
ENGINEERING MANAGEMENT CASE STUDY¹, SPRING 2009

The View from the Top: Organization Development

School of Engineering and Applied Sciences, University at Buffalo EAS590: Case Studies in Engineering Management, Dr. Robert E. Barnes

Educational Objective: to understand a modern company's – evolution, culture and philosophy, organizational structure, methods of communication and internal issues

1 INTRODUCTION

Tonight's presenters are three of our School's very successful alumni.

Video #1: Mr. Timothy J. Klein, a UB Engineering alumnus with a BS EE in 1984, shares his insights on three different roles played by engineers within a company – 1) engineer – technical/operational, 2) engineering manager – decision-maker/tactical, and 3)engineering executive – vision-mission/strategic. The UB Alumni Association awarded Klein their 1998 George W. Thorn Award given to UB graduates under 40 in recognition of their outstanding national or international contributions to their career field or academic area and the UB Engineering Alumni named him their 2006 Engineer of the Year.

Video #2: Mr. Hatim A. Tyabji, a UB Engineering alumnus (MS EE 1969), was in town to receive a UB Distinguished Alumni Award. On this day, he took time to address a group of UB Engineering and Management students.

Earlier, in 1995, Tyabji received the UB Engineering Dean's Award for his career-long achievements as an engineer in industry at the School's Commencement ceremony. In May 2001, Tyabji joined us at Commencement to receive The State University of New York's highest award, an honorary doctorate, in recognition of his pioneering worldwide work in transaction automation. In 2004, he visited us again – this time to receive the UB Alumni Association's Furnas Award for a distinguished career in engineering.

Video #3: Mr. Larry L. Peckham, another UB Engineering alumnus (BS IE 1969) and Founder, LPA Associates, Rochester, NY, came to this class to do a guest lecture. Peckham received the UB Engineering Dean's Award for his career-long achievements at the School's 2002 Commencement. In 2005, Peckham joined us to receive the UB Alumni Association's Furnas Award for a distinguished career in engineering.

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Messrs. Klein, Tyabji and Peckham are or have been members of our School's Dean's Council, an advisory group that meets semi-annually to help us advance our School.

2 BACKGROUND INFORMATION

Part 1: Klein is an engineer – entrepreneur who has turned his product-based idea into a sizeable, profitable business.

After graduating from UB, he took positions at Motorola, Tempe, AZ and with Barrister Information Systems, Buffalo, NY, a local company specializing in supporting law firms. Somewhere along the line, he got the desire and idea to begin his own business.

Today, Klein is president and CEO of ATTO Technology, Inc. of Amherst, NY. Established in 1988, ATTO develops solutions that enable users to accelerate data access, increase business productivity and better manage the storage of enterprise information. Klein has led ATTO since its inception and has guided the company through significant growth. From the beginning, ATTO has focused on a single goal – faster, more flexible data delivery.

From their award-winning line of SCSI and Fibre Channel host bus adapters, Fibre Channel-to-SCSI bridges and hubs, Gigabit Ethernet-to-SCSI bridge, and SAN solutions – ATTO products improve data availability in direct-attach, network-attached and fabric-attached environments. With the release of their Diamond RAID storage arrays, they have further expanded their offering to include storage as well as storage-infrastructure products. As they enter their 16th year of providing innovative storage technologies, ATTO remains steadfast in its direction to: *design*, and *manufacture* and *deliver* more flexible and reliable storage and storage-infrastructure solutions.

Part 2: Tyabji was Chairman, President and Chief Executive Officer of VeriFone, Inc.² of Redwood City, California.

Tyabji joined VeriFone as president, CEO, and a member of the board of directors in November 1986. Since then, under Tyabji's leadership, VeriFone grew from annual revenues of \$31.2 million, operating at break-even (1986), to \$309.1 million with \$27.7 million in net income (1994). (The company became publicly held in March 1990.) The company's business has diversified from point-of-sale payment processing in the U.S. to Transaction Automation worldwide, serving retail merchants, petroleum service stations and convenience stores, supermarkets, health care providers, and government agencies. At the time this case was written, VeriFone had shipped more than four million systems, supporting more than 1,400 applications, to customers in more than 90 countries. In 2000 they reached 110 countries and in 2002, they celebrated 10 million shipments.

² In 1997, Hewlett-Packard purchased VeriFone for \$1.2B. It has since left the H-P fold.

In addition to his strategic and operational contributions, Tyabji is the chief architect of the VeriFone Philosophy; a written set of shared beliefs and values which define the corporate culture. This culture unites more than 1,900 employees around the world, with approximately half of them outside of the United States.

Before his appointment at VeriFone, Tyabji spent 13 years in management positions at Sperry Corporation, last serving as president of the Information Systems Products and Technologies Group of the merged Sperry and Burroughs organizations, which has since become Unisys Corporation. Tyabji became a Sperry corporate officer in 1985, when he was assigned responsibility for all development and manufacturing worldwide. In this capacity, he had a staff of 12,000, and the operations under his direction included Sperry facilities in Roseville and Eagan, Minnesota; Clear Lake, Iowa; Blue Bell, Pennsylvania; Bristol, Tennessee; Roedelheim, West Germany; Salt Lake City and Ephraim, Utah; and Dorval, Quebec, Canada. During this time, Tyabji also served on the board of directors of Sperry's affiliate company in Japan.

Tyabji currently is a principal with Datacard Group, a leading global provider of innovative plastic card personalization and issuance systems, photo ID card printers and identification systems, and healthcare patient identification systems. He is past CEO of Saraide and serves on the board of directors of Ariba, BestBuys, EFunds, SmartDisk and Merchant eSolutions.

Now a naturalized U.S. citizen, Tyabji was born in Bombay, India, in 1945 and received a BS EE from the College of Engineering in Poona, India. He came to the US in 1967, and subsequently earned his MS in Electrical Engineering from the University at Buffalo.

In addition, he holds an MBA in international finance from Syracuse University and is a graduate of the Stanford Executive Program.

Part 3: Peckham is a self-made businessman. He is founder of LPA Software, Inc. of Rochester, NY.

After graduating from the UB School of Engineering in 1969, he worked for three years at Xerox and then returned to UB where he completed his MBA in 1974 and finished #1 in his class.

He started LPA as its sole employee in 1972. His work was dedicated computer programming for Xerox, the company that he had been working at for three years. In 1974, LPA's sales were \$0.1M. After programming alone for several years, he hired his first employee in 1978. Sales that year were \$0.2M.

Hereafter, Peckham was faced with the many questions that confront small, wholly owned companies: expand or not, and if so – HOW?

A milestone for LPA was 1985 – the company numbered 12 employees and sales were \$0.9M. He decided it was time for serious strategic planning – the company then wrote its first "12-year Business Plan" that called for 25 % growth per year.

About this time Peckham sensed a need to add customers beyond Xerox. In 1986, LPA opened its first branch office in Burlington, VT with three employees. This office was in response to contracts the company received from a major IBM plant there. Sales then reached \$1.2M.

LPA's collective experience allowed them to develop and launch its first product – industry leading "supply chain planning" software in 1991. Past and present work had grown annual sales to \$3.8M.

LPA's second product was a semi-conductor defect tracking system launched in 1994. Sales that year were a healthy \$8.0M.

Sensing the need to focus, LPA sold the Burlington operation to ADE Corporation in 1997 for \$10.0M cash. Sales had reached \$14.1M.

In 1998, LPA sought and found outside investors who brought in \$39.0M, \$20.0M in cash. Growth in number of employees and customers pushed sales to \$20.5M.

In 2000, Xelus Software purchased LPA for \$40.0M. It is now the world's leading provider of supply chain solutions; customers include Dell Computers, Cisco Systems, Boeing, AlliedSignal and the US Postal System.

Peckham was selected "Business Person of the Year" by Business Strategies Magazine in 1998.

3 YOUR CHALLENGE

Using the three videos as well as the supplementary printed information, prepare written and oral responses to this case study.

Please do each presenter's part as a mini-case. I would also like to see you develop these mini-cases by stating the problem(s) in each by deducing what the problem(s)/objective(s) was(were) that each engineering executive was addressing.

As for solutions, identify the presenter's solutions as his. Please be encouraged to comment positively or negatively on these and back-up with literature. You may also present your own solution(s) and label it(them) as such (again, back-uped with literature).

Make sure to include: issues, evolution, philosophy, motivation, strategic plans, organizational structure, roles and responsibilities, and methods of communications as they may or may not apply to each case.

Mini-case 1: From what Klein said,

- describe the three levels of engineering participation in a company. Please pay special attention to the duties of the engineering managers.
- Write one page on the topic of "Organization."

Mini-case 2: In 1994, after VeriFone experienced its first year (1993) where profit growth declined over the previous year, Tyabji turned his attention to "organization." After several years of success, he feared that VeriFone would fall into the trap of "business as usual." Tyabji believed if VeriFone was to continue to grow as it had been, the company's major challenge would be to communicate its organizational philosophy.

Use what you heard from the video; what you learn from the above background; what you gather from VeriFone's web site: www.verifone.com (http://datacard.com/ and others that may be helpful); what you read from: VeriFone: Transaction Automation Company (A), Harvard Business School, Case #9-195-088, Rev., July 12, 1995; and what you find in the literature.

Include in your case response a description of VeriFone's business and the sector of commerce of which it is part today. As you id problems, please consider –

- a discussion of what a company's culture was and what it became. Provide a definition and explanation of VeriFone's philosophy, including the role of a philosophy in a company and why it is important.
- a discussion of VeriFone's need to have the proper people assembled in a way that they could work well together. Diagram an organization chart for the company (make special notations indicating where people/units are geographically located).
 - Within this area on organization, discuss Tyabji's "blueberry pancake." Is it real or imagined? What are its strengths and weaknesses? What organizational structure would you use and why?
- a discussion of how VeriFone's workers work effectively. For this use Case-Exhibits 13 and 14 and two basic tenets of VeriFone:
 - "We do not merely compete; we set new industry ground rules." "We constantly challenge traditional methods of conducting business."
- write one page on "motivation."

Mini-case 3: LPA represents a considerably smaller company; however, engineering management needs and challenges are as great for executive direction.

Use what you heard from the video; what you learn from the above background; what you gather from Xelus' website http://www.xelus.com; and what you find in the literature.

Please include:

- a description of the business and the sector of commerce of which it is part today.
- study Peckham's "Walk in the Dark." Do you really think he was in the dark? Classify and describe key elements. Support your opinion with items from the presentation and literature. Also critique Peckham's 12-year plan that began in 1985. Was it successful?
- Write a page on "strategic planning."

4 ACKNOWLEDGMENTS

Special thanks you to Messrs. Timothy Kline, ATTO Technology; Hatim A. Tyabji, formerly of VeriFone; and Larry L. Peckham, formerly of LPA Associates, for their lectures and supporting materials.

5 SPECIAL NOTES

All copies of the Harvard Business School Case are to be returned to me unmarked.

The guidelines -

- 1. the written submission is at least five pages per person from Introduction through Conclusions.
- 2. the oral presentation is seven minutes per person without questions; visuals (with a paper set of PowerPoint handouts 3 to a page) are mandatory.
- 3. send me an e-mail "White Paper" about the most important thing you learned from the case by Noon, Friday, 2/6.

Notes from

Tim Klein, BS EE 1984 President, CEO and Founder, ATTO Technology, Inc. Amherst, NY

for

EAS590: Case Studies in Engineering Management

Spring 2009

These notes are in the form of a PowerPoint presentation found in UBLearns.

Notes from

Hatim Tybaji, MS EE 1969 Past President, CEO and Board Chair, VeriFone

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VeriFone: Transaction Automation Company (A) Harvard Business School, Case #9-195-088 Rev., July 12, 1995

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- handed out in class
- Mailed to distance learners

All case booklets are to be returned.

Notes from

Larry Peckham, BS IE 1969 Founder, LPA Associates Rochester, NY

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