Masstor Systems Corporation

Company Details

Name: Masstor Systems Corporation
Sector: Data Storage Sector
Description
        Description goes here

Facilitators

- Bob Howie - Email

Statistics
        Contributors (1), Events (0), Stories (0), Documents (1), References (0), Discussions (0 threads, 0 posts)

Entered By: Luanne Johnson
                             August 17, 2006

Contributors

Contributor Erik Salbu
Date Joined September 1975
Job Description
        TBA
Date Entered August 18, 2006

Timeline

There are no events for this company in the collection

Stories

There are no stories for this company in the collection

Documents

Title: Masstor History Overview
Author: Bob Howie
Created: December 28, 2006
Publisher:
Donated By: Bob Howie
Filename: doc-459536e276ee0.doc (Size: 42 KB)
Pages:
Cataloguer:
Copyright:
Description:

Masstor Systems Corporation

Brief History of Masstor. Needs:
Product Descriptions
IPO Information
Customer Information
and more ...

Entered By: Bob Howie
December 29, 2006

References

There are no references for this company in the collection

Discussions

There are no discussions for this company in the collection

Maxtor

Company Details

Name: Maxtor
Sector: Data Storage Sector
Description
> Founded in 1982 to build multi-platter 5.25" hard disk drives. Merged with Quantum HDD in 2001 and aquired by Seagate in 2006.

Facilitators

Statistics
> Contributors (1), Events (0), Stories (0), Documents (0), References (0), Discussions (0 threads, 0 posts)

Entered By: Luanne Johnson
                                       April 11, 2005

Contributors

Contributor Rich Jorgensen
Date Joined October 1989
Job Description
> Marketing Manager
Date Left June 1992
Date Entered March 8, 2006

Timeline

There are no events for this company in the collection

Stories

There are no stories for this company in the collection

Documents

There are no documents for this company in the collection

References

There are no references for this company in the collection

Discussions

There are no discussions for this company in the collection

Memorex

Company Details

Name: Memorex
Sector: Data Storage Sector
Description

Memorex Corporation, founded in 1961 by Laurence L (Larry) Spitters and a group of entrepreneurs from Ampex Corporation, initially successfully entered professional tape media markets. Memorex is believed to be the first computer industry start-up in Silicon Valley.

In the mid-1960s Memorex began a strategic plan to enter the computer systems business by first establishing its presence as a supplier of products plug-compatible to IBM systems and then using its established sales and service capabilities to offer complete computer systems.

A Consumer Products division established in 1970 made Memorex a household name with its 1972 campaign; Ella Fitzgerald and the shattering glass - " Is it live or is it Memorex ? " Pieces of such shattered glass are purported to be in the Smithsonian. Burroughs sold the consumer business in 1982; in 2006 it was acquired by Imation.

Memorex successfully executed the equipment into system strategy thru the early 1970s including significant successes in IBM plug-compatible disk storage and communications products. It continued as a leader in various media products. The Memorex system was introduced in April 1972. A series of extremely aggressive pricing and product actions by IBM reduced the profitability of Memorex's equipment businesses to the point where corporate viability was questionable.

In July 1973 the Memorex system was withdrawn. In 1974 Robert C. (Bob) Wilson replaced Spitters as CEO and restructured the company in cooperation with the Bank Of America. During the 1970s Memorex successfully focused on media products and on IBM plug-compatible storage and communication products.

Wilson retired in 1979 and was replaced as CEO by Clarence W. (Clancy) Spangle. In 1981 Burroughs acquired Memorex and in 1986 Burroughs, upon acquiring Sperry Univac, renamed itself Unisys. Memorex continued into the 1980s in its three business lines but problems in all product lines, including a difficult transition to the 3380 class of plug-compatible disk subsystems and a complete miss in the then vigorous OEM disk drive markets led to the dismemberment of Memorex by Unisys in the late 1980's.

Led by its international team under Giorgio Ronchi, most of Memorex spun out of Unisys, later becoming Memorex Telex N.V. It in turn was broken up in the middle 1990's. Many of Memorex's original international sales and service subsidiaries continue as subsidiaries of other companies, e.g. Memorex Telex Japan, Ltd, continued operations until 2007. The Memorex tape plant on Shulman Avenue in Santa Clara initially occupied in November 1961 was auctioned off in February 1994.

The disk drive business unit was spun out in late 1989 as Sequel, headed by Mike Haltom. It continued as a disk drive repair company and was acquired by Solectron in 1999.

Memorex

Memorex as a consumer brand lives on today; in 2006 Imation acquired the brand from Hanny Holdings.

Facilitators

Statistics

Contributors (8), Events (57), Stories (4), Documents (133), References (20),
Discussions (0 threads, 0 posts)

Entered By: Luanne Johnson
                              April 11, 2005

Contributors

Contributor Henry Baylor
Date Joined June 8, 1970
Job Description

Began as a Customer Engineer in Wilmington Del/Philadelphia in 1970. Branch Manage in Philadelphia, Regional Manager in Boaton, HQ CE Operations Manager for US in Santa Clara, and eventually became the VP of Customer Engineering in 1989.

Accomplishments

Too numerous to mention!

Date Left November 8, 1992
Date Entered April 21, 2006

Contributor Robert DiMenna
Date Joined November 1, 1970
Job Description

Systems Engineer, Communications Controllers

Accomplishments

Managed the development of a Telecommunications Monitor/Tester device.

Date Left June 1, 1976
Statistics

Stories (1)

Date Entered April 28, 2006

Contributor Tom Gardner
Date Joined September 1968
Job Description

Started as a development electronic engineer is disk drive development; rose thru a series of promotions to chief engineer for storage systems and then to general manager of the Large Storage Systems division.

Accomplishments

Leadership in development of Memorex PCM disk storage products 1968-1979

Major quality, inventory and cost improvements in Memorex 3650 production 1981 -1982

Technical support of the IBM anti-trust matters.

Sponsored by Memorex as a Sloan Fellow at Stanford. 1979-1980

Facilitated Burroughs acquisition of Memorex
Date Left May 1982
Statistics
Stories (3) , Documents (47) , References (20)
Date Entered December 31, 2005

Contributor john green
Date Joined January 1900
Job Description
I was never an employee. I was a customer.
Date Entered October 30, 2006

Contributor Anthony LaPine
Date Joined July 15, 1969
Job Description
VP&GM Disk Drive Division
Accomplishments
Mr. LaPine launched his career at IBM where as a member of the Advanced Technology team that spearheaded the development of the modern Disk Drive. His technical achievements include numerous patents and awards. His Data Synchronization Patent (3,701,039) remains state of the art in today's disk drives.
In 1969 as one of the founders of the Memorex Equipment Group and played a major role in nurturing the company's meteorite growth. After raising $75 million, the company's stock peaked at $175 a share on the New York Stock Exchange.
He later helped spearhead Memorex's historic turnaround, succeeding in relisting Memorex on the New York Stock Exchange - the only company ever relisted. After a major contribution to the company's first billion-dollar revenue year, he was instrumental in the sale of Memorex to Unisys.
In 1981 Mr. LaPine became president of Irwin-Olivetti where he led the company to profitability and a successful public offering (IPO).
In 1983 he formed LaPine Technology, giving birth to today's Laptop Disk Drive technology. He led LaPine Technology to a profitable $60 million in sales before selling the company to his joint venture partners, Prudential and Kyocera in a transaction valued at $234 million. LaPine Technology was featured by Forbes magazine in 1986.
After the sale of LaPine Technology, he formed The LaPine Group, a private investment and management consulting firm that achieved world wide recognition for its successes.
In 1996 Mr. LaPine launched Datalink Corporation. He listed the Company initially on AMEX and later moved to NASDAQ under the symbol XLNK. In 2000 the stock soared to $88 a share and the Company's market valuation approached One Billion dollars.
As CEO of Datalink he acquired 9 companies, developed a Fortune 1000 customer base, and created leading edge technology for the mobile enterprise market. Datalink achieved recognition as a Deloitte & Touché Silicon Valley Fast 50 and American Fast 500 Company.
Mr. LaPine later restructured Datalink into what became Semotus, buying back the preferred stock, eliminating debt and cleaning up the capital structure in preparation for an M&A exit strategy.
In October of 2008 Mr. LaPine merged Semotus with Flint Telecom forming Flint Telecom Group, a leader in the VOIP marketplace.
Mr. LaPine serves as a technology expert for major law firms and government agencies on intellectual property matters. He lectures in the Graduate School of Business at the University of San Francisco, is a member of the National Association of Securities Dealers Board of Arbitrators and a Public Arbitrator for the Pacific Stock Exchange.
Mr. LaPine is a 50 year resident of Silicon Valley. He has served on over 20 corporate

boards for companies whose products or services span a broad spectrum of industries. During his career, he has spearheaded the raising of hundreds of millions in investment capital.

He has served as Chairman of the Hoover Institution's Council on Economic Development and as a strategic advisor to the Russian government on the transition to capitalism. He is an honored recipient of the San Jose State University "Alumni Award of Distinction" and the Santa Clara University "Distinguished Engineering Alumni Award".

He received a BSEE Cum Laude, from California State University, an MSEE from Santa Clara University and an MBA from the University of San Francisco. He later became an alumnus of the Stanford Graduate School of Business through their prestigious residential Graduate Executive Program.

He has been the subject of articles in Forbes, Business Week, and the Wall Street Journal to name a few. He is listed in "The International Directory of Distinguished Leadership" "Men of Achievement" and "Who's Who" in: "...the Computer Industry", "...California", "...Finance and Industry"; ".Science and Engineering" "...American Business Leaders", "...Worldwide".

Mr. LaPine's achievements have been chronicled in a number of business books including The Third Century, High Technology Start-Ups, and Overseas Business.

Date Left July 15, 1980
Date Entered January 24, 2009

Contributor Paul Reichel
Date Joined July 1, 1979
Job Description

I joined Memorex as an Internal Auditor and for 2.5 years travelled the world doing financial and operational audits in the interantional subsidiaries. After this I took over the financial Consolidation of EMEA (afterwards Memorex International) for 50 monthly closes - which I think is a world record, together with responsibility as Finance Manager of the International H.Q. in London

Date Left November 29, 1985
Date Entered February 28, 2008

Contributor Giorgio Ronchi
Date Joined November 1969
Job Description

- 1969 joined as Technical Manager, Memorex Italy
- 1975 became President & CEO Memorex italy
- 1980 Vice President Memorex International in charge of South Europe & Latin America; later also including Canada, Austria, Middle East and South Africa
- After the Management Buy-Out in December 1986 became President & CEO Memorex worldwide, and Chairman of Management Board - at that time Memorex became a Dutch company with a Supervisory Board and a Management Board.
- January 1988: President & CEO Memorex Telex and then Chairman of the Management Board

Accomplishments

- 5 times Mr. Profit of the year
- 2 Profit Awards from Burroghs
- Management Buy-Out
- Leverage Acquisition of Memorex Telex

Date Left November 1992
Date Entered April 24, 2006

Memorex

Timeline

1961

Milestones

Memorex founded - Larry Spitters, President (February 1961 ca.)

In Dec 1960 Laurence (Larry) Spitters and 3 other persons resigned from Ampex Corporation to found Memorex for the purpose of entering "precision magnetic tape" markets. The initial capitalization requested was $1.26 million of which the founders proposed raising $12,500.00 and retaining 50% ownership. Memorex was incorporated on 9 Feb 1961.

Spitters remained as President (& Chairman) until Mar 1974

Related Documents
[Memorex Corporation Private Placement Memorandum]
Intercom, Employee Newsletter, May 74
Intercom, Employee Newsletter, Feb 71

Tape Plant Occupied (November 1961)

Memorex completes and occupies it\'s first facility, the tape plant at 1180 Shullman Ave, Santa Clara. Shullman Ave, later Memorex Drive, becomes the principal location of Memorex for the next 10 years.

Related Documents
Intercom, Employee Newsletter, Jun 65

1962

Milestones

First revenue (December 31, 1962)

Revenue of 475,000 for calendar year ending 12/31/62

Related Documents
Memorex Annual Report, 1966

1965

Milestones

Comdata Formed (October 1965)

18 Oct 1965 Comdata formed in Los Angeles to make metal parts for tape products and in 1968 added plastic parts. In 1970 it began selling OEM outside Memorex. Freeman Crank was first GM.

Related Documents
Intercom, Employee Newsletter, Dec 75
Memorex Annual Report, 1966
Intercom, Employee Newsletter, Oct 75

IPO (March 4, 1965)

Initial public offering at $25 per share closed at $32

1966

Milestones

MRX-III Computer Tape Introduced (June 1966)

This premium quality product "wears substantially longer than any other computer tape ..." Orders have been the sharpest rising for any Memorex product ever introduced.

Related Documents
Memorex Annual Report, 1966

Peripheral Systems Corp (PSC) founded (1966)

PSC formed as an entrepreneurial subsidiary with Robert Brumbaugh as President. Rumour has it that the original plan was to do a key to disk drive entry system but when IBM refused to sell disk drives at a volume discount price (~25k per 2311 drive regardless of volume) the charter was changed to drive devolopment.

Ken Fannin was in charge of Engineering. Key contributors included Roy Applequist (Mechanical Engineering - voice coil motor), John Richards (Electronics Engineering) and Dave Jepson (Recording Channel Engineering). All left Memorex in Spring 1969 more or less concurrent with Al Shugart's arrival.

See the following events:
630 Disk Drive Demonstrated
630 Disk Drive Shipment
630-1 (RP01) Disk Drive
660 Disc Drive Demonstrated

Related Documents
Memorex Annual Report, 1966

1966 Net Sales 13M (December 31, 1966)

Net income = 5M
Shareholders equity = 6M
Number employees = 918

Related Documents
Memorex Annual Report, 1967

$ 12M Debentures Sold (August 1966)

1 Aug 1966 20 Year 5% convertible subordinated debentures sold. They were redeemed (converted to common) on 1 Feb 1969 at $72/share

Disk Pack Corporation Formed (1966)

" Entrepreneurial subsidiary " formed to enter into disk pack market. Raymond Stuart-Williams was first President

See also:
Mark I Disk Pack Shipped
Mark IV Disc Pack Shipped

Memorex

Mark XI Disc Pack
Data Mark Module

Related Stories
Entrepreneurial Subsidiaries

Related Documents
Intercom, Employee Newsletter, Sep 77
Memorex Annual Report, 1966

1967

Milestones
Mark I Disk Pack shipped (September 1967)
First shipment to customers of Mark 1 Disk Pack (IBM 1316 compatible) occured in Sept 1967.

Related Documents
Memorex Annual Report, 1967

630 Disk Drive Demonstrated (November 1967)
The 630 disk drive was demonstrated at the Nov 1967 Fall Joint Computer Conference

Related Documents
Memorex Annual Report, 1967

1967 Net Sales 34M (December 31, 1967)
Net income = 7M
Shareholders equity = 22M
Number employees = 1,304

Related Documents
Memorex Annual Report, 1967

1968

Milestones
630 Disk Drive Shipment (June 1968)
First shipment of the 630 disk drive to Management Assistance Incorporated (MAI), a computer leasing and service company for installation at an MAI customer site. This is the first ever shipment of a disk drive plug compatible to an IBM system and represents the start of the plug compatible manufacturers (PCM) market.

Robert Brumbaugh initially headed Peripheral Systems Corporation, the organization within Memorex then responsible for disk drive development. He was followed by Joseph Koenig. The Chief Engineer was Ken Fannin and key engineers included Roy Applequist (mechanics), Dave Jepson (recording) and John Richards (electronics),

Memorex

Related Documents
Memorex Annual Report, 1968

660 Disc Drive Demonstrated (May 1968)
The 660 disc drive, pack compatible with the IBM 2314 disk drive was demonstrated at the Spring NCC

Related Documents
Memorex Annual Report, 1968

Quantum tape introducted (1968)
Quantum, an enhanced tape product demonstrated to be 15 time more resistant to temporary errors and twice as resistant to permanent errors was introduced during calendar year 1968. Volume shipments began in Jan 1969

Related Documents
Memorex Annual Report, 1968
Memorex Reports First Quarter Results

Image Products Corp formed (1968)
Image Products Corp (IPC) formed as an entrepreneurial subsidiary to enter computer output microfilm markets. D. James (Jim) Guzy appointed as President.

Related Documents
Memorex Annual Report, 1968

1968 Net Sales 58M (December 31, 1968)
Net Income 19M
Shareholders Equity 27M
Number Employees 1,916

Related Documents
Memorex Annual Report, 1968

630-1 (RP01) Disk Drive (November 1968)
First OEM disk drive shipment to Digital

Related Stories
OEM 630 & 660 Disc Drives

Related Documents
Memorex Reports First Quarter Results

Mark VI Disc Pack Shipped (November 1968 ca.)
In late 1968 the Mark VI disc pack began shipping. It was compatible with the IBM 2316 disk pack.

Related Documents
Memorex Annual Report, 1969
Memorex Annual Report, 1968

1969

Milestones

Leige Belgium Plant (May 1969)
On May 21 1969 the first reel of magnetic tape was produced at the new Leige Belgium plant. The plant was dedicated by Spitters in June.

Related Documents
Intercom, Employee Newsletter, Jan 71
Intercom, Employee Newsletter, Jun 69

1969 Net Sales 78M (December 31, 1969)
Net income = 14M
Shareholders equity = 35M
Number employees = 3,409

Related Documents
Memorex Annual Report, 1969

Storage Products Corp (SPC) formed (July 1969)
SPC formed as a entrepreneurial subsidiary to enable entering the IBM plug compatible 2314 facility business. This required the development of the 661 storage control unit. It is not clear who was the initially the general manager, Hiroshi (Rusty) Nagakura clearly was the head of engineering for all storage products and in Jun 1970 he was appointed GM of Storage Products Corp.

Nagakura was replaced by Padalino (1973) who was in turn replaced by Jack Clemens (late 1973), Tom Gardner (circa 1977) and finally by William Brown (1979).

This organization was responsible for Memorex's disk drive and control unit development for the next four years and under a variety of names for as long as Memorex remained in the disk drive and subsystem businesses.

As it turned out, the then existing Memorex 660 (2314 compatible) product line, although in production, had many problems so much of the initial activity of this group was focused on engineering changes to the existing disk drive product line while concurrently the 661 storage control unit was being developed.

see the following events:
Al Shugart
3660 Disc Storage System
3670 / 3671 Storage Subsystem
3675 / 3673 /3672 Storage Subsystem

Related Stories
Entrepreneurial Subsidiaries

Related Documents
Intercom, Employee Newsletter, Apr 75
Memorex Annual Report, 1969
Storage Products Enginnering

Midwest Systems Corp (MSC) formed (1969 ca.)

MSC formed as an entrepreneurial subsidiary to enable Memorex\'s entrance into the computer systems market. John Eastling may have been the first general manager

Related Documents
Memorex Annual Report, 1969
Intercom, Employee Newsletter, Feb 71

Sales, Service and Marketing (1969 - 1984) (August 1969)

This is a stub of an event to be filled in

International Sales and Service
1966 - UK, Belgium, France, Germany, Sweden, Norway, Italy, Switzerland
1967 - Austria, Japan, Netherlands
1988 - Canada, Denmark, Mexico
1989 - Argentina, Venezuela, Peru
1970 - Australia

Equipment Sales and Service
Aug 69 Garrett Fitzgibbons VP Marketing
??? 70 Bill Emmons VP Sales

Media Sales and Service

??? 74 Phil Yaconelli

Related Documents
Intercom, Employee Newsletter, Aug 69
Memorex Annual Report, 1969
Memorex Annual Report, 1970
Memorex Annual Report, 1968
Memorex Annual Report, 1966
Memorex Annual Report, 1967

Al Shugart (April 1969)

In Apr 1969 Al Shugart started as vice president of engineering of the Equipment Group reporting to Jim Guzy.

It was rumored that he recruited several hundred engineers from IBM San Jose by amongst other things making job offers including stock options at the Paddock bar located immediately across the street from IBM. The first wave of about 10 recruited engineers joined Memorex on July 4, 1969 and this group included all of what became the management of the Storage Systems Group, i.e., Hiroshi Nagakura, Marco Padalino & Walt Hillblom as well as a number of key individual contributors. . The last engineer to join Memorex from IBM was probably Terry Johnson. The actual number is likely to be in the range of 30 to 50 engineers in his Equipment Group engineering organization.

Shugart remained in this position until he left in Feb 1973 to form Shugart Associates.

Related References
Shugart's Resignation

Related Documents
Intercom, Employee Newsletter, Aug 69
Storage Products Enginnering

Equipment and Media Groups formed (May 1969)
The Equipment Group, headed by Jim Guzy was formed to encompass all activities related to the corporations\\\'s equipment businesses including PSC, IPC and IPSC.

The Media Group, headed by John P DelFavero was responsible for media products.

Related Documents
Intercom, Employee Newsletter, Jun 69
Memorex Annual Report, 1969

Information Printing Systems Corp (IPSC) formed (1969)
IPSC formed as entrepreneurial subsidiary to develop keyboard printer for use as a remote terminal. Don Reichel was general manager.

Related Documents
Intercom, Employee Newsletter, Apr 70
Memorex Annual Report, 1969

1970

Milestones
$ 75M dollars Debenture Sold (April 1970)
20 year $ 75M 5.25% convertible subordinated debenture.
Provides funds for Equipment Group product development & manufacturing operations and for additional working captial.

Related Documents
Memorex Annual Report, 1970

Independent Peripherals Leasing Corp (ILC) (June 29, 1970)
ILC was formed on 29 Jun 170 and closed financing on 29 Dec 1970. An aggregate $ 197M was to be available for use from 1970 to 1972 for purchase of Memorex equipment for lease to end users. Memorex was responsible for sales to end users, service and resale of products purchased by ILC. In 1972 Memorex acquired 100% voting control of ILC.

Memorex initially did not account for ILC finances in its reporting but in April 1971 was required by its accountants to state its 1970 (and subsequent) results in combination with ILC.

Related Documents
Memorex Annual Report, 1970
Memorex Changes Accounting

Memorex

Memorex 3rd Quarter 1971 Report

San Tomas Facilities (July 1970)
Building 10, 210,000 sq ft, Equipment Group manufacturing facility occupied beginning Jul 1970.
Building 12, Corporate Headquarters occupied beginning Feb 1971.
Building 14, 200,000 sq ft Equipment Group engineering to be occupied in Apr 1971 and 200,000 sq ft warehouse to be occupied in May 1971.

As a cost savings measure, Building 12 was mothballed from ???? to ????. It was then reoccupied first by the Antitrust ligigation team and then again by Corporate HQ. It was torn down in ????.

Related Documents
[Memorex World Headquarters in Santa Clara]
Intercom, Employee Newsletter, Jun 71
Intercom, Employee Newsletter, Feb 71

Consumer Products Division (January 14, 1970 ca.)
The Consumer Products Division was started in Jan 1970 when Robert (Bob) Jaunich joined Memorex reporting to Spitters. CPD was an entrepreneurial subsidary with its own board. The incentives were not stock for stock like the equipment group but were based on percent earnings in the business achieved cumulatively over time.

The products (blank audio cassettes and reel tapes) were introduced in early 1971 with television and major print advertising commencing in the fall of 1971. The first ads featured a "shattered glass" and the first person to do so was Metropolitan Opera tenor, Enrico DiGiuseppe. In 1972 Ella Fitzgerald became the spokesperson for Memorex - "Is it live or is it Memorex"

By 1972 more retailers stocked Memorex than any other cassette brand.

By 1973, no fewer than six competitors were using "glass" in their advertising.

Tandy acquired the consumer business in 1982 and in 1993 it was sold to Handy Holdings. In 2006 the business was sold to Imation for $ 330M

Related Documents
Memorex Contemplates New Markets as It Promotes Blank Audio Tapes
Goblet Shattering Ad Titillates Tape Giants
Tandy-Memorex
Imation To Acquire Memorex For $ 330 Million
Search For A New Chief At Memorex
Handy Holdings acquires Memorex Consumer
Memorex 3rd Quarter 1971 Report
Shattering Goblets With Amplified Sound
Intercom, Employee Newsletter, Apr 76
Shattering Glass Print Ad
DiGiuseppe Shattering Glass Video Storyboard
Ella Fitzgerald Photo
Memorex Consumer Tape #2 In Market Ad
Is it Ella or is it Memorex Ad

Is it live or is it Memorex Ad - Ella and Count Basie

3660 Disc Storage System (July 1970)
The 3660 disc storage subsystem consisted of one 661 storage control unit and one to nine 660-0 disc drives.
661 storage control unit announced Dec 1969
Subsystem first shipped about Jun 1970.
1970 Revenues $ 40M (at sales value)

At end of life many 660-0 were reconditioned and sold to Digital as RP-02's.

Related Documents
Memorex Annual Report, 1969
Memorex Annual Report, 1970
630 / 660 Drive Patent
660-0 disc drive maintenance manual
Intercom, Employee Newsletter, Apr 76

IBM Trade Secret Litigation (December 12, 1970)
On 7 Dec 1970, IBM sued Memorex aledging theft of trade secrets.

On 31 Mar 1971, Memorex countersued aledging illegal interference with IBM employee migration rights and illegal impeding of ILC financing.

In Jan 1972 the suits were settled; IBM\'s complaint was dismissed with predjudice but Memorex\' was not, allowing for subsequent action by Memorex

Related Documents
Memorex Sues IBM for $ 3 Billion
IBM Names Memorex in Secrets Suit
Memorex Changes Accounting

1971

Milestones
1270 Terminal Control Unit (May 1971)
Announced May 1971
See detailed story by Bob DiMenna

Walt Hillblom head of team that developed 1270

William Bridge head of all communications engineering (1975)

Related Stories
MRX 1270 Terminal Control Unit

Related Documents
Intercom, Employee Newsletter, Apr 75
Intercom, Employee Newsletter, Jun 71
1270 Terminal Control Unit, Illustrated Parts Catalog
1270 Terminal Control Unit, Maintenance Manual, Volume I (1982)
1270 Terminal Control Unit, Maintenance Manual, Volume II (1983)

1270 Terminal Control Unit, Maintenance Manual, Volume II (1975)

1972

Milestones

3670 / 3671 Storage Subsystem (October 1972)

The 3670 Storage Subsystem consisted of one 3761 Storage Control Unit and one to four 3670 two spindle disk drives. It was plug compatible with the IBM 3330 direct access storage subsystem.

Product engineering began in Dec 1970 with Don Massaro in charge of drive development and Walt Hillblom in charge of control unit development. Key drive development managers were J Brent Nilson (mechanical) and Tom Gardner (electrical). Key control unit development managers were Larry Pyle (firmware) and Dave Osborne (hardware).

First shipment to a customer occurred in Oct 1972. Before the end of 1974 more than 2,000 3670 units had been shipped.

Related Documents
Intercom, Employee Newsletter, Jan 75
Photo, Memorex Disk Drive Div Managers circa 1973
3670 Design Patent
3670 Airflow Patent

Floppy disc drive business (December 1972 ca.)

In 1972 the Memorex 650 is the first read/write floppy disk drive shipped in the OEM market. Major customers were Wang and Zenith.

The development program was initially headed by Don Wartner with Herb Thompson responsible for the head design. Dave Stoddard later took over the engineering responsibility.

A later version, the 651 Flexible Disc Drive was format compatible with the IBM 33FD. It shipped in ???

Related References
650 FDD announcement

Related Documents
650 Flexible Disc File - OEM Manual
Memorex in FDD market
651 OEM Manual
650 Announcement

MRX 40 / 50 Computer System (February 1972)

Announced Mar 1972 with shipments begining in 4Q1972.

The product was developed by MSC in Minneapolis suberbs. John Eastling headed the program

The products were withdrawn in Jul 1973.

Related References
MRX 40 / 50 Documents at Bitsavers site

Related Documents
Memorex MRX/40 and MRX/50
MRX 40 / 50 Product Manual (Internal Use)
MRX 40 / 50 Product Manual

1973

Milestones

Memorex Antitrust Litigation (December 14, 1973)
On 14 Dec 1973 Memorex sued IBM aledging antitrust violations

On 22 Feb 1974 IBM counter sued Memorex aledging theft of trade secrets.

Memorex formed a team to support its attorneys, led by John Eastling and with John Navas handling marketing issues and Tom Gardner handling technical issues.

In 1978 a jury trial hung 9 - 2 in favor of Memorex but notwithstanding the jury results, the judge directed a verdict in favor of IBM. On appeal, the directed verdict was sustained (1980) and the Supreme Court denied cert (1981).

Related References
Memorex Antitrust Litigation Records
Supreme Court denies cert in Memorex case
Decision for IBM sustained

Related Documents
IBM Charges Espionage In Answer to Memorex
Memorex Sues IBM for $ 3 Billion

1974

Milestones

3675 / 3673 /3672 Storage Subsystem (October 1974)
The 3673 Disk Controller and 3672 Storage Control Unit were follow on procucts to the Memorex 3671 Storage Control Unit in response to the IBM 3380-2 and 3333-1. The Memorex products, like the IBM products split the control unit function into two boxes, a device independent storage control unit and a device dependent controller. Ron Singleton had overall engineering reponsibility with Tom Idleman responsible for the microcode and Tore Larsen responsible for hardware.

The 3675 Disk Drive was a double capicity, 200 MByte, version of the 3670 Disk Drive. The engineering project was led by Tony LaPine. The 3675 was the first drive to use Manganese Zinc Ferrite for the head transducer allowing the heads to fly higher thereby improving reliability.

A 3672 Storage Control Unit would attach up to four 3673 Disk Controllers and each disk controller in turn would attach from one to four 3670 or 3675 Disk Drives,

that is, four strings of up to eight drives for a total of 32 drives. The 3672 and 3673 supported string switch, the ability to switch a disk controller between two storage control units.

The 3672/3673 shipped in the fall of 1974 to American Motors, Milwaukee WI.

The 3675 shipped in Oct 1974 to Omnis Corp, Dallas TX. According to George Dashiel, VP Sales and Service, the 3675 was the most successful product he had been associated with in his 27 years in the data processing industry

The 3673 was the first PCM A-Box and therefore could attached to IBM's integrated attachments, a diagnostic device, the "Parrot" allowed maintenance in these environments.

Related Documents
Intercom, Employee Newsletter, Nov 74
Intercom, Employee Newsletter, May 74
Memorex Annual Report, 1978
Memorex 3673 Disc Controller, 1978
Memorex 3670 and 3675 Disc Storage Modules, 1979
Memorex 3672 Storage Control Unit, 1977
Memorex 3670/75 Disc Storage Subsystem, 1979
Intercom, Employee Newsletter, Nov 73
Intercom, Employee Newsletter, Oct 75
The Independent Journal, Dec 75

Wilson Era 1974 - 1980 (April 1974)
Robert C. (Bob) Wilson joined Memorex as Chairman and President in April 1994 replacing Spitters; the position of CEO was added in ????. He left Memorex in 1980.

" Management lib is spelled c-a-s-h " Wilson intitially focused on Attitute Cash and Profits going as far as to replace the corporate Cadilac with a Pinto having MRXACP as its license.

Refinanced

Wilson brought in a new managment team in 2 product organizations and 2 international sales organizations, as follows:

Equipment Products - John J Kramer, replaced by Roger Johnson circa Oct 1974

Media Products - J Garrett Fitzgibbons, replaced by James Dobbie circa Dec 1974

EUMEA Operations - William S. McCalmont

A&A Operations - Richard L. Renne, replaced by Marcello Gumucio (1975).

Other members of Wilson's initial team included George Bragg (Corporate Development) and Bob Erickson (Legal). The initial Finance VP, Hal J. Krauter, was replaced by Henry Montgomery circa Oct 1974.
10 key management areas

Memorex

Annual management reviews were instituted as a means to improve communications and resultes.
see event: Silverado Management Conferences

Performance under Wilson

MRX was listed on the Pacific Stock Exhange in 1975 and relisted on the New York Stock Exchange in Sep 1977.

Related Documents
Intercom, Employee Newsletter, Sep 77
Intercom, Employee Newsletter, Apr 75
Intercom, Employee Newsletter, Nov 74
Intercom, Employee Newsletter, Jan 75
Intercom, Employee Newsletter, May 74
Search For A New Chief At Memorex
Memorex Corp. Says It's Facing Big Writeoffs
Memorex: This is 'the year of restoration'
Intercom, Employee Newsletter, Aug 75

Cubic Tape (December 1974 ca.)
Cubic announced circa Dec 1974

CubicHD announced 1978; designed specifically for 6250 bpi tape drives

Related Documents
Intercom, Employee Newsletter, Jan 75
Memorex Annual Report, 1978

Mark XI Disc Pack (November 1974 ca.)
Late 1974 Memorex began shipping its Mark XI 200 MByte disk pack, a compatible alternative to the IBM 3336-11 disk pack.

Related Documents
Intercom, Employee Newsletter, Feb 75

1975

Milestones
Data Mark Module (April 1975)
Circa Apr 1975 Memorex announced availability of it's Data Mark module a compatible alternative to the IBM 3348 Data Module (Winchester module). First customer shipment was Jun 1975.

Don Matson was general manager of the disk pack division and the development was led by Dr. John Scott. There had be a debate within Memorex whether this was a media or an equipment product, with the decision going to media. One unintended consequence of this decision, was that the heads for this product were sourced outside Memorex whereas previously Memroex had been in its equipment business a head designer and manufacturer.

Related Documents

Intercom, Employee Newsletter, Apr 75
Intercom, Employee Newsletter, Aug 75

Silverado Management Conferences (February 1975)
Beginning Feb 75 and continuing thru 1980 ? Memorex senior managers met for several days at the Silverado Country Club, Napa CA, to better management teamwork, review the previous years results, communicate current year plans and have fun.

It is rumoured that financial discipline required the first year's participants share accomodations, but by 1976 the participants had private rooms.

To deal with both growth and turnover, the programs listed each first time participant and all participants were encouraged to get the signature of each new participant in his/her program.

Related Documents
Intercom, Employee Newsletter, Apr 75
Intercom, Employee Newsletter, Apr 76
Team '76 Management Conference, Official Program
Team '77 Creative Excellence, Management Conference, Silverado
Team '78 Quality Excellence, Management Conference, Silverado
Team '79 Professional Excellence, Management Conference, Silverado
Intercom, Employee Newsletter, Apr 78
Silverado Speech - Lapine 1978
Silverado Speech - Lapine 1979
Silverado Speech - Lapine 1980

1976

Milestones
3650 Disc Storage Subsystem (September 1976)
14 Sep 1976 Announced
Sep 1977 first shipped to Dallas County, TX

Consisted of 3653 Disc Controller and Disc Drive Module (A box) and 3650 Disc Drive Module

Al Wilson program manager

Related Documents
Memorex Subsystem 3350-Compatible
[Photo of Memorex 3650]
[Caption of Memorex 3650]
Intercom, Employee Newsletter, Nov 76
Commitment, Newsletter, Sep 77
Intercom, Employee Newsletter, Apr 78

1380 Communications Controller (March 1976)
In 1975 Memorex agreed to acquire on an OEM basis the CCI CC80 communications controller and market and service it under the Memorex Brand. The product was first shipped circa Apr 1976 to Loyola University, Chicago IL, as

the Memorex 1380.

Related References
CCI purchase agreement

Related Stories
MRX 1270 Terminal Control Unit

Related Documents
Intercom, Employee Newsletter, Jun 75
The Independent Journal, Mar 76

1976 Net Sales 345M (December 31, 1976)
Net income = 40M
Shareholders equity = 48M
Number employees = 6,840

Related Documents
Memorex Annual Report, 1976

1978

Milestones
1978 Net Sales 633M (December 31, 1978)
Net income = 50M
Shareholders equity = 207M
Number employees = 11,085

Related Documents
Memorex Annual Report, 1978

Technology (1978 ca.)
This is a stub event to be filled in

Corporate Vice Presidents of Engineering
Jul 76 Dick Allan
Apr 78 Steve Puthoff

Recording Technology Center
Frank Sordello

Magnetic and Chemical Technology Center
Eric Daniel

1979

Milestones
3770 Disc Cache (1979)
The Memorex 3770 Disc Cache was intended to extend the life of existing leased
3670/3675 storage subsystems by providing a substantial performance

improvement for a relatively low price.

The initial concept was developed by Richard Reiser under the direction of Ward Ellis and was based upon trace tapes from the Memorex corporate S/370 Model 155 installation. Analysis of the traces predicted a subsystem cache would substantially increase system performance.

The 3770 is likely the industry's first cache in a disk storage subsystem substantially predating the STC 8890 Sybercache (1981) and the IBM 3880-13 (Sheriff, 1982).

Memorex's decision to locate the cache at the head of a string of drives is interesting and controversial. The two subsequent competitive products (and all such thereafter) located large caches in the storage control unit. Memorex's decision apparently was in part due to targeting it's installed base, in part due to resources constraints (controller vs. storage control unit) and in part due to politics.

The project was led by Jesse Stamnes (firmware) and Dave Gordon (hardware) with Ron Singleton in overall charge of all storage subsystem development. At first CCD's were the intended cache memory but when Fairchild failed to provide the memory, the product was switched to DRAM.

First customer shipment was to Southland Corp (now 7-Eleven Corp.) for a warehouse reconciliation operation. During the day, stores placed orders on the system; at midnight a batch application was started to reconcile the orders to inventory and prepare warehouse pull lists. The application had to finish by 6:00 AM and usually did but not with much margin. On the first production run, the application finished in less than two hours, so soon that the Southland's personnel couldn't believe it wasn't a bug. Subsequently, Southland's system analysts discoverred they could get similar performance improvements thru optimization at the systems level.

Only a few were actually built and shipped, because ????

Related Documents
Memorex to Feature Its New 3770 Disc Cache and Intelligent Dual Interface at '79 NCC
Memorex 3770 Disc Cache
Intercom, Employee Newsletter, Feb 79
Memorex Annual Report, 1976

1980

Milestones

Spangle Era 1980 - 1984 (March 1980)
Clarence W. (Clancy) Spangle was appointed President and CEO in Mar 1980 and Chairman in May 1980 replacing Wilson. He remained as CEO and Chairman until 1984.

Spangle appointed Charles S. (Chuck) Strauch President and COO in May 1980 with initial focus on Media and International organizations. Strauch left in Mar 1982.

Spangle's intial focus was on losses and declining market share caused by IBM price cuts and disc product delays.

Related References
Philip S. Dauber
MEMOREX SEEKS NEW RECOVERY

Related Documents
Organizational Announcement (Spangle Chairman)

1981

Milestones

Memorex-Burroughs Merger (August 1981)

Memorex and Burrough had discussions in the summer of 1980 regarding the formation of a joint venture for development and manufacturing storage products to be structured much as the Magnetics Peripherals Inc structure of CDC, Honneywell, etc. To a great extent this was driven by William (Bill) Bayer then in charge of the Peripheral Equipment Group and based upon Bayer's MPI experience. Discussions were broken off in the Fall of 1981.

Need some info on when they restared.

31 Jul 1981 Paul Stern and Phil Dauber arrived in Santa Clara for final due dilligence. The senior Memorex executives (Spangle, Strauch & Dobbie) were all out of town and unavailable so Memorex was represented in these final discussions by William Krehbiel and Tom Gardner. Late in the afternoon Stern excused Krehbiel and Gardner to make a telephone call to the Burroughs Board. On Sunday, 2 Aug 1981, Burroughs made public their offer.

As announced Memorex was to continue as a free standing division with Spangle reporting to Jerry Jacobson, Burroughs, Vice Chairman. It turned that Burroughs in effect placed most of its Peripheral Products Group under Memorex management including organizations based in Westlake Village, CA, Winnepeg, Canada and Glenrothes Scottland.

Related Documents
Intercom, Employee Newsletter, Dec 81
Memorex-Burroughs Merger
Joint Venture Proposal To Burroughs
Brochure on Burroughs acquisition of Memorex

1982

Milestones

3680 Disc Subsystem (September 1982)

Announced 8 Sept 1982 with production shipments scheduled to begin in 1Q83 the 3680 Disc Subsystem consisted of a 3683 Dual Path String Contoller to which could be attached up to eight 3680 Disc Drives. Also announced was the 3888 Dual Director Storage Control unit for attachment of 3680 Subsystems to IBM compatible channels.

Memorex

The product family was a plug compatible alternative to the IBM 3380 Disk Subsystem and 3880 Storage Control.

An OEM version was announced as the 680 Disc Storage Subsystem.

Overall engineering was headed by William Brown. Thin film head development was the responsibility of Frank Sordello.

The products were late and poorly designed; only becoming stable in late 1985. Policy recalls were required in the summer of 1985 and Oct 1985.

A double density version, the 3682 was announced in Apr 1985.

Of all of the US based PCM's Memorex was the only one to develop the 3380 class of product - all others had withdrawn from the market!

Related References
3682 Announcement

Related Documents
Memorex Introduces Disc Storage Subsystem Series Utilizing Advanced Thin-Film Technology
Memorex 3680/3683 Product Specifications
Memorex 3888 Dual Director Storage Control Unit
The Memorex Press, Employee Newsletter, Jan 86
Memorex chief takes over disk drive manufacturing

1984

Milestones
Dauber Era 1984 -1986 (May 1984)
Dr. Philip S Dauber, Ph.D. replaced Spangle as President and CEO in May 1984 and as Chairman Dec 1984.

Sometimes known as Dr. Death, he invested major effort in fixing the troubled 3680 program and other problem areas,

He presided over the dismemberment of Memorex and return to a Unisys postion at the end of 1986.
see event: The Dismemberment

Related References
Philip S. Dauber

Related Documents
The Memorex Press, Employee Newsletter, Jan 86
The Memorex Press, Employee Newsletter, Aug 85
Memorex chief takes over disk drive manufacturing

1986

Milestones

The Dismemberment (1982 - 1988) and After Life (1986 ca.)
Memorex was spun out in four pieces by Burroughs and Unisys

27 Apr 1982 Consumer Products brand sold to Tandy.
see event: Consumer Products Division

13 May 1985 OEM Disk Drive Sales and Service sold to Toshiba.

23 Dec 1986 A group of managers from the Int'l division of Memorex led a leveraged buyout of Memorex from Unisys, except for the disk drive manufacturing division, making Memorex once again an independent company. In 1988 Memorex acquired Telex leading to the formation of Memorex Telex, N.V. A collapse of the IBM mainframe market and the subsequent problems at IBM led to the eventual restructuring of Memorex Telex and finally its dissolution.

8 Dec 1988 Disk products spun out as Sequel.
Sequel continued intitially as a manufacturer and servicer of end of life products for disk drive companies and evolved into a specialized repair company. In 1999 it was acquired by Solectron.

Related References
Sequel spin out
Gumucio resigns as CEO of Memorex Telex
Unisys spins out Memorex Media and Communications
Memorex-Telex Merger
Sequel - Maxtor
Sequel - Priam
Sequel - Nashua
Sequel - Mitsubishi

Related Stories
Memorex Management Buyout - Memorex Telex NV

Related Documents
Tape Plant Auction Catalog
Memorex Technologies, Inc.
Tandy-Memorex
Sequel - Solectron
Sequel - TSS (IBM)
Management Seals Memorex Merchant Business Buyout From Unisys
Memorex Realigns Manufacturing, Marketing, Sales Operations
Telex Papers On Acquisition By Memorex

1996

Milestones

Memorex Telex NV Bancruptcy And Dismemberment (October 15, 1996)
Memorex Telex NV continued world wide operations into the 1990s but in October 1996 its US subsidiary filed for bankruptcy and was acquired by DecisionOne.

Its Japanese subsidiary was acquired by Kanematesu.

Memorex

In 19?? the European part of Memorex Telex, that is Germany, UK, France, Spain, Netherlands and Ireland was acquired by XXXX as a single corporation with each country doing its own thing. XXXX then sold European Memorex Telex to Systematics, another German "Systems House" and they kept it going under the same name. In 2001 EDS bought Systematics (including Memorex Telex) renaming it EDS Global Field Services (GFS). In November 2006, A&O Group, Ireland, acquired EDS GFS operations in Ireland, UK, France, Germany, Iberia and the Netherlands thereby perpetuating these remnants of Memorex Corp.

Stories

Title: MRX 1270 Terminal Control Unit
Author: Robert DiMenna
Created: April 28, 2006
Cataloguer:
Copyright:
Story:
The MRX 1270 was announced to compete with the IBM 270X family of Communications Controllers, in one of the many markets dominated by IBM at the time (i.e., all competitors = approx. 20% or less, of the total market). After a painful product introduction, the 1270 went on to earn the great distinction, of establishing a record 25% (??) of the IBM controller market. The 1270's function was to interface with IBM mainframes, and sundry tele-communications devices, i.e., terminals, displays, remote computers, etc.

The attachment point for mainframes was the "channel interface," a critical point of compatibility, any deviation in procedure or data transfer would cause "total system crashes." When asked for the IBM Interface Specifications for each model mainframe, e.g., System 360 Model 45, 55, 85 etc. and System 370 Model 135, 145, etc., IBM sent the same, identical, scant, booklet for all models. The fact was that every single channel was different, therefore, every installation on a mainframe that MRX had not been attached to, required engineering changes. The process of defining the differences and making engineering changes was often to painful (system crashes) for customers to allow.

It had been a very difficult sell into the IBM compatible communications market. Typically, the clients whole company communicated through this type of equipment, so there were tremendous "risks" perceived, relative to the compatibility and reliability of the new equipment. These risks where often exaggerated by IBM sales people, as well as, an implied reduction in service for remaining IBM equipment, subsequently retarding 1270 initial sales. However, the 1270 was one in a series of Memorex products which employed "state-of-the-art" technologies developed here in Silicon Valley. The technology, architecture and features of the MRX 1270 made it a powerful adversary. One 1270 often replaced numerous competitive products, e.g. in one account, a single 1270 replaced 4 x 2701's, 2 x 2702's, and 4 x Bell modem racks, Thus when the 1270 proved reliable, sales grew rapidly.

IBM in the mean time was developing a follow-on product, the IBM 3705 which was programmable. Being software controlled it performed more telecommunications functions with less mainframe involvement (reducing CPU overhead). Many in the industry felt IBM announced the 3705 prematurely, because of the 1270 market penetration, and appropriately, Memorex sued IBM. As customers evaluated the 3705's additional "software" capabilities, they realized that relative to their present communications networks the 3705 provided little if any benefit, however, relative to growth, it required a commitment in direction, that few where willing to make. Therefore, 1270 sales grew-on, and the manufacturing line that had been shut-down in anticipation of 3705 sales, was restarted three times.

In analyzing the communications market, Memorex recognized an emerging "distributive/networking" type architecture and decided to OEM a 3705 type product rather than making a large commitment to develop their own.

Memorex

Entered By: Robert DiMenna
         April 28, 2006

Related Documents
1270 Terminal Control Unit, Illustrated Parts Catalog
1270 Terminal Control Unit, Maintenance Manual, Volume I (1982)
1270 Terminal Control Unit, Maintenance Manual, Volume II (1983)
1270 Terminal Control Unit, Maintenance Manual, Volume II (1975)

Related Events
1270 Terminal Control Unit
1380 Communications Controller

Title: Entrepreneurial Subsidiaries
Author: Tom Gardner
Created: March 5, 2006
Cataloguer:
Copyright:
Story:
In the mid 1960's Memorex developed a strategy of forming "entrepreneurial subsidiaries," by which Memorex developed new products for new markets while, if successful, the subsidiary's founders could receive entrepreneurial rewards for their efforts.

Each subsidiary was essentially a joint venture between Memorex and the technically skilled entrepreneurs who were purported to be capable of developing innovative products. No two subsidiaries were identical in their arrangements, each reflecting the uniqueness of the product development task, funding requirements, manpower needs, and market opportunity. But all had in common that Memorex provided financial resources, marketing and manufacturing capabilities. Memorex acquired controlling equity in the subsidiary and an option to subsequently acquire the minority-interest equity by exchanging Memorex common stock for the subsidiary's common stock. The entrepreneurs acquired their minority equity interest at negligible cost per share. The variable exercise ratio of the option was tied to the degree of success achieved by the subsidiary relative to the program's objectives but the cost basis to the entrepreneur was so low that any conversion was a substantial reward.

The companies included:

Disk Pack Corporation (1966) - Developed the Mark I disk pack (IBM 1316 compatible).

Peripherals System Corporation (1966) - Developed the 630 disc drive (plug compatible with the IBM 2311) and a series of OEM disc drives.

Image Products Corporation (1968) - Developed the 1600 family of computer output microfilm equipment.

Information Printing Systems Corporation (1969) - Developed the 1240 keyboard printer family.

Storage Products Corporation (1969) - Developed the 661 storage control unit that together with the 660-0 disc drive formed the 3660 Disc Storage Subsystem, a plug compatible equivalent to the IBM 2314.

Midwest Systems Corporation (1969) - Developed the 40/50 computer system.

Memorex acquired all of these subsidiaries. Three of these subsidiaries, Disk Pack, Peripheral Systems, and Storage Products, appear to have been unqualified successes. Information Printing Systems printer business was mediocre. The computer output microfilm business never achieved its projected volumes. The Memorex computer system was withdrawn due to Memorex's financial condition before its success or failure could be determined.

Memorex

Entered By: Tom Gardner
          March 5, 2006

Related Events
Disk Pack Corporation Formed
Storage Products Corp (SPC) formed

Title: OEM 630 & 660 Disc Drives
Author: Tom Gardner
Created: March 7, 2006
Cataloguer:
Copyright:
Story:
Memorex's first disk drive, the 630, was sold to end users of IBM computing systems and connected to systems thru an IBM 2841 storage control unit.

The first OEM disk drive was the Memorex 630-1 developed jointly by Memorex and Digital Equipment Corp. The key DEC engineers were John Greene and Dave Ives. I was the only Memorex engineer. The product was designated the RP01 by DEC. Initial shipments occurred in late 1968, probably around Nov.

A number of changes were made to the interface to accommodate DEC's requirements, principally changing the interface voltage to RTL/DTL compatible levels, eliminating the Set Difference tag and simplifying the power sequencing. This was the first OEM interface; other manufacturer's (e.g., Information Storage Systesm, ISS) adopted this interface and it became the industry standard for large disk drives. Its tag/bus structure became the industry standard until the early 1980s, including, e.g., the SMD interface.

Demand immediately shifted to the higher capacity 660 products. The 660-2 was shipped to RCA in early 1989 and the DEC version, 660-1, was shipped shortly there after (not later than March 1969). The 660-1 became the generic OEM model. DEC designated their product the RP02.

Entered By: Tom Gardner
          March 7, 2006

Related Events
630-1 (RP01) Disk Drive

Title: Memorex Management Buyout - Memorex Telex NV
Author: Sergio Mazza
Created: April 21, 2006
Cataloguer:
Copyright:
Story:
1. The management buy-out of Memorex was a record breaking transaction at the time. I believe it was at that date the largest leveraged buy out in the IT industry and it was unique then , and may still be, in that a $900 million revenue business was purchased for $550 million, but with only $3 million in equity. It was an extraordinary deal then, and may still be an extraordinary deal in terms of the leverage. Also unique is the fact that the Managers who led the buy out were from two and three management layers below the leadership of Memorex at the time of the buyout. Management led leveraged buyouts are almost always led by the top management of a company.

2. As part of the Memorex acquisition of Telex, two divisions were spun off into separate entities, Telex Communications Inc. was completely separated from the parent and spun off to shareholders, and

Memorex

Memorex Computer Supplies, the computer magnetic media portion of the company, was spun off into an autonomous division with Sergio Mazza as President, and the manufacturing assets moved into Memorex Technologies Inc.

3. An interesting anecdote is that Memorex was the first company to bring to market an IBM compatible PC (soon after IBM introduced it PC) that could connect to an IBM 3270 telecommunications network, an option not even IBM offered at first. It was a revolutionary idea at the time, combining the power of the PC and the power of the dominant corporate data communication network standard of the time. The product was killed by Burroughs who insisted that it's own B-20 architecture should be sold by Memorex, despite the clear market indications that IBM corporate customers were not interested in a personal work station that was not IBM compatible. Had Burroughs not interfered, Memorex could have taken an early leading position in the IBM compatible PC market.

Entered By: Tom Gardner
          April 21, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Documents

Title: [Memorex Corporation Private Placement Memorandum]
Author:
Created: 1961
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-43385ed292719.pdf (Size: 1.29 MB)
Pages: 21
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Private placement memorandum (circa 1961) for intitial funding of Memorex Corporation. Includes description of the magnetic tape industry and the formation of Memorex Corporation.
Accession: 062304025
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/07/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304025_business_plan.1961

Entered By: Sarah Wilson
September 26, 2005
Related Events

Memorex founded - Larry Spitters, President

Title: Intercom, Employee Newsletter, Jun 65
Author:
Created: June 12, 1965

Memorex

Publisher: Memorex
Donated By: Mark Lutvak
Filename: doc-43d57b6eb22e1.pdf (Size: 755 KB)
Pages: 4
Cataloguer: 2006-01-23 Sarah Wilson
Copyright: Memorex
Description:
Volume 2 Number 5 June 12, 1965. Cover caption: First Memorex Open House Today.
Accession: 062304173
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304173.intercom_newsletter.1965jun
----
Entered By: Sarah Wilson
January 23, 2006
Related Events

Tape Plant Occupied

Title: Memorex Annual Report, 1966
Author:
Created: 1966
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43f10d139e8a4.pdf (Size: 2.89 MB)
Pages: 26
Cataloguer: 2006-02-13 Sarah Wilson
Copyright: Memorex
Description:
Memorex Annual Report 1966. Statement of operating and financial results.
Accession: 062304203
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-02-15 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304203.annual_report.1966

Entered By: Sarah Wilson
February 13, 2006
Related Events

Comdata Formed
Disk Pack Corporation Formed
First revenue
MRX-III Computer Tape Introduced
Peripheral Systems Corp (PSC) founded
Sales, Service and Marketing (1969 - 1984)

Memorex

Title: Memorex Annual Report, 1967
Author:
Created: 1967
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-44079743d1ce1.pdf (Size: 6.21 MB)
Pages: 45
Cataloguer: 2006-02-07 Sarah Wilson
Copyright: Memorex
Description:
Memorex Annual Report 1967. Statement of operating and financial results.
Accession: 062304202
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-02-06 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304202.annual_report.1967

Entered By: Sarah Wilson
March 2, 2006

Title: Memorex Annual Report, 1968
Author:
Created: 1968
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43e912e3ca7b2.pdf (Size: 5.87 MB)
Pages: 44
Cataloguer: 2006-02-07 Sarah Wilson
Copyright: Memorex
Description:
Memorex Annual Report 1968. Statement of operating and financial results.
Accession: 062304201
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-02-06 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304201.annual_report.1968

Entered By: Sarah Wilson
February 7, 2006

Title: 630 / 660 Drive Patent
Author:
Created: March 22, 1968
Publisher: US Patent Office

Memorex

Donated By: Tom Gardner
Filename: doc-4410da0c72978.pdf (Size: 688 KB)
Pages: 11
Cataloguer:
Copyright:
Description:
Roy Applequist's patent on the mechanism that was the bases for the 630 and 660 disk drives. While the claims are limited to the flexible cable connecting to the linear motor, the disclosure is very exhaustive including details of the arm and ramp, carriage, detent and linear motor
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Entered By: Tom Gardner
March 9, 2006
Related Events

3660 Disc Storage System

Title: Memorex Annual Report, 1969
Author:
Created: 1969
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43d57c40a5f8f.pdf (Size: 5.49 MB)
Pages: 40
Cataloguer: 2006-01-23 Sarah Wilson
Copyright: Memorex
Description:
Memorex Annual Report 1969. Statement of operating and financial results.
Accession: 062304176
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-17 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304176.annual_report.1969

Entered By: Sarah Wilson
January 23, 2006
Related Events

1969 Net Sales 78M
3660 Disc Storage System
Equipment and Media Groups formed
Information Printing Systems Corp (IPSC) formed
Mark VI Disc Pack Shipped
Midwest Systems Corp (MSC) formed
Sales, Service and Marketing (1969 - 1984)
Storage Products Corp (SPC) formed

Title: Memorex Reports First Quarter Results
Author:
Created: May 2, 1969
Publisher: Memorex

Memorex

Donated By: Tom Gardner
Filename: doc-440e1a237ecc1.pdf (Size: 44 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
Net Sales = 18M
OEM models of 660 disc drive shipped to customers
Quantum tape shipped to customers

Entered By: Tom Gardner
March 7, 2006
Related Events

630-1 (RP01) Disk Drive
Quantum tape introducted

Title: Intercom, Employee Newsletter, Jun 69
Author:
Created: June 1969
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43d57a0ce5730.pdf (Size: 1.80 MB)
Pages: 8
Cataloguer: 2006-01-23 Sarah Wilson
Copyright: Memorex
Description:
Volume 6 Number 5 June-July 1969. Cover caption: Board of Directors Elects Four New Vice Presidents.
Accession: 062304172
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304172.intercom_newsletter.1969jun
----
Entered By: Sarah Wilson
January 23, 2006

Title: Intercom, Employee Newsletter, Aug 69
Author:
Created: August 1969
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43d57945ad4c1.pdf (Size: 1.76 MB)
Pages: 8
Cataloguer: 2006-01-23 Sarah Wilson
Copyright: Memorex
Description:
Volume 6 Number 6 August 1969. Cover caption: Special Training and Educational Information in This Issue.
Accession: 062304171

Memorex

Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304171.intercom_newsletter.1969aug
----
Entered By: Sarah Wilson
January 23, 2006
Related Events

Al Shugart
Sales, Service and Marketing (1969 - 1984)

Title: Memorex Annual Report, 1970
Author:
Created: 1970
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43d6a216d1eb5.pdf (Size: 6.00 MB)
Pages: 40
Cataloguer: 2006-01-23 Sarah Wilson
Copyright: Memorex
Description:
Memorex Annual Report 1970. Statement of operating and financial results.
Accession: 062304177
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-17 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304177.annual_report.1970

Entered By: Sarah Wilson
January 24, 2006
Related Events

$ 75M dollars Debenture Sold
3660 Disc Storage System
Independent Peripherals Leasing Corp (ILC)
Sales, Service and Marketing (1969 - 1984)

Title: Intercom, Employee Newsletter, Feb 70
Author:
Created: February 1970
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43d5786288ad3.pdf (Size: 2.07 MB)
Pages: 13
Cataloguer: 2006-01-23 Sarah Wilson

Memorex

Copyright: Memorex
Description:
Volume 7 Number 2 February 1970. [No cover caption.]
Accession: 062304170
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304170.intercom_newsletter.1970feb
----
Entered By: Sarah Wilson
January 23, 2006

Title: Intercom, Employee Newsletter, Apr 70
Author:
Created: April 1970
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43c31c876dd21.pdf (Size: 1.98 MB)
Pages: 12
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Memorex
Description:
Volume 7 April 1970. [No cover caption.]
Accession: 062304169
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304169.intercom_newsletter.1970apr
----
Entered By: Sarah Wilson
January 9, 2006
Related Events

Information Printing Systems Corp (IPSC) formed

Title: Memorex ASTRON/Type 26 Computer Tape, 1970
Author:
Created: April 1, 1970
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-4418b8cf61801.pdf (Size: 222 KB)
Pages: 2
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
One sheet (printed on both sides) describing the ASTRON/Type 26 Computer Tape.

Memorex

Accession: 062304354
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-13 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304354.astron-type26.1970

Entered By: Sarah Wilson
March 15, 2006

Title: Intercom, Employee Newsletter, Jun 70
Author:
Created: June 1970
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43c3168aca981.pdf (Size: 2.14 MB)
Pages: 12
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Memorex
Description:
Volume 7 June 1970. [No cover caption.]
Accession: 062304168
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304168.intercom_newsletter.1970jun
----
Entered By: Sarah Wilson
January 9, 2006
Title: 660-0 disc drive maintenance manual
Author:
Created: September 1970
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-44112459b6f33.pdf (Size: 9.48 MB)
Pages:
Cataloguer:
Copyright:
Description:
Maintenance manual for the 660-0 disk drive that was a part of the IBM 2314 compatible subsystem.
Manual has extensive theory of operations.

Entered By: Tom Gardner
March 9, 2006
Related Events

3660 Disc Storage System

Memorex

Title: Intercom, Employee Newsletter, Oct 70
Author:
Created: October 1970
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43c3126a68f01.pdf (Size: 2.17 MB)
Pages: 12
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Memorex
Description:
Volume 7 October 1970. [No cover caption.]
Accession: 062304167
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304167.intercom_newsletter.1970oct
----
Entered By: Sarah Wilson
January 9, 2006

Title: IBM Names Memorex in Secrets Suit
Author:
Created: December 7, 1970
Publisher: Electronics News
Donated By: Tom Gardner
Filename: doc-440f7eba358e7.pdf (Size: 398 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
IBM sues Memorex for theft of trade secrets relating to IBM 3330 disk drive (Merlin) and 3830 storage control unit.

Entered By: Tom Gardner
March 8, 2006
Related Events

IBM Trade Secret Litigation

Title: [Memorex World Headquarters in Santa Clara]
Author:
Created: 1971
Publisher: Memorex
Donated By: Robert Quinn
Filename: doc-43384cea44520.pdf (Size: 124 KB)
Pages: 1
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:

Memorex

Front and back of a color postcard showing the Memorex World Headquarters, Building 12, in Santa Clara in 1981.
This facility at the south east corner of San Tomas Expressway and Central Expressway was occupied in Spring 1971 and comprised 3 buildings, Headquarters - Building 12 (shown), Engineering - Building 14 and Operations - Building 10.
Accession: 062304019
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/07/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source

Entered By: Sarah Wilson
September 26, 2005
Related Events

San Tomas Facilities

Title: DiGiuseppe Shattering Glass Video Storyboard
Author:
Created: January 1971
Publisher: Leo Burnett Company
Donated By: Tom Gardner
Filename: doc-443dc9ba0c85f.pdf (Size: 924 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Jan 71 proof sheet for a video ad featuring first Metropolitan Opera singer Enrico DiGiuseppe and then Memorex consumer tape shattering a glass.

Entered By: Tom Gardner
April 12, 2006
Related Events

Consumer Products Division

Title: Intercom, Employee Newsletter, Jan 71
Author:
Created: January 1971
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43c30b375f2c0.pdf (Size: 2.27 MB)
Pages: 12
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Memorex
Description:
Volume 8 January 1971. [No cover caption.]
Accession: 062304166
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB

Memorex

Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304166.intercom_newsletter.1971jan
----
Entered By: Sarah Wilson
January 9, 2006
Related Events

Leige Belgium Plant

Title: Intercom, Employee Newsletter, Feb 71
Author:
Created: February 1971
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-4418adf104ba5.pdf (Size: 1.58 MB)
Pages: 8
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
Volume 8 Number 2 February 1978. [No cover caption.]
Accession: 062304165
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-09 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304165.intercom_newsletter.1971feb
----
Entered By: Sarah Wilson
March 15, 2006
Related Events

Memorex founded - Larry Spitters, President
Midwest Systems Corp (MSC) formed
San Tomas Facilities

Title: Memorex Contemplates New Markets as It Promotes Blank Audio Tapes
Author:
Created: March 1, 1971
Publisher: Advertising Age
Donated By: Tom Gardner
Filename: doc-44283fd8a5a87.pdf (Size: 630 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
Mar 1971 Advertising Age article describing Memorex's hiring P&G personnel to enter consumer market
----

Memorex

Entered By: Tom Gardner
March 27, 2006
Related Events

Consumer Products Division

Title: Memorex Changes Accounting
Author:
Created: April 12, 1971
Publisher: Electronics News
Donated By: Tom Gardner
Filename: doc-440f8171afa03.pdf (Size: 822 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
Last week, Memorex disclosed that it report its consolidated earnings combined with those of ILC.
Last week, Memorex filed a countersuit to IBM\'s trade secret suit, aledging IBM was illegally attempting to halt migration of IBM employees and impeding the financing of ILC.

Entered By: Tom Gardner
March 8, 2006
Related Events

IBM Trade Secret Litigation
Independent Peripherals Leasing Corp (ILC)

Title: Intercom, Employee Newsletter, Jun 71
Author:
Created: June 1971
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43c2f919c827f.pdf (Size: 2.63 MB)
Pages: 12
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Memorex
Description:
Volume 8 June 1971. [No cover caption.]
Accession: 062304164
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304164.intercom_newsletter.1971jun
----
Entered By: Sarah Wilson
January 9, 2006
Related Events

1270 Terminal Control Unit
San Tomas Facilities

Title: Shattering Glass Print Ad
Author:
Created: September 1971
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443dc5d92ccd5.pdf (Size: 7.35 MB)
Pages: 1
Cataloguer:
Copyright:
Description:
circa Sep 1971 - copy of first print ad for Memorex Consumer Tape; " the tape that shatters glass"

Entered By: Tom Gardner
April 12, 2006
Related Events

Consumer Products Division

Title: Memorex 3rd Quarter 1971 Report
Author:
Created: September 30, 1971
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-44288ce2b1fc1.pdf (Size: 2.49 MB)
Pages: 8
Cataloguer:
Copyright:
Description:
Memorex 3Q 1971 report features " shattering glass " image noting it has begun national advertising.
FN 5 states, " Last year's nine month statement, for the period ended September 30, 1970, was originally issued on November 9, 1970, and was revised on December 15, 1970. "

Entered By: Tom Gardner
March 27, 2006

Title: Goblet Shattering Ad Titillates Tape Giants
Author:
Created: October 9, 1971
Publisher: Billboard
Donated By: Tom Gardner
Filename: doc-442846f87f2fe.pdf (Size: 595 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
Oct 1971 article describing success of Memorex's shattering glass advertising campaign.

Entered By: Tom Gardner
March 27, 2006

Title: 650 Flexible Disc File - OEM Manual

Memorex

Author:
Created: 1972
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-4407890383ae1.pdf (Size: 1.59 MB)
Pages: 42
Cataloguer:
Copyright:
Description:
This OEM manual, copyrighted 1972, establishes the Memorex 650 Flexible (Floppy) Disk Drive as the first commercially available FDD that both read and wrote floppy disks. This is in contrast to the IBM23FD which was available in 1970 but was not sold separately nor was capable of writing.

Entered By: Tom Gardner
March 2, 2006

Title: Memorex Consumer Tape #2 In Market Ad
Author:
Created: 1972
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443dcb58a123d.pdf (Size: 2.89 MB)
Pages: 1
Cataloguer:
Copyright:
Description:
late 1972 copy of ad stating Memorex became number 2 [in market] in less than one year. Probably late 1972 because of reference to Consumer Electronics Show which was typically held in January.

Entered By: Tom Gardner
April 12, 2006
Related Events

Consumer Products Division

Title: Memorex MRX/40 and MRX/50
Author:
Created: 1972
Publisher: Auerbach Publishers, Inc.
Donated By: Robert Quinn
Filename: doc-433870c97a073.pdf (Size: 505 KB)
Pages: 3
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Auerbach
Description:
Three pages about the Memorex MRX/40 and MRX/50 (1972) torn from the reprinted Auerback Standard EDP Reports.
Accession: 062304008
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi

Memorex

Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304008.mrx40mrx50.1972

Entered By: Sarah Wilson
September 26, 2005

Title: Presenting MRX/50 System to Memorex Board
Author:
Created: 1972
Publisher: n/a
Donated By: Andrew Lovas
Filename: doc-4bbd3da7b94d0.jpg (Size: 4.50 MB)
Pages: 1
Cataloguer:
Copyright:
Description:
The occasion was the first shareholder's meeting in the new cafeteria after the San Thomas and Central Expressway complex was complete. Andrew Lovas is the leftmost person in the photograph, with Dan O'Brien (dec.) beside him. The others are almost certainly Memorex board members, although some might simply be major shareholders.

Entered By: Bill Potts
April 7, 2010

Title: 3670 Airflow Patent
Author:
Created: January 13, 1972
Publisher: US Patent Office
Donated By: Tom Gardner
Filename: doc-4410d8edccec2.pdf (Size: 337 KB)
Pages: 5
Cataloguer:
Copyright:
Description:
This invention by Bill Anderson turned the spinning disk pack into an air cooling pump, eliminating the more conventional blower and thereby increasing the product reliability, while lowering cost and power
----
Entered By: Tom Gardner
March 9, 2006
Related Events

3670 / 3671 Storage Subsystem

Title: 3660 Disc Storage System, Illustrated Parts Catalog
Author:
Created: March 1972
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-4407916994c57.pdf (Size: 391 KB)
Pages: 6
Cataloguer: 2006-03-02 Sarah Wilson
Copyright: Memorex
Description:

Memorex

Memorex 3660 Disc Storage System, Illustrated Parts Catalog 1972. Contains only the cover and table of contents.
Accession: 062304259
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-02-27 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304259.3660_catalog.1972

Entered By: Sarah Wilson
March 2, 2006

Title: 650 Announcement
Author:
Created: March 1972
Publisher: IEEE
Donated By: Tom Gardner
Filename: doc-4449072f220b3.pdf (Size: 10 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Actual announcement date is likely Jan or Feb
Capacity is 1.5 megabits

Entered By: Tom Gardner
April 21, 2006
Related Events

Floppy disc drive business

Title: MRX 40 / 50 Product Manual (Internal Use)
Author:
Created: March 1972
Publisher:
Donated By: Tom Gardner
Filename: doc-441110dd5c9e1.pdf (Size: 8.47 MB)
Pages:
Cataloguer:
Copyright:
Description:
The pre-announcment, internal use only, product description manual for the Memorex 40 / 50 computer systems.

Entered By: Tom Gardner
March 9, 2006

Title: Ella Fitzgerald Photo
Author:
Created: September 1972

Memorex

Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443dca556d4a2.pdf (Size: 927 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Sep 72 photograph of Ella Fitzgerald standing in front of a display of Memorex cassette recording tapes
----
Entered By: Tom Gardner
April 12, 2006

Title: 3670 Design Patent
Author:
Created: October 2, 1972
Publisher: US Patent Office
Donated By: Tom Gardner
Filename: doc-4410d844b6f37.pdf (Size: 84 KB)
Pages: 3
Cataloguer:
Copyright:
Description:
Design patent for the 3670 disk drive module. Inventors are T Gardner, J B Nilson and D Massaro
----
Entered By: Tom Gardner
March 9, 2006

Title: MRX 40 / 50 Product Manual
Author:
Created: December 1972
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-441111d752da1.pdf (Size: 4.18 MB)
Pages:
Cataloguer:
Copyright:
Description:
The published version of the product manual for the Memorex 40 / 50 computer systems.

Entered By: Tom Gardner
March 9, 2006
Related Events

MRX 40 / 50 Computer System

Title: Memorex in FDD market
Author:
Created: December 11, 1972
Publisher: Electronic News
Donated By: Tom Gardner
Filename: doc-44111bbb66623.pdf (Size: 9 KB)
Pages: 1
Cataloguer:

Memorex

Copyright:
Description:
11 Dec 1972 EN article captioned "Potter Instrument, Memorex and Century Data Systems are trying to take a big bite of the
multi-million dollar tape cassette market with their new floppy disc drives" shows Memorex 650 in market.

Entered By: Tom Gardner
March 9, 2006
Related Events

Floppy disc drive business

Title: Is it Ella or is it Memorex Ad
Author:
Created: 1973
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443dcc1d56e38.pdf (Size: 3.01 MB)
Pages: 1
Cataloguer:
Copyright:
Description:
late 1973 copy of ad featuring Ella Fitzgerald shattering a glass with the tag line, " Is it Ella or is it Memorex"

Entered By: Tom Gardner
April 12, 2006
Related Events

Consumer Products Division

Title: Photo, Memorex Disk Drive Div Managers circa 1973
Author:
Created: 1973
Publisher:
Donated By: Tom Gardner
Filename: doc-44078ed488902.jpg (Size: 190 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Photograph of most of the managers responsible for development of the Memorex 3670 Storage Subsystem taken in the Spring 1973 before many left to found Shugart Associates.

Entered By: Tom Gardner
March 2, 2006

Title: Storage Products Enginnering
Author:
Created: 1973 ca.
Publisher:
Donated By: T Gardner
Filename: doc-458940001a4cb.pdf (Size: 2.20 MB)

Memorex

Pages: 4
Cataloguer:
Copyright:
Description:
Collage of persons in Storage Products Engineering from 1969-1973

Entered By: Tom Gardner
December 20, 2006
Related Events

Al Shugart
Storage Products Corp (SPC) formed

Title: 1270 Terminal Control Unit, Illustrated Parts Catalog
Author:
Created: March 1973
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-4407924030ac0.pdf (Size: 274 KB)
Pages: 4
Cataloguer: 2006-03-02 Sarah Wilson
Copyright: Memorex
Description:
Memorex 1270 Terminal Control Unit, Illustrated Parts Catalog 1973. Contains only the cover and table of contents.
Accession: 062304258
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-02-27 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304258.1270_catalog.1973

Entered By: Sarah Wilson
March 2, 2006
Related Stories

MRX 1270 Terminal Control Unit
Related Events

1270 Terminal Control Unit

Title: Memorex Corp. Says It's Facing Big Writeoffs
Author: Richard Leger
Created: July 9, 1973
Publisher: Wall Street Journal
Donated By: Tom Gardner
Filename: doc-442af90587d03.pdf (Size: 1.21 MB)
Pages: 2
Cataloguer:
Copyright:
Description:

Memorex

WSJ 9 Jul 1973 article about massive writeoffs which could give Memorex a negative net worth
----
Entered By: Tom Gardner
March 29, 2006
Related Events

Wilson Era 1974 - 1980

Title: Shattering Goblets With Amplified Sound
Author: Peter Tappan
Created: September 13, 1973
Publisher: Autio Engineering Society
Donated By: Tom Gardner
Filename: doc-44289adc9e7df.pdf (Size: 302 KB)
Pages: 7
Cataloguer:
Copyright:
Description:
Describes the work first by Memorex's Eric Daniel and then by a team at Bolt Beranik and Neuman to select and instrument goblets that were then shattered as part of the Memorex ad campaign.

Entered By: Tom Gardner
March 27, 2006
Related Events

Consumer Products Division

Title: Intercom, Employee Newsletter, Nov 73
Author:
Created: November 1973
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4432bf65903f6.pdf (Size: 2.23 MB)
Pages: 12
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 10 Number 8 November 1973. Cover caption: Memorex Announces the 3675 Disc Module.
Accession: 062304110
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304110.intercom_newsletter.1973nov
----
Entered By: Sarah Wilson
April 4, 2006

Title: Memorex Sues IBM for $ 3 Billion
Author: Ian Iscoff

Memorex

Created: December 17, 1973
Publisher: Electronics News
Donated By: Tom Gardner
Filename: doc-440f7de0491a0.pdf (Size: 820 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
On Friday, 14 Dec 1973, Memorex sued IBM for anti-trust violations.

Entered By: Tom Gardner
March 8, 2006
Related Events

IBM Trade Secret Litigation
Memorex Antitrust Litigation

Title: Is it live or is it Memorex Ad - Ella and Count Basie
Author:
Created: 1974
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443dcd05a4416.pdf (Size: 2.73 MB)
Pages: 1
Cataloguer:
Copyright:
Description:
1974 copy of ad featuring Ella Fitzgerald and Count Basie, with the Count unable to tell the difference between Memorex and Ella live.

Entered By: Tom Gardner
April 12, 2006
Related Events

Consumer Products Division

Title: 3670 Disc Storage Subsystem, Illustrated Parts Catalog
Author:
Created: January 1974
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-440790a3cf5d1.pdf (Size: 408 KB)
Pages: 4
Cataloguer: 2006-03-02 Sarah Wilson
Copyright: Memorex
Description:
Memorex 3670 Disc Storage Subsystem, Illustrated Parts Catalog 1974. Contains only the cover and table of contents.
Accession: 062304260
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-02-27 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff

Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304260.3670_catalog.1974

Entered By: Sarah Wilson
March 2, 2006

Title: IBM Charges Espionage In Answer to Memorex
Author: Jack Fraser et al
Created: February 25, 1974
Publisher: Electronics News
Donated By: Tom Gardner
Filename: doc-440f7c7970261.pdf (Size: 1.12 MB)
Pages: 2
Cataloguer:
Copyright:
Description:
On Friday, 22 Feb 1974, IBM countersued Memorex aledging unlawful conduct in obtaining IBM trade secrets
----
Entered By: Tom Gardner
March 8, 2006
Related Events

Memorex Antitrust Litigation

Title: Intercom, Employee Newsletter, May 74
Author:
Created: May 1974
Publisher: Memorex
Donated By: Robert Wilson
Filename: doc-43c2ef2cd1eb1.pdf (Size: 3.32 MB)
Pages: 16
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Memorex
Description:
Volume 11 May-June 1974. Cover caption: Attitude, Cash and Profit Key Memorex Priorities says President Wilson.
Accession: 062304163
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304163.intercom_newsletter.1974may
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Entered By: Sarah Wilson
January 9, 2006
Related Events

3675 / 3673 /3672 Storage Subsystem
Memorex founded - Larry Spitters, President

Memorex

Wilson Era 1974 - 1980

Title: Intercom, Employee Newsletter, Nov 74
Author:
Created: November 1974
Publisher: Memorex
Donated By: Robert Wilson
Filename: doc-43c2e6336dd21.pdf (Size: 2.71 MB)
Pages: 12
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Memorex
Description:
Volume 11 November 1974. Cover caption: Serving Customers in the Far East, Latin America and
Canada... That's A&A Operations' Job.
Accession: 062304162
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304162.intercom_newsletter.1974nov
----
Entered By: Sarah Wilson
January 9, 2006
Related Events

3675 / 3673 /3672 Storage Subsystem
Wilson Era 1974 - 1980

Title: 1270 Terminal Control Unit, Maintenance Manual, Volume II (1975)
Author:
Created: 1975
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-442b154a6e849.pdf (Size: 581 KB)
Pages: 6
Cataloguer: 2006-03-29 Sarah Wilson
Copyright: Memorex
Description:
Memorex 1270 Terminal Control Unit, Maintenance Manual, Volume II (1975). Contains only the cover
and table of contents.
Lot number: X3487.2006
Accession: 102649374
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\resources\text\Memorex\src\102649374.1270manual_volII.1975

Memorex

Entered By: Sarah Wilson
March 29, 2006
Related Stories

MRX 1270 Terminal Control
Unit Related Events

1270 Terminal Control Unit

Title: Intercom, Employee Newsletter, Jan 75
Author:
Created: January 1975
Publisher: Memorex
Donated By: Robert Quinn
Filename: doc-43c2df838d8f6.pdf (Size: 1.79 MB)
Pages: 8
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Memorex
Description:
Volume 12 January 1975. Cover caption: Teamwork and Progress Characterize the Events of 1974.
Accession: 062304161
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304161.intercom_newsletter.1975jan
----
Entered By: Sarah Wilson
January 9, 2006

Title: Intercom, Employee Newsletter, Feb 75
Author:
Created: February 1975
Publisher: Memorex
Donated By: Cathy Huffman
Filename: doc-4353e26575291.pdf (Size: 2.74 MB)
Pages: 12
Cataloguer: 10/17/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 12 February-March 1975. Cover caption: Memorex Combats Inflation with New Buying Techniques.
Accession: 062304058
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/12/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304058.intercom_newsletter.feb1975

Entered By: Sarah Wilson
October 17, 2005
Related Events

Mark XI Disc Pack

Title: Intercom, Employee Newsletter, Apr 75
Author:
Created: April 1975
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4353e0bf2223d.pdf (Size: 3.40 MB)
Pages: 16
Cataloguer: 10/17/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 12 April-May 1975. Cover caption: New \'Data Mark\' Module Expands Computer Media Products Line.
Accession: 062304057
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/12/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304057.intercom_newsletter.apr1975

Entered By: Sarah Wilson
October 17, 2005

Title: Intercom, Employee Newsletter, Jun 75
Author:
Created: June 1975
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432c5bcc5001.pdf (Size: 3.48 MB)
Pages: 16
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 12 June-July 1975. Cover caption: Quality: An Important Memorex Asset.
Accession: 062304112
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304112.intercom_newsletter.1975jun
----
Entered By: Sarah Wilson

Memorex

April 4, 2006

Title: Intercom, Employee Newsletter, Aug 75
Author:
Created: August 1975
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432c7002e929.pdf (Size: 2.73 MB)
Pages: 12
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 12 August 1975. [No cover caption.]
Accession: 062304113
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304113.intercom_newsletter.1975aug
----
Entered By: Sarah Wilson
April 4, 2006

Title: Field Engineering Newsletter, Sep 75
Author:
Created: September 1975
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432d39ba49df.pdf (Size: 928 KB)
Pages: 4
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 3 Issue 1 September 1975.
Accession: 062304123
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304123.field_engineering.1975sep
----
Entered By: Sarah Wilson
April 4, 2006

Title: Intercom, Employee Newsletter, Oct 75
Author:
Created: October 1975

Memorex

Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432c8029376e.pdf (Size: 1.80 MB)
Pages: 8
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 12 October 1975. Cover caption: Engineering, Marketing, Inventory Management, Manufacturing, Service, Finance.
Accession: 062304114
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304114.intercom_newsletter.1975oct
----
Entered By: Sarah Wilson
April 4, 2006
Related Events

3675 / 3673 /3672 Storage Subsystem
Comdata Formed

Title: Memorex: This is 'the year of restoration'
Author:
Created: November 10, 1975
Publisher: Business Week
Donated By: Tom Gardner
Filename: doc-442afc0221524.pdf (Size: 1.61 MB)
Pages: 4
Cataloguer:
Copyright:
Description:
Nov 1975 Business Week article regarding turnaround of Memorex. Has photo of Wilson with MRX ACP Pinto
----
Entered By: Tom Gardner
March 29, 2006

Title: Intercom, Employee Newsletter, Dec 75
Author:
Created: December 1975
Publisher: Memorex
Donated By: Robert Quinn
Filename: doc-4353dec6b49f2.pdf (Size: 2.64 MB)
Pages: 12
Cataloguer: 10/17/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 12 December 1975. [No cover caption.]
Accession: 062304056

Memorex

Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/12/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304056.intercom_newsletter.dec1975

Entered By: Sarah Wilson
October 17, 2005
Related Events

Comdata Formed

Title: The Independent Journal, Dec 75
Author:
Created: December 1975
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432d1f42dda2.pdf (Size: 1.33 MB)
Pages: 6
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 1 Number VII December 1975. News and Views of the Memorex Equipment Sales and Service Team.
Accession: 062304121
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304121.independent_journal.1975dec
----
Entered By: Sarah Wilson
April 4, 2006

Title: Memorex Annual Report, 1976
Author:
Created: 1976
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-43d57cd7b70ff.pdf (Size: 5.91 MB)
Pages: 52
Cataloguer: 2006-01-23 Sarah Wilson
Copyright: Memorex
Description:
Memorex Annual Report 1976. Statement of operating and financial results.
Accession: 062304174
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale

Memorex

Digitized: 2006-01-17 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304174.annual_report.1976

Entered By: Sarah Wilson
January 23, 2006
Related Events

1976 Net Sales 345M
3770 Disc Cache

Title: Team '76 Management Conference, Official Program
Author:
Created: February 23, 1976 ca.
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4432d7f7b2b8d.pdf (Size: 1.13 MB)
Pages: 8
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Program for the Memorex Management Conference, 1976.
Accession: 062304127
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304127.mgmt_conference.1976

Entered By: Sarah Wilson
April 4, 2006
Related Events

Silverado Management Conferences

Title: The Independent Journal, Mar 76
Author:
Created: March 1976
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432d11371480.pdf (Size: 927 KB)
Pages: 4
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
March-April 1976. News and Views of the Memorex Equipment Sales and Service Team.
Accession: 062304120
Dimensions: 11 x 8.5 in.

Color depth: 24 RGB, 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304120.independent_journal.1976mar
----
Entered By: Sarah Wilson
April 4, 2006
Related Events

1380 Communications Controller

Title: Intercom, Employee Newsletter, Apr 76
Author:
Created: April 1976
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432cbc7e6a3b.pdf (Size: 3.62 MB)
Pages: 15
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 13 April 1976. Cover caption: Health Services: Helping You Stay Well.
Accession: 062304115
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304115.intercom_newsletter.1976apr
----
Entered By: Sarah Wilson
April 4, 2006

Title: The Independent Journal, May 76
Author:
Created: May 1976
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432d067115f2.pdf (Size: 1.67 MB)
Pages: 7
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
May-June 1976. News and Views of the Memorex Equipment Sales and Service Team.
Accession: 062304119
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL

Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304119.independent_journal.1976may
----
Entered By: Sarah Wilson
April 4, 2006

Title: Intercom, Employee Newsletter, Jun 76
Author:
Created: June 1976
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432c49bae7cf.pdf (Size: 2.84 MB)
Pages: 12
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 13 June 1976. Cover caption: Memorex Picnic: Big Day at Marine World.
Accession: 062304111
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304111.intercom_newsletter.1976jun
----
Entered By: Sarah Wilson
April 4, 2006

Title: The Independent Journal, Jul 76
Author:
Created: July 1976
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432d2a1a4efd.pdf (Size: 1.40 MB)
Pages: 6
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
July 1976. News and Views of the Memorex Equipment Sales and Service Team.
Accession: 062304122
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304122.independent_journal.1976jul
----
Entered By: Sarah Wilson

Memorex

April 4, 2006

Title: Intercom, Employee Newsletter, Sep 76
Author:
Created: September 1976
Publisher: Memorex
Donated By: Helen Sayer
Filename: doc-4353dcfb0c2ad.pdf (Size: 2.73 MB)
Pages: 12
Cataloguer: 10/17/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 13 September 1976. Cover caption: EPG's Drew Lance breaks the tape in the one-mile. See story on first Memorex track meet.
Accession: 062304055
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/12/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304055.intercom_newsletter.sep1976

Entered By: Sarah Wilson
October 17, 2005

Title: [Caption of Memorex 3650]
Author:
Created: September 14, 1976
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4338695f4932f.pdf (Size: 72 KB)
Pages: 1
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
One typed half page describing the Memorex 3650. (Accompanies the black and white photograph of the Memorex 3650.)
Accession: 062304007
Dimensions: 5.25 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source

Entered By: Sarah Wilson
September 26, 2005
Related Events

3650 Disc Storage Subsystem

Memorex

Title: [Photo of Memorex 3650]
Author:
Created: September 14, 1976
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-43386876b9810.pdf (Size: 92 KB)
Pages: 1
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Black and white photograph of the Memorex 3650. (Same photo used in \"Memorex Subsystem 3350-Compatible\" Computerworld article.)
Caption is separate document.
Accession: 062304006
Dimensions: 8.25 x 10 in.
Color depth: 24 RGB
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source

Entered By: Sarah Wilson
September 26, 2005

Title: Memorex Subsystem 3350-Compatible
Author:
Created: September 27, 1976
Publisher: Computerworld
Donated By: Robert Quinn
Filename: doc-433864df8d8fe.pdf (Size: 185 KB)
Pages: 1
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Computerworld
Description:
Photocopied 1976 Computerworld article about the Memorex 3650 direct access disk storage subsystem which was compatible with the IBM 3350.
Accession: 062304005
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source

Entered By: Sarah Wilson
September 26, 2005
Related Events

3650 Disc Storage Subsystem

Memorex

Title: Intercom, Employee Newsletter, Nov 76
Author:
Created: November 1976
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4432cd06d5b2a.pdf (Size: 2.88 MB)
Pages: 12
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 13 November 1976. Cover caption: Leading the way: Memorex team launches the 3650.
Accession: 062304116
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304116.intercom_newsletter.1976nov
----
Entered By: Sarah Wilson
April 4, 2006

Title: Intercom, Employee Newsletter, Dec 76
Author:
Created: December 1976
Publisher: Memorex
Donated By: Helen Sayer
Filename: doc-4353db55c0d42.pdf (Size: 2.56 MB)
Pages: 12
Cataloguer: 10/17/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 13 December 1976. Cover caption: 1976 at Memorex, a year of \'remarkable progress.\'
Accession: 062304054
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/12/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304054.intercom_newsletter.dec1976
Web access large:

Entered By: Sarah Wilson
October 17, 2005

Title: Memorex 3672 Storage Control Unit, 1977
Author:
Created: 1977

Memorex

Publisher: Memorex
Donated By: Jim Porter
Filename: doc-4418b74972972.pdf (Size: 375 KB)
Pages: 2
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
One sheet (printed on both sides) describing the 3672 Storage Control Unit.
Accession: 062304353
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-13 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304353.3672_storage_control.1977

Entered By: Sarah Wilson
March 15, 2006

Title: The Independent Journal, Feb 77
Author:
Created: February 1977
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4432cf8aa4053.pdf (Size: 1.79 MB)
Pages: 7
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
February-March 1977. News and Views of the Memorex Equipment Sales and Service Team.
Accession: 062304118
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304118.independent_journal.1977feb
----
Entered By: Sarah Wilson
April 4, 2006

Title: Team '77 Creative Excellence, Management Conference, Silverado
Author:
Created: February 21, 1977 ca.
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4432d8c1d458c.pdf (Size: 1.32 MB)
Pages: 9
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex

Memorex

Description:
Program for the Memorex Management Conference, 1977.
Accession: 062304355
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304355.silverado.1977

Entered By: Sarah Wilson
April 4, 2006
Related Events

Silverado Management Conferences

Title: 651 OEM Manual
Author:
Created: July 1977
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-44112863e0745.pdf (Size: 1.56 MB)
Pages: 40
Cataloguer:
Copyright:
Description:
1977 version of 651 OEM manual

Entered By: Tom Gardner
March 9, 2006
Related Events

Floppy disc drive business

Title: Commitment, Newsletter, Sep 77
Author:
Created: September 1977
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4432d6311c7cb.pdf (Size: 1.39 MB)
Pages: 4
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 1 Number 1 September 1977. A Publication Dedicated to Quality in the Equipment Products
Group.
Accession: 062304125
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff

Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304125.commitment.1977sep
----
Entered By: Sarah Wilson
April 4, 2006
Related Events

3650 Disc Storage Subsystem

Title: Intercom, Employee Newsletter, Sep 77
Author:
Created: September 1977
Publisher: Memorex
Donated By: Helen Sayer
Filename: doc-4353d3dba86a1.pdf (Size: 4.37 MB)
Pages: 16
Cataloguer: 10/17/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 14 Number 5 September 1977. Cover caption: Historic Comeback, \'MRX\' returns to New York Stock Exchange.
Accession: 062304053
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/12/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304053.intercom_newsletter.sep1977

Entered By: Sarah Wilson
October 17, 2005
Related Events

Disk Pack Corporation Formed
Wilson Era 1974 - 1980

Title: Commitment, Newsletter, Dec 77
Author:
Created: December 1977
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4432d6e13b8f2.pdf (Size: 1.73 MB)
Pages: 4
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 1 Number 2 December 1977. A Publication Dedicated to Quality in the Equipment Products Group.
Accession: 062304126
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB

Memorex

Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304126.commitment.1977dec
----
Entered By: Sarah Wilson
April 4, 2006

Title: Memorex Annual Report, 1978
Author:
Created: 1978
Publisher: Memorex
Donated By: Robert Wilson
Filename: doc-43d57d76f4191.pdf (Size: 6.45 MB)
Pages: 55
Cataloguer: 2006-01-23 Sarah Wilson
Copyright: Memorex Description:
Memorex Annual Report 1978. Statement of operating and financial results.
Accession: 062304175
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-01-17 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304175.annual_report.1978

Entered By: Sarah Wilson
January 23, 2006

Title: Intercom, Employee Newsletter, Jan 78
Author:
Created: January 1978
Publisher: Memorex
Donated By: Helen Sayer
Filename: doc-4341518046c21.pdf (Size: 2.85 MB)
Pages: 12
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 15 Number 1 January 1978. Cover caption: Winter Comes to Eau Claire, Wisconsin.
Accession: 062304018
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304018.intercom_newsletter.1978

Memorex

Entered By: Sarah Wilson
October 3, 2005

Title: Intercom, Employee Newsletter, Feb 78
Author:
Created: February 1978
Publisher: Memorex
Donated By: Helen Sayer
Filename: doc-43414ec222236.pdf (Size: 2.04 MB)
Pages: 10
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 15 Number 2 February 1978. Cover caption: Computer Aided Design comes to Memorex.
Accession: 062304017
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304017.intercom_newsletter.1978

Entered By: Sarah Wilson
October 3, 2005

Title: Silverado Speech - Lapine 1978
Author: Anthony Lapine
Created: February 8, 1978
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443c020cbb9ee.pdf (Size: 208 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
Lapine QA speech at Silverado 1978

Entered By: Tom Gardner
April 11, 2006
Related Events

Silverado Management Conferences

Title: Team '78 Quality Excellence, Management Conference, Silverado
Author:
Created: February 13, 1978 ca.
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4432d99144df4.pdf (Size: 1.04 MB)
Pages: 12
Cataloguer: 2006-04-04 Sarah Wilson

Memorex

Copyright: Memorex
Description:
Program for the Memorex Management Conference, 1978.
Accession: 062304356
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304356.silverado.1978

Entered By: Sarah Wilson
April 4, 2006

Title: Intercom, Employee Newsletter, Apr 78
Author:
Created: April 1978
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-4435686e9ddd6.pdf (Size: 2.93 MB)
Pages: 11
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Volume 15 Number 3 April 1978. Cover caption: Mary Johnston...from entry-level clerk to manager.
Accession: 062304117
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304117.intercom_newsletter.1978apr
----
Entered By: Sarah Wilson
April 6, 2006

Title: Memorex 3673 Disc Controller, 1978
Author:
Created: May 1978 ca.
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-4418afe2afa05.pdf (Size: 370 KB)
Pages: 2
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
One sheet (printed on both sides) describing the 3673 Disc Controller.
Accession: 062304348
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB

Memorex

Digitized: 2006-03-13 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304348.3673_disk_controller.1978
Web access large:

Entered By: Sarah Wilson
March 15, 2006

Title: Memorex 3770 Disc Cache
Author:
Created: December 1978 ca.
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-433861d82e580.pdf (Size: 1.07 MB)
Pages: 7
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Color booklet describing the 3770 Disc Cache.
Accession: 062304027
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/07/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304027_3770_specs.1978

Entered By: Sarah Wilson
September 26, 2005

Title: Intercom, Employee Newsletter, Feb 79
Author:
Created: February 1979
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-43414c3b4e154.pdf (Size: 2.47 MB)
Pages: 12
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 16 Number 1 February 1979. Cover caption: The 3770 disc cache - innovative engineering at its best.
Accession: 062304016
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi

Memorex

Scan location:
\Archive\projects\ITCHP\Memorex\source2304016.intercom_newsletter.1979

Entered By: Sarah Wilson
October 3, 2005
Related Events

3770 Disc Cache

Title: Silverado Speech - Lapine 1979
Author: Anthony Lapine
Created: February 18, 1979
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443c029cd4306.pdf (Size: 196 KB)
Pages: 5
Cataloguer:
Copyright:
Description:
Lapine OEM Disk Drive Division speech at Silverado 1979

Entered By: Tom Gardner
April 11, 2006
Related Events

Silverado Management Conferences

Title: Team '79 Professional Excellence, Management Conference, Silverado
Author:
Created: February 19, 1979 ca.
Publisher: Memorex
Donated By: Anthony LaPine
Filename: doc-4432da67269e7.pdf (Size: 1.31 MB)
Pages: 11
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Memorex
Description:
Program for the Memorex Management Conference, 1979.
Accession: 062304357
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304357.silverado.1979

Entered By: Sarah Wilson
April 4, 2006
Related Events

Silverado Management Conferences

Memorex

Title: Memorex 3670/75 Disc Storage Subsystem, 1979
Author:
Created: April 1979
Publisher: Memorex
Donated By: Mark Lutvac
Filename: doc-4418b9be49195.pdf (Size: 1.75 MB)
Pages: 11
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
Color booklet describing the 3670/75 Disc Storage Subsystem.
Accession: 062304347
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-13 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304347.3670-75_disk_storage.1979

Entered By: Sarah Wilson
Mach 15, 2006

Title: Search For A New Chief At Memorex
Author: Timothy Gardner
Created: April 27, 1979
Publisher: San Francisco Chronical
Donated By: Tom Gardner
Filename: doc-44285ac7057f7.pdf (Size: 75 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Apr 1979 Wilson announces he will retire when he turns 60 in Jan 1980. Internal candidates to replace
are Charles Strauch , James Dobbie and Reto Braun

Entered By: Tom Gardner
March 27, 2006

Title: Memorex 3670 and 3675 Disc Storage Modules, 1979
Author:
Created: May 1979
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-4418b5bb49167.pdf (Size: 372 KB)
Pages: 2
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
One sheet (printed on both sides) describing the 3670 and 3675 Disc Storage Modules.
Accession: 062304351
Dimensions: 11 x 8.5 in.

Memorex

Color depth: 24 RGB
Digitized: 2006-03-13 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304351.3670and3675_disk_storage.1979

Entered By: Sarah Wilson
March 15, 2006
Related Events

3675 / 3673 /3672 Storage Subsystem

Title: Memorex to Feature Its New 3770 Disc Cache and Intelligent Dual Interface at '79 NCC
Author:
Created: June 4, 1979
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43386002863c0.pdf (Size: 235 KB)
Pages: 2
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Two pieces of paper stapled together. Memorex 1979 press release announcing representation of products at the National Computer Conference.
Accession: 062304026
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/19/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304026.press_release.1979

Entered By: Sarah Wilson
September 26, 2005
Related Events

3770 Disc Cache

Title: Quality, For Better Product Assurance and Reliability
Author:
Created: September 1979
Publisher: Hitchcock Publishing Company
Donated By: Anthony LaPine
Filename: doc-4432d4f871ab8.pdf (Size: 1.14 MB)
Pages: 6
Cataloguer: 2006-04-04 Sarah Wilson
Copyright: Hitchcock Publishing Company
Description:
Reprint from September 1979 issue of Quality. Cover caption: "Impressive investments in quality" - Memorex's Robert C. Wilson.

Memorex

Accession: 062304124
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304124.quality.1979sep
----
Entered By: Sarah Wilson
April 4, 2006

Title: Silverado Speech - Lapine 1980
Author: Anthony Lapine
Created: February 1980
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443c0343b7bb2.pdf (Size: 211 KB)
Pages: 3
Cataloguer:
Copyright:
Description:
Lapine OEM Disk Drive Division speech at Silverado 1980

Entered By: Tom Gardner
April 11, 2006
Related Events

Silverado Management Conferences

Title: Organizational Announcement (Spangle Chairman)
Author:
Created: May 8, 1980
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443c22c9630c8.pdf (Size: 41 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Spangle appointed Chairman
Wilson appointed Vice Chairman until 31 Aug 1980
Strauch appointed President and CEO

Entered By: Tom Gardner
April 11, 2006
Related Events

Spangle Era 1980 - 1984

Title: Memorex 3652 Disc Storage Subsystem, 1979
Author:

Memorex

Created: July 1980
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-4418b44cc5990.pdf (Size: 329 KB)
Pages: 2
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
One sheet (printed on both sides) describing the 3652 Disc Storage Subsystem. (C)1979
Accession: 062304349
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-13 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304349.3652_disk_storage.1979

Entered By: Sarah Wilson
March 15, 2006

Title: Memorex 3670/3675, 3650 and 3652 Intelligent Dual Interface, 1979
Author:
Created: July 1980
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-4418b6cc22062.pdf (Size: 371 KB)
Pages: 2
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
One sheet (printed on both sides) describing the 3670/3675, 3650 and 3652 Intelligent Dual Interface.
Accession: 062304352
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-13 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304352.3670-3675,3650and3652.1979

Entered By: Sarah Wilson
March 15, 2006

Title: [Organizational Charts, 1980]
Author:
Created: July 1, 1980
Publisher: Memorex
Donated By: Mark Lutvac
Filename: doc-4432ddb401e41.pdf (Size: 191 KB)
Pages: 15
Cataloguer: 2006-04-04 Sarah Wilson

Memorex

Copyright: Memorex
Description:
Charts showing Memorex's organizational structure.
Accession: 062304128
Dimensions: 11 x 8.5 in.
Color depth: 1 bitonal
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304128.org_charts.1980

Entered By: Sarah Wilson
April 4, 2006

Title: Joint Venture Proposal To Burroughs
Author: Thomas Gardner
Created: July 31, 1980
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-4431c9256ec60.pdf (Size: 611 KB)
Pages: 24
Cataloguer:
Copyright:
Description:
Jul 1980 proposal to form a joint venture, Storage Products Inc, between Memorex and Burroughs for purpose of joint development and production of disk drives and controllers
----
Entered By: Tom Gardner
April 3, 2006
Related Events

Memorex-Burroughs Merger

Title: Intercom, Employee Newsletter, Sep 80
Author:
Created: September 1980
Publisher: Memorex
Donated By: Robert Berry
Filename: doc-43387f49815a0.pdf (Size: 1.63 MB)
Pages: 4
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 17 Number 4 September 1980.
Accession: 062304015
Dimensions: 17.5 x 11.5 in.
Color depth: 8 grayscale
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:

Memorex

\Archive\projects\ITCHP\Memorex\source2304015.intercom_newsletter.1980

Entered By: Sarah Wilson
September 26, 2005

Title: Infosystems Articles On Memorex's 20th Anniversary
Author:
Created: May 1981
Publisher: Infosys
Donated By: Tom Gardner
Filename: doc-443e7ae53b4e6.pdf (Size: 6.09 MB)
Pages: 28
Cataloguer:
Copyright:
Description:
May 1981 special edition of Infosystems sponsored by Memorex at its 20th anniversary includes details on all current products and a number of customer testimonials
----
Entered By: Tom Gardner
April 13, 2006

Title: Memorex-Burroughs Merger
Author: Clancy Spangle
Created: August 14, 1981
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-442b81769909e.pdf (Size: 612 KB)
Pages: 8
Cataloguer:
Copyright
Description:
Spangle's internal memorandum to Memorex employees explaining the Memorex Burroughs merger. Includes as attachments EN 10 Aug 1981 article, "STC Bid for Memorex Upstaged by Burroughs" and a Business Week 17 Aug 1981 article, "How Memorex may pay off for Burroughs."

Entered By: Tom Gardner
March 29, 2006
Related Events

Memorex-Burroughs Merger

Title: Intercom, Employee Newsletter, Dec 81
Author:
Created: December 1981
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-43387e5646c21.pdf (Size: 1.56 MB)
Pages: 4
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
December 1981. A special Intercom issue on Burroughs Corporation.
Accession: 062304014

Dimensions: 17.5 x 11.5 in.
Color depth: 8 grayscale
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304014.intercom_newsletter.1981

Entered By: Sarah Wilson
September 26, 2005
Related Events

Memorex-Burroughs Merger

Title: Brochure on Burroughs acquisition of Memorex
Author:
Created: December 15, 1981
Publisher: Memorex
Donated By: Tom Gardner
Filename: doc-443e7832d9acf.pdf (Size: 2.22 MB)
Pages: 9
Cataloguer:
Copyright:
Description:
Dec 1981 brochure published by Memorex depicting advantages of combined companies. Includes letter by Spangle to vendors stating strong desire by Burroughs that Memorex " retain both its name and personality. " Most likely this brochure was sent to all vendors and employees.

Entered By: Tom Gardner
April 13, 2006

Title: Memorex 3680/3683 Product Specifications
Author:
Created: 1982
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43385b9652f71.pdf (Size: 445 KB)
Pages: 2
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
One color sheet (printed on both sides) describing the 3680 Disc Storage Subsystem and the 3683 Dual Path String Controller.
Accession: 062304023
Dimensions: 11.5 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/07/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304023_3680-3683_specs.1982

Memorex

Entered By: Sarah Wilson
September 26, 2005

Title: Memorex 3888 Dual Director Storage Control Unit
Author:
Created: 1982
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43385ca8dbaf2.pdf (Size: 323 KB)
Pages: 2
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
One color sheet (printed on both sides) describing the 3888 Dual Director Storage Control Unit.
Accession: 062304024
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/07/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304024_3888_specs.1982

Entered By: Sarah Wilson
September 26, 2005
Related Events

3680 Disc Subsystem

Title: Tandy-Memorex
Author:
Created: April 27, 1982
Publisher: New York Times
Donated By: Tom Gardner
Filename: doc-44284ce27ce0f.pdf (Size: 10 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Tandy to acquire Memorex consumer products in Jun 1982

Entered By: Tom Gardner
March 27, 2006
Related Events

Consumer Products Division
The Dismemberment (1982 - 1988) and After Life

Title: Memorex 3676 Storage Control Unit, 1981
Author:
Created: July 1982
Publisher: Memorex

Memorex

Donated By: Jim Porter
Filename: doc-4418b528099c1.pdf (Size: 355 KB)
Pages: 2
Cataloguer: 2006-03-15 Sarah Wilson
Copyright: Memorex
Description:
One sheet (printed on both sides) describing the 3676 Storage Control Unit. (c)1981
Accession: 062304350
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2006-03-13 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\src\062304350.3676_storage_control.1981

Entered By: Sarah Wilson
March 15, 2006

Title: Memorex Times, Employee Newsletter, Aug 82
Author:
Created: August 1982
Publisher: Memorex
Donated By: Robert Berry
Filename: doc-43387c465a4a0.pdf (Size: 1.14 MB)
Pages: 5
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 1 Issue 1 August 1982. A newspaper for Memorex employees.
Accession: 062304013
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304013.times_newsletter.1982

Entered By: Sarah Wilson
September 26, 2005

Title: 1270 Terminal Control Unit, Maintenance Manual, Volume I (1982)
Author:
Created: September 1982
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-442b02f244a03.pdf (Size: 2.62 MB)
Pages: 22
Cataloguer: 2006-03-29 Sarah Wilson
Copyright: Memorex
Description:

Memorex

Memorex 1270 Terminal Control Unit, Maintenance Manual, Volume I (1982). Contains only the cover, the table of contents and section 1.
Lot number: X3487.2006
Accession: 102649372
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\resources\text\Memorex\src\102649372.1270manual_volI.1982

Entered By: Sarah Wilson
March 29, 2006

Title: Memorex Introduces Disc Storage Subsystem Series Utilizing Advanced Thin-Film
Technology
Author:
Created: September 8, 1982
Publisher: Memorex
Donated By: Jim Porter
Filename: doc-43385427185f3.pdf (Size: 300 KB)
Pages: 5
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Five pieces of paper stapled together. Memorex 1982 press release announcing new series of products.
Accession: 062304022
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 09/07/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304022_press_release.1982

Entered By: Sarah Wilson
September 26, 2005
Related Events

3680 Disc Subsystem

Title: 1270 Terminal Control Unit, Maintenance Manual, Volume II (1983)
Author:
Created: June 1983
Publisher: Memorex
Donated By: Robert Di Menna
Filename: doc-442b059000c73.pdf (Size: 609 KB)
Pages: 6
Cataloguer: 2006-03-29 Sarah Wilson
Copyright: Memorex
Description:

Memorex

Memorex 1270 Terminal Control Unit, Maintenance Manual, Volume II (1983). Contains only the cover and table of contents.
Lot number: X3487.2006
Accession: 102649373
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 2006-03-28 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\resources\text\Memorex\src\102649373.1270manual_volII.1983

Entered By: Sarah Wilson
March 29, 2006

Title: Memorex chief takes over disk drive manufacturing
Author:
Created: August 23, 1984
Publisher: SJ Mercury News
Donated By: Tom Gardner
Filename: doc-4443e698c12bf.pdf (Size: 191 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Dauber takes charge of 3680 disk drive program. Meyercord resigns. Castle reassigned to special projects
----
Entered By: Tom Gardner
April 17, 2006

Title: Memorex Times, Employee Newsletter, Feb 85
Author:
Created: February 1985
Publisher: Memorex
Donated By: Robert Quinn
Filename: doc-43387a2c68f01.pdf (Size: 1.35 MB)
Pages: 6
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 4 Issue 1 February 1985. A newspaper for Memorex employees.
Accession: 062304012
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304012.times_newsletter.1985

Entered By: Sarah Wilson

Memorex

September 26, 2005

Title: The Memorex Press, Employee Newsletter, Aug 85
Author:
Created: August 1985
Publisher: Memorex
Donated By: Robert Berry
Filename: doc-433876891ad00.pdf (Size: 1.50 MB)
Pages: 8
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 2 Number 16 August 1985.
Accession: 062304010
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304010.press_newsletter.1985

Entered By: Sarah Wilson
September 26, 2005
Related Events

Dauber Era 1984 -1986

Title: The Memorex Press, Employee Newsletter, Jan 86
Author:
Created: January 1986
Publisher: Memorex
Donated By: Robert Berry
Filename: doc-433874dfb22e1.pdf (Size: 1.16 MB)
Pages: 6
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Volume 11 Number 19 January 1986.
Accession: 062304009
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/20/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Memorex\source2304009.press_newsletter.1986

Entered By: Sarah Wilson
September 26, 2005
Related Events

Memorex

3680 Disc Subsystem
Dauber Era 1984 -1986

Title: Management Seals Memorex Merchant Business Buyout From Unisys
Author:
Created: December 29, 1986
Publisher: Electronic News
Donated By: Tom Gardner
Filename: doc-4443e7d117407.pdf (Size: 194 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Unisys spins out as Memorex the IBM sales and service business, the Communications division and the Computer Media business. Unisys retained the large disk development and manufacturing. Ronchi is head of Memorex. Buyout price is $ 550 million.

Entered By: Tom Gardner
April 17, 2006
Related Events

The Dismemberment (1982 - 1988) and After Life

Title: Memorex Realigns Manufacturing, Marketing, Sales Operations
Author:
Created: January 1, 1987
Publisher: Electronic News
Donated By: Tom Gardner
Filename: doc-4443e8fd9de1a.pdf (Size: 213 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
North American sales and service operations are decentalized by eliminating NA Operations Group. Sergio Mazza running Memorex US subsidiary
----
Entered By: Tom Gardner
April 17, 2006
Related Events

The Dismemberment (1982 - 1988) and After Life

Title: Telex Papers On Acquisition By Memorex
Author:
Created: January 1988 ca.
Publisher:
Donated By: T Gardner, G Bragg
Filename: doc-4586992e29d8f.pdf (Size: 41.40 MB)
Pages:
Cataloguer:
Copyright:
Description:

Memorex

Introduction from bound volume IX of Telex Corporate papers covering the significant events from Oct 8, 1987 thru Jan 20, 1988 during which George Partners, Inc. ("George Partners"),
a wholly owned subsidiary of Memorex International N/V offered for and acquired up to 13,276,348 shares of common stock of The Telex Corporation.

Entered By: Tom Gardner
December 18, 2006

Title: Memorex Technologies, Inc.
Author:
Created: 1992
Publisher: Memorex
Donated By: Mark Lutvac
Filename: doc-433852d1c8274.pdf (Size: 1.38 MB)
Pages: 12
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Memorex
Description:
Color booklet; 1992 company profile of Memorex Technologies, Inc.
Accession: 062304021
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/07/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304021_mti_brochure.1992

Entered By: Sarah Wilson
September 26, 2005
Related Events

The Dismemberment (1982 - 1988) and After Life

Title: Handy Holdings acquires Memorex Consumer
Author:
Created: December 16, 1993
Publisher: SEC (Tandy 10k)
Donated By: Tom Gardner
Filename: doc-44287b0130ea6.pdf (Size: 7 KB)
Pages:
Cataloguer:
Copyright:
Description:
Dec 93 Handy Holdings Ltd acquires the Memorex brand from Tandy.

Entered By: Tom Gardner
March 27, 2006
Related Events

Consumer Products Division

Memorex

Title: Tape Plant Auction Catalog
Author:
Created: February 8, 1994
Publisher: Ross-Dove Company
Donated By: Tom Gardner
Filename: doc-43384ebae3021.pdf (Size: 1.30 MB)
Pages: 8
Cataloguer: 09/26/2005 Sarah Wilson
Copyright: Ross-Dove Company
Description:
Color catalog from the Ross-Dove Company (Auctioneers). The catalog contains tape plant equipment located at 1200 Memorex Drive, Santa Clara, being sold by Memorex as surplus to Memorex's continuing operation. Auction was held February 8, 1994.
Accession: 062304020
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/07/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Memorex\source\062304020_auction_catalog.1994

Entered By: Sarah Wilson
September 26, 2005

Title: Sequel - TSS (IBM)
Author:
Created: July 10, 1998
Publisher: Memphis Business Journal
Donated By: Tom Gardner
Filename: doc-443d539836236.pdf (Size: 14 KB)
Pages: 2
Cataloguer:
Copyright:
Description:
Jul 1998 - Sequel acquires IBM's Memphis based Technology Service Solutions. Sequel has overseas operations in England, Malaysia and Japan in addition to its operations in California and Memphis. As part of the acquisition of TSS, Sequel agreed to continue to provide depot notebook repair and customer support services for IBM.

Entered By: Tom Gardner
April 12, 2006

Title: Sequel - Solectron
Author:
Created: May 21, 1999
Publisher: NY Times
Donated By: Tom Gardner
Filename: doc-443d508c4bdc4.pdf (Size: 13 KB)
Pages: 1
Cataloguer:
Copyright:
Description:

Memorex

Sequel acquired by Solectron

Entered By: Tom Gardner
April 12, 2006
Related Events

The Dismemberment (1982 - 1988) and After Life

Title: Imation To Acquire Memorex For $ 330 Million
Author:
Created: January 20, 2006
Publisher: Information Week
Donated By: Tom Gardner
Filename: doc-44284de402123.pdf (Size: 19 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Jan 2006 Imation acquires Memorex consumer products and brand from Tandy
----
Entered By: Tom Gardner
March 27, 2006
Related Events

Consumer Products Division

References

Title: MRX 40 / 50 Documents at Bitsavers site
Author:
Created: 1972
Publisher:
Cataloguer:
Copyright:
Reference:
http://www.bitsavers.org/pdf/memorex/7x00/

Entered By: Tom Gardner
          March 9, 2006

Related Events
MRX 40 / 50 Computer System

Title: 650 FDD announcement
Author:
Created: November 12, 1972
Publisher: Gale Group PROMT®
Cataloguer:
Copyright:
Reference:

Memorex

Potter Instrument (Melville, NY), Memorex (Santa Clara, Cal), and Century Data Systems (Anaheim, Cal) subsidiary of Caliornia Computer Products are trying to take a big bite of the multi-million dollar tape cassette market with their new floppy disc drives. - December 11, 1972 - Gale Group PROMT®

Entered By: Tom Gardner
         March 9, 2006

Related Events
Floppy disc drive business

Title: Shugart's Resignation
Author:
Created: February 12, 1973
Publisher: Electronic News
Cataloguer:
Copyright:
Reference:
Shugart Associates (Sunnyvale, Cal) has been organized by AF Shugart, who resigned recently as a Memorex vice-president, and several other former executives of that firm.
Electronic News , February 12, 1973 , Page: 28,32

Entered By: Tom Gardner
         March 9, 2006

Related Events
Al Shugart

Title: MRX 40 / 50 Program Termination
Author:
Created: July 16, 1973
Publisher: Gale Group PROMT®
Cataloguer:
Copyright:
Reference:
Memorex (Santa Clara, Cal) is discontinuing its MRX 40 & 50 computer systems operations, and will take a $40 mil write-off in assets. - July 16, 1973 - Gale Group PROMT®

Entered By: Tom Gardner
         March 9, 2006

Title: Spitter's Resignation
Author:
Created: March 4, 1974
Publisher: Gale Group PROMT®
Cataloguer:
Copyright:
Reference:
Memorex (Santa Clara, Cal) president Laurence L Spitters is severing all ties with the company he founded in 1961. - March 4, 1974 - Gale Group PROMT®

Entered By: Tom Gardner
         March 9, 2006

Memorex

Title: CCI purchase agreement
Author:
Created: October 1975
Publisher: Gale Group PROMT®
Cataloguer:
Copyright:
Reference:
Memorex Corp will purchase Computer Communications Inc telecommunications equipment on an OEM basis and acquire an interest in the communications products and proramming organization.

Entered By: Tom Gardner
          March 31, 2006

Related Events
1380 Communications Controller

Title: Memorex Antitrust Litigation Records
Author:
Created: 1978
Publisher:
Cataloguer:
Copyright:
Reference:
Some Memorex litigation records at:
IBM Antitrust Suit Records, Box 40
Hagley Museum and Library
P.O. Box 3630 Wilmington, DE 19807-0630
see:
http://www.hagley.lib.de.us/1980.htm

Entered By: Tom Gardner
          March 8, 2006

Related Events
Memorex Antitrust Litigation

Title: Decision for IBM sustained
Author:
Created: November 24, 1980
Publisher: Gale Group PROMT®
Cataloguer:
Copyright:
Reference:
Nov 1984 - US Court of Appeals (San Francisco, Calif) rejected a Memorex request for reversal of the 8/78 verdict clearing IBM of antitrust charges it brought.

Entered By: Tom Gardner
          April 13, 2006

Related Events
Memorex Antitrust Litigation

Title: MEMOREX SEEKS NEW RECOVERY

Memorex

Author: Thomas Leuck
Created: April 10, 1981
Publisher: NY Times
Cataloguer:
Copyright:
Reference:
http://select.nytimes.com/search/restricted/article?res=F40716FE355D0C738DDDAD0894D9484D81#

Spangle hired as CEO Mar 1980
MRX lost 29M in 1980 vs profit 32M in 1979
Revenues flst
Disk products 1/3 sales

Overtaken by STC in 1980 because disc product 6 months late.

Entered By: Tom Gardner
          April 11, 2006

Related Events
Spangle Era 1980 – 1984

Title: Supreme Court denies cert in Memorex case
Author:
Created: June 29, 1981
Publisher: Gale Group PROMT®
Cataloguer:
Copyright:
Reference:
29 Jun 1981 - The US Supreme Court closed the book on the 8 yr old Memorex suit against IBM, refusing to hear the firm\'s appeal to reverse IBM\'s victory in the $919 mil antitrust case.

Entered By: Tom Gardner
          April 13, 2006

Related Events
Memorex Antitrust Litigation

Title: 3682 Announcement
Author:
Created: April 22, 1985
Publisher: Gale Group PROMT®
Cataloguer:
Copyright:
Reference:
IBM Compatibles: They're Making Memories: Memorex Counters IBM 3380 with High Density 3680. April 22, 1985

Entered By: Tom Gardner
          March 10, 2006

Related Events
3680 Disc Subsystem

Memorex

Title: Unisys spins out Memorex Media and Communications
Author:
Created: December 23, 1986
Publisher: Gale Group
Cataloguer:
Copyright:
Reference:
Unisys Corp. completes sale of a substantial portion of Memorex Corp. - Dec 23 - 1986 - Gale Group
Trade and Industry Database

Entered By: Tom Gardner
          March 10, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Title: Memorex-Telex Merger
Author:
Created: June 29, 1988
Publisher: Gale Group
Cataloguer:
Copyright:
Reference:
Memorex Telex merger consummated. - June 29 - 1988

Entered By: Tom Gardner
          March 10, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Title: Sequel spin out
Author:
Created: December 8, 1988
Publisher: Gale Group Trade and Industry Database™
Cataloguer:
Copyright:
Reference:
Sequel born in management buyout of Unisys disk unit. - Dec 8 - 1989 - Gale Group Trade and Industry
Database™

Entered By: Tom Gardner
          March 9, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Title: Sequel - Priam
Author:
Created: March 26, 1990
Publisher: Gale Group
Cataloguer:
Copyright:

Memorex

Reference:
26 Mar 1990 - Sequel, Atasi Buy Major Priam Assets
http://openaccess.dialog.com/business/cgi/search?CoName=sequel&Subject=&Fulltext=disk+drive&FT=
NFT&startYear=1988&endYear=2006&PDstartMonth=&PDstartDay=&PDstartYear=&PDendMonth=&PD
endDay=&PDendYear=&Search=cc%2FEW.BusNewsUSByName

Entered By: Tom Gardner
          April 12, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Title: Sequel - Maxtor
Author:
Created: March 23, 1992
Publisher: Gale Group
Cataloguer:
Copyright:
Reference:
23 Mar 1992 Manufacturing agreement: Maxtor & Sequel. (Maxtor Corp. to sell manufacturing rights to
XT-1000, -2000 and -4000 disk drives to Sequel Inc.)

Entered By: Tom Gardner
          April 12, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Title: Sequel - Nashua
Author:
Created: March 21, 1994
Publisher: Gale Group
Cataloguer:
Copyright:
Reference:
23 Mar 1994 - NASHUA ANNOUNCES AGREEMENT TO SELL OXIDE DISK AND HDA BUSINESS
http://openaccess.dialog.com/business/cgi/search?CoName=sequel&Subject=&Fulltext=disk+drive&FT=
NFT&startYear=1988&endYear=2006&PDstartMonth=&PDstartDay=&PDstartYear=&PDendMonth=&PD
endDay=&PDendYear=&Search=cc%2FEW.BusNewsUSByName

Entered By: Tom Gardner
          April 12, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Title: Gumucio resigns as CEO of Memorex Telex
Author:
Created: March 19, 1996
Publisher: Memorex Telex
Cataloguer:
Copyright:
Reference:

Memorex

On April 4, 1996, Memorex Telex NV filed a current report on Form 8-K reporting the resignation of Marcelo Gumucio, on March 19, 1996, as Chief Executive Officer and as a Member of the Management Board.
http://www.sec.gov/Archives/edgar/data/818035/0000912057-96-014654.txt
----
Entered By: Tom Gardner
          March 10, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Title: Sequel - Mitsubishi
Author:
Created: November 18, 1996
Publisher: Gale Group PROMT®
Cataloguer:
Copyright:
Reference:
18 Nov 1996 - Sequel to Provide Global Repair Service for Mitsubishi ANGLEVIEW Color TFT LCDs; Mitsubishi is the first Japanese supplier to offer OEMs worldwide TFT LCD repair service, to help reduce repair turnaround time and inventories.
http://openaccess.dialog.com/business/cgi/search?CoName=sequel&Subject=&Fulltext=disk+drive&FT=
NFT&startYear=1988&endYear=2006&PDstartMonth=&PDstartDay=&PDstartYear=&PDendMonth=&PD
endDay=&PDendYear=&Search=cc%2FEW.BusNewsUSByName

Entered By: Tom Gardner
          April 12, 2006

Related Events
The Dismemberment (1982 - 1988) and After Life

Title: Philip S. Dauber
Author:
Created: April 15, 2004
Publisher: Tessera Technologies
Cataloguer:
Copyright:
Reference:
Dr. Dauber was a Senior Vice President at Unisys Corporation from May 1981 to December 1987 and was Chief Executive Officer of Memorex Products, Inc., a subsidiary of Unisys Corp., from May 1984 to December 1986. He received a B.S.E. in electrical engineering and an M.A. and a Ph.D. in communications sciences from the University of Michigan.
Extracted from Tessera Technologies, DEF14A
http://sec.edgar-online.com/2004/04/15/0001193125-04-063003/Section5.asp
----
Entered By: Tom Gardner
          April 11, 2006

Related Events
Dauber Era 1984 -1986
Spangle Era 1980 - 1984

Discussions

There are no discussions for this company in the collection

Miscellaneous

Company Details

Name: Miscellaneous
Sector: Miscellaneous
Description
This is a holding area for storing materials that have not yet been assigned to a specific corporate history collection.

Facilitators

Statistics
Contributors (0), Events (0), Stories (2), Documents (6), References (0),
Discussions (threads, posts)

Entered By: Luanne Johnson
March 9, 2010

Contributors

Contributor Luanne Johnson
Date Joined October 25, 2007
Job Description
Luanne Johnson is a Co-Chair of the Software Industry Special Interest Group at the Computer History Museum.
Statistics
Stories (2) , Documents (1)
Date Entered March 9, 2010

Timeline

There are no events for this company in the collection

Stories

Title: The First Commercial Univac I Installation
Author: Burt Grad
Created: 1997
Cataloguer:
Copyright: Burton Grad
Story:
The First Commercial Univac I Installation

 The Univac I was produced by Eckert & Mauchly and was first marketed by Remington Rand starting in 1952. The Univac I made a big splash in the 1952 election by predicting an Eisenhower landslide even before the polls closed in California; statistical sampling techniques related to results from previous elections were used. The CBS network held back the predictions for quite a few hours because they didn't

believe it would be a landslide; but the actual results came out very close to the initial predictions. Obviously, this was not just because of the computing power of the Univac I, but because some very smart political analysts had constructed insightful models which had been accurately programmed and tested.

This was a wake-up call for a few U.S. businesses. If a computer could predict election results, why couldn't it forecast sales, lay out production schedules, simulate factory operations, perform "what-if" analyses and solve many business operations problems.

The first sale of a Univac I was to the U.S. Census Bureau (in 1953) to help process the 1950 census data. The first commercial sale of the Univac I was in 1954 to the General Electric Co. to use in its brand new Major Appliance Division plant in Louisville, Kentucky. GE had constructed state-of-the-art manufacturing facilities in Louisville to produce washers and dryers, dishwashers and disposers, refrigerators and freezers and electric ranges and ovens. Expanding its plan to automate the production facilities and to help make Louisville a showcase plant, GE decided to use the Univac I computer not only to process payroll, general ledger, accounts receivable and payable and other accounting functions, but also for manufacturing planning and control functions.

GE Corporate Accounting Services took primary responsibility for designing and programming the first payroll system which was to be initially used by the Washer and Dryer department. This design and programming team also had participants from Univac.

GE Corporate Manufacturing Services took responsibility for designing and programming the manufacturing control system for the Dishwasher and Disposall department. I was given this assignment after one year with GE's Manufacturing Training Program and four years in manufacturing control at GE's Large Steam Turbine Department in Schenectady, N.Y. I had just begun working for GE's Manufacturing Services Division in New York City in June, 1954. I then spent three months in Louisville designing and programming these applications (bill of material processing, factory scheduling, inventory control, capacity analysis) in the winter and spring of 1955. Then I went back to New York City and spent the next three months debugging the programs I had written.

In 1954, the Univac I had the following equipment:

a calculation engine
internal and intermediate memory (mercury delay tube) and external storage (metal magnetic tapes)
printers
card readers
It had the following programming facilities:

none
Programs were written directly in machine language with an operations instruction code (A for add, S for subtract, etc.) and a numeric address (xxxx) which was the actual address location in memory on which the operation was to be performed. The mnemonic instruction codes were pretty helpful, but having only one instruction address for each operation made for lengthy programs, e.g., many individual steps (adding a number to an internal register; multiplying a number by the number in the register and putting the results in that register; taking the value in the register and putting it into a location for later use). It required three instructions just to multiply one number by another.

But the most painful part was managing the locations of the input and output information. The good news was that there were only 2000 word locations. The bad news was that these were absolute addresses in the mercury delay storage device. So, any change in the records or fields usually meant changing the absolute addresses, hence reprogramming the application. Further, for efficiency, it was necessary to consider when each address would be available (there was a 200 millisecond lag before each address came around again for usage). So, based on the cycle time of each operation (add, multiply, etc.), one would try to position the addresses for inputs and outputs to optimize performance (throughput).

Miscellaneous

One of my special experiences in debugging (and correcting) the Dishwasher and Disposall manufacturing control programs was that I essentially had Remington Rand's Univac I (on Lexington Avenue in New York City) to myself from 6 P.M. to midnight each day (except for the operator), so I didn't have to wait to run tests or to rerun programs or be delayed by anyone else's work. I could literally test, debug and correct in an online mode. The Univac I was also hooked up with speakers, and the operator had the machine playing classical music each evening.

Most remarkable (from my point of view) was that the programs really worked and were the first productive commercial applications run on the GE Louisville Univac I, toward the end of 1955. The payroll programs took a much longer time to get up and running in spite of (or maybe because of) having a team of many analysts and programmers working on the project. This was probably the earliest example of Fred Brooks' "mythical man-month", where each estimate of the work still required to complete the project was greater than the previous estimate, even though significant effort had been expended since the earlier projection.

As a result of these projects, we quickly learned that none of us knew how much time and effort would be needed to design, build and thoroughly test substantial application programs. Furthermore, we began to understand that without higher level languages (relative addresses, multi-address instructions, if-then statements) and entry validation and test analysis tools, production quality programs would be slow to produce, difficult to maintain and enhance and would operate relatively slowly.

(The above anecdote was submitted to The Software History Center website by Burt Grad in 1997.)

Entered By: Luanne Johnson
         March 9, 2010

Title: From Not-Invented-Here to Off-the-Shelf
Author: Luanne Johnson
Created: 1997
Cataloguer:
Copyright: Luanne Johnson
Story:
From Not-Invented-Here to Off-the-Shelf

One of the biggest challenges facing vendors of applications software products in the 1960s and 70s was overcoming the Not-Invented-Here syndrome. It was really hard to convince customers that software that had not been written specifically for them could handle their business processes properly.

This was a different sales problem from that faced by the companies selling systems software during that period. Customers understood that they would need standardized systems software such as operating systems, utilities, and language compilers to be able to use their computers effectively. But they expected to get systems software from the computer manufacturers for free so the challenge to was to convince them that a systems software product sold by an independent vendor was worth paying for.

For those of us in the applications software business, the challenge took a different slant. I started Argonaut Information Systems in 1971 to sell a payroll system and an accounts payable system for IBM 360/DOS computers that I had acquired the rights to from a company that had gone out of business. For the first couple of years, the sales process with every one of my prospects consisted of trying to convince them that my off-the-shelf software would be able to do the job for them without requiring a lot of modification to either the software or their business practices. We managed to sell twenty or thirty systems a year, helped by the fact that the cost of buying off-the-shelf software was so much less than the cost involved in having their in-house programmers write an entire system from scratch. Customers were often willing to make some changes to their business practices so they could take advantage of the

Miscellaneous

lower cost of using our software. But every sale that we lost was because the customer had decided that they would be better off doing it themselves rather than buy a software package.

Early in 1974, I suddenly realized that things had changed. I had lost three sales in a row to other software vendors rather than to the customer's in-house staff. At first I was shocked and a little frightened to realize that I had that kind of competition. But it didn't take me long to figure out that this was a very, very positive development. Competing against other software vendors meant that I no longer had to invest in the time-consuming process of educating the customers about the advantages of using off-the-shelf software. They were already convinced that they could and would use a software product, so it was a matter of defining how our price and functionality compared to those of our competitors.

We had tough, aggressive competitors with good products so it didn't mean that running a software products company got easier or less challenging. But the change in the environment meant that the energy that had previously gone into getting the customers to accept the idea of buying off-the-shelf software could now be put into differentiating our product from those of our competitors and zeroing in on the customers whose requirements most cleanly matched our products' functionality.

The company really took off from that point on and I've always felt that the 1973-1974 time period was a very important one for the software industry in terms of a shift in customer acceptance of off-the-shelf software.

(The above anecdote was submitted to The Software History Center website by Luanne Johnson in 1997.)

Entered By: Luanne Johnson
          March 9, 2010

Documents

Title: Operating System Roots
Author: Bob Patrick
Created: December 2006
Publisher: Computer History Museum
Donated By:
Filename: doc-4b96adeb71ca7.pdf (Size: 28 KB)
Pages: 4
Cataloguer:
Copyright: Computer History Museum
Description:
Bob traces the evolution of operating systems from his early work on CPCs and the first IBM scientific computers through the GMR-NAA system and the development of SOS, IBSYS and the Direct Couple to the IBM OS/360.

Entered By: Luanne Johnson
          March 9, 2010

Title: The First Commercial Computer Application at General Electric
Author: Burton Grad
Created: December 2006
Publisher: Computer History Museum

Donated By:
Filename: doc-4b96ad1f843d9.pdf (Size: 31 KB)
Pages: 4
Cataloguer:
Copyright: Computer History Museum
Description:
Burt describes his experience designing and programming a manufacturing control system in 1954 for the Dishwasher and Disposer Department of GE in Louisville, KY to run on the first Univac I computer sold for commercial use (as against government use).

Entered By: Luanne Johnson
          March 9, 2010

Title: The Title Plant Operating System: A Data Base System of Index Files for Recorded Documents
Author: Jerry Koory
Created: January 2007
Publisher: Computer History Museum
Donated By:
Filename: doc-4b96ad8752b8a.pdf (Size: 28 KB)
Pages: 4
Cataloguer:
Copyright: Computer History Museum
Description:
Jerry describes his experience in the mid-1960s while working for PRC in developing a comprehensive system for a Title Insurance company to manage the records for both real property transfers and related court actions. This system was an early application on the IBM S/360. Jerry notes that the system was still in operation in 2006.

Entered By: Luanne Johnson
          March 9, 2010

Title: Evolutionary Events in Core Business Information Systems
Author: Bruce Peterson
Created: February 2007
Publisher:
Donated By:
Filename: doc-4b96ae5964ee8.pdf (Size: 25 KB)
Pages: 3
Cataloguer:
Copyright: Computer History Museum
Description:
Bruce describes his experiences at Hughes Aircraft as a programmer on the Hughes Labor System and the problems from some of the short-cut assumptions built in from the use of punched cards. He also describes techniques that he introduced ("Pitchfork Processing") to improve the throughput on large, sequential jobs. Finally he talks about how he set up the management process for year end closing.

Entered By: Luanne Johnson
          March 9, 2010

Title: A Brief Account of Spell Checking as Developed by Houghton Mifflin
Author: Howard Webber
Created: March 2007

Miscellaneous

Publisher: Computer History Museum
Donated By:
Filename: doc-4b96aeb98fa48.pdf (Size: 52 KB)
Pages: 3
Cataloguer:
Copyright: Computer History Museum
Description:
Howard describes his work over the years in developing a system to a comprehensive spell checker to be used in producing a world class dictionary which could be used to drive spell checking. He also talks about how this was expanded to cover other languages besides English and for grammatical analysis as well.

Entered By: Luanne Johnson
            March 9, 2010

Title: The Birth of IMS/360
Author: Uri Berman
Created: April 2007
Publisher: Computer History Museum
Donated By:
Filename: doc-4b96aca992886.pdf (Size: 21 KB)
Pages: 3
Cataloguer:
Copyright: Computer History Museum
Description:
Uri Berman worked with Pete Nordyke at Rockwell's Space Division on a massive parts list application for the Apollo space capsule. They had the idea of separating the disk access and recovery functions from the applications programs which accessed the data. Uri created Data Language/I (DL/I) which was also used with the program when it was converted to run as Information Management System (IMS) for the IBM S/360. IMS became a major program product for IBM with many thousands of installations and Uri was given an Outstanding Contribution Award with a large check attached.

Entered By: Luanne Johnson
            March 9, 2010

References

There are no references for this company in the collection

Discussions

There are no discussions for this company in the collection

Quantum

Company Details

Name: Quantum
Sector: <u>Data Storage Sector</u>
Description

Quantum designed, manufactured and marketed rigid disk drives for use by Original Equipment Manufacturers (OEM's) in personal computers, workstations, and servers. Quantum was a leader in the markets in which it participated. Its business success was due to the ability to quickly achieve high volume production of reliable, cost-effective products. This was due to a number of factors including close integration of design and manufacturing engineering including concurrent product design and production process development. Quantum was founded in 1980 by a group of experienced managers from the disk drive and computer manufacturing industries. Early financing was provided by leading venture capital firms. The company became publicly traded in December 1982. Quantum acquired various business units of Digital Equipment Corporation in 1996 including its tape drive business. The hard disk business was merged into Maxtor Corporation in 2000. Quantum in 2005 is a leading supplier of tape and disk based backup, recovery and archive systems.

Facilitators

Statistics

Contributors (4), Events (38), Stories (31), Documents (57), References (0), Discussions (0 threads, 0 posts)

Entered By: Luanne Johnson
                                             April 11, 2005

Contributors

Contributor Ron Dennison
Date Joined May 1995
Job Description

ENGINEERING MANAGER, ADVANCED TEST AND PROCESS DEVELOPMENT
·Led development of advanced technology for disk drive manufacturing
·Defined, implemented, staffed and led self-servo writing program for all products
·Managed development of advanced tests, data systems, analytical techniques
Date Left December 1998
Statistics

Stories (28) , Documents (11)
Date Entered July 20, 2005

Contributor Tom Gardner
Date Joined 1982
Job Description

Just an observer from a competitor
Date Left 1983
Statistics

Stories (1) , Documents (4)
Date Entered April 19, 2006

Contributor John Levy
Date Joined January 1993
Job Description
>Director of Systems Engineering; After consulting for Quantum from 1983-1992, I joined Quantum to create this department, which ultimately included three functions: hardware interface development (ATA and SCSI); firmware testing tools; and simulation and modeling (predicting performance of yet-to-be-built hard disks); we also managed the relationship with Microsoft.

Accomplishments
>Developed Ultra-ATA/33 and successor speed-ups in cooperation with Intel, and got it adopted as the standard; built a series of firmware test carts, used by all of the DPSG firmware development groups;
>
>I also participated in the Blue Team, part of the 1996 strategic planning exercise on the Prahalad-Hamel (\\

Date Left October 1998
Statistics
>Stories (1)

Date Entered March 16, 2006

Contributor Ron Moon
Date Joined January 1982
Job Description
>Electronic Engineer. Design the electronics for the Q2080 hard disk drive and servo writer. Design the electronics for the Q280 hard disk drive. Design the electronics for the 2 1/2 inch Go drive. My main focus was on the servo portion of the drives. I also worked with continuation issues and test equipment for the Q2000, Q540, and Q280.

Accomplishments
>I invented the angle servo for the optical encoder. I also invented a power amplifier circuit to drive the voice coil motor. I invented the system level design of the Q2080 and Q280 and the Go drive. I consulted off and on at Quantum from 1989 to 2000.

Date Left April 1987
Statistics
>Stories (1)

Date Entered February 22, 2006

Timeline

1979

Milestones
>Quantum Founders Meet and Plan (September 1979)
>
>Related Stories
>How Quantum Was Founded, Joel Harrison
>Founding of Quantum, Jim Patterson
>Product Plan, Dave Brown
>Quantum's Founders, John Attenborough
>
>Related Documents

Quantum

Ex-System Industries, Shugart Execs Establish 8-Inch Winchester Company
James L. Patterson of Quantum Corporation
[Dave Brown's Photo Album, 1980-1990]
James L. Patterson: The Drive to Succeed
Quantum Leaps-- But Not Too Quickly
Quantum founders meet and plan Quantum

Naming Quantum (1979)
Naming Quantum

Related Stories
Naming Quantum, Dave Brown

1980

Milestones
First Customers (1980)
First Customers

Related Stories
Wang Sale, Jim Patterson
Altos Computer, Jim Patterson

Company Culture
Early Days (February 1980)
Early Days

Related Stories
Quantum's Simplest Intercom System, Joel Harrison
Quantum's Founders, John Attenborough

Related Documents
Quantum Corporate Values
Quantum Values Plaque

People
Dave Brown's Photo Album (1980)
Photo's of people and events at Quantum from 1980 to 1990

Related Documents
[Dave Brown's Photo Album, 1980-1990]

Ron Moon's Quantum Recollections (1980)
Ron Moon's Quantum Recollections

Related Stories
Joining Quantum

Products
Early Product Issues (September 1980)
Early Product Issues

Related Stories
Early Field Problems, Joel Harrison
The Biggest Engineering Challenge?, John Attenborough

Q2000 Pictures (September 1980)
Pictures of Q2000

Related Documents
Q2000 Detail
Q2000 w/o Board
Q2000

Technology
Unique Quantum Technology (May 1980)
Unique Quantum Technology

Related Stories
Quantum's Technical Edge: Optical Encoder and Self-Write Servo, Joel Harrison
AC vs. DC, Joel Harrison
Another Quantum Technical Innovation, The Air Lock; Joel Harrison

1982

Milestones
Going Public (1982)
Going Public

Related Stories
Going Public, Jim Patterson

Related Documents
James L. Patterson of Quantum Corporation
[Dave Brown's Photo Album, 1980-1990]
James L. Patterson: The Drive to Succeed
Quantum Annual Report 1983

Quantum Reference Guide (1982)
Quantum Reference Guide includes company background and organization,
financial information , employee handbook, product information, pictures and a
variety of other Quantum related material. Good overview of history for period
1980-82

Related Documents
[Quantum Reference Guide 1980-1982, Part 1 of 4]
[Quantum Reference Guide 1980-1982, Part 2 of 4]
[Quantum Reference Guide 1980-1982, Part 3 of 4]
[Quantum Reference Guide 1980-1982, Part 4 of 4]

Financial Data
14 Million the First Year! (March 1982)
14 Million in Sales the First Year of Operation

Related Stories
14 Million the First Year!, Jim Patterson

Related Documents
James L. Patterson of Quantum Corporation
[Dave Brown's Photo Album, 1980-1990]
James L. Patterson: The Drive to Succeed
Quantum Annual Report 1983

1983

Acquisitions and Disvestitures
Plus Development (Hardcard) Company Formed (May 1983)
Plus Development (Hardcard)spun out of Quantum

Related Stories
The Genesis of Plus Development, Dave Brown

Related Documents
Hardcard may be disk drive firm's ace in the hole
Imitators are flooding Quantum's Hardcard market
[Dave Brown's Photo Album, 1980-1990]
Quantum Leaps-- But Not Too Quickly

Financial Data
Annual Report (1983)
Annual Report

Related Documents
Quantum Annual Report 1983

Organization and Management
Quantum Integrity (1983)
Quantum's Demonstrated Integrity

Related Stories
Quantum Integrity, Richard Taylor

Related Documents
James L. Patterson of Quantum Corporation
[Dave Brown's Photo Album, 1980-1990]
James L. Patterson: The Drive to Succeed
Quantum Corporate Values
Quantum Annual Report 1983

People
Hiring Into Quantum (April 1983)
Hiring Into Quantum

Related Stories
Values and Going to Quantum, Richard Taylor

Engineers for Quantum?, John Attenborough
Joining Quantum

1984

Financial Data
Annual Report (1984)
Annual Report

Related Documents
Quantum Annual Report 1984

Organization and Management
JIT or How Quantum Won DEC (February 1984)
JIT or How Quantum Won DEC\\\'s Business

Related Stories
JIT or How Quantum Won DEC, Richard Taylor

Innovative Management (June 1984)
Innovative Management

Related Stories
Quantum Integrity, Richard Taylor
Innovative Management Structure, Richard Taylor

Related Documents
James L. Patterson of Quantum Corporation
[Dave Brown's Photo Album, 1980-1990]
James L. Patterson: The Drive to Succeed
High-Tech Industry Rates Top 10 Execs
Quantum Corporate Values
Quantum Annual Report 1983

1985

Financial Data
Annual Report (1985)
Annual Report

Related Documents
Quantum Annual Report 1985

Marketing and Competition
Quantum Saves Rock 'n Roll (May 1985)
Bill Graham's Computer Data Survives Fire

Related Documents
[Quantum Saves Rock and Roll] Bill Graham's Computer Data Survives Fire

Products

5-1/4 inch (June 1985 ca.)
5-1/4" Stumble

Related Stories
5-1/4" Stumble, Jim Patterson

Related Documents
Quantum Leaps-- But Not Too Quickly
Quantum Set To Introduce New Series Of Half-Height Drives
Q200 Brochure

Success! (1985)
A great year for Quantum

Related Documents
James L. Patterson of Quantum Corporation
Hardcard may be disk drive firm's ace in the hole
How Some Succeed Despite Slump
ENCORE Award Honors Quantum's Leaps
[Dave Brown's Photo Album, 1980-1990]
James L. Patterson: The Drive to Succeed
Quantum Annual Report 1984
Quantum Annual Report 1985
Quantum Annual Operating Plan
Quantum Annual Report 1986

Q540 Pictures (1985)
Pictures of Q540 5-1/4" Drive

Related Documents
Q540 Picture
Q540 Picture - Bottom View
Q540 Picture - Cover Removed
Q540 Picture - Cover Removed Opposite View

Plus HardCard 40 Picture (1985)
Plus HardCard 40 Picture

Related Documents
Plus HardCard 40 Picture

Technology
Quantum Engineering Objectives (November 1985)
Engineering Objectives

Related Documents
Quantum Corporation: Engineering Objectives, Fiscal Year 1986

1986

Financial Data
Annual Report (1986)

Annual Report

Related Documents
Quantum Annual Report 1986

1987

Milestones
A change at the helm (November 1987)
Steve Berkley takes over from Jim Patterson

Related Documents
James L. Patterson of Quantum Corporation
Quantum President/CEO Resigns
Steve Berkley: A Renaissance man who left forestry for wilds of technology
Imitators are flooding Quantum's Hardcard market
[Dave Brown's Photo Album, 1980-1990]
James L. Patterson: The Drive to Succeed
Quantum Corporation: Engineering Objectives, Fiscal Year 1986
Quantum Corporate Values

Acquisitions and Disvestitures
Plus Recombines with Quantum (March 1987)
Plus Development Recombines with Quantum

Related Stories
Plus Recombines with Quantum, Dave Brown

Financial Data
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Annual Report

Related Documents
Quantum Annual Report 1987

People
Dave Brown's Photo Album Volume 2 (1987)
Photos of people, event's and happenings at Quantum 1987 to 1995

Related Documents
[Dave Brown's Photo Album, 1987-1995]

1988

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Related Documents
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1989

Organization and Management
Re-Engineering Quantum (1989)
Re-Engineering Quantum

Related Stories
Re-Engineering Quantum, Dave Brown
The Change to Business Teams, Dave Brown

1990

Financial Data
Annual Report (1990)
Annual Report

Related Documents
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1992

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Related Documents
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Organization and Management
New Facilities! (1992)
Aerial photos of new buildings and site

Related Documents
[Three Aerial Photographs]

Bill Miller Succeeds Steve Berkley (May 1992)
Bill Miller takes over

Related Documents
Steve Berkley: A Renaissance man who left forestry for wilds of technology
Quantum Corporation Names William J. Miller Chief Executive Officer
Quantum Corporation Promotes Michael Brown to Executive Vice President
Bill Miller: An Interview with Eric Nee
[Dave Brown's Photo Album, 1987-1995]
Quantum Annual Report 1992

2005

People

Quantum

Video of Interview with Jim McCoy (November 8, 2005)
Link to Video Interview with Jim McCoy: Quantum Founder and first VP Marketing.
http://archive.computerhistory.org/resources/moving-
image/oral_history/Jim_McCoy/

Related Stories
How Quantum Was Founded, Joel Harrison
Founding of Quantum, Jim Patterson
Quantum's Founders, John Attenborough
Joining Quantum

Related Documents
Ex-System Industries, Shugart Execs Establish 8-Inch Winchester Company
[Dave Brown's Photo Album, 1980-1990]
Quantum Corporation Business Plan
Quantum Corporation Business Plan - Appendix

Stories

Title: Engineers for Quantum?, John Attenborough
Author: John Attenborough
Created: August 5, 2005
Cataloguer:
Copyright:
Story:
Bob Perchaluk worked for me at Recortek and had already joined Quantum and he kept telling me that Quantum was looking for engineers… So anyway I got an interview with Dave Brown and of course the first thing out of my mouth is that I was not a degreed engineer. Dave Brown said "I don't want to hear about that. Tell me what you've done!" So anyway I said I had done some design work and I told him what I had done and we had a long conversation which ended with Dave saying I will call you. So that night he called me and said "John I really enjoyed our conversation and I'd like you to come in and talk to two of the engineers here." So I went in and Spoke with Pat Weiher who I knew from 24 hour fitness and Joel Harrison and they wanted to hire me. But I said don't hire me yet, give me something you'd like me to design over the Christmas holidays. So I did design a tool for staking the heads onto the arms and they hired me. That may have been one of the reasons or it may not.

Entered By: Ron Dennison
            September 13, 2005
Related Events

Hiring Into Quantum

Title: Quantum's Founders, John Attenborough
Author: John Attenborough
Created: August 5, 2005
Cataloguer:
Copyright:
Story:
…This startup had five founders and every one of them were great people and dynamic. Dave Brown is a person I'll never forget. I think he's just the greatest person I've ever met in a company. Not only from the point of being a personnel person but someone who really knows how to get to the core of problems and makes sure that you are on that track. An example: I had a guy working for me who was a great engineer,

a smart guy, but he liked to talk. He liked to describe in detail how a task was done from beginning to end. And Dave had no patience for this kind of stuff. The question was where are we in this project. We have to get down to the core of the problem and that's it. So I got with the engineer and said you have to get down to the essentials quickly or Dave will shut you off. But I thought that as a founder with experience Dave had in engineering and as a personnel person he really knew how to get to the core of a problem and not make you feel bad….

We had a great team of founders. I think different from other companies, all of the founders had a position to perform and nobody got in each other's way. Getting to the core of the problem, helping whenever you needed help they were there, always, no matter what. So you felt really good about what you were doing that you were really on the right track and almost everyone in the company had that same feeling, accounting, everyone. I've never met a more dynamic group of people all headed in the same direction and it proved that in the end… It was the best company I ever worked at.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Early Days
Quantum Founders Meet and Plan
Video of Interview with Jim McCoy

Title: The Biggest Engineering Challenge?, John Attenborough
Author: John Attenborough
Created: August 5, 2005
Cataloguer:
Copyright:
Story:
One of the biggest engineering challenges in the process for the 1st 8" drive was drive contamination. We had a leaking ferrofluid seal and an outgassing rubber gasket. The manufacturer had changed the material of the gasket without telling us… So we had a group of people get together to try to solve the problem. We had a group that included all departments including accounting. My first reaction to that was why are we having all these people who are not engineers involved in solving an engineering problem. But Ivan Nazario said "When you're solving a problem like this people [who are unfamiliar with it] ask interesting questions that might lead to solving the problem" Over time I came to know he was absolutely right. As it turned out the guy that really solved the problem was in the materials group, who suggested we look at all the parts and see if anything had changed since the initial production. At the time it was very significant because we only had one customer, I think. The problem was significant for two reasons: 1. We solved the problem and 2. we established a similar process [of multidisciplinary teams including people outside of engineering] for all major problems that followed.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Early Product Issues

Title: The Genesis of Plus Development, Dave Brown
Author: Dave Brown
Created: July 12, 2005
Cataloguer:
Copyright:
Story:
I have a very short attention span and the next major thing for me was the starting of Plus Development. That was an amazing step as a startup and a technology. That was born out of the fact that we had a

board member, Bob Schroeder[QUME]… he came into Quantum one day, this was right around 1983 when IBM brought out the PC. He said you guys all need to have a PC. There was a huge computer store on the corner of San Thomas and Steven's Creek Boulevard. So he marched us all down there one evening and we all bought PC's.

One of the first things we noticed in the PC was that there was no hard disk. In order to put a hard disk in a PC you needed a 5-1/4" drive, a controller, a power supply, you had to integrate all this stuff and do some software. We decided that we would provide that solution in one PC slot. So we designed the hard disk to fit on a card which we called "Hard Card". It was the first time in history that a controller was integrated onto the disc drive printed circuit board. Up until that time controllers were always a separate item. So this was a one slot solution to a hard disk in a PC. Besides really difficult development we did a lot of firsts: a controller chip set under X bucks which nobody said we could do, including Adaptec at the time… Another first was the size of the drive, 1" thick. Another first was that we thought of it as a consumer product, so we went to and started a long term relationship with a Japanese company [MKE] who was going to make it. [They] didn't speak a lick of English and had never manufactured a hard disk drive in their whole life.

So all of these things together in a dramatically shortened development schedule… this was a miraculous challenge. We met that challenge.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Plus Development (Hardcard) Company Formed

Title: Plus Recombines with Quantum, Dave Brown
Author: Dave Brown
Created: July 12, 2005
Cataloguer:
Copyright:
Story:
[Plus Development] taught us that, even though you pride yourself on delegation or succession, in startups or small companies there's only a small handful of people that make a company work. If you take them out and put them somewhere else, things may go awry from where you took them. So when we [Steve Berkeley and others] went back to Quantum, Plus started going awry. So that would tell you that we didn't put enough strong people underneath us. So Plus got melded back into Quantum. There was always conflict and problems with that. But we survived. So we brought back the technology and MKE to Quantum and started doing in earnest 5-1/4" and 3-1/2"products initially for Apple. There was a four year run there where we went from 200 [million dollars in sales], to 400, to 800, to 1.2 billion; doubling every year. That was a hell of a run.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Plus Recombines with Quantum

Title: Product Plan, Dave Brown
Author: Dave Brown
Created: July 12, 2005
Cataloguer:
Copyright:
Story:

Quantum

This [matrix completed by all of us] was the basis for deciding what our first product would be. We wrote down in priority order the list of products that we wanted to start the company with. We ranked them on revenue potential, timing, life growth, share potential, competitive synergy, development cost, and so on. We rated them high, low and medium. You'll notice that 5-1/4" rigid drive was on the top; 5MB less than $280 cost. Unfortunately, Seagate was started just as we were meeting and Al [Shugart] had a sweetheart deal with Dysan, so he got the 5-1/4" disks and we couldn't get them. So we went down through [the other products on the matrix] and lo and behold, the 8", 10 MB was there and that's the one we ended up starting the company with. We did a 10, 20, 30 and a 40. That [product matrix] is cool because it shows you what products in 1979 had a lot of potential.

Entered By: Ron Dennison
            September 8, 2005

Related Events
Quantum Founders Meet and Plan

Title: Re-Engineering Quantum, Dave Brown
Author: Dave Brown
Created: July 12, 2005
Cataloguer:
Copyright:
Story:
Another very important thing we did. There was a period around 1990 where we were having difficulty with time to market, everybody was. So I brought in a consultant and used some principles that Steve Wheelwright (board member) was talking about at Harvard and Stanford. We had two major thrusts in Quantum. One was fast cycle time. We totally re-engineered how we developed a product… That led to all hands on deck engineering meetings where we threw away what we did in the past and on a huge white board we reconnected the dots and how to do things in parallel. We talked about platform development, parallel development, and rapid prototyping. So we used all these things and put it all together and were quite successful over a multi-year run of continuously reducing the time to market for our products. That to me was one of the most amazing things that we did at Quantum to re-tool it.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Re-Engineering Quantum

Title: Naming Quantum, Dave Brown
Author: Dave Brown
Created: July 12, 2005
Cataloguer:
Copyright:
Story:
[The Quantum name originated in this way.] We had a big dinner one night at La Hacienda with our spouses. [After dinner] we got into a big room and began to try to name the company. We came up with a lot of weird ass names. We made a big list. I remember Polara was one. We decided that was the name of a lousy Dodge at the time. So we did it in a big social thing at La Hacienda after dinner one night and we left it to [Jim] McCoy to research the list and find out what was taken with Sacramento. The criteria for the name came from a sentence. We would phone a customer and ask "How do you like your blank drive." So if it was a good name it would sound good in that sentence. That's how our company got name Quantum.

Entered By: Ron Dennison

September 8, 2005

Related Events
Naming Quantum

Title: The Change to Business Teams, Dave Brown
Author: Dave Brown
Created: July 12, 2005
Cataloguer:
Copyright:
Story:
The other initiative that was also amazing, and equally as important, was implementing business teams. We implemented these teams in the early 90's. If you get the book "Fast Cycle Time" by Chris Meyer, it's written about Quantum, it's a fabulous book, and both "time to market" and "business teams" are in the book. We had found ourselves living in minutia at the executive staff level. In order to push decisions down we embraced and implement business teams. This was equally as important hard as fast cycle time. Business teams were put together with 6 people from engineering, manufacturing, quality, finance, marketing, and sales, this was at the director level below the vice presidents. These teams, we had three of them, were totally responsible for the gross margin of a business, with multiple products per business… They were responsible for the product definition, the production, customer satisfaction, the end of life, the whole works at the gross margin level. We started slowly, there were initially some weak performers, but the teams did self evaluations and over time grew their performance. We didn't invent teams. Chris took us to several companies that had implemented business teams including Tektronix in Oregon, so we could be successful.
Those two things, business teams and fast cycle time, totally transformed Quantum into a dynamite, profitable, time-to-market company. There was a time before we sold off the drive business, when Quantum was the highest volume manufacturer [in the hard disk drive industry].

Entered By: Ron Dennison
              September 13, 2005

Related Events
Re-Engineering Quantum

Title: The Best Place I Ever Worked
Author: Ron Dennison
Created: September 13, 2005
Cataloguer:
Copyright:
Story:
"I had a lot of people say that "Quantum was the best place that they had ever worked in their lives." That was rewarding and, I think, a true difference between us and [other disk drive companies]." Jim Patterson

"There was never a PROBLEM there was always an OPPORTUNITY."
and
"We all worked for the company not for any individual." John Attenborough

"I believe people feel best about building a good product and being proud about it and being the best and having happy customers. So it was just a wonderful experience for me." Richard Taylor

"I've never met a more dynamic group of people all headed in the same direction and it proved that in the end… It was the best company I ever worked at." John Attenborough
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Entered By: Ron Dennison

September 13, 2005

Title: Q200 Series Intelligent Disk Drives
Author: Tom Gardner
Created: April 19, 2006
Cataloguer:
Copyright:
Story:
Quantum announced the Q200 series in April 1985 and after some delay began delivery in late 1Q86. The initial product family was the Q250 and Q280 half height 5.25 inch disk drives; a full height, Q160, was added in 1986 and dropped shortly thereafter.

If not the first, this product is certainly an early example of both an intelligent drive (integrated SCSI) drive and an embedded servo with rotary voice coil actuator drive. This combination is arguably the first instance of what has become all modern disk drive designs. The picture in the brochure could just as easily be 1986 or 2006 :-)

Apple apparently was a large customer particularly in FY1988. By the end of FY1989 (31 Mar 1989) the family had been discontinued.

Entered By: Tom Gardner
          April 19, 2006

Related Documents
Quantum Confirms Winchester Delay
Quantum Releases 160 MB Hard Drive
Quantum Discontinues Winchester
Q200 Series Intelligent Disk Drives

Title: Quantum's Simplest Intercom System, Joel Harrison
Author: Joel Harrison
Created: August 18, 2005
Cataloguer:
Copyright:
Story:
We rented space at 120 Charcot to begin. We had Quantum's simplest intercom at the time. When the phone rang, we'd answer it and knock on the wall between the engineering group and the business group. Jim McCoy the marketing guy got the most calls so he got knock number one [one knock]. I think I was 5 or 6 [knocks] because I didn't get that many calls.

Entered By: Ron Dennison
          September 13, 2005

Related Events
Early Days

Title: Quantum's Technical Edge: Optical Encoder and Self-Write Servo, Joel Harrison
Author: Joel Harrison
Created: August 18, 2005
Cataloguer:
Copyright:
Story:

Quantum

Within a month we had pretty much established our architecture. The problem, if you go back to 1980, was that there were really only two technologies for disk drives in terms of how you keep a head on track or position. That was you either have a servo head on a dedicated surface that positioned the whole actuator based on the feedback from that surface. Or you were like Seagate and the product I did at Shugart, which was a stepping motor approach with no feedback. The head went out to the track and you assumed it was there, and you tolerance around that. Those were the two approaches.

We realized that if we could get some feedback from the data head and also fool the controller and hide any servo information. Then we could compete with a higher [track] density than what you could do with a stepper with substantially less cost and more importantly less manufacturing process problems.

So we looked at should we do this [actuator motion control] with a stepper motor or should we do this with something else… I had built a flat coil actuator for the spectrophotometer at HP. I understood that. I understood that the flat coil actuator was the simplest motion… It had six segments, three for motion in one direction and three for motion in the other [picture5]. Push-pull between the two of them. The thing we did there was we totally balanced the actuator, both from a center of mass and from a center of torsion. So it was totally balanced in two dimensions. So for the mass of it, it was very important that we do that.

The other thing we did is we committed to an optical encoder technology to do the coarse position. What we did was we slowed [the spindle motor] down by 4%, allowing time at the end of the track, hidden behind the index mark, the [servo information]… All servoing was done to the [optical] encoder. The target position was corrected once per rev by the feedback [from the hidden servo information]. It got more sophisticated as the product architecture matured, but that ended up being the architecture that survived a decade: Optical encoder and self-write servos.

Entered By: Ron Dennison
          September 13, 2005

Related Events
Unique Quantum Technology

Title: AC vs. DC, Joel Harrison
Author: Joel Harrison
Created: August 18, 2005
Cataloguer:
Copyright:
Story:
We had a major crisis in early June of 1980. We went to NCC. I remember that we were battling the future versus the past. Every new disk drive announced at NCC had a brushless DC spindle motor. We were the only new product that had an AC motor… Our business plan for this first product was to walk into a Shugart customer, unplug their product, plug ours in and have it play and they wouldn't know the difference. The power supply specification of a Shugart product would not support a brushless DC motor… So we used an AC motor [on the Q2000] and we're done, end of discussion.

Entered By: Ron Dennison
          September 13, 2005

Related Events
Unique Quantum Technology

Title: Early Field Problems, Joel Harrison
Author: Joel Harrison
Created: August 18, 2005

Quantum

Cataloguer:
Copyright:
Story:
In the 2nd quarter of 1981 we had delivered 500 units to the field. A couple of weeks into this process of going into the field we had some serious return issues. Two company killing problems, potentially. One we were getting some disk erasures and two our encoders were unreliable…

We had a ferrofluid seal and we were getting magnet[ic particles] from the motor contaminating the ferrofluid which was then getting out on the disk and contaminating the head… Bill [Moon] had experienced the same problem on an HP drive.. An interesting Silicon Valley story, somebody found for Bill, a scanning electron microscope for hire in the yellow pages available on Saturday. No place else in the world! They were able to diagnose the problem. Bill had the experience to know what to look for and validate it is or it isn't. Once we found that was the problem then we had a clear target of what to do. We ended up sealing the magnets in the motor and sealing the magnets in the actuator and the problem went away.

Another problem we had that Bill [Moon] solved is that we had a temperature range problem that we didn't understand… If you notice on the actuator… there is a steel plate in combination with an aluminum housing that warped. So he tuned the thickness of the plate so it would work… Bill was the best experimentalist I have ever worked with…, a great practical engineer.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Early Product Issues

Title: Another Quantum Technical Innovation, The Air Lock; Joel Harrison
Author: Joel Harrison
Created: August 18, 2005
Cataloguer:
Copyright:
Story:
One of the problems we had with our first product, collectively we knew we needed to lock the heads when the drive was being transported… The [manual lock] was fine for the OEM, but it really was dysfunctional for shipment of the system. So our customer said we're not buying another product without an automatic lock. All of us through our various disk drive experience in the past had experience with solenoid locks. So Dave Brown in his goal management style (He's the best leader I've ever worked with), said. "Here's what we're gonna do guys, we're gonna have an automatic lock but it's not going to be a solenoid. Go figure it out." He doesn't specify how. He specified what it is and what it isn't. So we had a brainstorming session… We went off on the first tangent, an inertial latch. After 7 or 8 weeks [Bill Moon determined that it wouldn't work and] we went back to the meeting notes. A manufacturing engineer, whose name escapes me, said, "We've got an awful air coming thru that drive. Why don't we use that air to latch an actuator." We came back [to the meeting notes] and he had essentially invented the air latch. Bill Moon and Charlie Mitchell ended up prototyping it and that became our future lock… We did that at least 15 years.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Unique Quantum Technology

Title: How Quantum Was Founded, Joel Harrison

Author: Joel Harrison
Created: August 18, 2005
Cataloguer:
Copyright:
Story:
I was in the hard drive business [at Shugart Associates]. Dave Brown was on floppy drive [side of the business at Shugart Associates]. But I was on several task forces for the floppy disk side of the business where I met and befriended Dave Brown. He was the key mover and shaker at Quantum. So what became clear in the Shugart period. Shugart had been bought by Xerox. Don Massaro was the executive who had really made Shugart successful… He was the glue managerially that held the place together. Don got promoted within Xerox and chaos happened. Don was the control system that made Shugart work. At all levels there was just no cooperation. We saw clearly in '79 that Shugart was not going to dominate the businesses that they could dominate. So the consequence of that was can we started a company to compete with them.

During the fall of '79 [when we were meeting at Harold Medley's house working on starting up Quantum], at least three of us [original five founders of Quantum] were interviewed by Al Shugart to head up mechanical engineering at Seagate. We all turned him down…

Entered By: Ron Dennison
          September 8, 2005

Related Events
Quantum Founders Meet and Plan
Video of Interview with Jim McCoy

Title: Plus Development launch
Author: John Levy
Created: March 16, 2006
Cataloguer:
Copyright:
Story:
I left Apple in November, 1982, and shortly thereafter was introduced to Jim Patterson by our mutual stockbroker, Allen Chozen. Jim told me that the company was considering spinning off a group to develop a hard disk for the PC market. The following week, I delivered a lecture at Santa Clara University (recorded on videotape, which I still have) to the Executive Staff on "What is DOS?" and how it relates to the IBM PC.

I was invited to join Dave Brown, Joel Harrison, Bernie Huth, and Rolf Brauchler at a planning session at Pajaro Dunes. We plotted the launch of Plus. I was the "systems guy" -- none of them had experience in computer systems or disk controllers.

With the creation of "Bits in Space", then "BBH Corp" and finally, "Plus Development Corp.", I began consulting regularly. I helped define the system-related requirements for the HardCard development, including things like Compatibility Test (I hired Claude Camp as the first employee in that area), BIOS development, and software things in general. I also helped to put together the entire specification of the product for the Japanese manufacturing partners, MKE. This mostly involved editing of the English, including removing all abbreviations.

As I recall, I and Zaydoon Jawadi were the only two long-term technical consultants to Plus. Zaydoon developed test equipment, and later went on to found his own company, Zadian.

Entered By: John Levy
          March 16, 2006

Title: Joining Quantum
Author: Ron Moon
Created: February 22, 2006
Cataloguer:
Copyright:
Story:
My entire family was getting together at my brother's house (Bill Moon) in California for Christmas 1981. I had a new job at Texas Instruments in Dallas, Texas. It was my dream job of designing analog integrated circuits. I had only been there for 9 months and had no intentions of leaving.

While visiting Bill he really wanted me to interview with this start-up company called Quantum that designs and manufactures hard disk drives (I think they called them rigid disk drives at the time). I was only 9 months out of college and was clueless about start-ups and disk drives. They interviewed me for Bob Peterson's test equipment group. At the time, all electronics was exciting and I was young. Then they offered me thousands of shares of stock options in the company and a better salary. The stock options were not worth much and luckily I didn't know how low odds of a start-up company going public were. The potential of the stock options were huge to me at the time.

I returned to Texas Instruments with my Quantum offer and asked two bosses up, Joe King (no joking that is his name), if he could match the offer. Remember, I loved my new job in Texas. Joe offered me two shares of stock options of TI at like 80 dollars a share and the stock was trading at the same price. I accepted the Quantum job and resigned at TI the next day.

I do not remember all this exactly but after joining Quantum it was not long before I wanted to jump into designing drives instead of test equipment. I remember Dave Brown and Joel Harrison trying to slow me down. I remember going to lunch with Dave, Joel and others with their goal to slow me down but I keep working on both the test equipment and the Q2000 issues. After a few months and working everyday including Sundays, I got shifted to the drive design team and I enjoyed inventing many disk drive things. The quiet Dick Simonsen was fine with any work I did to help out. And my brother Bill and I loved to work on drive problems together. Especially the mechanical resonance problems of the drives.

Shortly after my joining Quantum, the design team of Bill Moon, Bruce Peterson, Don Westwood and myself started designing the 80 megabyte follow up of the Q2000. It was about that same time that Quantum decided to get into the 5 1/4 inch drives and split into two teams one working on the Q500 and the other the Q2080.

I am grateful for the early opportunity to design drives after only one year out of college and wish to deeply thank Dave and Joel for giving me that chance.

Entered By: Ron Moon
         February 22, 2006

Related Events
Hiring Into Quantum
Ron Moon's Quantum Recollections
Video of Interview with Jim McCoy

Title: Wang Sale, Jim Patterson
Author: Jim Patterson
Created: June 1, 2005
Cataloguer:
Copyright:
Story:

We built the first prototype in September of 1980. We built, I would guess, 50 between September and the end of the year. Delivered them to customers and customers evaluated them. They had some problems. But by the beginning of the year… the first quarter we recognize our first revenue. I remember one sales call in particular that was like no sales call I have ever been on. Wang was Shugart Associates largest customer. They had a 5 MB 8" Shugart drive built in to their cabinet and they were going to buy a 14" single platter, I think 24 MB drive from Shugart, single platter. They had welded on a bustle box next to their [word] processor to house it. We came in there and there were 2 or 3 engineers who came in to look at it. They said "does it work?" Yes. "Can we plug it in?" Yes. We disconnected their 5 MB, we plugged it [our drive] in, now they had 40 MB and they didn't need this bustle box. The engineers just started flowing into the room and within minutes we had a captive customer.

Entered By: Ron Dennison
             September 8, 2005

Related Events
First Customers

Title: Founding of Quantum, Jim Patterson
Author: Jim Patterson
Created: June 11, 2005
Cataloguer:
Copyright:
Story:
Both Harold Medley...and I in September of 1979 were at a crossroads. He was dissatisfied with Shugart Associates and was going to retire or do something different. I was VP of Engineering at System Industries and in a very difficult situation there too… It was a very difficult time to hire engineers, enormous turnover, salaries were going through the roof. Ed Zschau had been away giving a speech and announced at that meeting that we were going to have a sabbatical. He came back and had a staff meeting and said we now have a sabbatical… There were five of us eligible and I was one of them… So I agreed with Ray Noorda that instead of taking three months off, I would work six months at half time and help a friend of mine write a business plan. So I did that.

In September of 1979, I was working half time, System Industries was going public and Ray [Noorda] wanted to know when I was coming back. That's when I got a call from Harold [Medley] saying let's start a company. His original thought was a half-high floppy disk drive that would fit underneath a low profile keyboard.

I remember my first thought was that all the world needs is another disk drive company. I think there were something like 33 of them at the time. So Harold and I started talking and we soon brought in Dave Brown whom I had known at Memorex and Harold had worked with at Shugart Associates and Joel Harrison and Don Daniels. All of which we had worked together at Memorex…

We talked about all sorts of things, but in October of 1979 the idea of a 5-1/4" hard disk drive had become prominent and we contacted Norm Dion to see if we could get media from him. He was very interested in it. I remember we met with him on a Monday in October and he said that he wanted to make an investment in the company and we should give him a business plan by the end of the week. So, everybody else was working but me. They were still employed. So the writing of business plan fell in my lap and I worked very hard every night until late in the morning to finish the business plan.

Thursday night before the presentation on Friday morning, Norm called and said before you come in the morning, I have to tell you I've decided to invest in Al Shugart's company. So I went over and met with him and he… said you do it too… and we'll give you just as good a support as we give [Al's company].

So we came back and we talked about it and we just did not believe that it was a very good position to be in to have a sole supplier of media that was an investor in your competitor. So we decided to focus on the

8" disk. Shugart associates dominated the market… but they had been unable to take it beyond 5 MB. We believed we could go way beyond that and make it compatible with Shugart Associates.

So by the end of the year [1979], we had really focused in on that idea and Jim McCoy joined the group. Of course, most of them were still working at Shugart Associates at the time. Why was Quantum founded in February 1980? Because they all had bonuses due in February from Shugart and we needed the [bonuses to found the company].

Entered By: Ron Dennison
            September 8, 2005

Related Events
Quantum Founders Meet and Plan
Video of Interview with Jim McCoy

Title: Altos Computer, Jim Patterson
Author: Jim Patterson
Created: June 11, 2005
Cataloguer:
Copyright:
Story:
I think our second or third customer was Altos Computer… We moved to Bering and right across the street was Altos Computer. I would, every once in a while, walk out of my office and into the manufacturing area Harold [Medley]had set up in the back. There would be Dave Jackson just walking around and he would say, "Not ready yet but you're getting closer." One day he came over and gave us a large order. He just felt comfortable…

Entered By: Ron Dennison
            September 13, 2005

Related Events
First Customers

Title: 14 Million the First Year!, Jim Patterson
Author: Jim Patterson
Created: June 11, 2005
Cataloguer:
Copyright:
Story:
The first year from March of 1981 to March of 1982 we did about 14 million in sales. I remember we submitted to the board a business plan that forecasted 26 million in sales in the first year. They laughed very loudly. They said it was absolutely foolish to think in those kinds of numbers. They said we'd order in so much inventory, we'd go through all our cash and then we'd be sitting with a company full of inventory and not anywhere near 26 million in customers. One of them [the board members], Len Baker as a matter of fact said, "If you sell 26 million dollars, I'll buy you and your team dinner anywhere you want in the world." We did 13 or 14 million, which I think everybody was really pleased at. But I learned a lesson at that time in managing expectations.
It turned out that five years later Lynn was moving his office… and he came across one of Quantum's original business plans. He looked at it and said, "You exceeded your forecast for every year of the five years that you forecast. Every year was better than you had forecast. So I'll buy you and your team dinner in San Francisco.

Entered By: Ron Dennison
            September 13, 2005

Related Events
14 Million the First Year!

Title: Going Public, Jim Patterson
Author: Jim Patterson
Created: June 11, 2005
Cataloguer:
Copyright:
Story:
In August of '82 Al Shugart phoned and said "What do you think about taking a company public? It's better than being acquired. Those are the two paths that I see and I just can't imagine Seagate being acquired by another company." That was really the first time I had given any thought to it. There were a lot of rumors about disk drive companies going public. I think Micropolis… and Priam… In a September board meeting the board said, "You don't want to be the sixth [disk drive] company to go public." That started us on, for me, an incredible steep learning curve and Joe Rodgers as well, I think. It's hard to believe after going thru the 90's that companies were that naïve about public offerings. But we were…
But, I think it was December 10th that our stock was traded for the first time.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Going Public

Title: 5-1/4" Stumble, Jim Patterson
Author: Jim Patterson
Created: June 11, 2005
Cataloguer:
Copyright:
Story:
When the transition was going from 40 MB to 85 MB [in the 5-1/4" drive business], we concluded that you couldn't do it. The media wasn't good enough, there were too many defects on the media. So we sat around and wondered how to make it work. We concluded that you had to put the controller on the disk with error correcting. We came out with the 525. But it was late and we lost a lot of market share. Because we put the controller chip on drive, we designed our own controller chip and our own error correcting. Everything about Quantum's was different from the rest of the world. Because we did all these things it was late as well. In '85 an '86 our revenues really flattened out with Plus rising up and the rest of the business declining.

Entered By: Ron Dennison
            September 13, 2005

Related Events
5-1/4 inch

Title: Customer Qualifications, Richard Taylor
Author: Richard Taylor
Created: July 20, 2005
Cataloguer:
Copyright:

Story:

Our OEM customers actually got so open and trusting with us that our lab qualification testing was accepted by corporations like Intel and TI, instead of them doing product quals. They believed in our integrity so much that they utilized our statistical data to bypass the normal product qualifications. Plus because our yields were so high (our manufacturing process was based on ISO 9000 before it existed)… so we had a wonderful experience. We had ship to stock programs, which were something in those days. So it was a lot of fun. I believe people feel best about building a good product and being proud about it and being the best and having happy customers. So it was just a wonderful experience for me.

Entered By: Ron Dennison
          September 13, 2005

Title: Values and Going to Quantum, Richard Taylor
Author: Richard Taylor
Created: July 20, 2005
Cataloguer:
Copyright:
Story:
I'm only interested in what I'm interested in and what I'm interested in, I'm passionate about. One of the things I've learned as I've gotten older, and I was a very shy guy when I was younger and I would allow other people to allocate me as a resource to serve their values instead of being in touch with and serving my own values. I've learned in life how to say no and just do things that only serve my own values. I ask myself a question, if I was on my deathbed will I have wished that I did this and if the answer is no, then I don't do those things. Now in business we all have to do things…

We were dissatisfied at DEC; a fellow who worked for me had been approached by a headhunter who worked for Quantum. They were dissatisfied with him as a candidate for the VP of Quality and Reliability position and asked him who his boss was. But because Quantum was negotiating a contract for the Q500 with DEC in the spring of 1983, I had to write them a letter saying I was interested in them and they ended up offering me a job.

There's some funny stuff around that. We were in the process of making an offer on a house in Colorado and I had locked my office at DEC and headed down the stairs when the phone rang in my office. I went back and luckily I did because they made me an offer. I told them I would give them an answer on Sunday. My wife Sally already had a job offer in Silicon Valley so we made a list of all the pro's and con's of accepting the offer and came up with a weighted average that was dead even. Then the phone rang and it was Quantum wanting an answer. So I reached into my pocket, took out a quarter and flipped it. I came up heads and we left DEC in Colorado Springs to go to Quantum in California.

Entered By: Ron Dennison
          September 13, 2005

Related Events
Hiring Into Quantum

Title: Quantum Integrity, Richard Taylor
Author: Richard Taylor
Created: July 20, 2005
Cataloguer:
Copyright:
Story:
The reason I was interested in going to Quantum, which was one of the 72 disk drive companies in the valley at that time, is that I interviewed with Jim Patterson and asked him how he was going to compete with the other companies, what's your competitive edge. He said one was the design, this optical encoder for rough positioning which was a patent that was quite valuable and a very smart idea by Joel Harrison.

Second, we're going to make disk drives that work. Because at the time drive reliability was terrible, terrible. In fact, I read an article about him shutting a line down for the 8" drive, shutting down the factory because one of the vendors was supplying a component that was failing. They [Quantum] integrated it into their manufacturing vertically so they could have control over that component. I was very impressed with that because it's hard to find, especially in the start-up companies, a guy with that kind of integrity.

Entered By: Ron Dennison
            September 13, 2005

Related Events
Innovative Management
Quantum Integrity

Title: JIT or How Quantum Won DEC, Richard Taylor
Author: Richard Taylor
Created: July 20, 2005
Cataloguer:
Copyright:
Story:
When Dale Hiatt and Steve Berkeley went off to start Asparagus [HardCard/Plus Development], Jim Patterson put me in charge of drive manufacturing around the beginning of 1984. I got to really do, with a wonderful team of people, stuff that when you're in power you get to do it that way. So we put in place a just in time materials systems, we dramatically dropped our materials inventory, we dramatically improved the yields in the process, and we began a product reliability testing program. [These things in the end caused DEC to begin buying Quantum Q500 drives instead of Evotek drives.]

Entered By: Ron Dennison
            September 13, 2005

Related Events
JIT or How Quantum Won DEC

Title: Robotics and Integration of Design and Manufacturing Engineering, Richard Taylor
Author: Richard Taylor
Created: July 20, 2005
Cataloguer:
Copyright:
Story:
…One of the things I realized in building the drives was that the error rate, the hard error rate was caused by humans, people assembling the HDA. So working with Art Geffon we implemented the first robotics to build HDA's. We said, gee, if we could load the disks, the spacers, the clamps and screw it down without having human contamination and particulate matter, then we will in fact solve one of the biggest problems in having contamination in the sealed HDA. Of course precision was important. Art's manufacturing engineering group was integrated with the design engineering group. What it really meant was that the design engineering team owned the manufacturing process. Therefore there wasn't this throw it over the wall, see you later, let's have these low paid manufacturing engineers try to figure out how to fix the design. They were instead a cohesive team that lived together and I really think that that was helpful, especially as we went ahead to integrate robotics. That was Dave Brown's brilliant idea. He set that up before he went over to Asparagus [Plus Development Hard Card].

Entered By: Ron Dennison
            September 13, 2005

Title: Innovative Management Structure, Richard Taylor
Author: Richard Taylor
Created: July 20, 2005
Cataloguer:
Copyright:
Story:
Another unusual aspect of the structure was set up by Jim Patterson. Order entry was normally a sales function but at Quantum reported to manufacturing. Combined with Jim Caldwell's help on understanding customer requirements, inventories and forecasts. This gave us instant awareness of what the demand on the manufacturing process configuration and quantities were. This really allowed us to have a competitive advantage because we were putting in place the combined JIT pull manufacturing system, reducing inventory. This meant that unlike a lot of companies that once a month or once a quarter find out what the marketing forecast is, we had real time feedback from the field.

Entered By: Ron Dennison
          September 13, 2005

Related Events
Innovative Management

Documents

Title: [Dave Brown's Photo Album, 1980-1990]
Author:
Created: 1980-1990
Publisher:
Donated By: Dave Brown
Filename: doc-434c29a370431.pdf (Size: 15.02 MB)
Pages: 82
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: Dave Brown
Description:
Photo album containing color photos of Quantum events and news articles about Quantum, 1980-1990.
Accession: 062304040
Dimensions: 12 x 12 in.
Color depth: 24 RGB
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304040.photo_album.1980-1990

Entered By: Sarah Wilson
October 11, 2005
Related Events

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14 Million the First Year!
A change at the helm
Dave Brown's Photo Album
Going Public
Innovative Management
Plus Development (Hardcard) Company Formed
Quantum Founders Meet and Plan

Quantum Integrity
Success!
Video of Interview with Jim McCoy

Title: [Quantum Reference Guide 1980-1982, Part 1 of 4]
Author:
Created: 1980-1982
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-43c2d6c1d93e4.pdf (Size: 3.65 MB)
Pages: 50
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Quantum
Description:
Pages 1 through 50 of a bound book, dated 1980-1982; contains compiled information about Quantum's
background, management, customers, competition, financials, products, etc.
Accession: 062304160
Dimensions: 11.5 x 9 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304160.reference_guide.1980-
1982\quantum.reference_guide.1980-1982.062304160.p1-50

Entered By: Sarah Wilson
  January 9, 2006
Related Events

Quantum Reference Guide

Title: [Quantum Reference Guide 1980-1982, Part 2 of 4]
Author:
Created: 1980-1982
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-43c2d7b4a86a1.pdf (Size: 6.39 MB)
Pages: 50
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Quantum
Description:
Pages 51 through 100 of a bound book, dated 1980-1982; contains compiled information about
Quantum's background, management, customers, competition, financials, products, etc.
Accession: 062304160
Dimensions: 11.5 x 9 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:

Quantum

\\Archive\projects\ITCHP\Quantum\source\062304160.reference_guide.1980-1982\quantum.reference_guide.1980-1982.062304160.p51-100

Entered By: Sarah Wilson
January 9, 2006
Related Events

Quantum Reference Guide

Title: [Quantum Reference Guide 1980-1982, Part 3 of 4]
Author:
Created: 1980-1982
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-43c2d83fa1185.pdf (Size: 7.77 MB)
Pages: 50
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Quantum
Description:
Pages 101 through 150 of a bound book, dated 1980-1982; contains compiled information about Quantum's background, management, customers, competition, financials, products, etc.
Accession: 062304160
Dimensions: 11.5 x 9 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-01-03 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304160.reference_guide.1980-1982\quantum.reference_guide.1980-1982.062304160.p101-150

Entered By: Sarah Wilson
January 9, 2006
Related Events

Quantum Reference Guide

Title: [Quantum Reference Guide 1980-1982, Part 4 of 4]
Author:
Created: 1980-1982
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-43c2d8c3e7e44.pdf (Size: 7.42 MB)
Pages: 54
Cataloguer: 2006-01-09 Sarah Wilson
Copyright: Quantum
Description:
Pages 151 through the end of a bound book, dated 1980-1982; contains compiled information about Quantum's background, management, customers, competition, financials, products, etc.
Accession: 062304160
Dimensions: 11.5 x 9 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2006-01-03 Sarah Wilson

Quantum

Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304160.reference_guide.1980-
1982\quantum.reference_guide.1980-1982.062304160.p151-end

Entered By: Sarah Wilson
January 9, 2006
Related Events

Quantum Reference Guide

Title: Ex-System Industries, Shugart Execs Establish 8-Inch Winchester Company
Author: Paul Schindler, Jr.
Created: March 3, 1980
Publisher: Computer Systems News
Donated By: Jim Porter
Filename: doc-4341753b44512.pdf (Size: 388 KB)
Pages: 1
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Computer Systems News
Description:
Photocopy of 1980 article about the formation of Quantum; it describes the six people who formed
Quantum and how they intend to become No. 3 among disk drive firms. James McCoy and James
Patterson are quoted.
Accession: 062304027
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 3, 2005

Title: Quantum Corporation Business Plan
Author:
Created: April 1980
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-439e080fd1eb1.pdf (Size: 2.82 MB)
Pages: 76
Cataloguer: 2005-12-12 Sarah Wilson
Copyright: Quantum
Description:
Quantum's Business Plan, dated April 1980. Includes summary of products, competition, market
forecasts, organizational charts, objectives, marketing and financial plans, etc.
Accession: 062304079
Dimensions: 11.5 x 8 in.
Color depth: 24 RGB, 1 bitonal
Digitized: 2005-11-30 Sarah Wilson

Quantum

Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304079.business_plan.1980

Entered By: Sarah Wilson
December 12, 2005

Title: Quantum Corporation Business Plan - Appendix
Author:
Created: April 1980
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-439e0ade7c781.pdf (Size: 11.92 MB)
Pages: 81
Cataloguer: 2005-12-12 Sarah Wilson
Copyright: Quantum
Description:
Quantum's Business Plan Appendix, dated April 1980. Includes press coverage, competitor's data sheets, management team's resumes, legal correspondence, etc.
Accession: 062304080
Dimensions: 11.5 x 8 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2005-11-30 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304080.business_plan_appendix.1980

Entered By: Sarah Wilson
December 12, 2005
Related Events

Video of Interview with Jim McCoy

Title: James L. Patterson of Quantum Corporation
Author:
Created: August 16, 1982
Publisher: Electronic Engineering Times
Donated By: Jim Porter
Filename: doc-43417768185ef.pdf (Size: 347 KB)
Pages: 1
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Electronic Engineering Times
Description:
Photocopy of 1982 article about Jim Patterson.
Accession: 062304028
Dimensions: 11 x 8.5 in.
Notes: Source quality is poor; some text is cut off.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL

Format: text/tiff
Resolution: 300 ppi
\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 3, 2005
Related Events
----
14 Million the First Year!
A change at the helm
Going Public
Innovative Management
Quantum Founders Meet and Plan
Quantum Integrity
Success!

Title: Quantum Annual Report 1983
Author:
Created: 1983
Publisher: Quantum
Donated By: Jim Patterson
Filename: doc-434c5805c5b60.pdf (Size: 3.60 MB)
Pages: 35
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: Quantum
Description:
Quantum Annual Report 1983. Statement of operating and financial results.
Accession: 062304042
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304042.annual_report.1983

Entered By: Sarah Wilson
October 11, 2005
Related Events
----
14 Million the First Year!
Annual Report
Going Public
Innovative Management
Quantum Integrity

Title: [Quantum Reference Guide 1983]
Author:
Created: 1983
Publisher: Quantum
Donated By:
Filename: doc-439e0c3966845.pdf (Size: 9.22 MB)
Pages: 69

Quantum

Cataloguer: 2005-12-12 Sarah Wilson
Copyright: Quantum
Description:
Bound book, dated 1983; contains compiled information about Quantum\'s background, management, customers, competition, financials, products, etc.
Accession: 062304082
Dimensions: 11.5 x 8 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2005-11-22 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304082.reference_guide.1983

Entered By: Sarah Wilson
December 12, 2005

Title: The only reason it's a story is the rest of the world isn't doing it - Quantum
Author:
Created: 1983
Publisher: Quantum
Donated By: Jim Patterson
Filename: doc-4341aad00c2a1.pdf (Size: 1.69 MB)
Pages: 14
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Quantum
Description:
Quantum company profile, 1983. Includes photos of the executives.
Accession: 062304038
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Quantum\source2304038.company_profile.1983

Entered By: Sarah Wilson
October 3, 2005

Title: Quantum Annual Report 1984
Author:
Created: 1984
Publisher: Quantum
Donated By: Art Geffen
Filename: doc-434c5aa17a071.pdf (Size: 3.70 MB)
Pages: 35
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: Quantum
Description:
Quantum Annual Report 1984. Statement of operating and financial results.
Accession: 062304043

Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304043.annual_report.1984

Entered By: Sarah Wilson
October 11, 2005
Related Events

Annual Report
Success!

Title: [Quantum Reference Guide 1984]
Author:
Created: 1984
Publisher: Quantum
Donated By:
Filename: doc-439e0cbb3a8d1.pdf (Size: 10.80 MB)
Pages: 84
Cataloguer: 2005-12-12 Sarah Wilson
Copyright: Quantum
Description:
Bound book, dated 1984; contains compiled information about Quantum's background, management, customers, competition, financials, products, etc.
Accession: 062304081
Dimensions: 11.5 x 8 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2005-11-29 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304081.reference_guide.1984

Entered By: Sarah Wilson
December 12, 2005

Title: ENCORE Award Honors Quantum's Leaps
Author:
Created: 1985
Publisher: Stanford Business School
Donated By: Jim Porter
Filename: doc-4341a82d7a071.pdf (Size: 507 KB)
Pages: 2
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Stanford Business School Magazine
Description:
Front cover and one page from the Summer 1985 issue of the Stanford Business School Magazine. The article describes the naming of Quantum as the Entrepreneurial Company of the Year by the Peninsula Chapter of the Stanford Business School Alumni Association

Quantum

Accession: 062304037
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
\Archive\projects\ITCHP\Quantum\source2304037.article_encore_award.1985

Entered By: Sarah Wilson
October 3, 2005
Related Events

Success!

Title: Quantum Annual Report 1985
Author:
Created: 1985
Publisher: Quantum
Donated By: Jim Patterson
Filename: doc-434c5e3a0e9b1.pdf (Size: 3.55 MB)
Pages: 34
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: Quantum
Description:
Quantum Annual Report 1985. Statement of operating and financial results.
Accession: 062304044
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304044.annual_report.1985

Entered By: Sarah Wilson
October 11, 2005
Related Events

Annual Report
Success!

Title: Quantum Corporate Values
Author:
Created: 1985-1990
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-434c55d50c29f.pdf (Size: 1.61 MB)
Pages: 18
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: Quantum
Description:
Color booklet, undated, describing Quantum's corporate values (similar to a company profile).

Quantum

Accession: 062304041
Dimensions: 8.5 x 5.5 in.
Color depth: 24 RGB
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304041.corporate_values.n.d
----
Entered By: Sarah Wilson
October 11, 2005
Related Events

A change at the helm
Early Days
Innovative Management
Quantum Integrity

Title: [Quantum Reference Guide 1985]
Author:
Created: 1985
Publisher: Quantum
Donated By:
Filename: doc-43a71f2dafbd5.pdf (Size: 3.77 MB)
Pages: 44
Cataloguer: 2005-12-19 Sarah Wilson
Copyright: Quantum
Description:
Bound book, dated 1985; contains compiled information about Quantum\'s background, management,
customers, competition, financials, products, etc.
Accession: 062304158
Dimensions: 11.5 x 8 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2005-12-14 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304158.reference_guide.1985

Entered By: Sarah Wilson
December 19, 2005

Title: Quantum Leaps-- But Not Too Quickly
Author: Nick Arnett
Created: February 18, 1985
Publisher: The Business Journal, San Jose
Donated By: Jim Patterson
Filename: doc-434c509e137d3.pdf (Size: 334 KB)
Pages: 1
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: The Business Journal, San Jose
Description:

Newspaper clipping, 1985, about how Quantum enjoyed growth while not doing business with IBM. Includes photo of Rolf Brauchler.
Accession: 062304051
Dimensions: 15 x 10.5 in.
Color depth: 8 grayscale
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 11, 2005

Title: Q200 Brochure
Author:
Created: April 1985 ca.
Publisher: Quantum Corp.
Donated By: Tom Gardner
Filename: doc-452b385f6e96e.pdf (Size: 1010 KB)
Pages: 4
Cataloguer:
Copyright:
Description:
This is a 1986 Quantum brochure on the Q200 family. As far as I know, this is the earliest example of what is today's converged drive structure, that is:
flat rotary actuator
straight arms
embedded servo
intelligent interface
This happens to be a 5.25" HH (the FH never was real), but it is representative of all of today's drive design.

Entered By: Ron Dennison
October 9, 2006

Title: Quantum Corporation: Engineering Objectives, Fiscal Year 1986
Author:
Created: April 11, 1985
Publisher: Quantum
Donated By: Art Geffen
Filename: doc-434c4f66863c1.pdf (Size: 819 KB)
Pages: 11
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: Quantum
Description:
Document which outlines the engineering objectives for FY 1986.
Accession: 062304050
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi

Quantum

\Archive\projects\ITCHP\Quantum\source2304050.engineering_objectives.1986

Entered By: Sarah Wilson
October 11, 2005

Title: Quantum Set To Introduce New Series Of Half-Height Drives
Author: Mary Brisson
Created: April 15, 1985
Publisher: Computer Systems News
Donated By: Tom Gardner
Filename: doc-452b370dba420.pdf (Size: 1.15 MB)
Pages: 2
Cataloguer:
Copyright:
Description:
As far as I know, this is the earliest example of what is today's converged drive structure, that is:
flat rotary actuator
straight arms
embedded servo
intelligent interface
This happens to be a 5.25" HH (the FH never was real), but it is representative of all of today's drive design.

Entered By: Ron Dennison
October 9, 2006
Related Events

5-1/4 inch

Title: [Quantum Saves Rock and Roll] Bill Graham's Computer Data Survives Fire
Author: John Eckhouse
Created: May 16, 1985
Publisher: San Francisco Chronicle
Donated By: Jim Porter
Filename: doc-434c4d2027052.pdf (Size: 297 KB)
Pages: 2
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: San Francisco Chronicle
Description:
Letter from Brook Byers to James Patterson congratulating him on the ruggedness of Quantum drives (as evidenced by enclosed photocopy of article about Bill Graham's computer data surviving a fire).
Accession: 062304049
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
\Archive\projects\ITCHP\Quantum\source2304049.article_rocknroll.1985

Entered By: Sarah Wilson
October 11, 2005

Quantum

Title: Hardcard may be disk drive firm's ace in the hole
Author: C.W. Miranker
Created: August 18, 1985
Publisher: San Francisco Examiner
Donated By: Jim Porter
Filename: doc-4341a0c8bbf1f.pdf (Size: 356 KB)
Pages: 1
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: San Francisco Examiner
Description:
Newspaper clipping, 1985, about the Hardcard, a hard-disk drive from Plus Development Corp. (a subsidiary of Quantum). Includes photo of Joel Harrison.
Accession: 062304034
Dimensions: 14 x 9 in.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 3, 2005

Title: How Some Succeed Despite Slump
Author: Jonathan Greer
Created: September 30, 1985
Publisher: San Jose Mercury News
Donated By: Jim Porter
Filename: doc-4341a52870430.pdf (Size: 570 KB)
Pages: 2
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: San Jose Mercury News
Description:
Newspaper clipping, 1985, about how Quantum survived changing market conditions. Includes photo of James Patterson and Joseph Rodgers.
Accession: 062304036
Dimensions: 16 x 11 in.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
\Archive\projects\ITCHP\Quantum\source2304036.article_how_some.1985

Entered By: Sarah Wilson
October 3, 2005
Related Events

Success!

Title: Quantum Confirms Winchester Delay
Author:
Created: October 28, 1985

Quantum

Publisher: Electronic News
Donated By: Tom Gardner
Filename: doc-4446b4c2d20f5.pdf (Size: 8 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Q200 series announced in April 1985 to be delayed until March 1986

Entered By: Tom Gardner
April 19, 2006
Related Stories

Q200 Series Intelligent Disk Drives

Title: Imitators are flooding Quantum's Hardcard market
Author: Jonathan Greer
Created: December 23, 1985
Publisher: San Jose Mercury News
Donated By: Jim Porter
Filename: doc-4341a24e70430.pdf (Size: 323 KB)
Pages: 1
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: San Jose Mercury News
Description:
Newspaper clipping, 1985, about competing versions of the Hardcard. Includes photo of Hank
Chesbrough and Stephen Berkley.
Accession: 062304035
Dimensions: 9 x 14 in.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 3, 2005

Title: Quantum Annual Report 1986
Author:
Created: 1986
Publisher: Quantum
Donated By: Art Geffen
Filename: doc-436f9b2bb49f1.pdf (Size: 3.43 MB)
Pages: 32
Cataloguer: 2005-11-07 Sarah Wilson
Copyright: Quantum
Description:
Quantum Annual Report 1986. Statement of operating and financial results.
Accession: 062304062
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2005-11-02 Sarah Wilson

Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304062.annual_report.1986

Entered By: Sarah Wilson
November 7, 2005
Related Events

Annual Report
Success!

Title: Peripherals
Author:
Created: 1986 ca.
Publisher:
Donated By:
Filename: doc-434c4a8183caf.pdf (Size: 169 KB)
Pages: 1
Cataloguer: 10/10/2005 Sarah Wilson
Copyright:
Description:
Photocopy of a chart (circa 1986) showing 30 companies and their profits.
Accession: 062304048
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 11, 2005

Title: James L. Patterson: The Drive to Succeed
Author: Frank Catalano
Created: April 1, 1986
Publisher: Electronic Business
Donated By: Jim Patterson
Filename: doc-434c3f4999c41.pdf (Size: 257 KB)
Pages: 1
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Electronic Business
Description:
Photocopy of 1986 article about James L. Patterson in a feature called "Excellent Executives."
Accession: 062304046
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff

Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 11, 2005

Title: High-Tech Industry Rates Top 10 Execs
Author:
Created: April 4, 1986
Publisher: USA Today
Donated By:
Filename: doc-434c49312be73.pdf (Size: 103 KB)
Pages: 1
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: USA Today
Description:
Photocopy of 1986 article wherein James L. Patterson is listed.
Accession: 062304047
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 11, 2005

Title: Quantum Releases 160 MB Hard Drive
Author:
Created: July 7, 1986
Publisher: Electronic News
Donated By: Tom Gardner
Filename: doc-4446b5443bdd9.pdf (Size: 9 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Q160 announced for production to begin in 4Q86. Production of Q250 and Q280 has just started ramping
----
Entered By: Tom Gardner
April 19, 2006
Related Stories

Q200 Series Intelligent Disk Drives

Title: Q200 Series Intelligent Disk Drives
Author:
Created: November 1986
Publisher: Quantum

Quantum

Donated By: Tom Gardner
Filename: doc-4446ba8d6570a.pdf (Size: 1010 KB)
Pages: 4
Cataloguer:
Copyright:
Description:
Product brochure for the Q200 Series of disk drives, consisiting of half height Q250 & Q280 and full height Q160 5.25 inch disk drives.

Entered By: Tom Gardner
April 19, 2006
Related Stories

Q200 Series Intelligent Disk Drives

Title: [Dave Brown's Photo Album, 1987-1995]
Author:
Created: 1987-1995
Publisher:
Donated By: Dave Brown
Filename: doc-434c286d5a4a1.pdf (Size: 15.73 MB)
Pages: 102
Cataloguer: 10/10/2005 Sarah Wilson
Copyright: Dave Brown
Description:
Photo album containing color photos of Quantum events and news articles about Quantum, 1987-1995.
Accession: 062304045
Dimensions: 11.5 x 10.5 in.
Color depth: 24 RGB
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304045.photo_album.1987-1995

Entered By: Sarah Wilson
October 11, 2005
Related Events

Bill Miller Succeeds Steve Berkley
Dave Brown's Photo Album Volume 2

Title: Quantum Annual Report 1987
Author:
Created: 1987
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-436fa1446dd1f.pdf (Size: 4.00 MB)
Pages: 33
Cataloguer: 2005-11-07 Sarah Wilson
Copyright: Quantum
Description:
Quantum Annual Report 1987. Statement of operating and financial results.

Quantum

Accession: 062304063
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2005-11-02 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304063.annual_report.1987

Entered By: Sarah Wilson
November 7, 2005
Related Events

Annual Report

Title: Quantum President/CEO Resigns
Author:
Created: May 11, 1987
Publisher: Electronic Buyers' News
Donated By: Jim Patterson
Filename: doc-4341793850863.pdf (Size: 356 KB)
Pages: 1
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Electronic Buyers' News
Description:
Photocopy of 1987 article about the resignation of Jim Patterson.
Accession: 062304029
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 3, 2005
Related Events

A change at the helm

Title: Quantum Discontinues Winchester
Author:
Created: June 20, 1987
Publisher: Electronic News
Donated By: Tom Gardner
Filename: doc-4446b5df5ff40.pdf (Size: 14 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Q160 discontinued less than 6 months after FCS. Q250 and Q280 to continue in production

----
Entered By: Tom Gardner
April 19, 2006
Related Stories

Q200 Series Intelligent Disk Drives

Title: Quantum Annual Report 1988
Author:
Created: 1988
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-436fac9892712.pdf (Size: 4.18 MB)
Pages: 31
Cataloguer: 2005-11-07 Sarah Wilson
Copyright: Quantum
Description:
Quantum Annual Report 1988. Statement of operating and financial results.
Accession: 062304064
Dimensions: 11 x 8.5 in.
Color depth: 24 RGB
Digitized: 2005-11-02 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304064.annual_report.1988

Entered By: Sarah Wilson
November 7, 2005
Related Events

Annual Report

Title: [Quantum Reference Guide 1989]
Author:
Created: 1989
Publisher: Quantum
Donated By:
Filename: doc-43a72ba168f01.pdf (Size: 4.30 MB)
Pages: 46
Cataloguer: 2005-12-19 Sarah Wilson
Copyright: Quantum
Description:
Bound book, dated 1989; contains compiled information about Quantum\'s background, management,
customers, competition, financials, products, etc.
Accession: 062304159
Dimensions: 11.5 x 8 in.
Color depth: 24 RGB, 8 grayscale
Digitized: 2005-12-14 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:

\\Archive\projects\ITCHP\Quantum\source\062304159.reference_guide.1989

Entered By: Sarah Wilson
December 19, 2005

Title: Steve Berkley: A Renaissance man who left forestry for wilds of technology
Author: Michael Krey
Created: November 1989
Publisher: San Jose Business Journal
Donated By: Jim Porter
Filename: doc-434194a6e0919.pdf (Size: 363 KB)
Pages: 1
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: San Jose Business Journal
Description:
Photocopy of 1989 article about Steve Berkley, Chairman and CEO of Quantum.
Accession: 062304030
Dimensions: 11 x 8.5 in.
Notes: Source quality is poor; some text is cut off.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source

Entered By: Sarah Wilson
October 3, 2005
Related Events

A change at the helm
Bill Miller Succeeds Steve Berkley

Title: Quantum Annual Report 1990
Author:
Created: 1990
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-436fc0eeecc61.pdf (Size: 5.87 MB)
Pages: 41
Cataloguer: 2005-11-07 Sarah Wilson
Copyright: Quantum
Description:
Quantum Annual Report 1990. Statement of operating and financial results.
Accession: 062304065
Dimensions: 11.5 x 8 in.
Color depth: 24 RGB
Digitized: 2005-11-02 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304065.annual_report.1990

Entered By: Sarah Wilson
November 7, 2005

Title: Quantum Annual Report 1992
Author:
Created: 1992
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-436fc2ceb49f6.pdf (Size: 4.20 MB)
Pages: 38
Cataloguer: 2005-11-07 Sarah Wilson
Copyright: Quantum
Description:
Quantum Annual Report 1990. Statement of operating and financial results.
Accession: 062304066
Dimensions: 11.5 x 8 in.
Color depth: 24 RGB
Digitized: 2005-11-02 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304066.annual_report.1992

Entered By: Sarah Wilson
November 7, 2005
Related Events

Annual Report
Bill Miller Succeeds Steve Berkley

Title: Quantum Corporation Promotes Michael Brown to Executive Vice President
Author:
Created: February 12, 1992
Publisher: Quantum
Donated By: Jim Porter
Filename: doc-43419abd4e15a.pdf (Size: 439 KB)
Pages: 2
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Quantum
Description:
Photocopy of 1992 News Release about the promotion of Michael A. Brown to Executive Vice President
of Quantum.
Accession: 062304032
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Quantum\source2304032.newsrelease_brown-evp.1992

Entered By: Sarah Wilson
October 3, 2005
Related Events

Bill Miller Succeeds Steve Berkley

Title: Quantum Corporation Names William J. Miller Chief Executive Officer
Author:
Created: March 11, 1992
Publisher: Quantum
Donated By: Jim Porter
Filename: doc-434199147ee9c.pdf (Size: 318 KB)
Pages: 2
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Quantum
Description:
Photocopy of 1992 News Release about William J. Miller replacing Stephen M. Berkley as CEO of Quantum.
Accession: 062304031
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source2304031.newsrelease_miller-ceo.1992

Entered By: Sarah Wilson
October 3, 2005

Title: [Three Aerial Photographs]
Author:
Created: December 1992
Publisher:
Donated By: Dave Brown
Filename: doc-434c53044ba41.pdf (Size: 391 KB)
Pages: 3
Cataloguer: 10/03/2005 Sarah Wilson
Copyright:
Description:
Three color photographs showing aerial views [of Quantum]; "Dec. 1992" is written on the back of all three.
Accession: 062304052
Dimensions: 8 x 10 in.
Color depth: 24 RGB
Digitized: 10/05/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source2304052.aerial_photos.1992

Entered By: Sarah Wilson

October 11, 2005
Related Events

New Facilities!

Title: Bill Miller: An Interview with Eric Nee
Author:
Created: November 1993
Publisher: Upside
Donated By: Jim Porter
Filename: doc-43419ce94e15c.pdf (Size: 1.79 MB)
Pages: 7
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Upside
Description:
Photocopy of 1993 interview of William J. Miller, CEO of Quantum. The interview was conducted by Eric Nee, editor-in-chief at Upside [magazine].
Accession: 062304033
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source2304033.article_bill_miller.1993

Entered By: Sarah Wilson
October 3, 2005
Related Events

Bill Miller Succeeds Steve Berkley

Title: Quantum Annual Operating Plan
Author:
Created: March 31, 1994
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-436f9588333a1.pdf (Size: 3.31 MB)
Pages: 48
Cataloguer: 2005-11-07 Sarah Wilson
Copyright: Quantum
Description:
Booklet; Annual Operating Plan, Year Ending March 31, 1994. "This report summarizes Quantum's operating results of FY 93 and projected financial performance in FY 94."
Accession: 062304061
Dimensions: 11 x 8.5 in.
Color depth: 8 grayscale, 1 bitonal
Digitized: 2005-11-02 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\\Archive\projects\ITCHP\Quantum\source\062304061.operating_plan.1994

Entered By: Sarah Wilson
November 7, 2005

Title: Off The Disk - Quantum Corporation
Author:
Created: February 1995
Publisher: Quantum
Donated By: Dave Brown
Filename: doc-4341ae6902667.pdf (Size: 4.80 MB)
Pages: 14
Cataloguer: 10/03/2005 Sarah Wilson
Copyright: Quantum
Description:
February 1995 Volume 5 Number 9. Color glossy newsletter; includes special 15th anniversary section.
Accession: 062304039
Dimensions: 17 x 11 in.
Color depth: 24 RGB
Digitized: 09/28/2005 Sarah Wilson
Device: Epson Expression 10000 XL
Format: text/tiff
Resolution: 300 ppi
Scan location:
\Archive\projects\ITCHP\Quantum\source2304039.off_the_disk.1985

Entered By: Sarah Wilson
October 3, 2005

Title: Plus HardCard 40 Picture
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3f2d22e3b1.jpg (Size: 278 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Plus HardCard 40 Picture

Entered By: Ron Dennison
February 3, 2006

Title: Q2000
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3f01004ba4.jpg (Size: 789 KB)
Pages: 1
Cataloguer:
Copyright:
Description:

Quantum

Q2000

Entered By: Ron Dennison
February 3, 2006
Related Events

Q2000 Pictures

Title: Q2000 Detail
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3ee086b442.jpg (Size: 758 KB)
Pages:
Cataloguer:
Copyright:
Description:
Q2000 Detail

Entered By: Ron Dennison
February 3, 2006
Related Events
-- -----
Q2000 Pictures

Title: Q2000 w/o Board
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3ef7e1d243.jpg (Size: 577 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Q2000 w/o Board

Entered By: Ron Dennison
February 3, 2006
Related Events

Q2000 Pictures

Title: Q540 Picture
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3f0fdd920f.jpg (Size: 481 KB)
Pages: 1
Cataloguer:
Copyright:

Quantum

Description:
Q540 Picture

Entered By: Ron Dennison
February 3, 2006

Title: Q540 Picture - Bottom View
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3f16179ea2.jpg (Size: 409 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Q540 Picture - Bottom View

Entered By: Ron Dennison
February 3, 2006
Related Documents

Q540 Picture - Cover Removed
Related Events

Q540 Pictures

Title: Q540 Picture - Cover Removed
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3f1f349161.jpg (Size: 513 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Q540 Picture - Cover Removed

Entered By: Ron Dennison
February 3, 2006
Related Events

Q540 Pictures

Title: Q540 Picture - Cover Removed Opposite View
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3f261c0b73.jpg (Size: 421 KB)
Pages: 1
Cataloguer:

Copyright:
Description:
Q540 Picture - Cover Removed Opposite View

Entered By: Ron Dennison
February 3, 2006
Related Events

Q540 Pictures

Title: Quantum Values Plaque
Author: Ron Dennison
Created: February 3, 2006
Publisher:
Donated By: Ron Dennison
Filename: doc-43e3ea92554b3.jpg (Size: 450 KB)
Pages: 1
Cataloguer:
Copyright:
Description:
Photo of Quantum Values Plaque from Jim Patterson

Entered By: Ron Dennison
February 3, 2006
Related Events

Early Days

References

There are no references for this company in the collection

Discussions

There are no discussions for this company in the collection

Seagate

Company Details

Name: Seagate
Sector: Data Storage Sector

Description

Seagate is the worldwide leader in the design, manufacture and marketing of hard disc drives, providing products for a wide-range of applications, including Enterprise, Desktop, Mobile Computing, Consumer Electronics and Branded Solutions. Seagate's business model leverages technology leadership and world-class manufacturing to deliver industry-leading innovation and quality to its global customers, and to be the low cost producer in all markets in which it participates. The company is committed to providing award-winning products, customer support and reliability to meet the world's growing demand for information storage. Seagate can be found around the globe and at www.seagate.com.

Facilitators

Statistics

Contributors (2), Events (38), Stories (2), Documents (0), References (0), Discussions (0 threads, 0 posts)

Entered By: Luanne Johnson
April 11, 2005

Contributors

Contributor Woody Monroy
Date Joined October 1995
Job Description

Oversee worldwide Corporate Communications, including product, business and technology PR

Statistics

Stories (2)

Date Entered April 12, 2005

Contributor David Szabados
Date Joined December 2000
Job Description

Senior Public Relations Manager for enterprise and future storage technologies. Analyst and media relations.

Accomplishments

Launched various enterprise-class drives including the first 15K RPM Cheetah known as the "Cheetah X15" drive, as well as the Savvio 2.5-inch enterprise models. Involved with promotion of Ultra320 and SAS technologies. Promoted future technologies such as HAMR, Probe. Involved with areal density demonstrations from 100 Gb/in2 to 421 Gb/in2.

Date Entered February 9, 2007

Timeline

1979

Milestones
Founding (1979)

Seagate founded as disc drive manufacturer

1980

Milestones
First drive (1980)

Seagate builds industry\'s first 5.25–inch hard drive

1989

Milestones
Imprimis acquisition (1989)

Seagate acquires Imprimis Technology – High Capacity Drives and Components

1992

Milestones
First 7200 RPM disc drive (November 1992)
Seagate introduces the first 7,200 RPM disc drive
2.5-inch drives (November 1992)

Seagate first–to–market with shock–sensing technology for 2.5–inch disc drives

1993

Milestones
50 million drives (May 1993)

Seagate ships 50 millionth disc drive

1996

Milestones
Conner merger (February 1996)

Seagate and Conner Peripherals merge to form the world\'s largest independent storage device manufacturer
First 10,000 RPM drive (October 1996)

Seagate introduces the first 10,000 RPM drive – Cheetah family

1997

Milestones
First 7200 RPM Ultra ATA drive (October 1997)

Seagate introduces first 7,200 RPM, Ultra ATA drive for desktop computers

First fibre channel drive (October 1997)

Company introduces world\'s first fibre channel interface disc drive

1998

Milestones

1 billion recording heads (March 1998)

Seagate produces one billionth magnetic recording head
Seagate Research established (August 1998)
August 1998
Seagate Research is established in Pittsburgh, PA – USA

1999

Milestones

250 millionth drive (April 1999)
April 1999
Seagate ships its 250 millionth disc drive

2000

Milestones

Consumer Electronics (2000)
January 2000
DISHPlayer 500 integrates Seagate disc drives – Seagate is world\'s leading digital
video recorder and Consumer Electronics storage provider
First 15,000 RPM drive (February 2000)
February 2000
Seagate introduces world\'s first 15,000 RPM disc drive – Cheetah X15

2001

Milestones

2nd generation 15,000 RPM drive (March 2001)
March 2001
Second–generation Cheetah X15 introduced – one year ahead of the competition
Voted Top Hard Drive company (August 2001)
August 2001
VARBusiness Magazine names Seagate Top Hard Drive Vendor in reader poll
Xbox ships with Seagate drives (October 2001)
October 2001
Microsoft Xbox ships with Seagate disc drives

2002

Milestones

3rd generation 15,000 RPM drive (May 2002)
May 2002
Seagate announces Cheetah 15K.3 - its third generation 15,000 RPM drive one
year ahead of the competition
HAMR technology unveiled (August 2002)
August 2002

Seagate successfully demos HAMR technology - HAMR aims to increase areal density by more than 100 times

First SATA drive (November 2002)

November 2002

Seagate delivers industry\'s first Serial ATA disc drive -- the Barracuda ATA V

STX IPO (2002)

December 2002

Seagate re-enters the public market (NYSE: STX)

2003

Milestones

Enters 2.5-inch notebook drive market (June 2003)

June 2003

Seagate enters notebook market with Momentus 2.5-inch disc drive

Voted #1 in Innovation and Enterprise drives (August 2003)

August 2003

VARBusiness magazine names Seagate #1 in Innovation and Enterprise disc drives

Named Best Disc Drive Company (October 2003)

October 2003

Seagate recognized by Sun as 2003\'s Best Disc Drive company

2004

Milestones

First 2.5-inch Enterprise drive (February 2004)

February 2004

Seagate announces Savvio, the industry\'s first 2.5-inch enterprise disc drive

One dozen new products taret 97% of disc drive market (June 2004)

June 2004

Seagate launches 12 new products -- an unprecedented array of disc drives to target a wide range of applications like MP3 players, DVR, consumer electronics, notebook computers, PCs, servers and corporate data centers.

CTO named Top Technology Innovator (2004)

December 2004

Seagate CTO Mark Kryder honored as Top Technology Innovator by VARBusiness Magazine

2005

Milestones

Named Best Hard Drive by PC World (February 2005)

February 2005

PC World names Seagate Barracuda 7200 Best Hard Drive

10 million 15,000 RPM drives shipped (March 2005)

March 2005

Seagate ships 10 millionth 15K RPM disc drive

Women in the Workplace (May 2005)

May 2005

Seagate honored for advancement of women in the workplace

US Congress Recognizes Seagate Engineer (June 2005)

June 2005

U.S. Congress Recognizes Seagate Engineer for Advancing Society, Culture and

Commerce
10 groundbreaking products and industry firsts (June 2005)
June 2005
Seagate does it again…drives innovation with 10 new, groundbreaking hard disc drives: First perpendicular recording 2,5-inch drive, and first drive with Full Disc Encryption data security.
Ships record 27.3 million drives in one quarter (July 2005)
July 2005
Seagate ships quarterly record 27.3 million hard disc drives
Named Company of the Year and Best Product Innovation (August 2005)
August 2005
Seagate wins "Company of the Year" and "Best Product Innovation" ARC Awards from VarBusiness Magazine
Seagate acquires Mirra Inc. (September 2005)
September 2005
Seagate acquires Mirra Inc
TV with Seagate hard drive built-in (October 2005)
October 2005
New LG High Definition Plasma TV Has Built-In Seagate Hard Drive

2007

Milestones

Milestones (June 22, 2007)
May 2006
Seagate acquires Maxtor Corporation

April 2006
Introduces world's first 750GB disc drive

February 2006
Introduces world's first 12GB 1-inch disc drive

January 2006
Named Forbes Magazine 2006 Company of the Year

October 2005
New LG High Definition Plasma TV Has Built-In Seagate Hard Drive

September 2005
Seagate acquires Mirra Inc

August 2005
Seagate wins "Company of the Year" and "Best Product Innovation" ARC Awards from VarBusiness Magazine

July 2005
Seagate ships quarterly record 27.3 million hard disc drives

June 2005
Seagate does it again…drives innovation with 10 new, groundbreaking hard disc drives: First perpendicular recording 2,5-inch drive, and first drive with Full Disc

Encryption data security

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February 2004
Seagate announces Savvio, the industry's first 2.5-inch enterprise disc drive

October 2003
Seagate recognized by Sun as 2003's Best Disc Drive company

September 2003
Seagate announces highest areal density at 100GB per platter

August 2003
VARBusiness magazine names Seagate #1 in Innovation and Enterprise disc drives

June 2003
Seagate enters notebook market with Momentus 2.5-inch disc drive

January 2003
Seagate ships record 18.3 million disc drives in quarter ended December 2002

December 2002
Seagate re-enters the public market (NYSE: STX)

November 2002
Seagate delivers industry's first Serial ATA disc drive -- the Barracuda ATA V

November 2002
Seagate demonstrates perpendicular recording areal density of 100 gigabits per square inch

Seagate

August 2002
Seagate successfully demos HAMR technology - HAMR aims to increase areal density by more than 100 times

May 2002
Seagate announces Cheetah 15K.3 - its third generation 15,000 RPM drive one year ahead of the competition

October 2001
Microsoft Xbox ships with Seagate disc drives

August 2001
VARBusiness Magazine names Seagate Top Hard Drive Vendor in reader poll

March 2001
Second–generation Cheetah X15 introduced – one year ahead of the competition

November 2000
Seagate introduces the world's highest capacity disc drive – Barracuda 180 Gbyte

February 2000
Seagate introduces world's first 15,000 RPM disc drive – Cheetah X15

January 2000
DISHPlayer 500 integrates Seagate disc drives – Seagate is world's largest digital video recorder and Consumer data storage provider

April 1999
Seagate ships its 250 millionth disc drive

August 1998
Seagate Research is established in Pittsburgh, PA –USA

March 1998
Seagate produces one billionth magnetic recording heads

October 1997
Company introduces world's first fibre channel interface disc drive

October 1997
Seagate introduces first 7,200 RPM, Ultra ATA drive for desktop computers

October 1996
Seagate introduces the first 10,000 RPM drive – Cheetah family

February 1996
Seagate and Conner Peripherals merge to form the world's largest independent storage device manufacturer

May 1993
Seagate ships 50 millionth disc drive

November 1992

Seagate

Seagate first–to–market with shock–sensing technology for 2.5–inch disc drives

November 1992
Seagate introduces the first 7,200 RPM disc drive

1989
Seagate acquires Imprimis Technology – High Capacity Drives and Components

1980
Seagate builds industry's first 5.25–inch hard drive

1979
Seagate founded as disc drive manufacturer

Stories

Title: The Innovator's Solution
Author: George Anders
Created: June 1, 2002
Cataloguer:
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Story:
The Innovator's Solution
by George Anders

Seagate Technology, one of the oldest firms in the disk-drive industry, has developed a set of five operating principles that allows it to out-innovate even the most nimble young competitor. The result: an innovator that poses a dilemma for its rivals.

from Fast Company magazine issue 59, page 132

Can you identify this quote? "The history of the disk-drive industry shows that the established firms ... have well-developed systems for killing ideas that their customers don't want. As a result, these companies find it ... difficult to invest adequate resources in disruptive technologies -- lower-margin opportunities that their customers don't want -- until their customers want them. And by then it is too late."

This passage comes from the opening paragraphs of The Innovator's Dilemma, a 1997 book by Harvard Business School professor Clayton M. Christensen that has become a modern-management classic. Whether you make cars or cornflakes, you've almost certainly been exposed to Christensen's central argument: Well-run industry leaders are constantly at risk of being outdone by innovative newcomers.

But in the disk-drive industry, which prompted Christensen's research, a lot has changed recently. Far from finding itself surpassed by creative challengers, Seagate Technology, the leading disk-drive manufacturer of the 1980s, has recovered from setbacks in a big way. It has reestablished itself as the industry leader; it's beating smaller, supposedly more nimble rivals in getting new drives to market. By the end of the fourth quarter of 2001, Seagate's profit margins had climbed tenfold from the depressed levels of the previous year, while shipments surged to a record 14.6 million drives.

Most striking, Seagate has seen much of its growth from smaller, cheaper drives that are going into the likes of Microsoft's Xbox, the heavily promoted new video-game console. And, at least according to Christensen's theory, that's not supposed to happen. To crack such markets, Seagate has had to get rid of many of the high-performance features that help it sell to big-time computer makers such as Dell, Compaq,

and Hewlett-Packard. It needed (at least briefly) to stop listening to its best customers so that it could instead pay attention to raw new markets.

So how does Seagate create innovation now? And what can companies that are competing in less frantic industries learn about serious innovation from the leading innovator in disk drives?

Seagate's answers began with a new management team that took charge in 1998, after company founder Alan Shugart departed. New CEO Stephen J. Luczo came from an investment-banking background. Luczo's president and COO at Seagate, Bill Watkins, had worked for several rival drive makers. They agreed that Seagate had become too insular, too slow, and too departmentalized. As Luczo explains, "If you want to change results, first you need to create a new culture." Here are five crucial ways that Seagate's CEO and his leadership team have infused this Scotts Valley, California company with a fresh approach to the future.

Get new ideas from your customers' customers. Seagate traditionally gathered the majority of its market intelligence from its top-20 corporate customers, which included nearly all of the leaders in the personal-computer or server markets. That's good, but it isn't good enough, says Brian Dexheimer, Seagate's executive vice president for worldwide sales, marketing, and customer service.

"As much as I admire our top clients, if I'm not doing anything but listening to their opinions, I'm going to be led down the primrose path," Dexheimer says. "We have to get past their horizons and understand their consumers' preferences so well that we'll never be surprised by a sudden turn in the market. Take something like the potential for usage characteristics of MP3 players. Our traditional desktop customers aren't going to be able to tell us a whole lot about that. We'd be better off gathering a dozen 19-year-olds at a college campus and asking them, 'What would you do with this sort of device?'"

The end-user intelligence that comes back can be a lot hazier and harder to sort out than a nice two-hour PowerPoint presentation by an existing big account, Dexheimer says. But he doesn't mind. "We go into these exercises figuring that 90% of what comes back won't have anything to do with the type of devices we build," he says. "But there will always be that 10% that means the difference between success and failure."

Consequently, outreach programs are flourishing at Seagate. The company typically looks for free-spirited engineers and salespeople and pairs them in two-person teams to gather consumer intelligence. In the old days, such scouting might have been done entirely by sales or marketing specialists. Adding engineers makes each outing more productive, Dexheimer says. "This way we're thinking right from the start about what would be involved in making a new product."

Force your research team to think five years ahead. At many big companies, it's all too easy to let research initiatives fall into one of two categories: safe bets -- incremental improvements that could help the next product cycle -- or long shots for the distant future, with no clear path out of the lab or even a timeline for completion. And hardly anything happens between those two extremes.

Seagate's research chief, Mark Kryder, forces many of his 160 researchers to focus on the harder but more valuable middle zone, the kind of ideas that could lead to remarkable breakthroughs many product cycles down the road. When he took office in 1998, Kryder ordered his researchers to devise ways that Seagate could manufacture disk drives capable of storing 100 gigabits of information per square inch. Their research resulted in a 30-fold improvement over the best drives on the market at the time.

Do something like that, Kryder says, "and it's impossible for researchers to simply squeeze more efficiency out of ideas that have been around for years. If we're really going to add value in research, we need to take a fresh look at basic technologies and materials and see if we can find the next big ideas."

Kryder feels that his approach works better, and he points to stunning success from his 1998 initiative to make his case. The 100-gigabits-per-square-inch aerial density drive is going into production within the

next 12 to 18 months -- far ahead of the competition. Some of the challenges that looked daunting in early 1998 turned out to be easier to solve than expected, once scientists and engineers got cracking.

Now Kryder has given his researchers a new challenge: Produce drives with a density of one terabit (or one trillion bits) of information per inch.

If you really want to be fast, fix your supply chain. Five years ago, Seagate president Bill Watkins walked into a meeting and pulled apart the company's two leading models. "I said, 'Out of 200 components in these systems, we've got only 3 that are the same. We've got different screws holding the same things together, for goodness sake! If I had told you to make them as different as possible, I bet you would have used more parts in common, just to piss me off.'"

That sort of absurd overspecialization was jacking up Seagate's manufacturing costs and making it difficult to achieve economies of scale. Even worse, every new-product rollout was a one-of-a-kind adventure that was prone to delays and manufacturing bottlenecks. As a result, Seagate was becoming known as a "fast follower" rather than a true innovator.

Watkins insisted that Seagate develop basic manufacturing platforms that could allow the company to make a variety of disk drives within a single plant without having to retool the entire production line. He also courted the company's key suppliers. Instead of squeezing them for the deepest discounts, Watkins created incentive contracts that let suppliers earn more if they could help Seagate get to market faster with drives that surpassed what its competitors were able to do.

Although fixing the supply chain may be unglamorous, it saves crucial weeks or even months in getting new products to market, says Luczo. That time savings is vital in an industry where it can take one and a half years to develop a new product -- a product that can then be sold profitably for only six to nine months before new breakthroughs and price cuts doom it to obsolescence.

"I think of this industry as an extreme sport," Luczo says. "We've got the fastest product cycles, the shortest selling seasons, and the most-relentless price cuts. First to market matters tremendously. But first to volume matters even more. Once you start production, you'd better be able to ramp up your volume from 100,000 a week to 1 million a week in almost no time. Otherwise, you're foregoing sales that you'll never get back."

Seagate's overhaul of its supply chain paid off richly last summer, as it raced to bring the Barracuda IV drive to market. The device was meant to be a mainstay of high-end PCs -- a market that Seagate once dominated but had largely lost in the late 1990s. But in late-stage developmental work, the company realized that a crucial part of the disk was overheating, causing errors when the disk drive tried to write data. The best hope of fixing it involved encasing the key part of the drive in a more heat-diffusing material that Seagate hadn't used before.

"We spent more than $1 million to help our supplier fabricate that material in high enough volume," Barracuda IV project leader Emil Yappert recalls. "But we cut the amount of time needed to get that part by one-third. In the old days, it would have taken us eight weeks. We got it done in five weeks. On a project like this one, each day that we save -- or lose -- means about $500,000 to the bottom line. So it's worth it."

Constantly build teams that can cut across old lines of command. Are you in sales? Research? Manufacturing? Development? At Seagate, if you're smart, you view your job more broadly than any of those classic categories. Engineers get on the road and meet with customers. Plant managers come into the R&D centers and discuss the best ways to build new disk drives. Expertise becomes something to share rather than something to hoard.

To hammer home this message, Luczo takes dozens of senior Seagate executives on an annual multiday retreat, where they must form five-person teams and climb ropes, ride mountain bikes, and face other challenges. The twist: The members are judged by the performances of their entire team. The result: Stars

learn that their personal success doesn't count for much. The only way the team can do well is if everyone helps the person who's having the hardest time.

Those lessons become invaluable when Seagate is racing to get a new disk drive into production. "If something is going wrong," Luczo says, "we want to bring in everyone who can help. The worst thing that can happen is for someone to hide a minor problem until it becomes a major one." Intense teamwork can also help Seagate make the most of its successes. Well before the Barracuda IV was ready for manufacturing, the company flew several of its top Asian-plant managers to Colorado to sit in on weeks of development meetings and to see how the new drive was taking shape. Managers were encouraged to question anything that looked odd or inefficient, so that when the final design was locked in, it would be one that their factories could produce with total efficiency.

"You could see the old silo mentality starting to break down," explains Rob Pait, a member of the Barracuda IV launch team. "Problems were resolved in days instead of weeks. It was a real interdisciplinary effort." And when Seagate did begin production, its factories were able to escalate from careful test runs of 10,000 drives a week to full-bore production of 1 million drives a week in record time.

Set some prices lower, so new markets can grow. In its long-established markets, Seagate can charge anywhere from $50 to $500 per drive without alarming anyone. Its machines typically account for 8% to 13% of the cost of a desktop computer or server, which are often priced in the thousands of dollars.

"But consumer devices only get interesting if the whole device costs less than $499," says Dexheimer. "They only get really interesting below $199. And they begin to get phenomenally interesting when they start at $99."

The upshot: If Seagate wants to take those new markets by storm, it needs to be comfortable selling much different drives at much lower prices. Typically, technology leaders can't stomach such low-end projects. Their internal culture points them toward developing sophisticated -- and costlier -- products that cater to their best customers. But Seagate has detached some of its leading mavericks to pursue cheap mass markets -- ones that don't look anything like the enterprise-computing business.

"There are all kinds of ways that disk drives could become important parts of handheld devices," Dexheimer explains. "Right now, there are at least six distinct markets. Several of them have significant potential. And we want to play there."

For the Xbox game console, Seagate proved that it could meet price points and manufacture a much smaller disk drive with just one-tenth of the storage of its high-end computer drives. (Game consoles don't require as much storage.) Seagate officials won't talk in detail about their profit margins on mass-market projects like the Xbox. But Dexheimer suggests that Seagate is comfortable pursuing less profit now in hopes of bigger gains later.

"This is a young and very promising market," he explains. "You could see our whole industry selling 200 million drives a quarter -- up from 50 million today -- if we really penetrate the home consumer market. And down the road, we might see customers wanting more-powerful drives to download new versions of games from the Internet. When a market has that kind of potential, you want to make sure you're helping it grow."

At Harvard Business School, Professor Christensen is watching his old favorite industry's most recent transformation with considerable interest. "The fundamental elements of The Innovator's Dilemma are always at work within all companies," he says. "It's like the laws of gravity. But in the same way that airplanes can fly, companies can sometimes overcome some of these pressures. If Seagate is figuring out how to sell smaller, cheaper, and simpler drives to a big new class of customers, it has a high probability of success."

Or, as several Seagate executives put it, "Around here, the mantra is, 'Stand still, and you die.' "

Seagate

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Title: Al Shugart – Career Overview Speech
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Al Shugart co-founded Seagate Technology in 1979, and his tenure as head of the disc drive giant cemented his status as a legend of the technology industry.

Al gave this speech to a group of Seagate employees prior to his departure from the company in 1998:

I came into the computer industry quite by accident. I graduated from the University of Redlands in 1951 after four years and four different majors, and took a job with IBM in Santa Monica, California as a customer engineer (that's field engineer nowadays) because I could start the day after graduation. The pay was good, too: $275 per month. I was 20 years old, married, one kid, and dead broke.

After having fixed all the troubles one could have with punch card accounting machines, in 1955, about when Scott McNealy was born, I transferred to a small IBM R&D lab in downtown San Jose, California.

I won't ever forget the day that Don Johnson, one of the pioneers in disc development, invited me over to see how he created his discs. He was rotating this giant 24-inch platter. Then he poured a solution of iron oxide on the disc from a Dixie Cup. No clean room, equipment so crude that we rotated the disc with a foot peddle. And that dixie cup didn't look out of place at all.

I certainly had no idea I was walking into the beginning of a technology and product development program that would have such a profound impact upon the computer industry.

The First Disc Drive
Using the accepted "big blue" approach, we made our disc drive big. Using these crude techniques, we produced a disc that supported a recording density of 2000 bits per square inch with 100 bits per inch and 20 tracks per inch. We stacked fifty of the 24-inch discs on a vertical shaft, and had a disc file that would store five million characters. And it weighed only One Ton! Average access time was a screaming 1-and a half seconds, and we spun the disc at 1200 rpm. No fire code, no ECC, no address marks, no flags for spare tracks. It should have made the controller easy, but it didn't. We didn't even know how to clock data without a clock track. Oh, by the way, the electronics were all in vacuum tubes. No volumes of semiconductors to choose from.

Who Could Use This Much Storage
Now that we had this big drive, we had a bigger marketing concern. Who could ever use this much storage? Five million characters was a lot. Notice that I said characters. This was long before the days of the 8-bit byte. A character was six data bits and one parity bit. Dark Ages!

RAMAC
Our magnetic head technology was equally crude. Although we had learned a lot from drum recording technology, the disc presented its own set of problems. To create an air bearing to separate the head from the disc, we routed compressed air through tiny orifices in the head carrier. We used this same air supply

to load the head. Unfortunately, this required a big supply of external air. In fact, the thing required so much air that we could use a total of only two heads to serve the one hundred disc surfaces.

To reach another disc, the two heads were unloaded, removed horizontally from the disc stack, then moved vertically to the desired disc, then horizontally again to the desired track, then loaded. This was a lot of mass, moving pretty fast, and the file really rocked in its shock mounts during accessing.

Actually, it worked pretty well. After all, users thought in terms of seconds per function, not milliseconds and nanoseconds. And we gave the user five million characters of storage for a rental cost of about $750 per month. Of course, this didn't include the controller or the air compressor you needed to supply all that external air.

I believe that IBM built about 5000 of these files. Most of them were used in a system called RAMAC or Random Access Method of Accounting.

A Better Air Bearing
During these early production years of the RAMAC file, we were looking for a better air bearing. Then sometime during the late fifties, a set of articles in the IBM Journal of Research & Development discussed a very old principle -- the self acting air bearing or slider. These articles became the bible for anyone interested in disc files.

The self acting air bearing did not require an external air supply. This meant we could place a magnetic head on each disc surface.

IBM Advanced Disc File
What a breakthrough. IBM introduced another 24-inch diameter disc file called the ADF, or Advanced Disc File. Although it was about the same size as our first RAMAC, it stored ten times as much data -- 50 million bytes. And by eliminating head movement between discs, we cut the average access time to 165 milliseconds. Recording density was also improved by a factor of 20 -- 25,000 bits per square inch with 500 bits per inch at a track density of 50 tracks per inch.

The Journal articles, our bible, were read by many people, and it wasn't long before IBM had some competition. Two early competitors that I remember were Telex and Bryant.

I do have to credit IBM management. They backed the disc as the random access technology of the future. In fact, they bet all their marbles on the new disc files. On the other hand, Univac chose the magnetic drum rather than the disc. It wasn't the only bad decision by Univac, but it ranks right up there with the worst.

Disc Pack/Standard 14-inch disc
In the early sixties, as IBM's first disc file with slider bearing heads went into production, we came up with another breakthrough. This was the removable disc pack. And for the first time, we see the disc size that was to become the standard -- a 14-inch diameter disc.
It began with a pack holding about 3 million bytes, then the real standard, a disc pack that carried 7.5 million bytes.

Capacities Grew
Capacities continued to grow. The next pack held 29 million bytes. The recording density was now 220,000 bits per square inch or almost 100 times greater density than the first RAMAC file. This same general technology carried through to IBM's first track following servo, with an aerial recording density of 1.5 million bits per square inch.

Technology Limits/The Winchester
It's at this point that removable discs began hitting some technology limits. The height of the air bearing and the possibility of contamination were tough barriers for removable disc packs to overcome. The infamous head crash became an ever present danger. This led to the development of the first hermetically sealed disc drive -- IBM's Winchester.

Winchester technology featured low mass, lightly loaded heads, starting and stopping in contact with the disc.

More Improvements Needed/Fixed Discs
But improvements were still necessary. The disc packs, now sealed in a data module, were still removable and still expensive, so discs became fixed to further increase the recording density. Linear bit density was increased to 6425 bits per inch, and an incredible aerial density of over 3 million bits per square inch was achieved. This was followed by an aerial recording density of 7.8 million bits per square inch.

Compare this with the 2000 bits per square inch of the first RAMAC file. Density had improved by 3900 times.

And Then There Was The Floppy
As we reminisce about old times, we shouldn't forget about a critical parallel development in data storage -- the humble but ubiquitous floppy.

The floppy disc was actually the result of advances in semiconductor technology. Here's why:

In the early sixties with the introduction of the IBM 360, control memory was employed to a great extent in both CPU's and peripheral controllers. This control storage was implemented in read only memory, because magnetic core and semiconductor memory were much too expensive.

However, by the time the IBM 370 was developed, semiconductor technology had advanced. Now, control storage could be implemented in semiconductor memory. Since this memory was volatile, a loading device was necessary. Magnetic tape was considered but the need for loading diagnostics as well as the control program seriously detracted from the desirability of this approach. Why not a cheap disc that would provide the random access speed needed for diagnostic loading?

With such a low cost disc, you would have an economical, random access, program loading device. And once such a device was available, why not add a write capability for logging?

So semiconductor technology and the big IBM 370 set the stage for the floppy, the data storage that in turn, helped to launch the small systems revolution.

Many of us saw the great potential of this little disc. That's why I formed my first company, Shugart Associates, in 1973.

On To Seagate
I was lucky to have played a role in the early days of floppies at Shugart Associates, and it led to a much more long-lived role at Seagate starting several years later.

The start of Seagate is sort of interesting, so I'd like to tell you about it.

In late September, 1979, the desktop computer market was going bananas. Millions of units were being shipped annually and most of them had a small auxiliary memory device called a minifloppy disc drive. These minifloppies were a reduced size version of the original floppy disc drive introduced in volume about 5 years early by Shugart Associates.

I had been working around computers and disc drive memories for over 25 years, and had discovered one fundamental that transcends computer systems of any size; and that is: A computer system's appetite for memory is insatiable.

And that was and is true for even very small computers. As more and more applications were put on these systems, the memory requirements grew. And in late 1979, these additional memory requirements were being met by adding a second and third and fourth minifloppy disc drive.

And Then Came Finis

Finis Conner, who joined me as a founder of Shugart Associates, came to me in late September of 1979 with the idea to build a fixed, rigid disc drive the same physical size as the minifloppy, with higher performance and higher reliability, and with 15 times the storage capacity at 3 times the cost. He said that if this were possible, he could sell to every desktop computer manufacturer that was shipping systems with more than one minifloppy; that is, our device would fill the memory need for more than one minifloppy.

I thought this was possible so we decided to go into business. On October 1, 1979, Finis and I hacked out an 8 page business plan that predicated our nearly taking over the world, and very quickly -- it was a very, very aggressive plan. It had to be. Finis and I had both run out of money and our personal habits needed recapitalizing.

The Search For Venture Capital

Each of us kicked in $10,000 and hit the road with our plan. We found a mechanical engineer, an electrical engineer, and an operations manager very quickly. It seems get-rich-quick schemes are easy to sell to poor people. We decided to let my daughter, Terry, who was in college, keep the books until we could afford a financial officer, since she worked cheap.

Finding the money to finance the venture wasn't quite that easy. We reasoned that our idea was worth $2 million dollars, and that we would sell 25% of our plan for $500,000.

Page Mill Group

Our first stop was the Page Mill Group, a venture capital firm made up of very successful people from the electronics industry. They would surely see the wisdom in what we were doing. Bob Noyce, Lester Hogan, John Young, Ken Oshman, and several other equally famous and successful people.

After my presentation, John Young, who, if you don't know, was the president of Hewlett -Packard, said: "Al, why should we pay half a million dollars for only 25% of a company that's only an idea in the minds of you and Finis?"

I said: "John, perhaps you shouldn't." And they didn't! (Finis said I needed to brush up on my marketing technique).

Exxon et. al.

But Finis and I decided that perhaps they didn't have enough money. So we set our sights on bigger bucks. We knew that the Exxon Corporation made venture investments, and Exxon seemed to have a good balance sheet and a lot of cash. So we made an appointment with the Exxon guy in New York who handled that sort of thing and we flew off to New York.

We arrived early in the evening the day before the meeting, and went out for a really nice dinner. We decided to celebrate this big deal we were going to close in the morning, so we got a bottle of really fine (and expensive) wine. When we returned to the hotel, there was a message from the Exxon guy that said he had to leave town, the meeting was canceled, and he would call us in a few weeks. That was an expensive call.

But we weren't discouraged. Following that, we got turned down by the Mayfield Fund, and Idanta Partners, and several funds didn't even return our calls.

But we still weren't discouraged. And money wasn't our only problem. We needed a disc, and let me explain how important THAT was.

We Needed A Disc - 3M

In a rigid disc drive in those days, the data was magnetically recorded on an oxide coated aluminum disc. There was a great deal of technology, and a lot of tooling money involved in producing magnetic discs. We needed a commitment from a magnetic disc manufacturer to develop and manufacture a disc that was a

different physical size from any in the industry. It would require a manufacturer to not only spend a lot of money on developing the disc, but an even greater amount in tooling for production. The total dollar requirement for this made our monetary needs seem small.

So first we flew to Minneapolis to see the 3M corporation. The 3M people were very interested in the project, but they couldn't do anything because our schedule was inconsistent with their view of reality.

But they were really nice people and agreed to help our effort to get the company off the ground by cutting down some larger discs to the required 5.25 inch size we needed. And even though the center hole of the disc was larger than we could tolerate in actual use, the disc should serve as a good visual aid.

While we were waiting for the 3M sample discs, we called on Memorex, but they never called us back. Within several days, 3M hand-delivered 6 disc samples to me in California, just to help us get going.

Dysan
With the disc samples in hand, we called on Norm Dion, president of Dysan Corporation in Santa Clara, a magnetic disc manufacturer. I handed Norm one of the sample 5.25-inch discs and he just held it and stared at it for what seemed like hours (probably 15 seconds). Dysan was just getting into production of an 8 inch disc, having manufactured 14 inch discs for several years. Finally, Norm said: "You know, 8 inches was the wrong size." I figured we had him at that point. He saw the tremendous future in what we wanted to do, and agreed to develop and manufacture the 5.25-inch disc.

Then he asked us how we were doing on getting financed. Not wanting to show any weakness, I told him we expected to close something soon, trying to keep my voice from cracking. He said that was a shame since he thought it would make a good package for Dysan to fund our development effort as well as commit to the disc.

We quickly saw the wisdom in this and, on November 14, 1979, six weeks after we put our plan together, Norm gave me a check for $10,000, as a show of good faith for his agreement to invest $500,000. We shook hands, and we had a deal.

We had always planned to get the lawyers to document the deal, but we never got around to it, and it was never really necessary. The following June, we raised another million dollars in capital through venture capitalists - they DID need to document the deal. So the total venture capital put into Seagate was only $1.5 million. An unbelievable small amount of money by today's standards.

We Needed Parts - Turn Left At Leo's Liquors
It was tough to find more believers at that time. We had 8 people in the loft of a suite in Scotts Valley, and we needed to place orders for parts; some big orders.

We knew we had to get magnetic heads on order quickly so we called the manufacturer's representative. I told him we wanted to buy 100,000 magnetic heads (at the time this was about a $2 million deal). He said he's come to see us. Where were we located, he asked. He had never heard of Scotts Valley.

I gave him directions . . . come down out of the mountains, turn onto Santa's Village road, go a quarter of a mile, turn left at Leo's Liquors, cross a little bridge and go into suite C in the only building there.

He repeated the directions and then said: "And you want to buy 100,000 magnetic heads?" I expected him to say, "come on now, who is this?"

Product Development
We completed our product development in 5 1/2 months and showed our product in a hotel suite at the National Computer Conference in Anaheim in May of 1980. We got orders during that show including a $200,000 prepayment, and began shipments 6 weeks later.

Seagate

We shipped 50 units our first month, and by October we were shipping 10 units a day out of a 1000 square foot lab.

The ST506 disc drive stored 6.38 million bytes of data and sold for $1,500 in single quantities: down to $775 in quantities of 5,000.

A Huge Market
The market for this size disc drive was quite large. We projected that the worldwide market would grow from 1100 units in 1980 - which was our total production output - to one million units in 1983. And although our projected shipment grew at an astounding rate, we told people that we didn't predict being able to maintain the 100% market share we enjoyed in 1980. In addition to Texas Instruments and CII-Honeywell Bull whom we had licensed to manufacture and market the product as a second source, we did expect to see several competitors in the marketplace later in 1981.

In our first full operating year we did about $12 million in revenues and made about $1.8 million net profit.

Things moved so fast that we had an initial public offering of our stock only 22 months from when we started.

What Makes The Great Opportunities Possible?
So what really makes these great opportunities? The availability of capital? Certainly. But I really think it has more to do with changes in our society. Let me talk a little about that.

When I was working at IBM, the corporation organized a science advisory board made up of a group of very distinguished scientists. This group met periodically with IBM management and senior technical people to give us the benefit of their wisdom and learning.

I was quite fortunate when in the 1960's I was invited to a luncheon with the science advisory board in San Jose, along with other senior technical people from the lab I worked at.

Following lunch, the IBM host asked the members of this advisory board if they would each comment on the terrible unrest that was going on in our universities, and the apparent change in behavior of all our younger people.

If you don't remember or weren't around at the time, the 1960's found a lot of our young people in jail for acts against public policy. I recall one columnist writing that while he was driving down the road he saw a sign that said "free firewood," and his immediate thought was: Who is this guy Firewood, and why is he in jail?

Anyway, each of the 6 or so distinguished scientists addressed the subject:

Norbert Weiner, the famous nuclear physicist and Nobel prize winner, began and expressed great disappointment in our youth with their erratic behavior, and concluded that we were going downhill. The following speakers expressed the same disappointment, and offered theories on the behavior, and proposals for fixing it.

The opinion was generally unanimous until the last distinguished scientist spoke. I can't recall his name but I can picture him clearly. He was a world-renowned mathematician, long since retired from his position at Columbia. This quite elderly, gray-haired gentleman said that what was going on with our young people was the result of a change in society that was underway -- and that he was both pleased and excited about it. He mentioned individualism, opportunity, creativity, and a true thinking and nourishing of society. He said we could close our eyes and hide from the change, or open our eyes and participate in it -- because it was changing anyway. And he had no fear of the future.

(I thought at the time -- "Easy for him to say; the old bugger is in his 80's and won't be around when these crazies are running the country").

Seagate

But you know, the man was absolutely right. We were seeing an expression of individualism as a result of a change in society that had begun, and is still in process, and will continue as long as people have ideas.

The Information Society
We've moved from a mass industrial society to an INFORMATION Society, with a much more profound impact than the 19th century shift from an agricultural society to an industrial society.

We've moved to an age of the power of the individual. Where the strategic resource in the industrial society was capital; the strategic resource in the post industrial society is Information and Knowledge. And that's not only renewable, but it's self-generating as well.

I believe that this provides for tremendous entrepreneurial activity in the world today. Because the strategic resource is now what we have in our heads. Access to the system is much easier. We have seen an impressive increase in the creation of small businesses over the last 20 years, and large institutions have restructured to encourage entrepreneurial activity within decentralized organizations.

In 1950, 65% of the people working in the country were working in the industrial sector, and only 17% in the information sector. Today, I'm sure those percentages are reversed.

The age of the individual has brought decentralization. We have seen large airlines collapse while new local and regional airlines have been established.

Large circulation, general purpose magazines have folded while thousands of special interest magazines are being published.

Great umbrella organizations like the American Medical Association continue to weaken as the groups within it -- pediatricians, plastic surgeons, cardiologists -- specialize and get stronger, along with county and local medical groups.

And it's happening all over the world. This great new age of individualism and its subsequent decentralization has led to the great number of opportunities for new leaders today.

Unfortunately, the age of individualism and special interest groups has also found a lot of jobs for a lot lawyers, who are misusing our legal system. But that's a story for another time.

Entered By: Woody Monroy
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Documents

There are no documents for this company in the collection

References

There are no references for this company in the collection

Discussions

There are no discussions for this company in the collection