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Alloy Ventures

OA Conf 2006

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My Background

- 16 years in semiconductor industry
  - Equipment
  - EDA, Fabless Semi, Semi Intellectual Property
- Co-Founder of Artisan Components (NASDQ: ARTI)
  - VP, Sales and Marketing
  - VP, Business Development through IPO
  - Most important thing about Artisan was the business model: took advantage of a changing world
- Joined Alloy Ventures in 1999

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What Changed in 1997-2000

- Foundries Needed everything ready to fill fabs
- Went from giving Design Rules and Spice Models to giving Design Rules, SPICE Models, DRC decks, Design Serivces—and Libraries.
- Artisan took advantage of that—and picked business model and distribution strategy that matched that change.
- Even bigger changes going on now: Open Source, OA, etc.

Alloy Ventures' Investment Philosophy

- Like technically difficult deals
- Allocate adequate dollars for future rounds
- Love to have investment partners
- Work closely with companies on hiring, strategy, sales, technology--and critical milestones for next round
- Like early stage deals--we usually lead
- As early investors we want to see step-up for next round

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“Top 5” Tips for Early Stage Companies Presenting to VCs

1. Explain your product or service clearly and early
2. Explain the market/space clearly--and make believable projections of market and company
3. Exhibit great respect—and knowledge — of the competition
4. Understand which segments/niches you can dominate—and explain why
5. Give VCs a presentation for VCs--not a sales presentation for customers

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Tip #6 (Bonus Tip): Understanding VC Structure, Partnerships, Practice

- We see lots of deals. Emphasize what makes you special and leave us with something to judge all the other deals by.
  - Insight to industry
  - Segmenting of market/players
  - Great team
  - Really clever idea
- We need easy, clear, concise story to convince our partners and justify the market, team and idea--and we need to explain it to them in 60 seconds.
- Money comes from limited partners—and better go back to them!! They expect a certain return.

What we need to see

- Need IRR of 20% for funds
- Half fail, so we need other half at 40% IRR
- This means 10x in 5 years
- If EDA company sells for $100M—and VCs own half, need $5M in
- $200M means you can invest $10M.
- Much more than that need a bigger exit

Observation about the World

- We are seeing profound changes in business models and development efficiences with “Open Source”
- From EDA companies to Enterprise software to hardware companies whole range of Open Source tools are making development MUCH faster
- Business models are still developing, but see a whole new set of options that allow new companies to get past entrenched players

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How OA Helps

- Easier Development environment
- Existence of other tools, starting points (CiraNova, Silicon Navigator, etc.)
- Easier for tool/solution to work with other tools
  - During evaluation
  - In real flow
- May make acquisition easier to digest—and hence worth more

My two EDA companies and how they use OA

- Gradient Design Technology
  - Thermal Integrity. Takes in the GDSII, Netlist and power numbers and temperature map. Users can take temperature at any location/gate and look at effects such as:
    - Delta Timing, IR Drop, Power, Leakage, Reliability
- Started native on OA. Was straight forward and finished working product ahead of schedule (first time I've seen this)
- While the product can run stand alone, many times it runs with other tools (IR drop tools, placer, etc). Being in OA makes this easier for tool company and for customer

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CiraNova

- Started before OA, developed own database
- Restart of code and product 15 months ago—on OA
- Provides Python extensions/APIs to let users build super pCells (PyCells) that plug into OA. OA plug in allows this!
  - Allow OA "users" to take advantage of new generation of object-oriented program languages—and all the existing support for it!
- OA and Open Source Python have allowed 10X+ in productivity from Skill, DFII

CiraNova (Business Model)

- Along with this goes opportunity for new business model.
- Problem:
  - People only just moving to OA “Chicken and egg problem”
  - Hard to get past CAD manager
  - Want to try before buy
  - Not a lot of discretionary dollars
- Solution:
  - Free downloadable Python-based authoring tools for OA
  - Support for OA based layout editor tools
  - Can build very complicated parameterizable cells
  - Charge for support and eventually, premium features
  - Users can use to help bring up rest of OA flow
- If OA allows lots of different tools to work together, new OA-based tools need to allow users to evaluate this

Observations going forward

- 65nm will be hard-but doable; 45nm will be REALLY hard
- Will see multiple versions of 65 and wide range of process/options between 65 and 45. Logic, Flash, etc.
- Will see more complicated rules (conditional, etc), more frequent changes to process, more rule variants/process (Higher yield, denser, etc.)
- Consumer is the driver
  - Short product life
  - Fashions
  - Cost
- Why logic/TSMC to 65nm? Cost—not speed

What's next

- Designs get much more complicated
- Flows interact with more tools
- Need better understanding of process
  - (or need to give foundry/fab more information about design, what can change what can't)
- Need more communication with Fab
- Customized flows
  - What we use for memory will be VERY different for High end processors and VERY different from consumer products going to 65nm for cost
  - Put together by big design groups to support:
- Shorter product life cycles, more complicated designs:
  - More IP re-use

Thank you

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