

Dr. Miriam J. Masullo
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Experience:

inViVo Vision, Inc., New Canaan, Connecticut.

Founder and President, December 2002 to present:

- Founded and organized a research and solutions start-up technology company to focus on services and applications in the physical, engineering, life and social sciences, with the goal of providing an outlet for women and minority scientists, engineers and researchers to lead their own projects in an intellectually nurturing environment focused on internal and external mentoring of professionals and students.
- Developed the intellectual property for inViVo Vision over a two-year research and development process in collaboration with a selected group of industry and university colleagues. Produced the necessary peer-reviewed publications in support of inViVo Vision solutions. Reserved the methods patents to build the intellectual property portfolio of inViVo Vision. Built necessary start-up relationships with government, academic and industry partners to help launch the inViVo Vision suit of products and solutions. Presented inViVo Vision solutions at national and international world-class venues. Applied for SDB/8(a) status for inViVo Vision to more effectively participate in government schedules and procurement.

National Action Council for Minorities in Engineering (NACME), New York, New York.

January of 1998 to December of 1999, two year executive-on-loan assignment from IBM Research as Director, Educational Technology:

- Envisioned and developed the technical and business basis to provide advanced commercial and educational solutions for various minority engineering programs. The solutions proposed would deliver educational programs in an equitable and cost effective manner based on advanced telecommunications technologies, using set-top boxes, cable, data broadcast satellite and other delivery platforms.
- Proposed the *Texas Teledigital Community of Learners*, a position paper that describes an Information and communications technologies solution for statewide education access for the State of Texas, and as a prototype national solution to promote educational equity.
- Designed a solution for alternative assessment based on advanced data mining technologies, meant to identify talent in students that are currently by-passed by standard assessment tools. The system is being worked with Virtual Gold, Inc., and it was the subject of a monograph published by Johns Hopkins University. These ideas were presented by NACME to the Gates Foundation.
- Defined the requirements for various technical and academic publications associated NACME's work of 25 years of education and research in a new NACME Research and Development Journal and a book.
- Engineer and editor at large of the NACME issue: *Celebrating Minority Engineering of the IBM Journal of Research and Development*, 2000.

IBM T. J. Watson Research Center, Hawthorne, N.Y.

March 1985 to retirement in May of 2003, Senior Scientist:

- Director of the *EduPort Project*, the first networked media on-demand for education pilot (five years ahead of uses of the Internet and the Web in education (academia or schools). The first interactive networked digital library for K-12 education to run in a real-time network and to include digital video. This project was ten years ahead of its time and continues to be recognized as the most advanced demonstration to date of advanced digital and network technologies in education. Representatives from more than eighty-five countries have visited the EduPort prototype classroom at the University of Nebraska in Lincoln, Nebraska and Lincoln High School.
- Designed the first systems and communications infrastructure for educational curriculum access and assessment, first described and published as her Ph.D. thesis, the *Experimental Educational Environment*.
- Managed a large team of Ph.D. researchers, engineers, software developers and co-op students worldwide to create leading edge solutions for IBM academic systems based on EEE and EduPort.
- Senior member of the IBM Research team responsible for creating, promoting, and reviewing IBM's industry leading inventions in educational, communications and multimedia technologies.

- IBM Research member of the technical steering committees for university technology strategy at Marist College, the University of Michigan, the University of Nebraska and many other IBM academic customers.
- Co-designed an interactive Internet/Web broadcast system that does not require a return channel, as an ideal equity access solution for underprivileged and geographically remote users; and suitable for developing nations.
- Introduced the concept of Policy Management for technology (systems and software management) and non-technology (social science) applications and problems. Developed the essential elements of the concept of policy management for e-commerce.
- Developed and promoted solution architectures, designs, and requirements gathering for expert systems and object oriented systems for IBM network and large systems management applications and solutions.
- Designed the systems architecture for the software backbone of Project 2061 of the American Association for the Advancement of Science.
- Co-designed and co-developed a resource object data manager), the first object oriented in-memory cache for large-scale databases.
- Co-designed and co-developed YES-L/1 (the Yorktown expert systems language 1), the first production (expert) systems language for scale computing and large and complex problems.
- Co-designed and co-developed of YES-MVS (Yorktown expert system for multiple virtual storage operating systems), the first large-scale artificial intelligence (production) expert system.
- Co-designer and co-developer of KnowledgeTool, a general-purpose programming language for intelligent systems and IBM Program Product for special customers and applications.

NYNEX, New York, New York.

August of 1968 to March of 1985, Senior Manager, Information Systems Organization:

- Senior manager in charge of the statewide software update system and responsible for the management of a large department and large distributed staff.
- Introduced NYNEX to artificial intelligence and expert systems technologies for knowledge engineering in workforce reduction without loss of talent.
- Led and managed a cross-functional development and marketing team to drive new generations of software products with a then emerging marketplace oriented focus; maintained existing products to revitalize internal (inter-departmental) customers; created new internal customers (i.e., bringing new corporate areas to implement technology solutions); and ran the product maintenance process for the (internal) technology acquisition operation.
- Made significant engineering contributions, including crisis management for civil service response and state communications network outage response systems for cable failure command and control, technical support in an emerging computing environment.
- Developed a very early system for executive reports production, based on a natural language oriented syntax, to automatically generate SAS reports (statistical analysis system) from existing internal SAS databases.
- Designed and developed a system called PRODUCTS for automatic updates via the network of remote software "libraries" (i.e., computer file systems) across all NYNEX production systems (i.e., mainframe computing centers) in New York State. This solution was in a class similar to what we now know and have created as Internet/Web solutions.
- Designed and executed the first and most successful ESS (electronic switching system) Cutover in the history of the telecommunications industry.

Education:

- City University of New York, The City University Graduate Center, New York, New York, Ph.D. in Computer Science, 1991. Thesis Title: Exploratory Educational Environment for Computer-Based Education, (EEE). (This is the computer science architecture that is the theoretical basis for most computer and communications education infrastructure solutions in place today.)
- City University of New York, The City University Graduate Center, New York City, New York, Master of Science in Engineering, 1985. Thesis Title: Systems that Learn by Means of Artificial Intelligence.
- City University of New York, The City University Graduate Center, New York City, New York, Master of Philosophy, 1985.
- City College of the City University of New York, New York City, Bachelor of Arts in English, minor in Architecture and Engineering Science, 1973.