

## CEO Talk: Scott Bulbrook

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This interview was held with Scott Bulbrook, Managing Partner, VP of Engineering at DA-Integrated.



### Tell me a bit about your background? How did you first get started with DA-Integrated?

I have always had a passion for the semiconductor industry. At university Semiconductor Physics was my favorite course. I worked my way through school with summer jobs at a local semiconductor company. My first job after graduation was litho engineer in a newly built bipolar wafer fab. Since then I have stayed in the industry with jobs as process engineer, designer, and finally product engineer before moving into management roles.

We founded DA-Integrated in 2002 in response to market demand for test system and factory agnostic test development services. Given my broad background, defining and developing test solutions is one of my strengths. We have grown the team around that, adding experts and services across that same range of disciplines.

### Tell me about DA-Integrated?

DA-Integrated is a leading global provider of Integrated Circuit Development and Supply Management Services. With core expertise founded in IC test and manufacturing, DA-Integrated provides services in all disciplines including: IC Design, DFT, Test Development, Supply Management and Production. We're the world's only services company that features an on-site Test Laboratory combined with IC Design, Introduction and Supply Engineering expertise. Real world experience with 100+ Customers and 500+ Chips equips our team for successful execution of IC design, product introduction and supply, optimizing Time-to-Market, Development Costs, Product Margins, and Quality. We've worked on chips from many different applications.

Put more simply, DA-Integrated is an extremely strong production test development services provider, with complementary skills and services in design, low volume production test, new product introduction and supply management.

### When did you start DA-Integrated? What were you doing before that?

My co-founder and I started DA-Integrated in 2002. Sam and I (along with the majority of the team) had already worked together through the 80's and 90's at Nortel Semiconductor, a \$300M captive semi provider. We both moved on to work at start-ups but felt the urge to become entrepreneurs and have our own company. Sam secured a small

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### Answer a Question

- FIB operation
- What is Clock Domain Crossing in ASIC design?
- "hard bumps" vs "soft bumps"
- Small than WLCsp
- receptacles or not

round seed funding and we went from there. We still have complete ownership of the company and are enjoying the journey immensely!

#### **What problem did you see that needed to be fixed? What is your approach to solving that?**

In 2002, there was a large number of semiconductor start-ups and smaller fabless companies including the ones where Sam and I had run operations. At that time, getting a test program up and running in support of a new product development was exceedingly difficult. The three options available were; purchase a tester (very difficult for a smaller company to afford, let alone properly maintain), work with your assembly and test factory (usually taking them outside their area of expertise) or deal directly with the apps team at an ATE company (notorious for upselling system features and never taking a development past bin 1). We had direct experience with all three approaches and knew there could be a better way.

We built up a team of experts and started offering test development on a local tester knowing that the end goal of the project was an OSAT transfer. This meant that our loyalty was to the customer and helping them achieve the difficult compromise of meeting time to market requirements, and hitting quality targets while maintaining cost and capacity. We have been very careful to maintain strong relationships with OSATs and ATE vendors with them considering us as enablers rather than competitors. The majority of our business comes from references from OSATs and ATE vendors.

#### **How was the role/offering of DA-Integrated changed during the recent years?**

Consolidation in the semiconductor industry has made small and medium sized fabless customers rare. Funding for pure play semiconductor start ups has also diminished significantly. We have adapted by widening our market to include (the surprisingly large) group of systems companies with custom IC content. In addition, the growth of services in our adjacent offerings has been an important factor in our continued success.

#### **Which market segment seems promising to you? And why?**

One of the great things about DA-Integrated is that we work with many different market segments. Applying best practices for integrated circuits development, introduction and supply management is mandatory for success in any end application. In cases where the IC includes some advanced technology that is core to our customers product, our customers typically keep that portion of the design in-house. We also often partner with application centric design houses. There are many promising market segments out there and we have the benefits of working with them all!

#### **What is a typical customer for DA-Integrated?**

A typical customer for DA-Integrated is an electronic system company optimizing their product in areas of performance, cost, power, or miniaturization by inclusion of custom ICs. We either provide specific expertise in strategically selected disciplines or manage the entire life-cycle from concept through volume acting as a Virtual Semiconductor Division.

The fact that test is so closely linked to design, product introduction and volume supply has been very beneficial, allowing us to make important contributions throughout the entire product cycle.

#### **Where can one find more information?**

All information can be found on our website at [www.da-integrated.com](http://www.da-integrated.com).

#### **What is the best moment in your day?**

As a technical manager, a coach of a youth sports team, or as a parent, I derive a great deal of pleasure from watching people who I have influenced or assisted succeed.

#### **How do you keep yourself energized and engaged during the day?**

Being a business owner and a chip guy means I have a large number of projects and concerns all going on simultaneously! I thrive in a multiplexing environment, moving from project to project with the occasional deep dive

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(every once in a while, I disappear into the test floor, making the joke that "I need some time where it just me and the electrons").

#### How do you spend your time outside working hours?

I do a lot of volunteer work with an organization called The Tetra Society. It is a group of (primarily) engineers who make custom assistive devices for disabled clients. It has been extremely rewarding and I have made quite a few friends and worked on some very cool projects.



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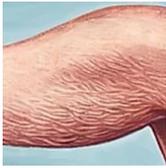
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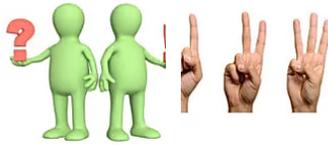
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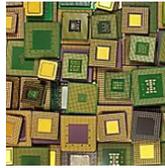


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