

digital

1957-1997

40  
years of

**Innovation  
and  
Customer  
Success**

For a more detailed timeline, see:  
<http://weblib.ako.dec.com/clg/cc/tminhome.htm>





## 1957

Ken Olsen and Harlan Anderson found Digital Equipment Corp. They set up shop in an old woolen mill in Maynard, Mass. DIGITAL opened for business with three employees and 8,500 square-feet of production space.

The company's first product is Laboratory Modules, intended to sit on an engineer's workbench or be mounted in a scientist's equipment rack.

## 1960

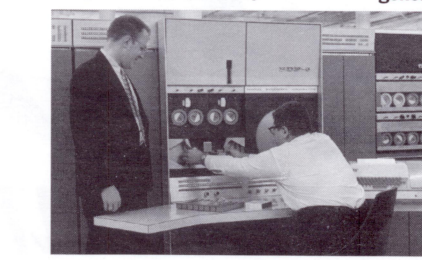
The first DIGITAL Logic Handbook is published, an early project of Barbara Stephenson, the first woman hired as an engineer at DIGITAL. The Logic Handbook is the first in a long series of handbooks that worked both as textbooks and promotional tools.

The PDP-1, the world's first small, interactive computer is delivered to Bolt, Beranek and Newman (BBN), a computer consulting firm in Cambridge, Mass.

## 1962

The PDP-1 operating system (the world's first timesharing system) is written by engineers at MIT and BBN for the PDP-1.

Timesharing made interactive access to computers economically viable by allowing various users to share the computer simultaneously.



## 1965

Introduction of the PDP-8, the world's first mass-produced minicomputer.

## 1966

In what is believed to be the earliest example of around-the-world networking, a link is made by operating a PDP-6 in Perth, Australia from Boston via a telex link. The PDP-6 was operated and programmed from Boston using a 12,000 mile, 5-hole telex code. It proved very difficult to generate a control C in the session. Robin Firth in Perth asks Alan Kotok in Massachusetts, "Do you think you could let us poor Aussies have a bit of core?"

The TYPESET-8, the pioneer of the "turnkey" computer system, is introduced. This hardware and software package originally sold with the classic PDP-8 as its CPU. It functioned as a computerized typesetting system for use in hot metal and photocomposition typesetting.

## 1968

The PDP-8/I is DIGITAL's third 12-bit computer system and the first to be implemented with integrated circuits.

EDUsystems are introduced using the BASIC language developed by Dartmouth College. It brought computers into elementary and secondary schools.

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## 1970

DIGITAL installed its 10,000th computer system.

The PDP-11/20, the first of DIGITAL's 16-bit family of machines, is delivered. The PDP-11/20 was the first minicomputer to interface all system elements - processor, memory and peripherals - to a single, bi-directional, asynchronous bus. The PDP-11 became the world's most successful family of minicomputers.

DIGITAL introduces three new peripherals: the LA30 DECwriter, the TU10 magnetic tape unit and the VT05 alphanumeric keyboard terminal. The VT05 was the first video terminal by DIGITAL.

## 1973

DIGITAL develops DEC Data Communications Message Protocol (DDCMP) as a standard for its future computer-to-computer communications. Used to develop DIGITAL's Network Architecture (DECnet), DDCMP was based on peer-to-peer communications where information is managed by members of the networks itself; communication is from processor to processor, rather than from processor to terminal.

The LSI-11, DIGITAL's first 16-bit microcomputer, is introduced. The powerful PDP-11/70 is added to the PDP-11 family, the first PDP-11 to use cache memory.

Introduction of DIGITAL's Network Architecture (DECnet). Unlike competitors' network offerings, DECnet was not a terminal network, but a true computer-to-computer capability for distributed computing systems.

## 1976

Introduction of 36-bit DECSYSTEM-20, the lowest-priced general-purpose timesharing system on the market. TOPS-20, a new virtual memory operating system, is introduced for use with the DECSYSTEM-20.

DIGITAL enters the word-processing market with the WPS-8, a stand-alone, single terminal, single user word processing system.



## 1978

V1.0 of the VMS (Virtual Memory System) operating system ships.

DIGITAL ships the first DECSYSTEM 2020, introduced as "the world's lowest cost mainframe computer system."

The VT100 terminal is introduced, DIGITAL's first ANSI-compliant video terminal. It became the industry's best selling terminal and the de facto market standard.

## 1980

Introduction of DECnet Phase III, making it possible to build networks of more than 200 nodes—very large for 1980.

DIGITAL, Intel and Xerox cooperate in Ethernet local area network project.

Introduction of the VAX-11/750, the second member of the VAX family and the industry's first Large Scale Integration (LSI) 32-bit minicomputer.

The RMB0 disk drive is introduced, DIGITAL's first product based on Winchester technology, incorporating advanced microprocessor control and industry leadership RAMP features.

## 1982

DIGITAL introduces a range of new personal computers, including the Professional 300 series based on the PDP-11, the Rainbow 100 based on the Intel 8086, and the DECmate II based on the PDP-8.

A new concept in integrated office software is introduced—ALL-IN-1, integrated office software that would run on a network and could mix and match custom applications such as word processing, mail, calendars and databases.

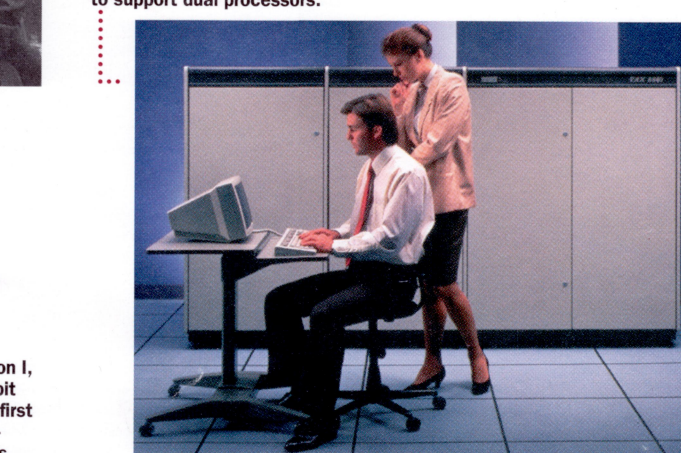
## 1984

DIGITAL announces the Rdb relational database management system.

Introduction of the VAXstation I, the company's first true 32-bit single-user workstation, the first in a new family of MicroVAX-based technical workstations.

## 1986

Introduction of the top-of-the-line VAX 8800 and the midrange VAX 8300 and VAX 8200, the first VAX systems to support dual processors.



## 1988

DECtp is introduced, a systems environment that integrated the functions required to build large-scale transaction processing applications, effectively enabling DIGITAL systems to process up to 100 transactions per second.

## 1990

Adding fault-tolerant technology to the VAX family, DIGITAL introduces the VAXR 3000 system, the first fault-tolerant system in the industry to run a mainstream operating system (VMS) and the first system in which every component, was mirrored.

The 20th anniversary of the introduction of the first PDP-11 computer is marked by the introduction of two new PDP-11 systems: the MicroPDP-11/93 and the PDP-11/34, the latest members of the longest-lived family of general-purpose computers. At this point, the series included over 20 members; more than 600,000 had been installed.

DIGITAL announces its intention to "open VMS." With Open VMS, VMS now supported the widely accepted POSIX standards of the IEEE (Institute of Electrical and Electronics Engineers).

## 1992

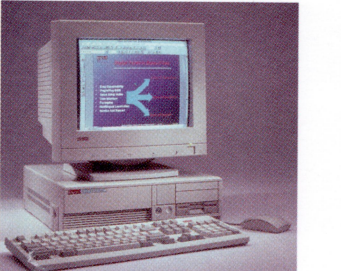
DIGITAL announces Alpha, its program for 21st century computing. Alpha was a totally new, open, 64-bit RISC architecture, addressing the needs of a broad range of computer users, engineered to support multiple operating systems and designed to increase performance by a factor of 1000 over its anticipated 25-year life. The first Alpha chip was the 21064, which provided record-setting 200-MHz performance.

DIGITAL introduces the DECpc LP series, its first internally designed, internally manufactured PCs based on the Intel 386 and 486 processors.

DIGITAL introduces 64-bit computing with five new workstations and servers and the OpenVMS operating system.

## 1994

DIGITAL describes the 21164, its newest Alpha microprocessor, a next generation of Alpha chip that provided peak processing power of more than one billion instructions per second. The chip was the industry's first to operate at 300 MHz; performance was estimated at 500 SPECint92 and 600 transactions per second.



DIGITAL introduces the Celebris family of performance-oriented desktop PCs.

## 1995



DIGITAL and Microsoft announce a strategic alliance that combines Microsoft client/server products with DIGITAL's leadership in enterprise systems, service, support and systems integration.

DIGITAL introduces the AlphaServer 8400, its most powerful computer system to date. The new AlphaServer 8400 supported up to twelve 21164 microprocessors and 14 gigabytes of memory. The 8400 created breakthroughs in very large database performance and provided a viable alternative to supercomputers and mainframes.

DIGITAL launches its entry into the Internet software business. The first product announced is AltaVista Mail server software.

## 1996

DIGITAL announces the Priors ZX 5133MP superserver, the premier product in a new line of Symmetric Multiprocessing (SMP) enterprise PC servers.

DIGITAL announces the SA-110 StrongARM microprocessor, the first processor to combine the performance of a supercomputer with power dissipation low enough to run on AA batteries. The new chips will power personal digital assistants (PDAs), electronic organizers, set-top boxes and video games.

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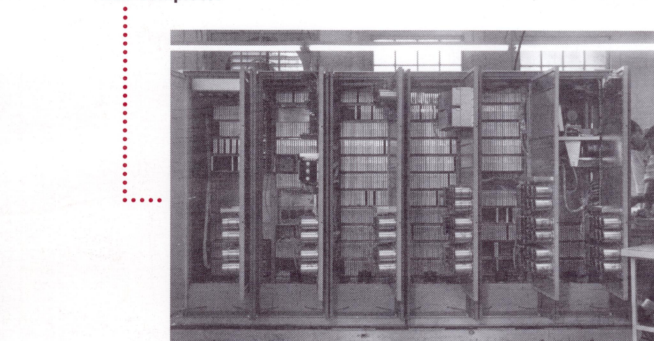
## Forty Years Of Innovation and Customer Success

## 1958

By the end of its first fiscal year, DIGITAL sells \$94,000 worth of laboratory and systems modules and has 60 employees.

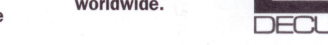
## 1959

A young hardware engineer, Ben Gueney, is hired to design the first DIGITAL computer, the Programmed Data Processor-1 (PDP-1). Three and a half months later, the prototype was complete.



## 1961

DECUS, the DIGITAL Computer Users Society, meets for the first time in Lexington, Mass. Founded on the idea of open exchange of information between user and manufacturer, DECUS has grown to be one of the largest users' groups in the computer industry, with a total membership of about 100,000 and 23 chapters worldwide.



## 1964

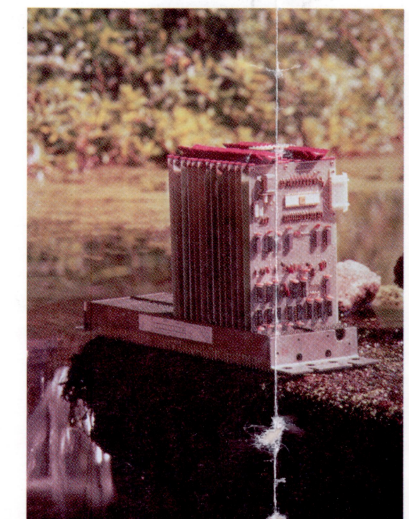
DIGITAL unveils its first 36-bit computer, the PDP-6, designed to be a powerful, timeshared machine oriented to scientific use. It was the first commercially available computer with manufacturer-provided software for general purpose applications.

TOPS-10 is developed as the major user software interface for DIGITAL's 36-bit machines. DIGITAL is issued its first patent, for magnetic core memory. The inventors are Ken Olsen and Dick Best. By 1971, DIGITAL was the largest consumer of magnetic core memories other than IBM. DIGITAL built its own magnetic core manufacturing business and by the mid-1970s was producing 30 billion magnetic cores per year.

## 1966

The LINC-8 is introduced for the emerging biomedical computer market. The computer incorporated both the LINC (Laboratory Instrument Computer) processor and the PDP-8 processor unit.

The RTM (PDP-16) is introduced, beginning a new concept in small computers and digital controllers. Announced initially as the PDP-16, this series of printed circuit modules could be tailored to any application and made to operate with or without programs.



## 1969

FOCAL version 1.0 is issued. The name stood for Formula Calculator. It was the company's first registered international trademark. FOCAL was the only language that ran on every DIGITAL computer at the time.

## 1971

RSTS-11, a timesharing operating system for the PDP-11, is introduced. It was the first general purpose small computer operating system with generalized device handling.

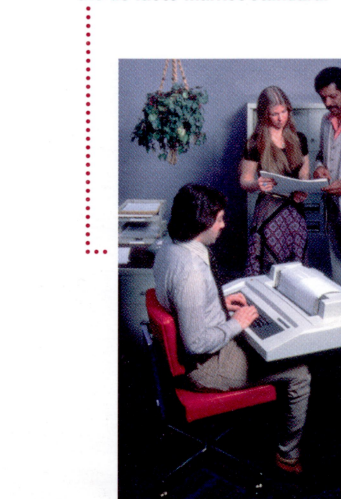
The DECSYSTEM-10 is introduced, marking a change in the marketing philosophy of the PDP-10 group. The entire DECSYSTEM-10 line used the same basic monitor system to give users unequalled expansion capability.

The RTM (PDP-16) is introduced, beginning a new concept in small computers and digital controllers. Announced initially as the PDP-16, this series of printed circuit modules could be tailored to any application and made to operate with or without programs.

## 1974

MPS, DIGITAL's first microprocessor, is introduced as DIGITAL's first entry into LSI (Large-Scale Integration) technology.

DIGITAL announces the LA36 DECwriter II, the company's first commercially successful keyboard terminal. It became the de facto market standard.

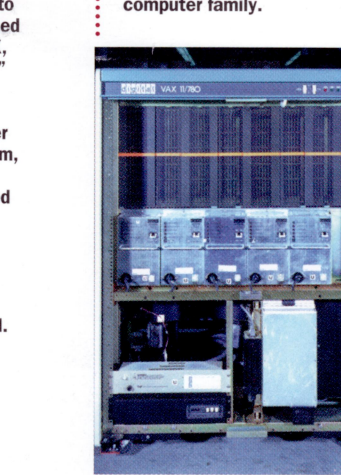


The VAX architecture committee meets for the first time. Work begins on a computer with 32-bit architecture; the goal: to build a machine culturally compatible to the PDP-11 — but with increased address space. The result: VAX, the "Virtual Address Extension" of the PDP-11's 16-bit architecture to 32-bit architecture. The new computer required a new operating system, so VMS, the "Virtual Memory System" was developed simultaneously.

The VT52, DIGITAL's first commercially produced video terminal is announced.

## 1977

Introduction of the VAX-11/780, the first member of the VAX computer family.



## 1979

The F-11 microprocessor is announced. It was DIGITAL's second 16-bit — and first internally designed — microprocessor. The F-11 shipped in the LSI-11/23 board.

VAX information architecture is introduced. It included a family of information management software products including VAX-11 FMS, DATARETrieve, CDD, RMS and DBMS. The key to the products was an integrated architecture that allowed functions to be added as they were needed.



## 1981

DIGITAL announces the DECmate "Work Processor," which integrated an array of functions such as word processing, communications, financial planning, budgeting support and engineering calculations in a single marketing focus.

The MicroVAX chip is announced for the MicroVAX II, DIGITAL's first 32-bit microprocessor and the first manufactured with internally developed semiconductor technology. The revolutionary "VAX-on-a-chip" had the highest level of functionality of any 32-bit processor in the industry. With the MicroVAX chip, DIGITAL became the first company to register a new semiconductor chip under the Semiconductor Protection Act of 1984.

Introduction of the VAXstation II/GPX, DIGITAL's first technical workstation for the UNIX marketplace.



## 1983

DIGITAL announces VAXclusters, which tied VAX processors together to operate as a single system, extending the characteristics of VAX to high capacity and high availability applications.

DIGITAL ships the HSC50 controller, its first intelligent disk subsystem. The HSC50 contained local intelligence capable of managing the physical activity of the drives, optimizing subsystem throughput, detecting and correcting physical errors.

DECtalk, a text-to-speech system that allows computers to talk, is announced. DECtalk accepted ASCII text from an RS232C terminal port and spoke the text rather than printing it, the first such device offered by any major computer manufacturer. Entertainer Stevie Wonder introduced DECtalk at the Park Plaza Hotel in Boston.

## 1985

DIGITAL introduces VAX ACMS (Application, Control and Management System), DIGITAL's first transaction processing product. It provided an environment for creating and controlling on-line transaction processing applications on VMS.

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## 1987

The VAXstation 2000 is introduced, a low-cost, single-user VAXstation based on the MicroVAX CPU and FPU chip set. It was DIGITAL's first workstation with a cost of less than \$5,000 and became the highest volume workstation in the industry.

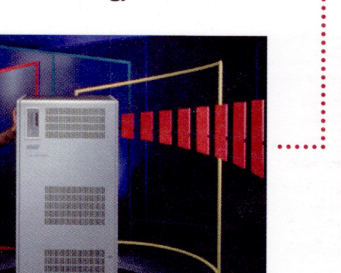
DIGITAL unveils a new generation of its MicroVAX computer family with the introduction of the MicroVAX 3500 and MicroVAX 3600 systems, which included the CVAX chip; DIGITAL's second 32-bit microprocessor design and the first manufactured with internally developed 2.0-micrometer CMOS technology.



## 1989

DIGITAL announces its broadest set of desktop solutions to date, including DECwindows, its X-based windowing system; the VAXstation 3100 based on the CVAX chip; and the DECstation 3100, its first RISC workstation.

The VAX 9000 mainframe is introduced, incorporating numerous technological advances, including high-density ECL macrocells, multi-chip module packaging and heavily macropipelined architecture. The VAX 9000 was DIGITAL's last system not based on microprocessor technology.



## 1991

The industry's first implementation of an object request broker is shipped under the name Application Control Architecture (ACA) Services, late renamed ObjectBroker. DIGITAL subsequently made significant contributions to the Object Management Group's Common Object Request Broker Architecture (CORBA).

The VVAX chip, DIGITAL's fourth VAX microprocessor, is implemented in 0.75-micrometer CMOS technology and ships in the VAX 6600. The NVAX incorporated the pipelined performance of the VAX 9000 and was the fastest CISC chip of its time.

DIGITAL and Microsoft announce an alliance allowing Microsoft Windows to retrieve and exchange data with local area network servers running DIGITAL PATHWORKS software. The DIGITAL and Microsoft development work assured seamless integration between selected office technologies such as Microsoft Word, Excel, Visual Basic, TeamLinks, PATHWORKS and ALL-IN-1 Mail.

## 1993

DIGITAL ships OSF/1 UNIX for Alpha systems.

DIGITAL and Microsoft ship the Windows NT operating system for Alpha systems. DIGITAL began shipping Windows NT preloaded on the DECpc AXP 150 personal computer just five weeks after Microsoft's initial release. By the end of 1993, over 500 applications from DIGITAL and other software vendors would run on the DECpc AXP 150 under Windows NT.

DIGITAL introduces GIGAswitch/FDDI, the world's first LAN backbone switch for FDDI, with more than 3 gigabits per second of bandwidth.

DIGITAL delivers its first video-on-demand system for an early broadband communications trial.



DIGITAL introduces the Venturis family of desktop PCs for general business use.

DIGITAL introduces the GIGAswitch/ATM. With the introduction of the GIGAswitch/ATM system and the ATMworks 750 adapter, DIGITAL had the highest performance ATM products in the industry.

DIGITAL introduces the HiNote Ultra. Only 1-inch thick and weighing less than four pounds, the Ultra is the first portable computer to combine light weight with desktop functionality.

DIGITAL introduces FX132, an advanced software translation and emulation technology that provides Alpha users with transparent access to 32-bit Windows applications.

DIGITAL introduces AltaVista, the most advanced information search and indexing technology available for the World Wide Web.



DIGITAL outlines its plan for virtual networking and the integration of LANs, WANs and ATM. The enVISON (Enterprise Virtual Intelligent Switched Networks) architecture combined virtual LAN technology, distributed routing and high-speed switching with centralized, policy-based administration to create flexible virtual networks.

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DIGITAL announces 500MHz and 433MHz versions of its Alpha 21164 RISC microprocessor, strengthening its four-year claim to the world's fastest and highest-performance microprocessors.

DIGITAL unveils the new Priors HX 6000 series of 200 MHz Pentium Pro-based application servers.

