

JEFFREY D. MARSH, PhD
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Broadly seasoned business operations executive bringing over 50 years of experience and innovation to a diverse industry spectrum.

Major Programs Brought passenger car Skid Control (ABS) from prototype stage to full production hiring and training all functions in the division – establishing the world’s first passenger car ABS manufacturing facility. Brought truck Skid Control Systems (FMVSS-121) from R&D to full production. Wrote basic patents in Wheel Speed Sensing

Developed Electronic Traction Control Systems for both passenger car and trucks. Built concept vehicles in both passenger cars and trucks. Wrote the seminal integrating patent for ABS and Traction Control.

Developed Positive Displacement Supercharging Systems for passenger cars. Created and managed the division’s engineering organization. Built commercially acceptable, emissionized concept cars that met future CAFE requirements for all of the major OEMs.

Developed and patented the Espresso BookMachine installed worldwide by On Demand Books and Xerox. Thirteen patents have been allowed to date. More patent pending. Developed a new high speed printer printing 100 duplex pages a minute in a 24” x 24” footprint – patent pending.

Brought back the lost art of design and manufacture of Bait Casting Fishing reels to create a 100% made in the USA product. Totally new conceptual design in patent application. Created a new family of high performance lubricants. After developing the product, created the manufacturing line and provided a turnkey operation for the investors.

Creating a plant-wide data acquisition, process control, and management information system for an industry leader in the investment casting business. Along with the traditional benefits gained from SCADA systems, this company can determine the entire life history of any given part from its introduction into the production stream through final inspection minute-by-minute (and in some processes, second-by-second) of all factors that play into the creation of the part.

Engineering Experienced in R&D, product, process, and manufacturing engineering. Established complete engineering organizations for two major automotive suppliers. Rebuilt an entrenched inflexible engineering directorate at a third. Established the engineering presentation standard at Bendix. Recipient of the Outstanding Oral Presentation Award by the Society of Automotive Engineers.

Manufacturing Experienced in all phases of manufacturing including metalworking (tool & die, press work, hot metal forming, fabrication, heat treating, etc.), high and low volume assembly and test (automated and non-automated) and “clean room” quality creation of electronic, pneumatic and hydraulic products. Union & non-union environments.

Marketing Experienced in creation of complete concept vehicles and marketing concepts to major automotive and truck OEM's world-wide. Performed numerous market feasibility studies on a wide range of products and services.

Information Systems

Developed the drug retail industry's premier theft loss management software.

Created state of the art image storage and retrieval system. Developed numerous business operating systems (financial and managerial). Created medical and psychiatric clinic management systems. Created one of the engineering industry's leading classification and retrieval systems. Created an 'electronic book' both in CD and Web formats marketed by the Midwest's premier Business Directory Publisher - Sorkins Directories. Created (patents pending) text to voice "Spoken Book" book production system. Developed and implemented total process management systems.

"Hired Gun" Called in by investment community to perform hands on turn-around management. Provided support in acquisitions & de-acquisitions to major and small corporations. Provided total services from concept thru initial production (including clinical testing) of a medical product for local investor group. Developed numerous devices in conjunction with a leading local neurosurgeon. Wrote numerous successful business plans. Utilized by a local leading patent firm as a consultant to their clients regarding problems in transitioning from concept to production. Provide "adjunct" services as financial consultant and strategic business information acquisition to a wide variety of businesses.

Teaching

Certificated FAA Flight and Advanced Ground Instructor since 1972.

1986-1988: Adjunct Professor St. Louis Community College and Adjunct Professor Lindenwood University. Finance, Human Resource, and Operations Research courses. Developed a new finance and accounting course for St. Louis Community College that reversed attendance to "standing room only" status. Course popularity was such that a local major manufacturer requested a private term for their managers nationally.

2011 to present: Adjunct Professor Lindenwood University. Management, Operations, Finance & Accounting, and Statistics topics - graduate and undergraduate. Created and teaching LU's OnLine Fundamentals of Financial Management for Masters Program in Leadership.

Education

PhD, Organization and Management, Capella University
Doctoral Studies in Business Administration, NOVA University
MBA, Advanced Management Program, Michigan State University
BSEE with minor in Mechanical Engineering, Lawrence Institute of Technology

Jeff Marsh is a Rust Belt engineer turned investor who lives in suburban St. Louis and flies a plane in his spare time. Jason Epstein is the dean of American publishing—the editor of books by Norman Mailer, Vladimir Nabokov, and Philip Roth, and the inventor of the quality trade paperback, which revolutionized the book business in the 1950s. Until December, they had never heard of each other. Now, suddenly,

Epstein is Marsh's biggest fan.
 What brought Marsh to Epstein's attention is a machine that may be the publishing equivalent of a car that runs on water. Working from a digital file, it can print, bind, and trim a book of any size in a matter of minutes. Having finished with one title, it can proceed to another and another, as long as the machine is kept supplied with ink, tone, and paper—the same regular copy

paper you might buy at Staples.
 "When I first saw it, I knew it would be as important as Gutenberg," says Epstein, who emerged as something of a digital prophet last year with the publication of a work of his own, *Book Business: Five Printed and Future*. "The whole world changes," he says, "because of our machines."
 Books are, of course, just about the oldest piece of information technology will in use.

Haven't publishers come up with a process like Marsh's now? Well, no. While companies like Ingram's Lightning Source have developed centralized on-demand printing services in recent years, the reality of those services is far from Marsh's turnkey operation. The Lightning Source system requires a technician to stand by the printer and take the unbound book blocks by hand to the binder. Then he carries the bound pages to the trimmer, where they're cut down to size. And even that labor-intensive effort is practically obsolete when compared to the stitching and sewing required by some hard-cover bindings.
 "Book binding has always been a black art," says Marsh. "If you put those processes into automotive plants, the whole industry would die. They're dangerous, and they can't

be replicated reliably. I mean, you get people walking their hands under moving blades."
 Marsh knows a thing or two about the auto business, having spent the better part of his working life designing brakes and other components for a series of automotive manufacturers. Laid off from the last of these jobs in 1984, he went into business for himself, eventually making the acquaintance of Harvey Ross, an entrepreneur with the kernel of an idea for a digital-book delivery system. Ross didn't have the know-how to actually make the machine, Marsh did. They worked together until the late '90s, when Marsh made the project his own.
 About the size of an industrial photocopier, the prototype of Marsh's PerfectBook machine (as he has dubbed it) requires no special know-how—a distorted message could run it. To demonstrate, Marsh selects a file from a computer networked to the machine, triggers the print command, and steps aside as the high-speed printer spits out double-sided pages in rapid succession. The sheets are clipped, glued, covered, and sheared. Watching the book move along is a bit like watching a doughnut go through a Krispy Kreme machine. There's the same mesmerized, giddy awe that comes from watching an elegantly automated process at work. In seven minutes, I am holding a finished book—a trial run of a Simon & Schuster children's title, its spine still warm from the hot glue. I fan the pages and giggle. "Yeah, it's a book, a real book," says Marsh. "Somebody does that when they see it or give my kids to corporate executives."

Expensive guesswork
 The machine's potential is vast and deep. America's beleaguered book industry is awash in wants, with retailers returning as much as 50 percent of their unused inventory for full credit, costing publishers billions. The industry produces about 50,000 new titles each year, and within a precise month for calculating demand, publishers must guess how many of each to print. Sometimes they guess wrong.
 "With something like Marsh's machine sitting in copyshops and bookstores across the land, customers could order a book over the Internet and pick it up within minutes. The need for overstock would be diminished, the cost of shipping and warehousing drastically reduced. Epstein figures that the price of a trade paperback could drop by 20 percent. The most exotic rate could, in theory, be satisfied anywhere and anytime: Running to catch the 6 A.M. flight to Denver, you could stop at an airport kiosk and buy a title as obscure as Thomas Merton's *The Way Zen* just as easily as you now pick up a copy of Stephen King's *Dreamcatcher*.
 Marsh, it seems, has devised a way to realize more of the advantages of digitized book catalogs, while rarely swelling many of the problems—real and imagined—of electronic publishing. Fancy, for example, goes away almost magically, since the network is cloud and files are (originally) for printing, not for viewing on a handheld device or PC. That realism also dispenses the other nagging worry about ebooks—the inconvenience of a .txt, or .pdf, or .no one really enjoys reading from a screen.
 But Marsh has far bigger things in mind. He calculates that his machine, manufactured on a large scale, could be sold for about \$30,000 apiece. At that price, they could be distributed widely enough to put everyone on the planet within a few miles and a few dollars of every book ever written. "I see this going into places like India or Brazil where you have real distribution needs," he says.
 That's a vision shared by Michael Smolens, the CEO of a company called 3 Billion Books. Smolens aims to be a sort of bibliophilic Ray Kroc, using the Internet to distribute the entire body of human literature through print-on-demand stations around the globe. "Can you imagine how much better the world would be?" he asks. "How much intelligence people would have?" The PerfectBook machine also has more precise and immediate applications—pinning quickly and at expense documents, for example. Marsh hopes to put it into broad use mainly by licensing it to corporate print shops.

Tough time for technology
 This dream requires at least one thing that Marsh cannot supply: a vast digital catalog

EBUSINESS

The PerfectBook Machine
 In St. Louis, of all places, a former automotive engineer invents a technology that could drastically alter the publishing industry. **BY JOHN MCCLOSKEY**

24 JULY 10, 2011 BUSINESS2.0

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Employment 1960-1968 President, James D. Anderson Company – Took control of a small steel fabrication company whose president had suddenly died and the remaining salaried staff had left to start a competitive business. Created new processes along with a new concept forging machine. Built the business back to profitability.

1968-1976 Kelsey-Hayes Corporation – Built the skid control division from scratch. Resolved a major plant start-up failure building a new product. Created new products. Principal Engineer within Kelsey Research Division advising on commercial feasibility of research projects.

1977-1978 Dyneer Corporation – Research Manager in charge of new product development and testing. Pioneered electronic traction control concepts.

1978-1982 Bendix Corporation – Manager of Manufacturing for company's oldest and largest facility. Director of Mechanical Technologies Section for Bendix Research Division. Director of Engineering for Bendix Supercharger Division. All three positions were dedicated to leading massive organizational change.

1982-1984 Carter Automotive – Senior Director over OEM business unit, Senior Director – all operations. Major turn-around of poorly performing operations.

1984 – Present Marsh Companies – President The main focus of my companies is on product, process, and organizational innovation.

1986-1980 – Adjunct Professor Lindenwood University, Adjunct Professor St. Louis Community College.

2011 to Present - Adjunct Professor Lindenwood University, Owner Marsh Intellectual Properties, LLC, Managing Partner Perfect Systems, LLC

