Ralph A. Niemann

Born 1921, Centralia, Ill.; died June 28, 1988, Springfield, Ohio; early computer user of the Harvard Mark III and supervisor of the NORC and STRETCH installations at the Naval Surface Weapons Center, Dahlgren, Va.

Education: AB, mathematics, DePauw University, 1941; MA, mathematics, University of Illinois, 1942; rector scholar, DePauw University; graduate of the Federal Executives Institute, 1970.

Professional Experience: Naval Surface Weapons Center, Dahlgren, Va.: staff member, 1947-1955, head, Warfare Analysis Department, 1955-1970, assistant technical director, 1970-1972, head, Warfare Analysis Department, 1972-1977, head, Strategic Systems Department, 1977-1979.

Honors and Awards: Navy Meritorious Civilian Service Award, 1970; Admiral John A. Dahlgren Award, 1974; Navy Distinguished Civilian Award, 1975.

"I went to DePauw University and got an AB degree in mathematics in 1941 and in 1942 went to the University of Illinois to get a master's degree in mathematics. Then I got taken into the Army for about 42 months, and after I got out of the Army I worked as a personnel officer at Valley Forge Hospital for about six months. One day I was reading *Popular Mechanics* and I saw that Aiken was building the Mark II computer for the Navy. I gave him a call. He said 'Yeah, come on up for an interview,' and when I got up there first I thought I was going to talk to Aiken. It turned out to be Dr. Bramble who was head of the Computation Department at Dahlgren. Aiken came in later and said, 'Can you use a pair of pliers and a screwdriver?' I said, 'Yes, I think so.' He said, 'Well, there are too damn many mathematicians that can't use a screwdriver and a pair of pliers.' He actually meant it, because over in the Gordon-McKay Laboratory there were people putting the Mark II together. So he had some petty cash there and he insisted on giving me some of it to go down to Dahlgren and get sworn in. I rode the Greyhound bus to Dahlgren and I said to myself, 'Boy, what am I getting into here?' I finally got to Dahlgren and got sworn in by the Personnel Office. Then I went back to Penneysville, Pennsylvania, where I was living at the time, and packed up and moved up to Harvard for six months. Later on I went back for another month when the Mark III was being built.

"They only had one programming manual. In fact they were using it all day so I would slip it out and make copies of it. So I made my own programming manual so that I could study at home at night.

"So then we moved to Dahlgren in February 1948—I came down with the computer. And then during the succeeding months there was a guy by the name of Heizer who used to be at the Census Bureau at one time, and he got a job offer somewhere and he left. And it turns out that everybody was leaving ahead of me and I kept getting promoted. Finally, I became department head and served about 22 years [in that position]. The Mark II is probably the one where I did most of my programming and then on the Mark III I did a little bit, but I didn't do any on the NORC."[1]

Niemann recognized the early potential for using computers to solve massive technical problems and led the implementation of cumbersome exterior ballistics calculations on a succession of "super" computers. Under

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[1] From an unpublished interview by. J.A.N. Lee and Henry S. Tropp, 1986.

Niemann's direction the department at Dahlgren led the field in the Fleet Ballistic Missile Program, and is credited with major contributions to the Polaris, Poseidon, and Trident programs.

QUOTATION

Regarding the Harvard Mark II: "It filled a whole room, and you could look at it, and see things going on, with a paper tape moving like a bicycle chain. You could hear all the clacking, and it was more impressive, in some ways, than modern computers."

BIBLIOGRAPHY

Biographical

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UPDATES