

people from Chippewa to start this new operation so they're all being absorbed. I don't think anyone on that project lost their job. There's a little finishing up work which will be on the order of a few weeks, then I think everyone will have been reassigned to another project. I would say there won't be any CRAY-3 project work after the middle of October.

Q: The question here was inaudible. Seymour is picked up again in the middle of his response.

. . . by a factor of 4 power down by a factor of 2 and it looks like evolutionary packaging. We have to improve the density of our holes in the printed circuit board by the square root of 2. We're at about 14 mils now between holes -- it has to be 10. As Paul Schroeder, who is in charge of the printed circuit facility says, "Gee, I'm anxious to get going. I can do this for you right now and when can we get started?" Because of the move it seems like we're not quite ready and I said, "Please wait a few more months." But it looks like it could be a smooth evolution. The answer to your questions is, we've defined the CRAY-4 and what it should be, but we have not yet made any circuit boards. We know how to make the integrated circuits and Gigabit Logic is again anxious to do this. What it means is, whereas we're using 2 levels of metallization right now in our integrated circuits for the CRAY-3, we need 3 levels of metal for the CRAY-4. Gigabit says, "We're using 3 levels now in our own work and we'd be happy to have you start using it." Everything is in place and as soon as we recover from our short term transient, we're going to get right at that. I don't want to postpone the CRAY-4 startup.

Q: Have you ever written any software?

A: Yes, but it was a long time ago. It was for another company called Control Data for the 1604 computer when there weren't that many people working there. I wrote the Fortran compiler there that was delivered with the first 4 systems. It wasn't immensely popular and I'm sure it had some bugs, but it was an interesting experience for me. I had the most trouble with the math library because it was left 'until last. There seem to be an awful lot of arc tangents and cosines. I attempted to do those things, so I have an appreciation.

Q: Question inaudible.

A: Now there's an idea that I planned to mention myself. It's about time the