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Dave Iadevaia Has Eye to the Future With Light Sensitive Matrix Project

What is never said may never be known. What is never tried may never be done. Dave Iadevaia, an Electronics Technician in the Product Assurance Environmental Lab in Building 1 believes in trying, and tomorrow someone's life may be better because of his efforts. While obtaining the Electronics Degree he received from Rhode Island Junior College in June 1969, Dave became intrigued with the potentials of a light sensitive matrix as it could apply in use as an artificial "eye" for the blind. The principle has been applied in tactile (touch) displays that permit the person to "feel" an image on his skin.

Dave envisions the application demonstrated by his model that he built as a microminiaturized unit placed in the eye cavity that would transmit signals to the optical portion of the brain. The resultant image would be the sight of the wearer.

The current state of the art, both technologically and medically, obstructs the immediate realization of practical applications. For example, a good "picture" would require a matrix containing 50,000 light sensitive elements with 50,000 outputs built on a 1-inch diameter silicon wafer to form the artificial retina.

This matrix connected to an artificial electronic eye capable of seeing and following objects while focusing and regulating light would have to be small enough to fit in

the space once occupied by the natural eye.

The medical aspects are also formidable in achieving brain connections with the unit. Experiments in sending artificial "sight" signals to the brain have been crude and of little success in forming the "pattern arrangement" necessary to "see."

But Dave is not dismayed. He is of the new generation that does not recognize the "if" for accomplishment; only "when" it can be done.

He is currently a full-time University of Rhode Island Extension student and will attend the University of Rhode Island this Fall as a BA candidate for a Philosophy of Science Degree. He even has his own R & D Lab where he works on this project as well as experimentation with lasers and highway speed control systems.



ELECTRONIC EYE is demonstrated by Dave Iadevaia