## Supporting The Design Engineer (Part 1): Life Before Covid

*by a member of the OT Club*

In the electronics industry, Covid has had a significant impact in accelerating trends that were already in motion. In other words, the changes I am about to describe were already occurring, only slowly. But then the arrival of Covid with all the associated corporate rules, policies and regulations that followed, fast forwarded the change in the ways that FAEs at electronics companies and others interact with their customers' engineers. So, changes that probably would have taken a decade or more without Covid took effect in just a few months to two years.

Before we proceed, I'd like to define some terms relating to the electronics supply chain that will be central to this discussion. First, a component company is the company who makes the components or devices that engineers might use in their designs. A rep or manufacturer's rep acts as a sales agent under contract for a percentage of the sales of that component company. (Where the sale takes place is key). A distributor sells components at a margin—they buy the parts and then sell them for more money than they bought the parts for.

It used to be that distributors stocked the parts, but those days are over for the most part—unless you are a company, they care about enough to stock anything. But more typically they have made sure the parts are already sold, on consignment or already allocated to a customer they care about. The public supply chain distributors are measured by Wall Street on "turns" (stock rotation), like bananas at the grocery store. But regardless of their different roles, the component companies, reps, and distributors have one thing in common: Making money and tracking your projects is now more important than serving customers.

The changes being discussed here all relate to how the customers' engineers want to be supported by the supplier companies, what modes of communication are now acceptable or unacceptable, and whether the component company management's obsession with tracking of business opportunities has any place in the post-Covid engineering world.

To understand how things have changed, we need to set the stage by remembering how component companies and distributors used to interact with customers back in the 70s and 80s, and how that started to change in the 90s and early part of this century. Here in part 1, we'll go through what happened in these eras to create the conditions that were present when Covid hit.

Some of these points were discussed previously in the earlier series in FAE Confidential, "The War on FAEs". But here we'll look at the issues with the goal of explaining why the engineer-customer at OEM companies does not want to deal with reps or people from the supplier companies or the mainline "brick and mortar" distributors. After examining these pre-covid conditions here, in part 2, we'll examine how things have further changed in the post-Covid era.

### Customer Support In The Early Days

First, the 1970s-to early 90s. A supplier visit to an engineering customer usually involved at least three people coming to visit. Everyone from the supplier team was taking notes profusely as if every word the customer uttered was gospel. Usually, the needs of design engineers were articulated as "Do I have the latest data books? If not, can I get them?" That usually meant a stack of them, depending on the company. The engineers' other request would be "Can I get samples of the following parts…?"

In this scenario, the visitors were usually a distributor salesperson, a branch manager for the distributor and a component company person traveling with them. As a customer, if you were lucky, one of the people writing things down would bring you the databooks and samples you requested. Typically, it was the distributor salesperson because the suits were far too important to do that follow-up work. But these interactions were valuable for customers because the only way to find out about new products was if distributors or suppliers brought you the news. Or you might read something in the printed magazines of the day, which were almost the thickness of the databooks.

Meanwhile, the component companies who were sending their people to meet with customers did not have great expectations of what information would flow back to them because of such meetings. Reports to superiors were handwritten—if they even wanted reports at all.

Then, during the 90s the world changed. The customers stopped building things themselves for the most part. Contract manufacturing emerged and the supply chain and design chain started to diverge. Moreover, contract manufacturing turned into a sea of global options and the buyer at the OEM either managed the CMs or went away. The divergence of the design and supply chains continues to this day and has only accelerated.

The component suppliers responded by making made one slight modification and that was to stipulate that anyone making contact with customers (company sales people, reps or FAEs), must track everything they do to get paid. This point is key because people maximize their efforts according to whatever their pay plans tell them to do. In this case, it meant that people within component companies and distributors (including FAEs) began shifting their focus away from serving customers. It should be noted that FAEs didn't want to do this but were forced to by the "professional management".

The emphasis on tracking that began in the 90s happened because all organizations were becoming infested with finance and operations people, and they of course are never encumbered with knowledge and experience in how things get done in the real world or technical knowledge of any kind. Instead, they want to know the cause and effect for everything that happens *in the organization*. This trend was occurring at the distributors, the suppliers, and even the customers' companies.

This big shift in how companies were run laid the groundwork for how business is conducted today. In the 90s, the emphasis on tracking was reflected in the fixation on CRM tools such as Siebel. That tool was replaced by the dashboards and ERP software of today from companies such as Oracle, SAP and Salesforce.com.

It's also important to note that during this time the distributors stopped having branches with parts in stock where you could run over and pick up parts at "will call" and they "hubbed". This means parts, if they are even stocked at the supply chain distributors, will be shipped from a central location.

The distributors also changed their policies on providing technical support—if any were provided at all—as well as sales support. In either case, support would only be provided if the distributors could follow the money trail and figure out where they might be able to fit in. This meant that any FAE resources from the distributor would only be allowed to support customers for which their finance guys could track cause and effect completely and for customers who bought into the dream of the provided services they offered. These changes were spurred by new corporate policies put into effect because of industry consolidation. Starting in the 90s, just about every distributor worth having was being acquired by the big two publicly traded distributors.

These days you probably have not been visited by a distributor salesperson unless you are a customer that buys things in huge volumes, or you are a CM (contract manufacturer). That's because, in addition to distributors wanting to track all business, the industry has instituted "registration programs" dictating that FAEs only focus on registerable proprietary products as designated by suppliers. So, when it comes to the big three distributors in North America, if they can insert themselves into the money trail and if they can sell registrable parts and can track all sales, then you might see a distributor FAE or salesperson. Otherwise, you will not. In other words, it's all about tracking and money.

But be advised that if you do see a distributor FAE and say a code word like FPGA or microcontroller, they will document the discussion and "register" everything in that category on their line card so whatever happens they can track your "opportunity". The supplier provides guaranteed additional margin and can windsock to whatever you pick that they sell.

Windsocking is the fine art of figuring out the direction the wind is blowing and going that way. So for example, if the distributor gives the customer 12 options and that person picks one, the distributor tells them that it was the best one all along. So once again the pay plan and measurement and reward system make people do crazy things that have nothing to do with the way design-ins and business happen today. The pay plans are leftovers from 1980s and companies refuse to change them.

The executives are worried about stock price, quarterly numbers, dashboards on Salesforce.com and data of all types. Customers, technology and business are way down the list of things to think about since they are doing the "forward-thinking thought-leadership thing"—whatever that means. But this lack of attention to customers and what's essential to doing business will have consequences. The executives today seem unwilling or unable to embrace the complexity of today's electronics marketplace—yet these are the same people who are savants with complex spreadsheets and data. This has always baffled the OT club team (a group of seasoned FAEs).

Since the executives can't make any decisions without more data—and there is never enough data (that little or nothing is ever done with)—they may soon find themselves incapacitated by having no data with which to make decisions. Customers are finding innovative ways to get product information without providing the tracking

information because they don't want to be bothered. Meanwhile Digi-Key and Mouser, and to a lesser extent Newark, (these three are referred to as the digital channel) provide the parts and data that the engineers need. Nobody else understands the way engineers really work.

What these digital-channel distributors have learned is that what the customers really want is fast accurate data and access to reference designs and immediate inventory to get them kick started. The customer can obtain whatever they want without the inquisitions and interrogations (they don't have to be "qualified").

The website now is king and reference designs rule the day. Engineers need to be supported in all these cases. But with the pay plans stuck in 1985, anyone contacting customers from the big distributors or component suppliers will be simply collecting data. We have trained customers to not want to see suppliers because the experience is painful, and the meetings will not be about the customer. It will be about data and "the funnel".

For example, if you call a company to get samples you will be asked a million questions: Where will it be built? What is the project name? What CM are you going to use? Is it a customer PN or could we make one for you so I could track it? What's the EAU? What's the run rate? When will you go to production? What's your puppy's name? What kind of cologne does your significant other wear? Then we must have a meeting with you so we can ask even more questions to prove to our management that the supplier-rep or mainstream distributor is doing something.

So why would an engineer ask for a sample? Is that data being collected by someone to qualify the opportunity such that if it's not big enough you won't get any samples? Why would anyone want to sign up for calling a company for that discussion about what's in it for them when there's nothing in it for the customer other than the samples, evaluation board or information you need to design with—and all these things can be obtained by other means with a few mouse clicks and no wasted time.

What I would do is what engineers are doing. I would just go to online to Digi-Key, Mouser, RS or Newark and place an order, or look for alternatives if what I am looking for isn't in stock. If engineers *order* prototype parts, rather than requesting samples, nobody bugs them. When contacted by component companies or distributors, I would hide and tell everyone that emailed or called we are working from home and on strict Covid lockdown from now until the end of time—leave me alone so I can work.

Which begs the question: if an engineer goes online and orders parts and there isn't someone there to track it, is it still a design win? Be prepared, component companies, to run your businesses without much or any data. The engineers want us to build a vending machine with parts and data. They don't want a Ferrari dealership where they must interact with humans asking a million questions to get anything done.

So because of all the trends described above, even before Covid, engineers didn't want to meet with you if you were a distributor or OEM. However, they would sometimes meet with reps because the reps have not gone 100% business stupid like their suppliers.

In part 2, we'll continue the discussion by exploring how Covid has further changed the expectations of engineering customers as well as what the customer companies are doing to take advantage of the ideocracy.

**References**

1. "The War On FAEs (Part 1): Remembering When FAEs Ruled"
2. "The War On FAEs (Part 2): New Management Brings Benign Neglect"
3. The War On FAEs (Part 3): Management Shifts To Active Aggression

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