

SIA WEBINAR

Encouraging Innovation: The Policies and Partnerships Needed to Support Semiconductor Startups

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Question: Your focus is on semiconductor startups. What are your thoughts about EDA startups? They face similar problems semi companies face.

Answer: EDA historically has had significant startup and M&A activity ... that has been a significant contributor to how the EDA industry has grown their market. There are major opportunities in chiplet and advanced packaging enablement moving forward and the use of AI to improve designer productivity.

Question: What is your perspective on the VCs supplementing funds or cost-sharing on programs being launched from NSTC and DOD Commons? Also once startups emerge out of the valley of death, the support and sustainability funds to get to the commerciality/outcome at the end?

Answer: The first part of the question was answered in the webinar. Exiting the valley of death, funds are much more available for technologies and solutions that have been de-risked and found product market fit ... which is what emerging from the valley of death implies to me.

Question: To address the time to liquidity barrier- how might a more robust secondary market for early stage/growth stage semiconductor company securities be developed?

Answer: This needs to be part of the long-term solution for “long time to liquidity” investments. The obvious tension is between investors who want all “new” cash going towards innovation, and employees and sometime early-stage investors where liquidity needs grow over time.

Question: "Great idea but have the agencies been responsive to targeted and augmented SBIRS?"

Answer: DOD and DARPA have modified and offered funding along these lines. I am hopeful but not aware of progress for other agencies.

Question: Great presentation, Dan! You talked about AI energy and power requirements which will be expected to be enormous. Are there any specific initiatives around power

semiconductor like SiC, GaN to deliver efficient power architectures for Data Center running AI GPUs?

Answer: I'd point you to the Open Compute Project (OCP) for information on the data center roadmaps for power delivery. Most of this activity is occurring directly between customers and prospective suppliers of GaN, and to SiC to a lesser degree.

Question: So, this data justifies the recent flurry of activity for "Round 2 funding" for the CHIPS Act that the news media is recently running. What are your general thoughts, at this moment? Is it bi-partisan? How is it being received? Are we likely looking at more funding than the initial round? Etc.?

Answer: It's way too soon to judge the support level for an extension of the CHIPS Act and at this point I believe the most important thing to do now is to execute with a sense of urgency and demonstrate early wins on relevant success metrics. The DOC Sec. Gina Raimondo has made positive comments on the likely need for continued investment due to the high level of interest and applications for manufacturing incentives, and in R&D, that leadership needs to be sustained over a time period exceeding 5 years.

Question: Where would you suggest chip companies testing unique AI accelerator IP on an FPGA with LOIs from potential customers go to get that first \$10-15M in seed funding? Is silicon catalyst going to invest in these companies or are you waiting for LPs first?"

Answer: \$10-\$15M is quite rich for a seed stage investment, and realistically the only sources of funding to get to that level in a round is through VC and Corporate VC (CVC). Silicon Catalyst Angels and Ventures are already investing in early-stage semiconductor companies, but they would be only a small portion of the levels of funding you are asking about.

Question: Would the restriction to China market access reduce the TAM/SAM of the startups to diminish VC's appetite to invest in semi startups?

Answer: To the degree that the China market is unavailable to semi startups, a reduced TAM/SAM certainly doesn't help, but it would depend on the details of how much China represents in the revenue opportunity of that particular startup.

Question: Thanks for an excellent presentation. As you pointed out in the early part of your presentation, the current trend toward some deglobalization. Do you think this trend will continue longer-term, and what impact will it have on the semiconductor industry overall and in VC semis investments?

Answer: I don't have a crystal ball on predicting complex geopolitical trends, but I've heard from several experts in this area that we should not expect a return to where we have been in the past and they expect we are in the beginnings of a long term re-balancing of global supply chain risks. I tend to agree with them.

Question: Can you explain how your incubator program works?

Answer: A good way to start is with the materials on siliconcatalyst.com and then applying or reaching out to any one of the partners.

Question: Dan, great presentation. You mentioned how the diligence muscle has atrophied. How are you seeing VC's rebuilding this skill?

Answer: Many VCs bring in external consultants to supplement their due diligence even when they feel they have the requisite experience and expertise in house ... so it's more a matter of degree.

Question: What areas are ripe for startups to innovate? Is it reasonable for a private AI processor to be successfully against NVDA/AMD? Or should they be focusing their efforts in other areas where the large incumbents are less focused?

Answer: Any space that a 10X or more advantage can be obtained on pain points that matter to customers. It's not a great idea to attempt to out-execute well entrenched incumbents on their specialties but rather to innovate in spaces that are adjacent to their product roadmaps. The exceptions need to be specifically targeted to industry verticals that are less well covered, especially for inferencing.

Question: Large M&As in semiconductor industry have dried-up. Do you expect to semi industry M&A will re-start driven by additional investment needs in the future?

Answer: M&A between larger companies may continue to be few in number because of concerns about the speed and success in obtaining global regulatory approvals for semiconductor M&A, and there have been some high profile proposed deals that had to be withdrawn. For M&A for startups, I expect an upturn as the public markets continue their recovery.

Question: Dan, Thank you for your excellent presentation. Since quality engineering talent is important, what are some recruitment strategies for attracting more engineers to the chip industry?

Answer: I'd point you to the ongoing work on workforce development from the Industrial Advisory Committee has been made public on the CHIPS.GOV site. There was also a brief comment on this in the Q&A section of the webinar.

Question: Is there opportunity for new resin makers with VC funds ?

Answer: Generally, materials innovation is one of the difficult areas to obtain VC funding, so the market opportunity and differentiation story needs to be really strong.

Question: what is the implication of the lack of young talent in the industry that has to do with new startups? It appears to me that the average age of a startup CEO/founder in the semi industry is far older than other verticals such as SaaS

Answer: My experience is that startups have generally been successful meeting their hiring needs if they have been funded for success. It varies due to the normal economic cycles, but I wouldn't rank hiring as a top issue for startups. There are specific areas such as business development for certain industry verticals and in general system architects that are most challenging.

Question: Do you see a trend of semiconductor companies doing more software acquisitions versus hardware?

Answer: With one or two exceptions, not really.