

# COMPOUND SEMICONDUCTOR

June 2006 Volume 12 Number 5

CONNECTING THE COMPOUND SEMICONDUCTOR COMMUNITY



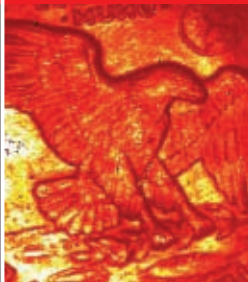
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## START-UPS

# Self-funding: building a business without the venture capitalists



## Felix Ejeckam: the CV

**1992** Electrical and computer engineering degree, Rice University.

**1994** Electrical engineering masters degree, Cornell University.

**1997** Electrical engineering PhD, Cornell University.

**1997–1998** Associate at McKinsey & Company.

**1998** Co-founder and CEO of Nova Crystals.

**2003** Nova Crystals acquired by Gemfire; co-founder and CEO of Group4 Labs.

Group4 Labs came out of stealth mode in February 2006, and has since publicly announced three GaN-on-diamond wafers for commercial and military applications. Visit [www.group4labs.com](http://www.group4labs.com) for more details.

Want to start up a new company, but worried about taking on financing from venture capitalists? **Felix Ejeckam** from GaN-on-diamond specialist Group4 Labs offers some words of advice.

When I was asked to write a column on building a business without venture capital, I thought it might directly and erroneously imply that we were already massively successful and have no need for continued funding. But then I realized that a lot of budding young entrepreneurs out there might benefit from our experience at Group4.

Three years since first registering Group4 Labs, LLC in California, our story is still unfolding. Though absolutely froth with the risky perils that plague all small companies, we have managed to become a successful, self-funded business without the benefits of traditional venture capital. In the US, venture capital (VC) is an incredible business-building tool that is almost without parallel in its ability to create substantial value quickly, efficiently and effectively. For those companies without the targeted billion-dollar market size, ace management team, all-cancer-curing product, or access to Svengali VCs, there are some funding alternatives to consider, while retaining the option to go out for VC funding later.

Our first source of financing in 2003 was (and still is) the would-be customer. We decided early on that we would not commence product development unless we could find a potential customer interested in co-funding it at an early stage. Our reasoning was simple: if we couldn't find a seed customer, we likely had one or more of a number of problems. Perhaps our proposed product was not strategically valuable enough. This might be due to a long product development time (five to seven years). The product may only be slightly more valuable than existing products, in which case a lump-sum investment for development would be unnecessary, too risky, or too small compared with expected returns.

A second possibility is that the market potential is limited, so what better time to get this direct and valuable feedback for a product idea than at the inception of its development? Thirdly, when there is significant competition in the market for the proposed product, the customer may still say: "Yes, please do develop such and such; we'll buy it." This off-handed remark may belie their knowledge of fast-encroaching competitors who are poised to quickly bring their product to market.

At Group4, we found that development funding from a would-be customer is a very good way to test their product adoption appetite. Many of our early product ideas were rejected outright by customers for development funding even though they liked the product. We always insisted that funding be paid according to a milestone-pegged plan, so that the risks for both parties could be reduced. In one regrettable instance, we stopped prod-

uct development after the customer had already begun funding because our due diligence revealed that we could not ultimately penetrate valuable market segments.

We have found that keeping the funding requests to \$100,000–\$200,000 per customer works well. The smaller the amount the easier it is for large companies to secure management approval. Several of these deals then aggregate to a substantial sum. But an important question arises: what does the customer get for funding development at this early stage? Typically, we have offered exclusive sourcing for a year or more, joint ownership of future intellectual property, substantially discounted pricing terms for one to two years, small quantity sampling for small funding amounts, etc. In other instances we simply asked the customer what they would prefer and negotiated.

Our second funding source has been the US government's various small-business initiatives (e.g. the small-business innovation research programs from the National Institutes of Health [NIH], the US Air Force, etc) and DARPA programs. This can be a slow way to get started, as lead times to fund can be months to years. However, once good development progress is made, further support is reasonably assured. In securing government funding we were keen to find strong overlaps between the needs of various government agencies, the commercial market needs, and Group4's particular products and strategic objectives. We also liked the government's investments because it might also become a customer. We did receive a lot of rejection early on, but we applied often and spoke with numerous program managers. In time, we received positive award letters and did our best to deliver on the original promise.

Our other focus has been on spending. In other words, we worked hard to be lean. If we received only \$500,000 in a year, we had to be highly critical about how to spend those funds to achieve development objectives as well as lay solid foundations for growth. Talented hires in this phase are more meagerly-paid guru prophets than fully-paid principal engineers. Since there is no VC, ample equity is available for recruiting. Lean firms also force heroic levels of creativity in product innovation and manufacturing. Such creativity can pay huge dividends later when spend budget grows.

Today, we're growing rapidly and grateful for all the support we've received over the last few years from our strategic partners and the US government. We expect to enter into more creative and strategic deals in the months and years to come, as we unveil more ground-breaking extreme materials for advanced electronics markets.