becoming a dispatcher. The late Sam Brown, the director of flight control told me, "Well, Fronzie, we'd love to have you, but you'd have to take a pay cut, because you see, where our dispatchers start is below where your salary is right now and we don't have any latitude in so far as bringing in a person, anywhere other than the starting position of an assistant dispatcher. At that point in time, I was two years into a new house. We had just graduated from the peanut butter and tuna fish plan into the hotdog plan. I just couldn't afford to take a pay cut.

Matt:

And so I told Sam, "Well, thanks anyhow, I appreciate it. We'll see what happens." Well, lo and behold, talk about good time, Kelly, lo and behold, a year later, Delta transitioned from its previous flight plan system into, at the time, a new flight plan system, the net effect of which was that they had basically seven too many people in the meteorology department and rather than letting, and this is an unabashed plug for Delta Air Lines, rather than letting seven meteorologists hit the streets, they basically offered seven meteorologists the opportunity to become dispatchers at a red line salary. And so I was at the head of the line, with my paperwork all filled out, saying "me, me, me, me," and luckily enough for me, I did get selected and transitioned to the role of an aircraft dispatcher in 1984.

Kelly:

Geez, you got lucky twice. Good timing. That's amazing, that you wanted to do it and you didn't want to take the pay cut, and then all of a sudden the opportunity came about.

Matt:

It happened. It's really good to be lucky and it's also really good, I think sometimes if you make your own luck, again, Sam Brown knew that I was interested based on our conversation. And so, when the chips fell my way, and I was at the front of the line, that that was probably, and I guess I was a reasonable meteorologist and human being too. There was nothing in my record to suggest that they were going to be taking on a liability if they took me.

Rex:

We're still making our way towards where you are now. I think there is one more step in between. It sounds like you didn't end your career at Delta as a flight superintendent. Tell us about that final stage of your time at Delta. And then how you went from your master's degree to what happened next.

Matt:

Well, actually, Rex, there's a lot of territory in between 1984, which is when I transitioned over into flight control, to 2008, when I retired from Delta. I was about, I don't know, three or four years into my time as a dispatcher, when I got asked by one of our supervisors, if I wanted to participate in a special project. At the time being even more naive than I am today, I said, without hesitation, sure. That led into doing, quote, back office work. I did well enough at that back office work that had led into an offer to become a supervisor in the back office. I did well enough at that, that it led to a manager's position, which I held for about 10 years.

Matt:

And then in the mid-1990s, a series of events, which are too long and torturous to go through, took place, that resulted in me voluntarily going back to the line, quote unquote, so leaving management and going back to a line position as what Delta called a sector manager. I did that for about five years and then the new director of flight control at that time approached me and asked me if I'd consider coming back into management and working another stint, which I did. At that point in time, I held the very interesting title, System Manager of Flight Control Technical Services, and people would ask me, "Well, what does that mean? What do you do?"

Matt:

I would say, well, if it has nothing to do with aircraft operations, domestic, or if it has nothing to do with aircraft operations, international, or if it has nothing to do with flight control administration, then I probably have it. And so in that nebulous position of mine, I was responsible for the Delta meteorology department which had its own manager at that time. So he reported to me. The Delta radio department, the Delta navigation database group, and also for all automation and technical aspects as they impacted flight control.

Matt:

I got to learn a lot about automation systems and how it's all woven together. My act as a business technical liaison between Delta's automation folks and the flight control department. I did that for five

years. At the end of that time period, that was when Delta was going through bankruptcy. There were some high level administrative changes at Delta that resulted in me correctly or otherwise, concluding that where I was, was likely to be as good as it got for me at Delta. I just wasn't sure that that's what I wanted to do for the rest of my career. And so I opted to resign from my management job, go back to a position on the floor, this time as something called an ATC coordinator and go back to school, that was in 2005.

Matt:

As I did back in the 1970s, I was working full-time and going to school full-time—graduate school-full time. Three years later, I had my diploma and voluntarily retired from Delta at the age of 52. Being the person that liked to eat and was hungry usually three times a day, I decided that I really wasn't retiring. I was just transitioning to my next job, whatever that was. I looked around and got two very good offers. One from a small aviation weather contractor in the Washington, D.C Metro area called AvMet Applications. And then I got another job from a large manufacturer of aircraft avionics called Rockwell Collins. They're now known as Collins Aerospace. I decided to take the Collins job and moved out to Cedar Rapids, Iowa for a very long, very cold winter.

Matt:

I hadn't realized what basically at the time, 30 years in Atlanta does to your blood, relative to being born in Cleveland, growing up in the Boston area, and then working in Cedar Rapids, Iowa. I just didn't appreciate the cold life I was once used to, I suppose appreciate the cold. I began pining for warmer work conditions, and Kelly, another one of those lucky timing situations. I was working on an industry group with a fellow from the MITRE Corporation. We were co-chairing a subgroup together. I was in his office in McLean and after we got through work one day, he said to me, "You retired too quickly from Delta." And I said, pardon me, "What did you just say?"

Matt:

He said, "You retired too quickly from Delta. I was actually trying to make arrangements to make you a job offer from MITRE when you took the job at Rockwell Collins." And I said, "Well, Mark, I did want to continue eating and supporting my family. And so that did factor into my decision making." He said, "Well, I know, it's too bad you moved that quickly." And I said, "Well, situations change, maybe I'd be interested if you were to make me a job offer at MITRE." And so, one thing led to another, and a few weeks, months later, I had a very, very difficult, probably the hardest conversation I've had in my life with a boss where I've had to thank him for hiring me eight months ago and tell him that I was resigning my position and taking a different job, but I did then transition to working for the MITRE Corporation in June of 2009. I've now just recently celebrated the completion of my 11th year there and I'm in my 12th.

Kelly:

Congratulations.

Matt:

Thank you. It's been a good ride.

Kelly:

So for your job at the MITRE Corporation, the weather portfolio advisor, what level of education is required for that? Is it a master's degree? You needed the master's degree that you had in order to get that position?

Matt:

No, actually, frankly, it's much simpler than that. I felt I needed the master's degree to be competitive with all the really smart people who are out there trying to gain jobs. At that time I was an early 50 year-old, with a master's degree. I felt I needed it in order to be competitive with all the other people who are out there looking for jobs in the aviation weather arena. At MITRE, sorry I'm going to have to get into the weeds here a little bit. MITRE is a nonprofit or a not-for-profit company that manages and runs federally funded research and development centers, known as FFRDCs. You've probably heard of some of the other FFRDCs that are out there.

Matt:

MIT Lincoln Labs is the US Air Forces' FFRDC, NCAR is the weather FFRDC for the National Science Foundation. Los Alamos National Lab is an FFRDC for the Department of Energy, I think. MITRE actually manages seven FFRDCs. One of which is known as CAASD, which stands for if I don't butcher this, the Center for Advanced Aviation System Development. That's the FFRDC that I primarily support and our federal sponsor of CAASD is the FAA. The FAA divides itself up for the purposes of organizing its work into portfolios. There is a portfolio called the National Airspace System or NAS infrastructure portfolio. And the NAS infrastructure portfolio is where all of the weather work that the FAA either does itself or funds other organizations like NCAR and AvMet Applications to do.

Matt:

This is the portfolio where it is managed. What my role is as an advisor to the folks within the FAA, Next Gen Directorate, who look after the NAS infrastructure portfolio. I advise them on basically the weather matters within their portfolio. I am a non-FAA, trusted partner, weather subject matter expert for these folks within the FAA that manage these projects. To your question, do I have to have a master's degree? No, but 65 to 70% of the employees at the MITRE Corporation have either graduate or doctorate level degrees. So in order to even be, I think reasonably considered at MITRE, I felt I needed that degree.

Matt:

Mine happens to be in meteorology and aeronautical science. MITRE has a handful and I mean a single handful of meteorologists. I can think of one, two, three, maybe four degreed meteorologists at the MITRE Corporation right now, plus an additional number of people who are by virtue of their jobs, weather subject matter experts within their aviation weather field with expertise. But I became almost by default the weather portfolio advisor by virtue of being this guy who knows a good bit about aviation weather and also about aeronautical sciences in general.

Rex:

I'd like to ask you, maybe going back all the way to your undergraduate degree in meteorology, were there any classes that were not in your strict curriculum requirement that would have been helpful for you or for other students in the aviation field, that you could think of? You had mentioned those liberal

arts classes that at first you thought weren't really in your interest, but then you thought back that maybe some of those might have been helpful for you.

Matt:

I have the benefit of lots and lots and lots of hindsight. I'm happy to talk about that. At the end of the day, as an aviation weather forecast at Delta Air Lines, it was my job, my function to communicate to our customers who primarily were the aircraft dispatchers and the pilots of our flights, the forecast that I was putting together. At the end of the day, as we all know, weather forecasts are uncertain. Sometimes we present them deterministically. Sometimes we present them probabilistically, but at the end of the day, there's always uncertainty associated with that. There ends up being a skill that you end up developing on how to communicate that uncertainty while delivering an appropriate forecast message. This is the same stuff that the [National] Hurricane Center grapples with.

Matt:

This is the same stuff that broadcast meteorologists grapple with, that our fine forecasters at the WFOs grapple with, is how to take this forecast that is by its very nature uncertain and provide good information while still relaying that uncertainty or the fact that very few of these forecast are 100% certain of anything. That would have been a really interesting and good non-STEM skill to get more training on. Same thing with human factors, which again, with the benefit of age in hindsight, is so important in how we prepare and present and communicate forecasts to our customers. Again, I could be the best forecaster in the world and technically, or as measured by objective verification techniques, my forecast can be the best in the world.

Matt:

If I don't have a good effective way of communicating them, then I might as well not be doing what I'm doing. That's one area that I think on the non-STEM side would have been really, really useful to know more about and to learn more about well in school. Just as I have, I have a theory that there are two flavors of meteorologist, I also have a theory that the world unbeknownst to us is run by two classes of people. They are statisticians and electrical engineers. Now, electrical engineers bring in an engineering rigor to the table that very few other disciplines I would argue do so. Statisticians have this way of looking at certainty and at probabilities and at what these numbers really mean, that I wish understood better.

Matt:

I'm involved in just a fascinating project right now where we're quantifying explicit uncertainties associated with terminal wind forecasts, be they from TAFs or from the LAMP, or even from a numerical weather prediction like HAP. At the foundation of this work are statistical methods that I've read about, I've heard about, and maybe even in graduate school, I did a little bit of, in support of my capstone project and some of the other classes that I took, but gosh, the machine learning, artificial intelligence statisticians that I'm working with right now know so much more about that. It is so applicable to the work that we do that I just frankly wish that I knew a little bit more about it and could apply it more successfully.

Matt:

There is another area that if I had it to do over again, I would probably grudgingly take more statistics in both undergraduate and grad school. Finally, let me say that, if you're a meteorologist and you can also

code well in Python or R, I know how to spell Python, and I'm especially proud of knowing how to spell R. That is a combination that is really, really hard to beat and really useful in today's day and age, in my opinion.

Kelly:

Matt, could you give us an idea of what a typical day on the job is like for you at the MITRE Corporation?

Matt:

As I mentioned, I'm project lead on this very interesting terminal wind translation, automatic optimization project right now. I'm also task lead on another task having to do with pilot reports and the reconstitution of the FAA's weather community of interest. I'm a subject matter expert on a task involving trajectory based operations and a user engagement piece with it. I'm also the—as I mentioned earlier—the co-chair of the friends and partners of aviation weather, and I'm also currently the chairman of the American Meteorological Society's Aviation Range and Aerospace Meteorology Committee. Between those five things, there's always something going on that requires a meeting that, that requires some interfacing with people.

Matt:

And so my day at MITRE is comprised of sometimes more meetings than I'd like, but a fair number of meetings, it's comprised of reading and or writing on certain topic areas or developing certain presentation materials, or technical reports that we collectively would call deliverables that go with our projects. It's involved with coordinating across different entities within the FAA, the Weather Service, some of the labs like NCAR, Lincoln Labs, the National Weather Service research arms on topics of mutual interest. In essence, I tell people that I get paid to read, to write, to think, to speak. Since I really don't mind doing any one of those, you could probably already tell that, and I get paid for it to boot, I'm just perfectly happy doing what I am right now. This fur-lined rabbit hole that I've found myself in, Br'er Fox, thank you for throwing me in. I do appreciate it.

Rex:

Reading, thinking, writing, speaking, what do you think you'd like most about your job out of those categories or is it something else entirely?

Matt:

It's probably the speaking, it's probably telling stories. What I am, I have another colleague at MITRE who is just, he has such a sense of imagination and he can imagine futures, and the weather component in it, and how many neat research threads there are in this. He can turn that into a business development effort, seemingly in just a heartbeat. I know it's not just a heartbeat, but it seems like it to me. I consider myself to be almost devoid of imagination as compared to him. What I am pretty good at, is connecting dots. I've done a lot of things in my career. There's a lot of dots out there for me to connect. I like thinking about those and connecting those dots, and then I like bringing together the people that could help forward, improve an idea, mature an idea based on these dots being connected and working on that angle.

Matt:

I like that a lot. So is that the speaking part or the thinking part or the reading? It's probably a little bit of both, Rex. I'm not sure that I could absolutely say one over the other. I don't mind public speaking. And

for folks who do, it can be, I would say a career impediment that would probably be worth perhaps, again, doing some work on trying to mitigate to the extent that you can. I know speaking is not for everybody. I just absolutely don't mind getting up in front of a bunch of people and yak, and it should be clear by now that that's the case.

Kelly:

What types of challenges do you encounter in your position?

Matt:

Weather as a topic area crosses so many organizational boundary lines and gets into so many lines of business, that we have to do a lot of coordination, that sometimes as a meteorologist you can't see the forest for the trees. You assume that everybody knows at least at some fundamental level what's going on meteorologically. Sadly this is not necessarily the case. And so you have to do more coordinating, more proselytizing, more, hey, I see that you're working on this. Did you know that this group over here is also working on that and can bring these things to the table? Because weather covers so many areas, it is by definition, cross departmental, cross organizational. It's just a very, very wide, wide ranging field, and it can be very difficult, sometimes frustrating, to get everybody in tune with what they need to know about weather.

Matt:

At the same time weather and meteorologists are almost always by definition, not decision makers, they are advisors. They provide guidance. They provide advice to people about meteorological topics. And then the decision makers, the aircraft dispatchers, the emergency management officers, the airport manager, the range officer and the mission control officer, they take the information and they make the decisions. Sometimes they make decisions that, both with the benefit of hindsight and lots of experiences of doing this, we wished they hadn't.

Matt:

It connects back to this notion of, we can have the best forecast in the world, but if we don't communicate properly in terms of what decision makers need, and in ways that they fully understand the implications and the risk reward that's at play, then sometimes they'll make the wrong decisions with what you thought was a pretty dang good forecast.

Rex:

Another question we always like to check on, is work-life balance, either at the moment in your current job or in the past, and how you've navigated that element of career?

Matt:

Wow. Well, I've been married to the same lady for 42 plus years, she has had to deal with a husband and father who was a shift worker on either 8 or 10 or 12 hour shifts on the front side of the clock, on the backside of the clock, who had to ask his wife if at all possible to please keep the kids quiet at 9:00 AM, because I'm trying to get some sleep before my next midnight shift. I know that's not easy to have done. I've worked those sorts of situations probably for 15 or 20 years of my career in total, to working as a manager, responsible for people and systems, which is an 8-5 job, which really means a 7-7 job and work comes home with you in your briefcase, to my current position where I'm not responsible for people directly.

Matt:

At MITRE, I'm on what is called a technical path versus a managerial path. I'm not responsible for people other than as I interact with them and work with them on projects or tasks that I lead. I'm a teleworker. When I started in MITRE, my hope was to be a teleworker from the very get go. My first boss, after we had had that conversation, I mentioned way back, in 2008, early 2009, my first boss had indicated to me initially that he thought that I could be a teleworker right from the get go at MITRE. Later he came to me, he said, I've talked this over with a number of people, and we all believe that it will work best for you and for us to have you spend some period of time physically at MITRE, before you begin working as a teleworker.

Matt:

And so for the first year, almost to the day, I worked locally at MITRE, in McLean, Virginia, outside of Washington, D.C and then commuted my way home most weekends. MITRE had a bit of a space crunch in early 2010 and asked its workforce, if any people had a desire to become a teleworker, this would be a good time to apply for it. Now, the agreement between thieves, that is between my boss and I, that we had a gentleman's and there was definitely not one gentlemen in the midst, that being me, but the agreement we had was that 18 to 24 months of working in-person ought to be just what the doctor ordered. And so here I was at the 12 month mark and I went to my boss and my boss's boss, and I said, "Hey guys, we said 18 to 24 months. It's 12 months. What do you think?"

Matt:

"Think I can make it as a teleworker? And if so, I'd like to take advantage of this opportunity, because who knows, it may not happen again for a long time." They said that they thought that I could survive as a teleworker with 12 months under my belt. I applied and was given permission to transition. And on Father's Day in 2010, my wife and I, and our 24-foot Ryder truck, had all my stuff from D.C. and we drove her back down to Metro Atlanta. I've been working as a teleworker from here, ever since 2010. What does that mean to me and my work-life balance?

Matt:

Well, it means that although my technical office hours are from 8-5 PM, more or less, the reality is that as long as I make all of my required meetings and get my work done and show up at the required times and put in the requisite number of hours per pay period, that I can more or less set my own hours. Tomorrow I have no meetings, first thing. I have a dentist appointment and I will just be out of the office during my dentist appointment hours, and then start my work day up a little bit later. Both of my children are now grown adults. I have no children or grandchildren here at home on a routine basis.

Matt:

I move my hours around as best suits my schedule, for instance, I'm working closely right now with some folks from Alaska who are four hours behind us time-wise. I have no problem doing work at 6:00 PM or 7:00 PM, or whenever, because it's either eat or do work or watch TV, which I do very little of, or listen to music, which I do a lot of. I'm happy to work late at night. My work-life balance right now is very much in my favor. I'm very much appreciative of what I have right now and what it enables me to do. I certainly wouldn't have expected to be in this place or could have done this early in my career. When I was gathering all these various and sundry skills and knowledge and abilities that I now have, but at this stage in my career, it's very flexible. It's very desirable and enjoyable as far as I'm concerned.

Matt:

People ask me, since I'm nearly at full social security retirement age, when are you going to retire? I say to people, well, as my old friend and colleague Ernie Dash told me, when I wake up in the morning, resenting going to work, and when I go to industry meetings and find I'm no longer relevant, then I'll know, it's time to hang it up. Meanwhile, I don't mind getting up in the morning and going to work. I believe until somebody disabuses me of the notion that I'm still relevant at industry meetings and they pay me reasonably well to boot. You know what, I'm just going to keep on riding this horse till its legs come off.

Kelly:

Sounds like you're in a great position right now, flexible and in your favor, so, hey, why not keep going? During your career, is there an event or anything specific that you would consider to be really exciting that happened to you?

Matt:

Exciting is such a loaded word, maybe interesting, in the curse sense of the word is more appropriate. Just coincidentally, when 9/11 happened, I happened to be the senior flight control manager on duty on that particular day. I watched with awe, absolute awe, as the dispatchers and pilots of not only Delta Air Lines, but all the other airline operators that were running that day together with the air traffic controllers and traffic managers that the FAA, managed to close down the national airspace system in literally one to two hours. In many ways, it's an experiment that nobody had probably done prior to that point. Nobody had simulated, and the experiment was run in real time, in real life. Sort of live experiment that we seem to be in right now in these very interesting times in which we live.

Matt:

But that was probably one of the most sobering moments that I can relate. I did mention in the written information I gave you, a situation that I had. In the mid-1990s, I was on a number of industry committees, including one called the International Air Transport Association, North Atlantic, North American Regional Coordination Group, or IATA NAT/NAM RCG, for short. I was the chair of that organization. We were at a meeting in which the concept of Reduced Vertical Separation Minimum was being debated. Reduced Vertical Separation Minimum, or RVSM, is the procedure that went into place about now 20-ish years ago, 15 years ago, where aircraft above flight level 290, used to be, have to be separated by 2000 feet, would have their vertical separation criteria reduced to 1000 feet.

Matt:

One of the first areas where this process was going to take place was in the North Atlantic, where there was just a crying need for additional capacity or additional airspace to be flown by all the aircraft that wanted across the North Atlantic, all basically at the same time and all basically on the same route. And so we the airline industry were pushing for the introduction of this RVSM process into the North Atlantic. The providers of air traffic services, the air navigation service providers, that is to say, the folks from the Shandwick area control center in the United Kingdom, the folks from the Gander area control center in Canada, the Reykjavik folks up in Iceland, the New York oceanic folks in New York center.

Matt:

They were all very nervous and very skittish about making this change, because there are a lot of technical and procedural things that were going to have to be introduced, almost all at once to a

workforce that I won't say is resistant to change, but that is reliant on doing things the same way over and over and over and over again, that's why they get so good, in part at what they're doing, that is the air traffic control community. And so we were at this meeting, and the first half of the day was given over to the air navigation service providers to tell us, the industry, why they couldn't possibly roll out RVSM on the schedule that had been laid out and that they had more or less committed to earlier.

Matt:

I guess I had heard enough of this and finally gotten it right up to here. We went to lunch, and after lunch we came back and it was our turn to argue why we needed to roll out RVSM on the schedule. I had just gotten just very excited by what I heard in the first half of the day. Gosh, I don't, Kelly, remember what I said that day, but I'll bet you, I said it very emotionally, and it must have been reasonably eloquent, because at the end of my time, trying to convince these leaders of these area control centers, why they needed to roll out RVSM on time, the head spokesman for this group who was a fellow named Miles Murphy, who was the ops manager at the Shannon area control center.

Matt:

He said to me, Matt, I don't know, if I could do an Irish accent I would, but I can't. I don't want to butcher it. So I'll just say it straight up. He said, "Matt, I don't know that you've convinced me or us that the schedule that's been proposed, that we will be able to keep to that schedule, or even want to keep to that schedule. But I'll tell you this." He said, "If I ever come over to the United States and God forbid should I ever get arrested for drunk driving, I want you to be my lawyer when I go before the judge." I remember that, as again, one of those, well, I don't know what I did, because I was probably so focused on making my point that I couldn't even hear what I was saying, but whatever it was, I said, must've been pretty good for him to want me to be his lawyer, even though I'm the furthest thing from a lawyer.

Rex:

Another question for you, Matt. What advice do you have for students or for early career professionals who want to follow in your footsteps in your career or in your field? This could be something you could tell them at graduation or something inspirational or something more specific.

Matt:

I don't know about following in my career per se, but in my case, not being pigeonholed as just a single thing has been a very useful attribute as time has gone on. I guess, a career philosophy, I would say, get very good at what you're doing, and don't be afraid to try to get very good at something else. In my opinion, for instance, if a person was to come to me and say, "Hey, I'd like to investigate or inquire about working at the MITRE Corporation. What you do sounds very interesting to me and I'm a meteorologist." My retort would be, "Is that all?" Because if that's all, you're probably not going to get hired as a meteorologist at the MITRE Corporation, you need to be a meteorologist and something, that other something could be a commercial pilot.

Matt:

He was the fourth. I could not think of the fourth, shoot. We have a gentleman working for us now as a part-time person, his choice, who is a bachelor's and master's degree meteorologist, an experienced aviation meteorologist, a licensed and experienced aircraft dispatcher. And he just retired after 30 some years as a pilot for American Airlines. He brings to the table, the whole gamut, from weather forecast, to dispatcher, to pilot in command. By the way, he was a management pilot for at least half of that 30

some year career at American Airlines, and took over my position as chairman of the NAT/NAM Regional Coordinating Group after I left there.

Matt:

There's a broadness, a breadth that he, and I think I bring to the table, that makes us attractive to a company like the MITRE Corporation, which is looking at applied meteorology and how weather works across the various lines of business at the FAA. That's a long way of saying, be diverse. Don't just be one thing. Be as diverse as you can be. In my opinion, is it better to be a master of one trade or a jack of many? I would definitely throw my hat in the jack of many rings. Speaking of many rings, what we do both at MITRE, at the Weather Service, at companies like Delta Air Lines with a meteorology department, that involves weather, involves somebody, somewhere along the line, writing code, creating apps or programs that leverage this particular area of the meteorology field.

Matt:

If you're a meteorologist who can write code, who is fluent in a Python or an R, or even VBS and Excel, there are so many things that you can do with that combination of skills, that make you very attractive in my opinion to either your current employer or to future employers that you might not have. I would certainly encourage that kind of combination. Another thing, with the benefit of hindsight I look back on and regret a little bit, I'm not doing this Rex and Kelly, because I'm sucking up for a job later on. I was not as involved in AMS early in my career as with the benefit now of hindsight, I wish I had been.

Matt:

I find the interactions through AMS to be very rewarding. I find the need for people to contribute to what AMS does to be significant. The contacts that I've made and the things that I've learned in being involved in the aviation range and aerospace meteorology committee of the AMS over the last several years have been significant. And so that's a regret of mine, that if I had to do it over again, I think I would stay more connected with AMS, with either the local chapters or the main organization and the annual meetings than I have in the past.

Kelly:

Well, we're certainly happy to hear that. Matt, we always ask our guests one last fun question at the end of each podcast. What is your favorite band or musician?

Matt:

If you'd look at my musical tastes over the years, and I just completed one of those goofy Facebook challenges where you put out your 10 albums without saying a whole bunch about them. I look at them and I think to myself, man, your musical tastes have gone all over the place. But right now I am enthralled with a three woman supergroup known as I'm With Her, which features Sara Watkins on fiddle, Sarah Jarosz on mandolin and guitar, and Aoife O'Donovan on guitar, and all three on vocals. They are just consummate female bluegrass country and just the most wonderful musicians. I could listen to them all day long.

Kelly:

Sounds incredible. I have to give him a listen.

Matt:

You should. You absolutely should. I'm With Her.

Rex:

Good to hear. Well, thanks so much for joining us, Matt, and sharing your work experiences with us.

Matt:

You're more than welcome Rex. It's been a lot of fun for me. I do enjoy gabbing about this.

Rex:

It's been fun for us too. Well, that's our show for today. Please join us next time, rain or shine!