

Sol Gradman asked me to write up something about DAC 2013 so I guess I should. Actually that's how things have been going this year. I've been so busy doing research that the only time I stop to write something is when someone asked me to, which was the case in my last Industry Note. Some of my friends at Intel asked me to write down a conversation we were having so I wrote the *"Intel, a Modest Suggestion"*.

The Austin DAC

Probably only Peggy Aycinena will understand all of this. As some of you know I study Classical Taoism. One of the foundations of the Taoist philosophy is that confusion started when we started to name things, and this came to mind quite often at DAC.

First, for those that weren't there; let me give you a feel for what it was like in Austin. It was like being pushed off onto a double black diamond run when you don't know how to ski too well. It was like drinking from the fountain of knowledge through a fire hose. It was an unbelievable rush.

We are well into the ESL Design Methodology headed downhill rapidly toward full System Level Design. We are doing this with an unbelievable amount of complexity with a design task that seems to be as large as a galaxy. I got to talk to and listen to a lot of brilliant and many wise people that are trying to get a handle on this thing before it flies out of control. All of them working on their side of the problem: while I am running around the edges trying to connect the dots.

Maybe Some Examples Will Help

On Thursday I was having a conversation with Soha Hassoun, next year's DAC Chairperson. We are trying to make IP a more integral part of the DAC conference. Her frustration was that she attended two IP presentations. The first one concluded that the key to using IP was not to touch it. Buy it, use it but if you touch it, it'll break. The second talk maintained that the only usable IP was "modifiable" IP. Now you could take this to be two different competitive approaches to the market, but it wasn't. Both of these presenters were absolutely right. They just happened to be talking about two completely different things, but calling them both IP. As I said, we are tripping over our own semantics.

Here is another example. As you know I spend a lot of time working with my clients on competitive positioning. Right now I'm having a hard time convincing Intel that they are not competing with ARM. Recently I have been running around the edges of ARM trying to figure

out what they are. Since, as you can see for the last paragraph, saying that you are an IP company is meaningless. So what box do they fit into? At DAC it dawned on me that ARM is the prototype for the new Integrated Circuit Company. You noticed I didn't say Semiconductor Company. That was for three reasons. First they don't actually produce silicon. Second we may not be making integrated circuits out of silicon or for that matter any semiconductor in the near future. What they produce is ones and zeros. What material that is made out of will be figured out by the scientist in the relatively near future. Third I expect that in the relatively near future a lot of Semiconductor vendors will be making a large percentage of their dollars selling soft Integrated Circuits like ARM, rather than just selling ICs. That means we are going to have to rename a lot of our categories.

So what is Intel? Intel and IBM are the two companies that are now the foundation of the electronics business. Fortunately Intel has now made the decision to stay in that role. Bell Labs was the third leg of the stool but they are gone now so we are looking for someone to take their place. TSMC, with the help of IMEC, are trying to fill that position but it is too early to tell if they can make the grade. It takes an extremely large amount of money to step up to that position. Samsung is a possibility but my guess is that they are looking to join Apple in the Super OEM category. Hopefully Sony can regain their spot in that category also. Samsung can't do both so sticking with IBM is their best choice. Japan could do it if they can get organized enough to wrap a consortium around the process development capabilities of Fujitsu. They do have the technology. The other possibility is China. I expect that they will do it, however it takes a good twenty to thirty years to develop the capability.

To wrap this up, what I got from DAC 2013 is a glimpse of the future. The world of Electronics is changing and it is changing rapidly. If you didn't attend DAC this year you missed quite a show. You can still go to their website and download the presentations to get a feel of what was going on. Still if I were you I wouldn't want to miss the next DAC. See you in San Francisco in 2014!