encourages this. They like to plan 10 years out and what they're planning is large-scale integration with enhancement mode gallium arsenide. They want to skip the interim step of making these crude circuits that I'm talking about because they don't see that there will be a long enough term to be worth the effort. By skipping this phase I think they're missing something. You learn a lot by actually doing and I think they're missing the boat here.

I looked around a little more--I'm digressing from your question--I hope I answered it. There is another place in the United States that does make circuits like Gigabit Logic and that's Rockwell International. Now that's hardly a surprise because that's where these guys came from and sure enough, Rockwell is interested now too. I think they're all interested because they read the newspaper that Cray Research is going to make real computers. It's interesting to see how attitudes change. There's another area where this happened also and that's the memory part. We're making our CRAY-3 logic circuits out of gallium arsenide, but the memory parts are still silicon. There's no way right now we can compete in the memory area with gallium arsenide. As a result of the packaging requirements for using the gallium arsenide speed, mainly these very dense kinds of circuits, we can't afford to have packaged integrated circuits. We have to use bare die and bond them directly to the circuit boards in order to save space. In fact what we have to do seems very cruel. We have to grind the die down because they're too thick. Even without the package we grind them down in half to 12 mils instead of 25 to save the 12 mils so the computer won't be bigger. Most people find that mind-boggling in the integrated circuit business, but that's indeed what we do. When we went to memory suppliers and said, "That's great, but we want you to grind the die down to 12 mils and we want you to sell just dies, forget about your packaging," there wasn't a whole lot of interest. Here's a repeat story coming up. Tom Longo, who is a member of our board, and who worked at Fairchild, was starting his own company. He said, "You know, it would be kind of nice if you'd give us a little money for some capital equipment. We could make some of those parts you want that are just bare die and we'll grind them down and all that sort of thing." So we got started that way and the rest of the industry said, "Oh, forget it." Well, again, things have changed. This