Featured Article

INTERVIEW BY AANAND KRISHNAN, ASHISH GARG & MUKUL CHAWLA

MAY PERSON OF THE MONTH: DR. VINOD AGARWAL ('68)

Vinod left a stellar career in academia to commercialize his theories that led to one of 2001's few successful technology IPOs with LogicVision, as the stock rose from $9.00 to almost $15.00 by the end of the year. LogicVision a small chip testing company that is reducing and eliminating the need for capital and labor intensive testing. LogicVision has kept Vinod on his toes, with a weak economic environment and a recent set-up in Bangalore, but he finds time to focus on BITSConnect. Vinod's faith in his alma mater is reflected in his teammates - Chairman Navindra Jain and India-head Hitesh Bhatnagar are BITSians. He has plans to recruit at Pilani.

Vinod, can you tell us a little bit about LogicVision and its technology?

LogicVision is a public company (NASDQ: LGVN) in the semiconductor space. Our products help customers design chips that can test themselves. LogicVision has over one hundred customers worldwide. Blue chip customers from Cisco to Sun Microsystems in the US, Sony to Matsushita in Japan, and ST Microelectronics to Ericsson in Europe use our products. We are the largest provider of the so called built-in self-test (BIST) technology with 72% market share.

I find it really interesting that I have been working with the BIST technology for almost 30 years. When I came to the US in 1973, my very first graduate level course was on Semiconductor Testing. I went on to do my MS thesis, my Ph.D. thesis and all my research during the 16 years as a Professor in the BIST area. And now for the past ten years, LogicVision is the leader in the commercial offerings in the same BIST area. I keep telling people I have a long way to go because I have been doing the same thing for almost 30 years, meaning I must be very slow.

Our technology is very innovative because normally complex semiconductor chips are tested on multi-million dollar testers. Also, the size and cost of these testers keeps going up while the size and price of semiconductor chips continuously goes down. Hence, the idea I have been working on for the past 30 years is that since chips have enough transistors on them, why don't we make a tester or multiple little testers on the chip itself? This way we can test the chip using these testers instead of testing the chip from outside. This is exactly what we do at LogicVision by providing a total solution, which includes automation, verification and complete design for putting tiny but comprehensive testers inside a chip.

How fast has LogicVision been expanding?

LogicVision has over a 100 employees and is headquartered in San Jose, CA with offices in Tokyo, UK and Canada. About six months ago we also started a center in Bangalore that has around 20 people right now and is headed by a very seasoned executive, my batch-mate from Pilani, Hitesh Bhatnagar. I am very excited about growing the prospects for LogicVision in India and the rest of the world.

Going back and working in India has been a pleasant surprise for me. I thought about starting in India many years ago but was discouraged due to the lack of IC design engineering expertise in India at the time. Recently there has been an influx of chip design knowledge in India and this has helped the chip business to grow in India. We most certainly will start direct recruiting from Pilani and other institutions.

Name: Dr. Vinod K. Agarwal

Position: Founder, Chairman & CEO, LogicVision, Inc. [NASD: LGVN]

Selected Achievements:

- Founded LGVN in 1992, raised $100 million and took company public in October 2001

- One of the very few tech IPOs of 2002; stock rose 60% by year end

- Voted Silicon India Entrepreneur of the Year 2002

- Nortel/NSERC Industrial Research Chair Professor at McGill University for 16 years with over 100 publications

- Fellow of the IEEE (1992) for contributions to the field of BIST and fault tolerant computing.

- Co-inventor of several U.S. patents on embedded technology.

Prior Jobs: Professor, McGill University (1978-94) and Wayne State U (1977-78)

Education: PhD, Johns Hopkins University (1977), MS, U Pittsburgh (1974) and BE (Hons) Electronics, BITS (1973)

Person of the Month

What hurdles did you face in raising capital for LogicVision?

When I set out to get venture funding for LogicVision, many VC firms rejected us in the beginning and it took more than a year and a half to raise the 3 million dollars I needed. Dr. Navindra Jain, Chairman of our Board of Directors, and the gold medalist from our batch in Pilani and a very successful entrepreneur was a significant angel investor in the beginning and throughout. Since then we have had to go through several other rounds of venture capital funding, raising about $50 million overall. We went public in October 2001, raising another $45 million.

I learnt that if you have a vision that you want to follow through and if the passion exudes then people will be willing to fund you. Of course, you need the right story and the right management team, but without the passion none of it works out.

Being a professor must have had its own set of challenges. What do you recall most fondly about being a professor?

I always wanted to get involved in research and that is something that still drives me. I wanted to be a scientist when I was young and once I graduated, a faculty position at McGill University turned out to be an excellent opportunity for me. I had no real problems on my tenure track and also held an endowed chair position funded by Northern Telecom. I soon found out that teaching and research also involve getting funding for your projects, which means that you also need to have good entrepreneur skills. Eventually if you do things right, things move the way you want them

to. My experience as a Professor also taught me to respect professors back in Pilani. I feel that we need to provide better recognition to our Professors in Pilani for their contributions to our success.

Coming from an academic background, how do you want to see BITS evolve in the years to come?

BITS Pilani is at the helm of the IT revolution in India and has a greater role to play in the future. The recent efforts to organize and bring together the BITS alumni are a great start. The BITSConnect project is going to go a long way in improving resources for students and expose them to world-class infrastructure. Coming from a research background, the next area I want to see Pilani grow is as a research institution, churning out world-class research work.

LogicVision Facts

Chairman: Navindra Jain*
CEO, Vinod Agarwal*
LTM Revenues: $16 MM
Employees: 100
Headquarters: San Jose, CA
Market value: $29 million
Stock price: $1.87
52Wk high/low: $9.6/$1.3

Source: filings, Yahoo, Bloomberg, LGVN
* BITSian

Tell us something about your days in Pilani.

My days at BITS were the best days of my life. We were in an environment, which not only allowed

us to learn, but also to have fun and just be ourselves. We spent a lot more time having fun and in cultural activities than with academics. That sort of environment is ideal to foster the entrepreneurship and hones your managerial skills. The experience of organizing events and getting things done in the institution, academically and culturally, instilled in us a sense of confidence, that doesn't come from just taking courses.

I was a part of a gang, called the "7 Generals". The 7 Generals were Anil Sethi, the highest executive at Sony Canada, Harsh Bhargava, Commodore in Indian Navy, Hitesh Bhatnagar, President of LogicVision (India), Anand Jain, based in UAE, and Kamal Lakhotia and Shirish Chinoy, both running their own companies in Bombay. We did a lot of things that were not always appreciated by the Professors (laughs). One year, I was Chief Editor of Hindi magazine, at the time called "Rachana". It was during our time that we set OASIS on the path to become a national cultural festival. I am actually amazed how successful OASIS has become. We certainly did not dream this success for OASIS.

Is there any specific piece of advice for budding engineers from Pilani?

From my experience as a professor and as an entrepreneur, I've realized that Pilani produces some of the best engineers from our country. We need to have confidence in our overall capabilities, not just in our technical skills. The younger people need to make the best out of their years in Pilani. Just be yourself, have confidence and things will work out great.

India Today 2002 rankings of Indian Engineering Colleges

Rank	COLLEGE	Academic	Reputation	Curriculum	Infra-structure	Student Care	Admission Procedure	Job Placement	Procedure Rank	Factual Rank
1	IIT Kharagpur	2	4	3	2	3	1	4	4	1
2	IIT Kanpur	3	3	4	3	2	3	2	3	2
3	**BITS Pilani**	1	2	1	4	4	5	3	2	6
4	IIT Mumbai	4	1	2	1	1	4	1	1	13
5	IIT Chennai	5	5	5	5	5	1	2	5	2
6	REC Surathkal	17	16	20	20	25	23	7	11	7
7	IIT Roorkee	7	7	7	7	8	9	6	6	-
8	Inst.of Tech., Varanasi	13	9	6	6	7	11	12	10	20
9	College of Engg., Guindy	8	8	9	9	10	7	10	8	17
10	IIT Delhi	6	6	13	8	6	10	8	7	-