

## **GARY CATLIN**

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Just before the team move to CA, I joined ESP in St. Louis, transferring from the “Gold Building” Silicon IC processing group. First task was to reduce LED costs by moving from hermetic cans to epoxy lens headers.

As Product Manager, Visible and IR Discretets, I had a clear directive to continue reducing costs and driving volume. Working for Ray Brown, and with the benefit of his extensive knowledge of high volume packaging, I successfully designed, developed and implemented in production a significantly cost-reduced, lead-frame based package named the MV-50. I had other opportunities to contribute to packaging these new devices—such as design and tooling for MAN-1 Displays for Eng-Hua Lim. For the MV-50, I designed a new chip metallization, to maximize the emission in the new smaller lens design. We had good equipment (lobe plotter) to assist in this effort. With increasing volume and new customers—I had many opportunities to correct a major cause of catastrophic field failures—they were plugging in the diodes as if they were lamps!

In April of 1970 I joined the startup of Litronix as co-founder #4, designing and implementing in volume production four product lines across the platforms of displays, opto-couplers, discretets, and special devices. Shortly after the photo below was taken, I moved our family from California to Singapore, expecting to live there for a year or so; however, the Singapore Government hastened our decision to put a plant in to Penang Malaysia by discouraging manual production activities—so after a very brief stay in that beautiful Island-Nation, we moved to Georgetown, Penang, Malaysia, where the new factory was the only the 3<sup>rd</sup> facility in the new Bayan Lepas Free Trade Zone. This “taste of the Lotus” lasted through a couple typical downturns, until we entered the consumer products business. The product life cycle and costs of marketing calculators, then electronic watches proved fatal and Litronix key leadership/directors turned down several good offers to purchase the company—insisting “we’ll kill the competition” (which of course didn’t happen!) Over 50 companies died in the consumer wars in watches and calculators—Litronix lasted longer than most. In 1976, just before the Siemens’ purchase, I left Litronix and moved on to the volume packaging world, using skills developed in that dynamic Asia-Pacific startup.

For the next 20 years, I racked up another million frequent flyer miles, as Pat patiently raised the boys and kept a semblance of order in our lives, while managing office broker for a 6-office realty firm! For 10 years during the ‘80s as Equipment Engineering and Automation Manager for Philips-Signetics worldwide, I had the opportunity to help drive the leading edge of high volume packaging and assembly. I visited nearly all of the key suppliers

of this equipment and specified/co-developed the volume equipment and automation for full-plant build of multiple factories with capacities averaging 1.2 billion devices annually. Philips-Signetcs sold off the hermetic capability in Bangkok Thailand, and I joined the startup that purchased this equipment—Alphatec Group, as VP Sales and Technology. Initially, I targeted 10 customers, closed 6, and filled the factory.

Other opportunities developed around experiences in key account sales and senior leadership. I worked for assembly-packaging capital equipment companies as VP product marketing, business development and technology, managing trade shows, closing key account multiple-machine orders and taking customer engineering teams to supplier facilities throughout Japan and S.E. Asia to confirm specifications, perform buy-offs and facilitate volume factory implementation.

Over the past seven years, I've worked to return some value-add to stateside assembly-packaging, directing an assembly engineering team for Plexus Electronic Assembly in Boise, Idaho, then following retirement in January 2011, working about half-time, in Business Development for that site.

Pat and I now split our time between Idaho in the Spring/Summer, and Arizona in Fall/Winter. We keep as frequent a travel schedule as possible, to enjoy our children and grandchildren. Fly-fishing, golf, and camping are our outdoor activities. Pat directs outreach programs for our church and gives tirelessly of her energy.

We celebrated our 50<sup>th</sup> anniversary on November 25<sup>th</sup>, 2011 and I now look forward to finally achieving a healthy work-life balance between the semiconductor packaging business and more involvement in Life!



Clockwise: Gary, Pat, Shawn, Lynn Catlin, 1971



Pat and Gary Catlin – Forty years later