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JDS Uniphase Corp.

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Introduction

JDS Uniphase Corporation stands as a remarkable example of ambition, innovation, and resilience within the fast-changing landscape of American technology companies. From its humble beginnings through its meteoric rise and subsequent restructuring, the company's narrative provides a window into the seismic transformations that swept the global telecommunications industry over the past four decades. This book tells the story of JDS Uniphase: how it began, what it became, the forces that shaped its journey, and what remains of its legacy in today's competitive world.

The origins of JDS Uniphase lie in two geographically distant startups: JDS Fitel, born in Ottawa, Canada, and Uniphase Corporation, founded in Silicon Valley, California. Both companies were pioneers, led by visionaries who recognized the revolutionary potential of fiber optics technology well before it became mainstream. Their paths converged in the late 1990s at a time when the Internet's dramatic expansion mandated ever-increasing bandwidth, setting off a massive wave of investments in optical communications infrastructure.

The merger of JDS Fitel and Uniphase created an entity uniquely positioned at the epicenter of this communications revolution. JDS Uniphase quickly became a darling of the financial markets, its shares surging amid expectations that its suite of optical components and systems would power the new digital economy. Fueled by strategic acquisitions and ambitious technological leaps, the company reached extraordinary heights, touching a peak market capitalization that rivaled the largest tech firms of its time.

Yet, as with many stories of phenomenal growth, JDS Uniphase's trajectory was not linear. The bursting of the dot-com bubble in 2000 delivered a harsh reckoning to the telecom industry, and JDS Uniphase found itself grappling with sudden, dramatic reversals of fortune. Its workforce was decimated, its share price collapsed, and the glare of the spotlight turned into the scrutiny of survival. Through determined leadership and painful restructuring, the company endured, reinventing itself in the face of adversity.

This book explores not only the technological accomplishments and business strategies that defined JDS Uniphase, but also the human side of its journey—the excitement of the boom years, the anguish of the bust, and the resilience that heralded its eventual transformation. After weathering years of change, JDS Uniphase ultimately split into two independent companies, Viavi Solutions and Lumentum Holdings, each carrying forward different threads of the original enterprise into new market realities.

In chronicling the rise, fall, and rebirth of JDS Uniphase, this book aims to provide both a historical account and a contemporary analysis of a company that helped shape the modern communications landscape. Its story is emblematic of the triumphs and challenges faced by many technology innovators, and the lessons learned are as relevant today as ever for industry leaders, investors, and visionaries alike.

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CHAPTER ONE: The Birth of Two Innovators: JDS Fitel and Uniphase Corporation

The story of JDS Uniphase Corporation, a company that would eventually become a titan in the fiber optic communications market, truly begins with the distinct yet parallel journeys of two pioneering entities: JDS Fitel Inc. and Uniphase Corporation. These two firms, born on different sides of the North American continent, were both driven by an unwavering belief in the transformative power of light to carry information.

In the bustling high-tech hub of Ottawa, Canada, JDS Fitel Inc. took its first breath in 1981. Its founders were a quartet of ambitious individuals: Jozef Straus, Philip Garel-Jones, Gary Duck, and Bill Sinclair. These four had previously honed their skills and vision at Bell-Northern Research Ltd., where they were immersed in the intricate work of designing components for early fiber optic systems. This experience ignited a shared conviction that a dedicated enterprise focused on manufacturing components for the burgeoning fiber optic network industry would be a lucrative venture. The "JDS" in JDS Fitel was an acronym cleverly derived from the last names of Jones, Duck, and Straus (or Sinclair, depending on who you asked, but the essence was shared).

Jozef Straus, a key figure in JDS Fitel's origins, was born in Eastern Slovakia in 1946. He pursued nuclear physics as an undergraduate at the Czech Technical University. In 1968, a scholarship brought him to the University of Alberta in Edmonton, where he continued his physics studies, ultimately earning a Ph.D. in 1974. That same year, Straus embarked on a postdoctoral journey at Bell-Northern Research in Ottawa, where he delved into the emerging field of fiber optics and steadily ascended to a managerial role. His decision to co-found JDS Optics (which later became JDS Fitel) in 1981, alongside his colleagues, marked a pivotal moment, as he dedicated himself full-time to the company as CEO starting in 1986.

Initially, the operation was quite informal, far from the structured environment of a traditional business school startup. "This was not a classic Harvard school of management situation where you write a business plan and a profit and loss statement," Straus would later recall, adding with a touch of humor, "God forbid - we never did. We were more like little elves. If some company had a problem, they'd call JDS." This early ethos of problem-solving and agile response laid a foundational characteristic for JDS Fitel. By 1990, the company had grown to a team of 70 employees and was generating annual sales of \$7 million. The demand for fiber optics, which had exhibited a steady, linear growth throughout the 1980s, was poised for an exponential surge with the advent of the World Wide Web in 1990. In March 1996, JDS

Fitel successfully completed its initial public offering (IPO), raising C\$93.6 million before underwriting expenses. Following the IPO, Japan's Furukawa Electric Co. Ltd. maintained a majority stake of approximately 55 percent in JDS Fitel.

Meanwhile, across the continent in San Jose, California, Uniphase Corporation was also taking root, albeit two years earlier in 1979, and in a rather unassuming setting: a garage. Unlike JDS Fitel's immediate focus on fiber optic components, Uniphase initially carved out its niche by manufacturing red helium and blue argon gas lasers. These lasers found applications in diverse fields such as printing and biomedicine, and the company also produced helium neon lasers for barcode readers. Uniphase officially became a public company in 1993.

During the mid-1990s, the semiconductor industry experienced a significant boom, and Uniphase found a new avenue for growth. The company developed an automatic defect classification system for semiconductor wafers, aptly named Ultrapointe. This system proved to be a valuable asset for Uniphase throughout the semiconductor upswing from 1994 to 1996. However, the Ultrapointe business assets were sold in December 1996. This divestment marked a strategic pivot for Uniphase, as it then shifted its complete focus to the burgeoning communications market.

This strategic reorientation was accompanied by a series of acquisitions designed to bolster its presence in the optical communications arena. In 1996, Uniphase acquired a U.K. laser packaging company, which became the foundation for its operations in that region. The following year, in 1997, Uniphase expanded its reach further by acquiring Australia-based Indx, a company specializing in fiber optic reflection filters essential for wavelength division multiplexing (WDM) technology. This acquisition was a significant step, as it positioned Uniphase to become a dominant supplier of transmitter lasers for fiber optic networks by 1998, serving major telecommunications equipment providers.

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