

REMEMBERING MILTON STEWART

The government-wide Small Business Innovation Research (SBIR) program would not have happened without Milton Stewart.

I can still remember my phone ringing at NSF in early 1977 when an Assistant Director of NSF called saying, “Milton Stewart is in my office with some ideas for the Small Business Innovation Research program and I am sending him to you.”

Milt and I found we had many common interests. We both had a history with small technology firms and venture capital, and an interest in the importance of innovation and technology breakthroughs by small high-tech firms resulting in rapid job creation and economic growth. We talked about the success of such firms in Silicon Valley and Route 128 around Boston, and about the possibilities for a new SBIR-type program.

The nation had just been through the Rust-Belt recession. Congress had directed NSF to initiate the RANN program (Research Applied to National Needs, established on February 1, 1971) that included small firms for the first time. The RANN program was terminated in 1977 and succeeded by the Small Business Innovation Research program because of their importance to innovation and technology breakthroughs the same year. SBIR focused on funding on high-risk innovative ideas that were too high-risk for small high-tech firms and private investors, including venture capital. It included small initial awards in Phase I for just six months followed by large awards for up to two years for the most promising results, and the potential to create jobs and economic results.

NSF was about to solicit proposals for the first SBIR funded ideas for 1977 awards. Milt suggested that NSF sponsor a conference before it's first solicitation for proposals and that this would increase the effectiveness of the program. He didn't stop there. The conference, he thought, should be at the National Academy of Sciences auditorium on Constitution Avenue. It would attract interest from stronger firms and the scientific community. He also suggested Ted Kennedy as the keynote speaker since he was head of the Senate's Science Committee with strong influence over the NSF budget and university research funding. How is that for starters to respond to a recession?

A couple of months later there was a full house at the National Academy. Senator Ted Kennedy was the key speaker with a talk that was memorable, humorous, and supportive. The fledgling SBIR program did immediately attract the attention of more scientists, engineers and small high-tech firms, those interested from other agencies and Capitol Hill. It was a great start for NSF's new Small Business Innovation Research program. Milt's mind was already thinking about potential legislation.

He asked me to meet with Jere Glover, then the Counsel to the House Small Business Committee, to describe the SBIR program. From the beginning, Jere was interested and also key to the program's legislative success. Right from the start he was laying the groundwork for NSF's program expansion into other agencies. He organized the first-ever combined House and Senate Small Business Committee hearings with extensive testimony by nationally recognized economists and academics with great research which documented thoroughly the outstanding contribution of small businesses to

the innovation process. These 1978 hearings provided the Congressional record needed to support Milt's legislative goals.

Milt made similar suggestions for NSF's second SBIR solicitation in 1978 for 1979 awards. Where was the next best place for an SBIR conference? Silicon Valley, of course! It was where hundreds of entrepreneurial scientists, engineers and small high-tech firms were located. This conference, too, was a major success. I remember that Milt got Gordon Moore, president of Intel, that had invented the microprocessor in 1971 and I talked with him as well.

Gary Hendrix, a computer scientist at Stanford Research Institute, attended the conference with some software ideas in mind. He joined a small firm, submitted a proposal to NSF that won a Phase I and then a Phase II award. The small firm went bankrupt in Phase II, but the project team spun off in Phase II into a separate company with NSF approval. Its new name was Symantec in Phase II in 1982. It immediately obtained \$3.5 million from the Perkin-Elmer venture group for Phase III and began buying more than 20 small firms of interest and one large one, Norton Utilities, while also being acquired by others a few times. By 1996 Symantec's private investment was 726 times the \$246,000 government investment in the NSF project. Symantec has since become the largest computer security company in the world. Even at the beginning Milt had two Perkin Elmer partners meet with the NSF director and other key people at NSF.

Milt soon joined the Small Business Administration as Chief Counsel for the Office of Advocacy late in the Carter Administration. He immediately discussed and then initiated plans for a major White House Small Business Conference in 1980 in Washington featuring SBIR. It, too, achieved excellent results that included a recommendation for legislation for SBIR to expand into all 11 agencies with R&D budgets of \$100 million or more. Interestingly, it was approved when we were once again in a recession, that of 1980-1982.

I think the SBIR legislation became his primary goal at SBA. Unfortunately, about 90 percent of government R&D goes to the defense industry, research universities, and national laboratories with less than five percent to small firms starting at just 0.25 percent for SBIR in 1982. They, their many associations and lobbyists strongly opposed SBIR for its entire history. Technological innovation and breakthroughs were not their priorities and Milt and I would say we are paying the price. Milt and Jere Glover organized Congressional hearings to support the proposed SBIR bill including one in the House in 1982 that had Stanford and the American Electronics Association opposing it while with the Electronics Association of California with Jim Conway and Terry Bibbens, from Silicon Valley and later an SBIR official at SBA, supporting it.

Even with all the opposition, the SBIR legislation as we know it today, passed in the summer of 1982 but at far lower levels than we had hoped. Milt and I both went to SBIR's signing-into-law ceremony by President Reagan on a beautiful July day on the south side of the White House. It was a major accomplishment that would not have happened without him.

We met more frequently for years, often for lunch, and with many telephone calls day and night. He also became a close friend. He set to work with long hours, attending conferences and meetings, and dedication to SBIR's goals. He was an outstanding Chief Counsel for Advocacy in spite of the strong opposition to increasing SBIR budgets by more than 2.5 percent by the powerful recipients of 90

percent of government R&D dollars – the defense industry, research universities, and the national laboratories, with their many companies, associations and lobbyists.

After his government service at SBA, Milt continued to devote much of his life's work to SBIR. He and his wife, Joan, formed the non-profit support groups for the SBIR program known as the *Academy of Technology Entrepreneurs and Innovators* and a related *Small Business High Tech Institute* . It later became the current *Small Business Technology Council (SBTC)* after the 1995 White House Conference for Small Business. Joan also made substantial contributions to SBIR with him, including his later years with his health problems as he remained active in SBIR nationally, and particularly in Phoenix where they chose to live.

The interagency SBIR program and all that it has contributed to our country and economy almost certainly would not have happened without Milton Stewart. We now have documented history of 28 years of the program, with tens of billions of dollars awarded to small technology –based firms, with tens of thousands of new innovative products helping to grow our economy with U.S. jobs – and with an incredibly fraud-free track-record and a highly effective use of the tax-payers dollars.

There have been a number of favorable GAO reports on SBIR and more recently a very positive report of a Congressionally mandated six-year-long National Academy study, *An Assessment of the Small Business Innovation Research Program*, by Charles Wessner of the National Research Council. It documents for all time the value of Milt's contribution to our country.

I am delighted to contribute to Milt's recognition.

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