LSI Corporation

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Table of Contents

Introduction

LSI Corporation, once an iconic name in the American technology landscape, offers an extraordinary lens through which to view the rise of Silicon Valley and the story of modern computing infrastructure. Founded in the heart of California's tech industry, the company grew from a specialized semiconductor startup into an S&P 500 giant, leaving its mark on much of the world's digital transformation. This book seeks to uncover the roots, evolution, and enduring influence of LSI Corporation—a story shaped by visionary leadership, relentless innovation, and a relentless drive to reshape what was technologically possible.

From its earliest days in the 1980s, LSI Logic Corporation, as it was first known, helped define the field of Application Specific Integrated Circuits (ASICs). The company's ambition, captured in its very name—referring to "Large Scale Integration"—was to integrate ever more complex functions onto a single chip. Under the leadership of founders like Wilfred J. Corrigan and his team, LSI drove breakthroughs in chip design and manufacturing, revolutionizing both the speed and flexibility with which custom silicon could be developed. By radically reducing development timelines, LSI enabled a host of advances in everything from consumer electronics to enterprise servers.

Yet LSI's history is about more than technological innovation: it is also a narrative of strategic expansion through global subsidiaries, savvy mergers, and timely acquisitions. Partnerships with companies such as Sun Microsystems and MIPS Computer Systems opened new fronts in processor architectures, while ventures in Japan, Britain, and Canada helped transform LSI into a global contender. Acquisitions of companies like Symbios Logic and Seeq Technology further broadened LSI's footprint in networking and storage, ensuring its presence at nearly every level of the digital data pipeline.

The company's journey was marked by continual reinvention, responding not only to market forces but to the rapid evolution of technology itself. The pivotal merger with Agere Systems in 2007 signaled the formation of a new LSI Corporation focused on the explosive growth in data storage, networking, and mobility. Under the stewardship of leaders like Abhi Talwalkar, LSI reasserted itself at the forefront of data center innovation, developing products and technologies that became the backbone of the digital age, from RAID controllers to solid state drive controllers and network processors.

Though LSI's tenure as an independent company ultimately concluded in 2014 with its acquisition by Avago Technologies (now Broadcom Inc.), its impact endures. The technical innovations, patents, and product lines born under the LSI banner remain

vital components of Broadcom’s storage and networking business. Perhaps most importantly, the company’s pioneering spirit continues to influence the global semiconductor industry, inspiring future generations of technologists and entrepreneurs.

This book traces the full arc of LSI Corporation—from bold beginnings and rapid ascent, through the periods of reinvention and transformation, to integration within a new corporate giant. In doing so, it illuminates how a group of visionaries in Santa Clara helped lay the foundation for today’s ubiquitous digital infrastructure, ensuring that LSI’s story will remain an essential chapter in the larger narrative of American innovation.

CHAPTER ONE: Beginnings in Silicon Valley: Founding of LSI Logic

The year was 1980, and the Santa Clara Valley in California was already humming with the energy of technological ambition. This was Silicon Valley, a place where innovation was not just encouraged but expected, a crucible where new ideas in electronics were forged daily. It was in this fertile ground that LSI Logic Corporation took root, a company that would go on to significantly shape the semiconductor industry. Founded in November 1980 by Wilfred J. Corrigan, the company began its operations in early 1981, leasing facilities right there in Santa Clara.

Wilfred Corrigan was no stranger to the world of semiconductors. A British engineer and entrepreneur, he had previously held the reins as CEO of Fairchild Semiconductor, a venerable name in the industry. His time at Fairchild, however, had also seen the company face challenges, including an ill-fated diversification into ventures like video games and digital watches, which, perhaps ironically, were areas that would later be revolutionized by the very kind of chips LSI Logic would specialize in. Corrigan's vision for LSI Logic was sharper, more focused, and aimed at carving out a very specific, yet incredibly powerful, niche: Application Specific Integrated Circuits, or ASICs.

The very name "LSI" itself was a nod to the company's core technological ambition: "Large Scale Integration." At the time, integrating numerous circuits onto a single chip was a cutting-edge endeavor, and LSI Logic aimed to push the boundaries of this integration, creating complex, custom semiconductors that could perform specific functions with unprecedented efficiency. This wasn't just about making chips; it was about making *precisely the right chips* for *exactly the right applications*.

To bring this ambitious vision to life, Corrigan assembled a formidable team of co-founders. He recruited Bill O'Meara to lead Marketing and Sales, Rob Walker to head Engineering, and Mitchell "Mick" Bohn as the Chief Financial Officer. This quartet formed the initial leadership, a blend of business acumen, technical prowess, and financial stewardship crucial for any startup, especially one venturing into the capital-intensive world of semiconductor manufacturing.

The nascent company quickly secured its initial financial footing, a critical step for any technology startup aiming to make a dent in Silicon Valley. LSI Logic's early operations were bolstered by an initial injection of $6 million from a consortium of venture capitalists. Among these early believers was Kleiner Perkins Caufield & Byers II, a venture capital firm that would become synonymous with backing transformative technology companies. This initial funding was a testament to the compelling nature

of Corrigan's vision and the perceived potential of the ASIC market, which, though under $100 million at the time, was projected to grow significantly.

The plan from the outset was to revolutionize the semiconductor creation process. Traditional methods for designing and manufacturing customized semiconductors could drag on for up to two years, a glacial pace in the rapidly evolving tech landscape. LSI Logic aimed to slash this timeline dramatically, bringing it down to a mere twelve weeks. This was an audacious goal, but achieving it would be a game-changer, allowing companies to bring new products to market far more quickly and efficiently. This ambition underscored LSI Logic’s pioneering spirit in both ASIC design and Electronic Design Automation (EDA), the software tools and methodologies that would make such rapid development possible.

The company's approach involved a strategic separation of the semiconductor fabrication process. While the intricate details of their early technical innovations will be explored in subsequent chapters, this foundational decision was key to their ability to accelerate chip development. It demonstrated an early understanding of the need for both specialized expertise and streamlined processes in a highly complex industry. Even in its earliest days, LSI Logic was not just building chips; it was building a more efficient way to build chips.

The founding of LSI Logic was more than just the incorporation of a new company; it was a statement of intent in Silicon Valley. It signaled a new era where custom silicon would become increasingly accessible, paving the way for a wave of innovation across various industries. While the path ahead would be filled with technological hurdles, market shifts, and intense competition, the seeds of a future S&P 500 company had been firmly planted in the rich, fertile ground of Santa Clara, California.

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