

# Data with Dad

In celebration of Father's Day during the month of June, Michelle Dennedy interviews the man she likes to think of as the "Father of Privacy Engineering," her dad, Thomas Finneran, Sr.

Michelle Dennedy: My next guest and I go way back, to the beginning, well to my beginning, really. Thomas R. Finneran is no ordinary Privacy Sigma Rider. In fact, many in the industry refer to him as the father of privacy engineering, but I just call him Dad. Tom Finneran, as you'll hear in the podcast, has a long career and history in computing, starting from the very earliest days, and has had many, many projects dealing with data, data privacy, data curation, and data valuation. I think you're going to really enjoy our conversation today.

Michelle Dennedy: Cybersecurity, data protection, privacy. You like to stay ahead of the curve and listen to experts who are leading the way in deriving greater value from data with a more organized approach to data privacy. You're like us, just a few deviations past the norm. You are a Privacy Sigma Rider.

I am here with the founder of the feast, the A-number one honcho, the dude who is the origin of the species of privacy engineering. Please welcome my next very special guest. I will let him talk a little bit about his deep, dark past. My deep, dark past goes back 50 years with this fellow. It is my dad, Thomas R. Finneran Sr., the coauthor of the Privacy Engineer's Manifesto, along with myself and Jonathan Fox, and long-time computer genius. Dad, welcome to the show.

Thomas Finneran: Thank you. It's an interesting show.

Michelle Dennedy: It's gonna be even more interesting now. Dad, may I call you Dad?

Thomas Finneran: Please do.

Michelle Dennedy: I think it would be a little weird if I called him Tom during the interview. In your minds, dear listeners, pretend that I'm calling him Tom because he's probably not your dad.

Thomas Finneran: Though one never knows.

Michelle Dennedy: We're not gonna get into that history. This'll actually be like kind of a public therapy session for me, too. Everyone will understand now why I have a podcast called Privacy Sigma Riders and how I had no choice but to become a freak.

Thomas Finneran: I don't buy that.

Michelle Dennedy: Are you blaming Mom?

Thomas Finneran: No, definitely not.

Michelle Dennedy: Dad, let's talk a little bit about the origins of privacy engineering. Can you introduce yourself for the audience and tell a little bit about your background in computing and how you became interested in data and all of its wonders and splendors?

Thomas Finneran: When I was in 8th grade, I thought I would like to be a lawyer who worked on engineering.

- Michelle Dennedy: In your 8th grade, Dad, were there cars?
- Thomas Finneran: Yes, there were cars.
- Michelle Dennedy: What was the state of the art for engineering in compute?
- Thomas Finneran: Computing was the earliest computers that I had just read about and thinking this is really fascinating stuff. I just kept on top of that through high school and I studied engineering at The Ohio State University.
- Michelle Dennedy: Go, Buckeyes.
- Thomas Finneran: When I graduated I had two summer jobs working for the Department of Defense in Columbus, Ohio, and worked on inventory. It was fascinating. I had taken a Fortran course at Ohio State, worked on a 70/90 computer, and then worked on a Honeywell computer on my summer job. When I went to my first real job, complete job, was with the United States Navy as a civil servant. I took a management training program that the Navy put together for young people to get into and improve their management. They presented their inventory system that they were in the process of implementing. I found a mistake in the presentation and it was their Senior Planner Architect for this new system.
- Thomas Finneran: I caught a mistake in his presentation and he said, "How did you know that was a mistake?" and I said, "Well, I worked on it -- on this system that you're implementing at a DoD organization." He said, "You know, I don't want you in our planning group. I want you in our data processing group because they need somebody like you in their systems analyst group."
- Michelle Dennedy: That's good when a manager recognizes fit and talent.
- Thomas Finneran: Yes. He was a very smart manager, so I lucked out. Took programmer training, but they didn't make me a programmer because the program I wrote took control of the computer and we couldn't turn the computer off.
- Michelle Dennedy: It's UNIVAC.
- Thomas Finneran: Yes, it was an original UNIVAC. It's called a 490 and it was brand new, so the operators didn't know how to do things. We finally pulled the plug and my computer program went away. Then they decided that while I was the best programmer in that class they decided I was a systems analyst. We started there, working on this inventory system and a requisition processing program, some things that were gonna be used around the world. Then, of course, everybody was getting drafted at that time--
- Michelle Dennedy: Where are we in time?
- Thomas Finneran: It was the Vietnam era.
- Michelle Dennedy: Early '60s.

- Thomas Finneran: I decided I would go into the Navy Reserve because they promised they would keep me in data processing during my time in the two-year active duty service. I had orders to Southeast Asia for an aircraft carrier, but the Navy decided because I was project leader of this brand new inventory system they decided I had a critical skill and they ordered me back to the same job I had as a civilian, which was very interesting. I then went and took a job at the Standard Oil Company. I started concentrating on database design.
- Michelle Dennedy: Now we're moved into the punch card era.
- Thomas Finneran: We were in the punch card era, but we were actually starting to move into the ... we actually had tapes at the Navy at the Electronic Supply Office where I worked. They were metal tapes and the operators, including the ladies, had big muscles because the metal tapes were very heavy. Anyway, we were evaluating database management systems at the Standard Oil Company and that was one of my big jobs. That got me into being a database person.
- Michelle Dennedy: You're talking Standard Oil, already a really intricate business model, lots of distributors and an interesting business, so what was the objective of the data manager and the database at that time? We're still in the late '60s, early '70s at this point.
- Thomas Finneran: What we were pushing was modern stuff at that time. That was basically every program should work off the same database. You would have an enterprise database that we worked on.
- Michelle Dennedy: Kind of your data source of truth.
- Thomas Finneran: We started putting that information about it into data models and the metadata in the data models were put into what we call data dictionaries.
- Michelle Dennedy: Mm-hmm, I love a good data dictionary even today. We don't have enough data dictionaries anymore.
- Thomas Finneran: No. A number of companies, including IBM, tried to build one and what they built wasn't as good or complete. We'd have to kinda build our own. Basically, the data dictionary is just another database.
- Michelle Dennedy: Right.
- Thomas Finneran: I built data models for the data dictionary. In that database, we would have what we call data entities. In the book we call them business objects, but they're the same thing as these data entities. That's basically a group of data like an order or a customer or any number of things, including a role that people play, a role that a business plays and they can be the same role. Each one of those roles have rules. If you look in the book, you find that's the data model for privacy, basically. You have privacy rules for the various roles that people play within the whole enterprise. That's what we were working on. One of the things in the '70s or so, we started looking at the various attributes and the attributes about like and order was it'd have a name and it would have a description, and then it would have relationships to order line items, and those line items would then tie into the products that you were selling, and these types of things.

- Thomas Finneran: Well, after we figured out what the standard attributes were, I started putting that into a best practices form that said when you're doing data modeling you should have these types of regular data attributes, and I started thinking about it. You should have a data attribute related to the attribute that is privacy oriented.
- Michelle Dennedy: Right.
- Thomas Finneran: Each attribute may or may not be relevant to privacy, and so we had kind of a score of how relevant is this to privacy and we talk a little bit about that in the book. We also talk about it in an article I wrote on privacy in the data analysis network. Anyway, TDAN--
- Michelle Dennedy: dot-org?
- Thomas Finneran: No, dot-com.
- Michelle Dennedy: Okay, TDAN.com. We'll have to make sure that citation is in the resources, link to the page.
- Thomas Finneran: Which is where there's all kinds of terrific data-oriented articles. We're starting to talk about looking at privacy and also, by the way, looking at security attributes because we know that security is nothing but a part of privacy. Everybody knows that.
- Michelle Dennedy: Yeah, some people see it the other way around, but we know from our data models which egg came first.
- Thomas Finneran: Yeah.
- Michelle Dennedy: When you're talking about in Standard Oil and the beginning of these data libraries there was governmental privacy laws in jurisdictions. The 64 Act in the U.S. had been passed and the OECD was just tuning up the fair processing principles. There was a book actually that we had at our house when I was a kid, it had a cartoon on the cover, I still have it, it's called The Right to Privacy and it was written in 1974 about what happens when the government has too much information about you as you roam around the city. It's not talking about IoT, this is 1974, but governmental monitoring and what does that mean vis-a-vis a right to privacy.
- Michelle Dennedy: A lot of these more modern conversations where we're labeling it with privacy or data protection really started to make their resurgence in 2000, but way back when these are the same rules. How did that all fit in? Was it intellectual property? Were they looking at just getting efficient use of data? How did we get beyond hardware/software and really get to that data layer as a business rule that you were creating at that time?
- Thomas Finneran: When we wanted a piece of data to be the same throughout the whole enterprise ... because, at first, if you were in the distribution department you'd have your database and in the order entry you'd have your database and they'd have the same data entities, but they'd also have the same data attributes, but they would have different definitions because different people would be writing them. We tried to come in with data administration and data dictionaries so that attribute meant the same thing throughout the whole enterprise and a number of us were kind of ahead of the industry and were kind of writing things. People like Barbara (Barbara von Halle) and John--

- Michelle Dennedy: Bob Steiner.
- Thomas Finneran: Bob Steiner and John Zachman, we were all kinda working on--
- Michelle Dennedy: Tom Redman out of Bell Labs.
- Thomas Finneran: Yeah, although we did some work with Bell Labs and they kinda saw our work and saw it was good. That's what we were seeing, and then when I went into consulting and I went to work for AT&T as a consultant and BellSouth and--
- Michelle Dennedy: You did United for a while, and Disney, and kind of every big brand. I think you--
- Thomas Finneran: Delta, Disney--
- Michelle Dennedy: Hit them all up. Mayo, you did that for awhile.
- Thomas Finneran: Merck.
- Michelle Dennedy: Merck.
- Thomas Finneran: AstraZeneca.
- Michelle Dennedy: Across all these industries and these multinationals they all have the same desire to use data more efficiently, to be able to communicate across silos.
- Thomas Finneran: That's right.
- Michelle Dennedy: I'm not hearing that this is like a flower child human right thing, this is business.
- Thomas Finneran: Yeah. It was definitely for business purposes.
- Michelle Dennedy: You're achieving a very human objective here, too. You're respecting the patients, you're respecting the travelers.
- Thomas Finneran: Yup, but putting attributes about privacy and even attributes about security, this was new.
- Michelle Dennedy: Yeah. It's still new. Can you believe it? In 2018 it's still new.
- Thomas Finneran: What happened--
- Michelle Dennedy: You know, people don't talk about this at home. I found that out a few years ago. This isn't normal Thanksgiving talk. Can you believe it? I don't know what they talk about, but this is what we talk about when we hang out.
- Thomas Finneran: Yes.
- Michelle Dennedy: Who are these freaky people not talking about data dictionaries?

- Thomas Finneran: Well, what happened was that we were basically bringing this to these really terrific companies and they were smart enough to hire us.
- Michelle Dennedy: That's good. Step one, hire the right people.
- Thomas Finneran: Yeah. Mostly as a consultant. I got a phone call one day. I was sitting in my office, which my office was by that time was in my home, and I got a call from a young lady who was a Chief Privacy Officer. She said, "Dad," that's what she called me.
- Michelle Dennedy: I had a bit of an inside track on this.
- Thomas Finneran: "We need privacy engineering." I said--
- Michelle Dennedy: "What's that?"
- Thomas Finneran: No, I didn't. I said, "Oh, I know how to do that."
- Michelle Dennedy: Yup. That's exactly what he said.
- Thomas Finneran: She said, "We gotta write a book", and I said, "Oh, I've always wanted to write a book."
- Michelle Dennedy: Do you still wanna write our second book, dad? We're working on our second one.
- Thomas Finneran: I'm working with you guys on the second one.
- Michelle Dennedy: Yeah. I know, remember after we published the first we went, "Oh my God, are we ever gonna do that again? I don't know."
- Thomas Finneran: I didn't do that.
- Michelle Dennedy: I didn't.
- Thomas Finneran: I wanted to go further.
- Michelle Dennedy: That's true. He was like, "Let's just keep going." Initially, we called it privacy engineering and I'm pleased that we didn't. First, because Ian Oliver was about to publish his book called Privacy Engineering, and we realized as we got down to it that because we talk about legal and business rules, converting those into requirement setting and methodologies, and then adding how to do value and company organization and reorganization, it really is a manifesto. It was the beginning of something. It's not a definite work by any means. It really is a battle cry I think.
- Thomas Finneran: I did forget to mention that besides being data processing, data analysis, a lot of my projects were data warehouse.
- Michelle Dennedy: You got an MBA and a JD during all this stuff, too. You kinda glossed over that.
- Thomas Finneran: Yes.

- Michelle Dennedy: Dad's a little ove- exercised in the mind.
- Thomas Finneran: I understood about privacy from a legal standpoint. At Corning Glass Works we talked about this type of thing, and my wife, your mom, was working as a lawyer on intellectual property. The three of us set up a software company that was rather successful. We had the deepest market penetration in IBM mainframes.
- Michelle Dennedy: That was a big exit, too, for its era.
- Thomas Finneran: Yeah, we had been through--
- Michelle Dennedy: Now we didn't move to Northern California and buy a bunch of land. We probably should've done that. That would've been a good call.
- Thomas Finneran: Walt did, but I didn't.
- Michelle Dennedy: Yeah, working for a living, but loving it.
- Thomas Finneran: Yeah, me too.
- Michelle Dennedy: I close off all my podcasts by saying, first of all, dad, we're gonna have to have you back on the show to walk through our methodologies.
- Thomas Finneran: It's in the book.
- Michelle Dennedy: It's in the book, but we need to teach the book. The book is the beginning.
- Thomas Finneran: We have found that out haven't we?
- Michelle Dennedy: Yes. We felt like this is so obvious, everyone's gonna sit down and read 465 pages and we're done, the market is done, we've done our good deed, and this is huge. But we found that there's a little more.
- Thomas Finneran: My thought is all they have to do was read chapters--
- Michelle Dennedy: Your parts?
- Thomas Finneran: Yeah.
- Michelle Dennedy: Just read the stuff that Dad did and it's all good.
- Thomas Finneran: Privacy engineering methodology.
- Michelle Dennedy: The methodology is good. I think a lot of people try to skip over it, but take time in the manifesto and look at those pictures and those graphs and you'll be pretty amazed at what they reveal. Dad, here you are supposedly retired, working on another book with us. I don't think you're ever gonna really retire. What gives you hope in this industry? What drives you forward in the search for data and data goodness?

- Thomas Finneran: There's a lot of smart people thinking about this stuff.
- Michelle Dennedy: Yeah, from very diverse backgrounds, too, really.
- Thomas Finneran: Yeah, well that's it. Even in the book, the different types of folks that are interested in this thing. Of course, what we mean, when we started setting up data administration we wanted to have business people, we wanted to have hands-on people we wanted to have data analysts, database administrators, even the lead programmers, and the privacy engineers, all on our teams, to work their way through. We talk a little bit about that in the book. The fact that we're working toward that means that there's gonna be a lot of broad thinking about it, improvements of the process, although I'm not sure they can improve all the process.
- Michelle Dennedy: All of dad's stuff is pretty sacrosanct.
- Thomas Finneran: Yeah, but there's just so many things that are happening. The fact that Europe is ahead of us--
- Michelle Dennedy: In the U.S.
- Thomas Finneran: The fact that we're gonna have to learn from Europe and they started learning from themselves with the--
- Michelle Dennedy: The new GDPR [General Data Protection Regulation].
- Thomas Finneran: GDPR, and it was done in Ireland, which means it had to be smart. All these things give you optimism that this important area, this area that helps people and protects people is going to continue to improve.
- Michelle Dennedy: I like that, good answer, Dad. Your first podcast.
- Thomas Finneran: Of course it's a good answer.
- Michelle Dennedy: I like your confidence.

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## Resources

[trust.cisco.com](http://trust.cisco.com)

[TDAN.com \(The Data Administration Newsletter\)](http://TDAN.com)

[The Privacy Engineer's Manifesto](#)