

digital

MAYNARD

DIGITAL THIS WEEK



Volume 9 Number 15

August 16, 1982

Digital's history – in an old New England woolen mill

Twenty-five years ago, all of Digital consisted of three people, 8,500 sq. ft. of rented space, \$70,000 in capital from American Research and Development of Boston, and a single product --- logic modules. The three founders (Ken Olsen, Stan Olsen and Harland Anderson) were quoted in a local newspaper as looking forward to "hiring ten people and eventually going to 40."

Back then, computers were perceived as forbidding, mysterious machines of interest to only a few highly trained, scientific people. It was generally agreed that computers had limited applications, and *Fortune* magazine had declared that no one was about to make money in the computer business.

Today, Digital is a \$3.9 billion company and the second largest manufacturer of interactive computers in the world. Digital has over 67,700 employees in some 700 sites worldwide, and has shipped over 360,000 computers.

Digital's early logic modules became the basis for its first computer, the PDP-1, in 1960. This was a small, 18-bit computer that cost only \$120,000 in an era when other computers were priced in excess of a million dollars.

Just three years later, Digital introduced the PDP-5, the world's first "minicomputer." With a price tag of just \$27,000, it could provide computer functions in scientific and industrial environments. Each of the PDP-5's were virtually handmade, and only 100 were assembled.

The PDP-5 led to Digital's first mass produced minicomputer, the PDP-8, in 1965. The PDP-8 family firmly established minicomputers as a whole new industry.

Meanwhile, in 1964, the company introduced its first large, 36-bit computer, the PDP-6. It was the first commercially available large-scale system for interactive time-sharing use, which meant that several users could have access to the computer at the same time. Eventually, this commitment to the large scale computer needs of customers resulted in even more powerful, high-speed, large storage systems like the

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Digital grows over 20 percent in FY '82

Digital, in this time of worldwide recession, grew over 20 percent in 1982 and maintained its 1981 profit level of 10.7 percent which is the highest profit level in more than ten years. Digital's continued commitment to the future was reinforced by the company's emphasis on research and development, which totaled \$350 million in FY '82 or 9 percent of revenues. This compares to a \$250 million or 7.9 percent investment in FY '81.

"We believe everyone at Digital should be proud of these figures which result from the hard work and the increased emphasis we placed on efficiency and productivity," said Win Hindle, vice president, Corporate

Operations. Digital selectively lowered some prices to reach a new level of competitiveness and introduced several new products which are expected to help the company maintain its strong market position.

"FY '82 was a very successful year. We showed remarkably good performance, which compares very favorably with other successful companies," said Win.

"The success of this past year is due in a large part to the contributions of our employees. They have helped us learn new ways to control our expenses and to man-

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Digital grows over 20 percent in FY '82

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age the company," he continued.

"We must all continue to work smartly in the coming year. I know that the sales force is selling very effectively and that our manufacturing organization continues to meet shipment requirements. The Engineering organization is turning out a stream of exciting new products. I know we can look forward to another good year in FY '83. Success requires a team effort and I know we have the winning team in our employees," said Win.

Several new products were introduced in FY '82. These new products include a

whole new generation of personal computers to meet the needs of businesses and professionals; OFFICE PLUS, a set of easy-to-use hardware and software capabilities intended to solve the basic office problems of managing information; a comprehensive software program designed to help Digital personal computer users select the right software for their particular needs; RA81 and RA60, high performance Winchester disks and advanced storage architecture; VAX 11/730, the latest and lowest cost addition to the VAX computer family; and VAX STATION 100, an advanced

graphics/video workstation.

The heavy investment in personal computers is expected to have a particularly positive impact on the company's revenues. Customer reaction to the many new products has been very enthusiastic.

The many new product announcements were made possible by Digital's continued emphasis on research and development spending. Digital spent \$511 million on new plant, property and equipment during the year. Shipments in the fourth quarter brought the cumulative number of computers shipped by Digital to over 380,000.

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Thousands anticipated at Canobie Lake Outings

This year, the annual outings at Canobie Lake Park will have a special theme. For Digital is inviting its employees and their families to join in a special celebration of its twenty-fifth anniversary.

Nearly 70,000 people - employees, their families and guests - are expected to join in the day of free rides and food at the New Hampshire amusement park. The grounds are reserved for eleven days of outings scheduled for consecutive Saturdays and Sundays beginning September 12.

With the number of attendees rapidly growing each year, Corporate Employee Activities is asking employees to request only the number of tickets for which they are entitled. Married employees are entitled to tickets for their spouses and dependent children. Employees who are single parents may bring their children and one guest, and single employees may bring one guest.

As in the past, employees will be required to show their badges as they enter the park. Minor children (17 years old and under) must be accompanied by an adult with a badge.

About four weeks prior to the date of

your outing, you will receive a registration form to obtain tickets. For more informa-

tion contact your outing manager as listed below.

Canobie Lake outing schedule for 1982

SUNDAY, SEPT. 12

Merrimack (MKO, PWO); Nashua (NMO, NNO, NXO, ROO, NQO, NUO, NPO, OWO); Hudson, NH (HZO, HDO, QLO, UHO); Manchester, NH (MHO, DSO)
Outing Manager: Jeanine MacDonald, 264-5718.

SATURDAY, SEPT. 18

Westminster (WMO); Leominster (VTO)
Outing Manager: Judy Shaugenessy, 241-4011

SUNDAY, SEPT. 19

Woburn (WOO); Burlington (UFO, OFO); Wilmington (ZWO); Salem, NH (NSO); Derry, NH (DRO); Waltham (FPO); Westford (WJO, WVO); Bedford (BUO); Billerica (BKO)
Outing Manager: Mary Christ, 261-2973

SATURDAY, SEPT. 25

Mill (MLO) Central Engineering; Tewksbury (TWO); Nashua, NH (ZKO); Andover (APO, QIO); Lawrence (VWO)
Outing Manager: Theresa Cash, 223-4074.

SUNDAY, SEPT. 26

Mill (MLO) Manufacturing, Admin/Facilities; Natick (NAO); Westboro (YWO)
Outing Manager: Holly Powderly, 223-5402.

SATURDAY, OCT. 2

Acton, (AKO); Littleton (LKO); Westboro (WZO3); Hudson, MA (HLO, USO); Marlboro (LMO)
Outing Manager: John O'Buck, 225-4043

SUNDAY, OCT. 3

Marlboro, (MRO, UPO); Hudson, MA (HUO)
Outing Manager: Peggy Mitchell, 231-6549.

SATURDAY, OCT. 9

Marlboro (MOO, KPO, BPO1, BPO2); Northboro (NRO); Southboro (HYO); Westboro, (WZO1, WZO2, EHO); Boylston (BYO, HRO)
Outing Manager: Janet Arnold, 234-4827.

SUNDAY, OCT. 10

Acton (ACO); Somerville (BNO); St. Bridget's (BGO); Concord (CFO, VRO); Auburn (FIO); Franklin (FXO); Hanscom/Bedford (HNO); Lowell (LWO); Powdermill Road (MSO) (XEO, BOO); Lexington (ZXO).

Outing Manager: to be announced

SATURDAY, OCT. 16

Parker Street (PKO1, PKO2, PKO3); Waltham (WAO, FJO); Littleton (LJO); Boston (BXO); Stow (OGO); Sudbury (VGO); Providence, RI (PVO); Worcester (WCO).

Outing Manager: to be announced

SUNDAY, OCT. 17

Salem, NH (NIO, SVO); Contoocook, NH (DOO); Chelmsford (ICO).

Outing Manager: Sue Brander, 261-3205, 261-2455.

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Editor: Christine Medeiros

Send stories, photos, ideas or suggestions to DTW, PK3-1/K23 or call the editor at DTN 8-223-5042. Ads must be submitted in writing to Marketplace, PK3-1/K23. Please direct all Marketplace inquiries to Jennifer Hawes at DTN 8-223-2261.

Digital This Week is published every other week by the Corporate Employee Communication department of Digital Equipment Corporation for the Employees in the Greater Maynard area.

FISCAL YEAR 1982 YEAR-END OPERATING RESULTS

| | Year Ended | | Fourth Quarter Ended | |
|----------------------------|-----------------|-----------------|----------------------|----------------|
| | July 3, 1982 | June 27, 1981 | July 3, 1982 | June 27, 1981 |
| Equipment Sales | \$2,793,701,000 | \$2,384,236,000 | \$ 764,809,000 | \$ 707,707,000 |
| Service and Other Revenues | \$1,087,070,000 | \$ 813,863,000 | \$ 311,487,000 | \$ 230,325,000 |
| Total Operating Revenues | \$3,880,771,000 | \$3,198,099,000 | \$1,076,296,000 | \$ 938,032,000 |
| Income Before Taxes | \$ 672,831,000 | \$ 567,433,000 | \$ 188,557,000 | \$ 193,195,000 |
| Provision for Income Taxes | \$ 255,676,000 | \$ 224,136,000 | \$ 66,809,000 | \$ 76,312,000 |
| Net Income | \$ 417,155,000 | \$ 343,297,000 | \$ 121,748,000 | \$ 116,883,000 |
| Average Number of Shares | | | | |
| Outstanding | 55,429,331 | 52,566,517 | 55,380,273 | 53,297,986 |
| Net Income Per Share | \$7.53 | \$6.70 | \$2.20 | \$2.19 |

Year End Financial Results Detail

Total operating revenues for the year were up 21 percent over last year, with \$3,880,771,000 in FY '82 versus \$3,198,099,000 in FY '81. Net income was up 22 percent to \$417,155,000 or \$7.53 per share versus \$343,297,000 or \$6.70 per share last year.

For the fourth quarter just ended, total operating revenues were \$1,076,296,000, up 15 percent from \$938,032,000 for the same period last year. Net income for the fourth quarter was \$121,748,000, up 4.2 percent from \$116,883,000 for the same quarter last year.

Product line engineering in LDP

Laboratory Data Products (LDP) is Digital's largest and oldest end-user product line. LDP began by shipping Digital's first laboratory computer, the PDP-12, in 1969. The PDP-12 was a combination of the LINC and PDP-8 computers with I/O interfaces and a VR12 graphics CRT.

With the advent of the PDP-11/20 and PDP-11/10 in the early 1970's, LDP focused on two value-added engineering efforts - data acquisition and computer graphics. These data acquisition engineering efforts lead to the LPS11 I/O subsystem; the "K-series" real time module options; LPA11-K Laboratory Peripheral accelerator; and the MINC (Modular Instrument Computer) series of computers.

The portable MINC was one of LDP Engineering's most ambitious projects. It was Digital's first user-installable computer, easy to interface and program, and one of Digital's first dock mergeable systems. The original MINC was based on the 11/03 cpu, RX02 disks and VT105 graphing terminal. It was later enhanced to include the 11/23 cpu, RL02 disks and VT125 graphics terminal. These systems have user installable I/O options and easy to use BASIC and FORTRAN software interfaces to the hardware I/O.

LDP Development Engineering today consists of 50 professionals. Their activities include both hardware and software design, quality assurance, support, manufacturing release, FCC and Product Safety engineering and Project management. The engineering environment at LDP is focused upon the specific market requirements of the laboratory computing field.

In addition to developing value added hardware and software, LDP Engineering maintains a Quality Assurance and Support function for reliability, maintainability, regression and environmental testing and product release of LDP-unique hardware options and software.

In May, LDP announced an instrument interface to create a desktop laboratory computer. A real time interface for the



(left to right) Ron Bauman, LDP software engineering supervisor, and Jim Zemcik, LDP hardware engineer, work together on a project in LDP's engineering lab in Marlboro.

PC300 series of personal computers, the interface includes two serial lines, an IEEE 488 port and a 24 bit parallel port. All can be run simultaneously by the user supported software.

Also under development at LDP is an advanced project on remote real-time, front-end data acquisition subsystems. The development project is looking at new software interfaces and tools; new hardware and software architectures; and new packaging and power designs.

Another current LDP project is a software application, developing a laboratory data management product for the VAX family.

Bert Bruce, LDP's group development manager, said, "What we are providing are

base level products that a laboratory can tailor to their own particular needs. Part of our challenge is to make systems flexible, and yet have enough function so that the customer does not have to be a programmer to use it. The overall goal is to have the researcher spend more time researching, and less time programming. Understanding research, knowing what kind of products they need - that is the product we are going to supply to the sales force, so they can go after the DUPONTS of the world."

In summary, product line engineering groups will continue to have an important role in Digital, adding value to Digital's mainstream of products, and providing better application tools to Digital's customers.

Offerings from Ed Services seminars

To register for the following courses, call the Seminar Registrar at DTN 249-4949. Software Services employees should register through their Software Services registrars.

PASCAL as a Second Language

This two and one half-day seminar presents an overview of the features, syntax, and semantics of standard PASCAL. It covers standard data types, data structures, control mechanisms, procedures, and functions. Project managers, systems analysts, and managers and programmers will be especially interested in this seminar.

September 13-15 Bedford, Massachusetts

Design of Applications under RSTS/E

This thorough, four-day seminar/workshop combines the best of two instructional methods to teach optimum design techniques for writing applications under RSTS/E.

In the seminar section, the faculty leader emphasizes the significant characteristics of each application and addresses critical steps in the design process. Appropriate trade-offs among operating system capabilities are highlighted. Then, in the workshops, each attendee becomes an active member of a team that creates a design for the following typical RSTS/E commercial applications: a database inquiry application, a transaction processing application and a multi-user job mix.

September 21-24, Boston, Massachusetts

Software Engineering: A Professional Development Seminar

This three-day seminar presents the significant advances in software development methodologies to assist in the timely and cost-effective production of high quality software systems. The orientation is primarily technical and intended for persons with two to five years of software development experience and some management experience. The seminar covers requirements analysis, specifications, design, implementation and other issues relating to the software development environment.

September 27-29, Boston, Massachusetts

Add to your skills

Registration is open for Office Education/Educational Services workshops in September. At the time of publication, there are openings for all of the classes listed. But many of them do fill up quickly, and it may be necessary to schedule you for a class at a later date.

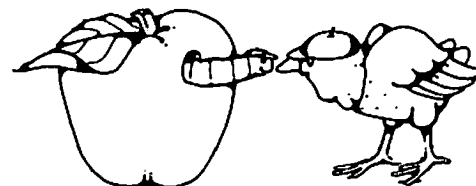
Accounting II (25 days -- 2 hrs/day) Sep 13-Oct 15 PK
Advanced Typing (25 days -- 2 hrs/day) Sep 13-Oct 15 PK
Advanced Word Processing Sep 2, 3, 7, 8, 16, 20, 21, 27, 30 PK
Basic Word Processing (3 days) Sep 13-15, 27-29 PK
Basic WP for Managers/Supervisors Sep 9, 10 MR, PK
Cost Center Expense Reports Sep 15, 27 PK; Sep 22 MR
Creating Effective Visuals Sep 15 PK
Customer Awareness Sep 24 PK
DEC/SEC Procedures Sep 2, 29 PK
Delivering Effective Presentations Sep 8-9, 21-22 PK
EDT Sep 9 PK
EMS I (half day) Sep 13, 15, 20, 21, 27, 29 PK
How to Dictate (half day) Sep 14 PK
Intermediate Typing (25 days -- 2 hrs/day) Sep 13-Oct 15 PK
Intermediate Word Processing Sep 1, 16, 20, 29 PK; Sep 8, 22, 30 MR
Intro to Computer Concepts Sep 16 BU; 28 PK
Introduction to TECO Sep 10 PK
Intro to Word Processing (half day) Sep 30 PK
Keyboard Techniques (5 days -- 2 hrs/day) Sep 20-24 PK
Office Use of DECsystem-10 (3 days) Sep 13-15 BU
RCS (half day) Sep 3, 22 PK
RUNOFF Sep 8 PK
Secretary/Manager Team Building Sep 30 PK
SOS/Edit Sep 7, 28 PK
Telephonics (half day) Sep 28 PK
Time Management for Secretaries Sep 1 MR; 13 PK
Understanding Style Oct 28 PK
WPS to EMS Sep 2, 3, 9, 22, 28 PK
WS200 System Manager Sep 7, 10, 20 MR; Sep 8, 9, 22, 30 PK

To register, send a memo with your name, badge number, cost center and cost center manager's signature to Registrar, PKO3-1/B11 or contact the training coordinator at your facility. For additional information, call DTN 223-5820 for word processing/technical courses or DTN 223-2872 for all others.

College registration times

| | PK3 CAFETERIA | ML CAFETERIA |
|-------------------|---|---------------------|
| U. Massachusetts | Thu. 8/26 9:30 - 11 | Thu. 8/26 12 - 3 |
| W.P.I. | Tues. 8/24 10 - 12 | Wed. 8/25 1 - 3 |
| MR CAFETERIA | | |
| Boston University | Wed. 8/25 11 - 2 Wed. 9/8 11 - 2 | |

*BU Metropolitan College will not conduct registration at the PK3 cafeteria nor the ML cafeteria, but will instead conduct registration at the Acton/Boxboro Regional High School from 4 p.m. to 8 p.m.; Tuesday through Thursday, August 24-26, and again on September 8, from 4:30 p.m. - 7:30 p.m.



WPI graduate courses & registration

Worcester Polytechnic Institute will be offering graduate courses in Computer Science and Electrical Engineering at the Acton/Boxboro High School this Fall. Courses scheduled to be offered during the Fall '82 semester are as follows:

COMPUTER SCIENCE

CS 614 Advanced Compiler Construction (Wed)
 CS 615 Adv. Topics in Computer Science Networks (Mon)

ELECTRICAL ENGINEERING

EE 579C Adv. Topics in Computer Architecture (Thu)
 EE 4802 Digital Computer Organization (Tue)

Fall Semester courses will start on Wednesday, September 8 and registration may be completed at Maynard on Tuesday, August 24. Courses are open to all interested participants and may be used in completion of the M.S. Degree at WPI, transferred elsewhere, or taken to improve background in any of the areas mentioned. A special tuition rate for those who wish to audit a course is available in addition to normal credit registration.

Minimum requirements for the M.S. Degree at WPI is 30 semester hours of credit. The M.S. in Electrical Engineering may be earned through a course-only program, in addition to a thesis or directed research program. The Computer Science Degree may also be earned through a non-thesis as well as a thesis program of study. Those interested in participating do not have to be admitted to graduate study prior to registration. Course offerings have been planned such that over a period of time degree requirements may be completed through attendance at classes offered in the Maynard area.

Registration for the Fall Semester will be conducted at the Parker Street cafeteria from 10:00-12:00 and in the Mill cafeteria from 1:00-3:00 on Wednesday, August 24. Prof. Robert J. Hall, Director of Continuing Education and representatives from the degree departments will be available for consultation. Questions as to general program information as well as admission requirements and individual course details will be answered at these sessions.

Tuition for the Fall Semester is \$185.00 per credit hour or \$555.00 per 3 credit course. The audit rate is one-half the credit rate. Additional registration opportunities will be available on the WPI campus on August 30 (FOR ADMITTED STUDENTS ONLY) and August 31, September 1 in Olin Hall, Room 107 from 6:45-8:30 p.m. for those unable to attend the August 24 session. Registrations may also be completed by mail and tuition may be paid by Master Charge/Visa. Evening catalogs which describe the WPI offerings for the current academic year including course descriptions may be obtained from Ms. Brenda Bowker, Department Coordinator, Corporate Employee Development in Maynard.

B.U. Fall Schedule Released

The affiliation of Boston University's Metropolitan College and Digital continues into its ninth year of providing graduate and undergraduate degree programs in business studies and computer science at off-campus locations.

Information and Counseling

Myra Shahan of the Metropolitan College counseling staff will be available for undergraduate counseling BY APPOINTMENT ONLY (617-353-2982) at the following places:

| | | |
|---------------------------|----------|----------|
| Maynard, PK3-1 Cafeteria | Tuesday | 10-4 |
| | Thursday | 10-11:30 |
| Marlboro, MR1-2 Cafeteria | Thursday | 1-3 |

For information about the master's program, please call the Computer Science Department at 617-353-2568.

COURSES OFFERED AT ACTON/BOXBORO HIGH SCHOOL

| No | Sec | Cr | Title | |
|---|-------|----|-------|---|
| Mondays, 6:00 p.m. to 9:00 p.m. | | | | |
| MET | CS101 | T1 | 4cr | Computers and Their Applications |
| MET | CS108 | T1 | 4cr | Intro. to Computing and PASCAL |
| MET | CS778 | T1 | 4cr | Computer Performance and Evaluation |
| MET | MA105 | T1 | 4cr | Pre-Calc. for Social Sci. & Bus. |
| MET | MA107 | T1 | 4cr | Statistics for Social Sci. & Bus. |
| MET | MK425 | T1 | 4cr | Advertising |
| MET | PS251 | T1 | 4cr | Psychology of Personality |
| Tuesdays, 6:00 p.m. to 9:00 p.m. | | | | |
| MET | AC201 | T1 | 4cr | Accounting 1 |
| MET | CS104 | T1 | 4cr | Programming for Bus. Data Processing |
| MET | CS218 | T1 | 4cr | PASCAL for Programmers |
| MET | CS547 | T1 | 4cr | Discrete Mathematics for Computer Science |
| MET | CS570 | T1 | 4cr | Systems Programming |
| MET | CS665 | T1 | 4cr | LISP Programming |
| MET | MG301 | T1 | 4cr | Introduction to Management |
| MET | MG410 | T1 | 4cr | Management/New & Small Enterprises |
| MET | MK301 | T1 | 4cr | Marketing Management 1 |
| Wednesdays, 6:00 p.m. to 9:00 p.m. | | | | |
| MET | AP101 | T1 | 4cr | AP Seminar: Humanities |
| MET | AP103 | T1 | 4cr | AP Seminar: Social Sciences |
| MET | CS105 | T1 | 4cr | Assembler Language Programming (DEC 10) |
| MET | CS301 | T1 | 4cr | Information Structures |
| MET | CS468 | T1 | 4cr | Intro. to design 9 Construct.--Compilers |
| MET | CS673 | T1 | 4cr | Software Engineering |
| MET | CS782 | T1 | 4cr | Management Information Systems |
| MET | EC102 | T1 | 4cr | Macroeconomics |
| MET | OM301 | T1 | 4cr | Operations Management |
| Thursdays, 6:00 p.m. to 9:00 p.m. | | | | |
| MET | AC202 | T1 | 4cr | Accounting 2 |
| MET | AP105 | T1 | 4cr | AP Seminar: Natural Science |
| MET | CS105 | U1 | 4cr | Assembler Language Programming (PDP 11) |
| MET | EN104 | T1 | 4cr | English Composition |
| MET | FI302 | T1 | 4cr | Financial Management |
| MET | SO335 | T1 | 4cr | Technology, Environment, & Society |

COURSES OFFERED AT MARLBORO PLANT-

| | | | | |
|---|-------|----|-----|----------------------------------|
| Mondays, 6:00 p.m. to 9:00 p.m. | | | | |
| MET | CS101 | U1 | 4cr | Computers and Their Applications |
| MET | EN104 | U1 | 4cr | English Composition |
| Tuesdays, 6:00 p.m. to 9:00 p.m. | | | | |
| MET | BE320 | U1 | 4cr | Managerial Psychology |
| MET | LA301 | U1 | 4cr | Law and Business |
| MET | MA105 | U1 | 4cr | Pre-Calc. for Social Sci. & Bus. |
| Wednesdays, 6:00 p.m. to 9:00 p.m. | | | | |
| MET | CS218 | U1 | 4cr | PASCAL for Programmers |
| MET | MG301 | U1 | 4cr | Introduction to Management |
| Thursdays, 6:00 p.m. to 9:00 p.m. | | | | |
| MET | MG310 | U1 | 4cr | Executive Writing Skills |

REGISTRATION SCHEDULE

Tuesday, August 24, 1982

Acton-Boxboro High School

4:00 p.m. to 8:00 p.m.

Wednesday, August 25, 1982

Marlboro Cafeteria (DEC ONLY)

11:00 a.m. to 2:00 p.m.

Acton-Boxboro High School

4:00 p.m. to 8:00 p.m.

Thursday, August 26, 1982

Acton-Boxboro High School

4:00 p.m. to 8:00 p.m.

Wednesday, September 8, 1982

Marlboro Cafeteria (DEC ONLY)

11:00 a.m. to 2:00 p.m.

Acton-Boxboro High School

4:30 p.m. to 7:30 p.m.

Official Registration Deadline

The registration period ends September 15. Late registration will be accepted through September 29. Students who complete their registration between September 15 and September 29 will be assessed a \$15 late registration fee and a \$15 late payment fee.

Tuition and Fees

Part-Time Tuition (1 - 12 credits)

Courses Numbered 100 - 599:

Tuition unless otherwise noted: \$85/credit

Courses Numbered 600 & Above:

Tuition unless otherwise noted: \$120/credit

| | |
|-----------------------|---------------|
| Registration Fee | \$25/semester |
| Late Registration Fee | \$15/semester |
| Late Payment Fee | \$15/semester |

September openings in development courses

Corporate Employee Development announces the following courses have openings for September.

Conflict Resolution,

Sept. 10

Managing Stress in the Workplace,

Sept. 21

Managing Transitions,

Sept. 16, 17, 24.

Follow up Nov. 1.

Increasing Individual Effectiveness,

Sept. 7-10.

Follow up Oct. 13, 14

Analyzing Your Writing Skills,

Sept. 10, 24, Oct. 8

Nutrition/Stress/Health Connection,

Sept. 20

English as a Second Language - Conversation

Begins Sept. 22 runs 10 weeks, 2 hrs/day

For further course description or information, call Martha Lenard, course registrar, at DTN 223-2938.



CARS

'71 BUICK SKYLARK, basically sound, needs some work, gd first car for teenager, \$350, Julie, 269-2245

'75 AUDI FOX, gd transportation, B/O, Kelly, 223-9678

'78 FORD LTD, small 8, AM/FM, creme w/ brown int, vly clean, exc cond, \$3000 firm, John, 223-4260

'65 MUSTANG GT, auto, 289, PS, disk brks, outstanding cond, \$2500, Gail, 223-6559

'79 CHEVETTE HATCHBACK, 46Kmi, AM/FM, rear defog, 4 spd, exc cond, \$3500, B/O, Rose, 236-2334

'72 SUPER BEETLE, orange/red, exc cond in & out, rebuilt eng, new paint, AM/FM, \$1500, Joe, 231-6169

'79 FIAT STRADA, 55Kmi, 5spd, frnt whl dr, sunrf, 30+ mpg, AM/FM, \$3500, B/O, Michael, 231-4105

'77 DATSUN B210 HATCHBACK, 2dr, 4cyl, 4spd, 60Kmi, AM, mntd snows, exc cond, \$3000 firm, Debbie, 223-3671

'80 TRANS AM, auto, PS, PB, FW, AM/FM, mags, 40Kmi, black w/ beige int, exc cond, \$7500, Dawn, 223-6899

'78 PINTO, 48Kmi, 4cyl, 4spd, AM w/ FM converter, gd cond, B/O, Debbie, 231-6929

'64 CORVETTE COUPE, 350, 4spd, power windows, tinted glass, Cragar mags, \$10,300, Cathy, 246-2406

MAZDA RX-7 GS, 5spd, 39Kmi, AM/FM, exc cond, Ken, 226-7274

'79 CHEVY LUV 4X4 PICKUP, w/cap, 3new tires, 4cyl, 4 spd, 42Kmi, step & tow bumper, \$4200, Steve, 223-6506

'76 BUICK CENTURY, V6, 4dr, 58Kmi, bucket seats, sports console, orig owner, \$2250, Jim, 223-4736

'81 FIREBIRD, 16Kmi, silver w/ red int, AM/FM, rear defog, \$7300 firm, Sue, 225-4325

'71 VW SUPER BEETLE, 72K orig miles, new brakes & muffler, gd eng, radio, \$600, Charles, 225-6020

'78 FORD FIESTA, 2dr hatchback, 77Kmi, frnt whl dr, runs well, \$2450, Bill, 276-9460

'73 CAPRI, V6, manual, new disks & carb, radials, runs well, some rust, B/O, Bob, 279-5720

'77 FORD COURIER TRUCK, 60Kmi, rack body, AM/FM, exc cond, \$2700, Carolyn, 279-5516

'57 CHEVY WAGON, 4dr, no motor or transmission, many spare parts, solid, \$500, B/O, Warren, 234-4232

'77 DATSUN B210, rebuilt eng, 85Kmi, new tires, no rust, \$2500, B/O, Claudia, 278-4069

'71 CHRYSLER NEWPORT, 53K orig miles, gd running cond, \$800, Jill, 223-5096

'74 MERCURY COMET, auto, PS, AM/FM, high mpg, one owner, exc cond, \$1095, Mike, 223-5418

'77 TOYOTA CELICA COUPE, auto, sunrf, 60Kmi, 4new radials, AM/FM, exc cond, \$4400, Debbie, 223-2552

FURNITURE

HEADBOARD, queen sz, maple, bookcase style, gd cond, \$135, Frank, 223-3063

DINING RM SET, 6piece, Medit style, dark wood, 4 chairs, table, hutch, \$500, Kathy, 223-8044

SOFA & CHAIR, brown/orange/beige, herculon plaid, gd cond, Watertown, \$195, Nancy, 251-1914

DINING TABLE, 6chairs, solid pine, 55"x32" rectangle, 2leaves, gd cond, \$200, Linda, 273-3103

ANTIQUA DINING SET, pedestal tble, 6chairs, buffet, server, waterfall design, 1923, \$850, Jean, 234-5098

PLATFORM/STORAGE BED, twin, custom made, 6drawers, Sealy mattress, like new, \$200, Roy, 232-2583

SOFA BED, queen sz, brown w/ rust, doesn't fit in new apt, orig \$650, asking \$500, Lynn, 225-5116

SOFA & CHAIR, 83" drk brown naugahyde couch, matching chair, \$250, Bob, 292-2254

MISCELLANEOUS

TWIN BOX SPRING, \$15; stainless for 8, \$250 new, \$50; china for 14, orig \$900, \$350, Linne, 231-5446

CAR STEREO, Sanyo AM/FM cassette, in-dash, new, \$60, Jack, 279-5482

AKAI REEL TO REEL TAPE SYSTEM, exc cond, 4yrs old, \$150, Paula, 231-4363

BUG ZAPPER, 30watts, new, \$75, Craftsman self propelled reel lawnmower, \$75, Joe, 234-4856

VW BODY PARTS, drs, hoods, trunks, seats, lights, for Rabbit, SprBtle, indiv or lot, B/O, Nancy, 276-9309

CLOCK, never used, energy efficient, looks beautiful, \$25, Dorita, 233-2154

VW ACCESSORIES, 2 mtd tires, AM radio, headlight, ski rack, trailer hitch, 40chnl CB, Marie, 231-6692

RADIAL SNOWTIRES, 2Goodyear, steel bltd, BR78-13, whitewall, used 1 seas, \$75, Joe, 234-4856

YAMAHA ORGAN, 2yrs old, dbl keyboard, foot pedals, rhythm section, like new, \$900, Tom, 247-3168

BOOKS, "Story of Civilization", classic 6 vol set, by Will Durant, \$30, Gary, 231-6629

TV, RCA 19" B&W, 7 mos old, hardly used, orig \$270, B/O, Debra, 225-5320

TYPEWRITERS, 2, older Remington and Royal, portable, nd a ribbon, gd cond, \$10ea, Carrie, 225-6373

FRYE BOOTS, drk brown, lace-up, 7 1/2 ladies, worn once, \$20, Linda, 223-6632

GUITAR SYNTHESIZER, Arp Avatar, complete, exc cond, \$400, Robert, 223-9341

3PC SUIT, charcoal grey, 39L, all wool, Saks 5th Ave, exc cond, \$75, David, 223-4911

FIREPLACE SCREEN, and a set of andirons, gd cond, all for \$25, John, 223-5339

TURNTABLE, BIC 960, belt-driven, semi-auto, w/out cartridge, \$70, B/O, Gary, 223-9599

POLAROID TELE-1.5 LENS, for SX-70, enlarges picture 50%, exc cond, w/case, \$70, Joseph, 223-3772

CHAIN SAW, Echo #351, 16" bar, vly gd cond, \$125, B/O, Sibby, 231-4420

FLUTE, gd cond, \$180, Ron, 231-4255

VIDEO EQUIPMENT, BETAMAX 5L-5800, remote cntrl, full warranty, salesman's sample, \$880, Susan, 223-6673

POLAROID FILM, Type 88, expires 10/82, bought wrong kind, \$3, Nancy, 223-3533

STEREO COMPONENT CABINET, Akai, walnut w/ glass door, unopened, brand new, \$120, Sujit, 225-5951

WEDDING GOWN, white, Queen Anne neck, w/train, long sleeves, sz 11, exc cond, \$300, Cindi, 251-1598

TIRE RIMS, 2, 14", vly gd cond, do not fit my car, \$12, Jitendra, 225-4832

TIRES, 1pair, bias 4-ply belted Armstrongs, H78-14, whitewalls, almost new, B/O, Gerald, 247-2494

WEDDING GOWN, white, satin slipper, w/train, handmade, never worn, sz 9-10, \$230, Cheryl, 279-5709

MOTORCYCLES

'75 HONDA 550-FOUR, exc cond, 13Kmi, new battery, tune-up, runs smoothly, Rowena, 223-9429

'81 YAMAHA 850 SPECIAL, black, 2500mi, exc cond, \$2900, Roger, 231-5136

'74 HONDA CL 450, gd cond, low miles, \$600 firm, Randolph, 223-4260

'79 TRIUMPH BONNEVILLE 750, brand new, never ridden, \$2500, B/O, Mike, 235-3207

'81 KAWASAKI KZ1000, 4400miles, must sell, moving, \$3000, B/O, Ben, 275-6012

'76 HONDA 550-FOUR, 11Kmi, exc cond, \$800, Ray, 234-4520

PETS

FREE KITTENS, 3 kittens, grey tigers, born 6/21, house-broken, Judy, 223-7254

FRENCH LOP RABBITS, all ages, colors, \$7, Diane, 289-6096

ARAB GELDING, registered yearling, bay, 13.2 hands and growing, \$1200, Jenny, 223-7706

AKC POODLE PUP, black, female, 3mos, \$150, Ruth, 223-6930

REAL ESTATE

MARLBORO, 6rm older colonial, new gas ht, roof, alum siding, updated elec, \$49.9K, Cindy, 223-9433

MOBILE HOME, 12'x65', 2bdrm, 10'x25' glass porch, WW crptg, metal tool shed, \$21K, Pete, 223-2170

MARLBORO, 4family, resdntial loc, separate utils, lower int rate w/20% dwn, \$99.9K, Paul, 485-6807

LOWELL-BELVIDERE, 4+bdrm, 2car gar, 2 1/2bath, 11yrs old, in-laws possible, exc loc, \$93.4K, Tom, 246-2452

MARLBORO, condo, 2bdrm, new appliances, cust windows, WW crptg, many extras, \$43.9K, Nadine, 251-1460

SOUTH NH, 3/4bdrm gambrel, fam rm, frplc, hardwd flr, cul-de-sac, \$69.9K, Steve, 223-4122

RENTALS

CONDO, N. Conway, NH, 2bdrm + loft, furnished, avail wks, wkends, Mary, 223-4449

HOUSE, Sudbury, close to cntr, 5bdrm, 1yr lease, avail immed, \$1200/mo, Bob, 223-2425

APT, Fitchburg, 5rm, newly renov, refrig/stove, hrd wood floors, \$95/wk includes heat, Doug, 257-1251

ROOM, Marlboro, furnished, kitch, washer/dryer, prking no pets, \$35/wk, Marie, 234-4723

HOUSE, 5rms, 2-3bdrms, driveway, \$450 + utils, Freda, 282-2092

APT, Marlboro, 3bdrm, 1st floor, fenced yard, no pets, \$400/mo, Ben, 275-6012

ROOMMATES

HOUSEMATES, M/F, E. Billerica, 4bdrm split, dead-end, furnished, \$290 + 1/3 utils, Bert, 223-9446

ROOMMATE, Marlboro apt, \$130 includes heat, AC, pool, prking, dishwasher & disp, Ed, 225-5103

ROOMMATE, F, to find/share apt, Marlboro area, Cindy, 231-5474

ROOMMATE, M/F, lrg Victorian hse, Brookline, Cleveland Circle, \$235 + 1/3 utils, Ira, 223-2673

HOUSEMATE, M/F, share 3bdrm hse, Leominster, \$260 includes utils, Bob, 279-5376

ROOMMATE, F w/one child seeks roommate, find/share, Andover vicinity/NH, Judi, 280-7520

WANTED

MAINE CATS, offering gd home to 2 long haired tiger cats/kittens from Maine, Carole, 246-2266

ELECTRIC HOTPLATE, 1-2-3 burner, gd useable cond, rated for 120V, Roger, 225-4528

CUBE VAN, used cube van needed, fair to gd cond, \$2000 or under, Linda, 231-4343

DALMATIAN PUPPY, female, Mary, 249-4113

BASEBALL CATCHER EQUIPMENT, reas price, Cindy, 234-4380

STOVE/REFRIG, 20"elec stove; 10-12cu ft refrig, Esther, 276-9254

Digital and University of Lowell sign agreement

A faculty exchange agreement has been signed between University of Lowell and Digital to mutually enhance each enterprise. It is an occasion for strengthening good relations while employing the academic experience of university faculty and adding to the enrichment of Digital's own people.

To be piloted through Educational Services, the program will loan the state university a needed resource to fill senior and graduate faculty positions with highly qualified and experienced people -- Digital employees. With their manager's recommendation, employees can serve as a consultant for a semester at Lowell while remaining on the company payroll and keeping company benefits.

In turn, Digital can employ, as contract workers, Lowell faculty in any discipline for research, consulting or teaching. Many members of the staff have taken Digital specific courses at Bedford and are knowledgeable of Digital products and applied computer languages.

An opportunity for diversification and renewal, the exchange program gives managers a useful tool to offer job enrichment and career advancement. Employees with computer science or engineering backgrounds, but working in sales, marketing or manufacturing at Digital, may like to return to Engineering through academics.

The first exchange is now under the scrutiny of the Advisory Council consisting of Dean Joseph Salamone, Dr. Thomas



Del Lippett, Educational Services manager, and William Hogan, president of the University of Lowell, shake hands after the official signing of the Faculty Exchange Agreement between Digital and the state university.

Costello, Edward Miller from Lowell and Mike Moffa, Ed Services Development and Publishing Operations manager; Drew Boyd, Customer Training manager; and Jack Landers, Ed Services Personnel manager. They will review nominations and positions.

Interested employees should contact Mike Moffa or Jack Landers through their manager with an appropriate resume.

Vietnam-era Vets meet at Digital

A clinical social worker with 13 years experience in working with Vietnam veterans and their families will be the speaker at the next meeting of Veterans at Digital.

Sarah Haley, MSW, a member of the American Psychiatric Association Task Force, has written extensively on post combat stress. Sarah will speak on Sept. 8 at 6 p.m. at the Parker Street facility, PK03-1 / Pole 25G.

During the meeting, a film, "Warriors' Women," will be shown portraying the daily problem's faced by families of Vietnam Vets. Actual case studies are illustrated and discussed.

Everyone is welcome to attend. For more information, contact Paul Senecal 223-9395, Jed Levine 221-5254, Al Revis 241-4276 or Frank Alia 223-9878.

Boston Ballet dedicates performance

The Boston Ballet Ensemble will dedicate its August 27 performance on the Esplanade to Digital for their sponsorship of the summer outdoor series.

The ninth annual set of performances will be held from August 19 to 28 free of charge at the Hatch Shell on the southern bank of the Charles River. Performances begin at 8:30 p.m. The series will include four works directed by Bruce Wells, resident choreographer of the Boston Ballet.

NEWS BRIEFS

Deadlines for DTW

The next four issues and deadlines for submitting articles for "Digital This Week" are:

- Sept. 6 issue - Aug. 26 deadline
- Sept. 20 issue - Sept. 9 deadline
- Oct. 4 issue - Sept. 23 deadline
- Oct. 25 issue - Oct. 14 deadline

Gallery talks spotlight "Four Generations" exhibit

Jeff Kalb will lead the August 18 Gallery talk at the Computer Museum. Jeff witnessed the development of integrated circuits at Texas Instruments. The first IC computer is on exhibit in the Museum's new "Four Generations" gallery.

On August 25, Geoff Feldman and Rick Jevon will swap war stories on early days of personal computer sales. Their topic is "Atavistic Origins of Personal Computers." An Altair 8800 can be seen in the "Four Generations" gallery.

Talks are held at the Museum every Wednesday at 4 p.m. They are free and open to the public.

Bike Club meets at Parker Street

The Digital Bike Club is up and rolling with after-work rides, weekend rides and bike clinics. The next general Bike Club Meeting will be held on Tuesday, Sept. 7, from 7 to 9 p.m. in the PK3 Corporate Conference Room.

There will be a bike clinic showing basic repairs and discussing bike safety. Everyone is invited. New members should contact Scott Blessly via the engineering network at SHADOW::BLESSLEY, via EMS at SHADOW/BLESSLEY @ CNS1 OR VIA INTERNAL MAIL AT PK02.

MEAC plans Oldies Revival Dance

The Maynard Employee Activities Committee is planning a Muscular Dystrophy fundraiser on Sept. 18 at the Maynard Elks on Powdermill Road.

From 8 p.m. to 1, there will be dancing to WHDH's disc jockeys, "Supple and Pudge," contests and raffles. Donations are \$5, and tickets are limited. Please call Donna Sarrasin, 223-6787, Theresa Cash, 223-4074, or Ellie Russ, 223-9443, for tickets.

Digital Equipment Corporation, history maker and keeper

Digital has made its mark — on the computer industry, technology, on each of its customers, its communities and its employees.

And as founder of the only museum in the world devoted to the history of computing, it has played the role of archivist. Digital not only provided the start-up funding for the Digital Computer Museum, located in Marlboro, but encouraged its employees to give their own time and talents to the cause.

Recently, the Internal Revenue Service granted approval for the Museum to operate independently from Digital as a non-profit charitable foundation.

Gwen Bell, director of the Museum, said in a report to Museum members, "The birth of the Museum is coincident with the twenty-fifth anniversary of the founding of Digital. And the Museum is the corporation's twenty-fifth birthday present to the public as a way to preserve the history of computing for future generations."

In the beginning

In 1973, Whirlwind, the first general purpose, interactive, real-time electronic digital computer was declared obsolete and consigned to the scrap heap. It was rescued, though, by Ken Olsen and Mitre President Robert Everett to be exhibited at the Smithsonian in Washington D.C.

Ken then began his own private collection of computing machines with the acquisition of TX-O, the first full-scale transistorized computer. Quickly, industry responded with donations to his warehouse collection of a LINC, a PDP-8 and other classic machines doomed to be junked.

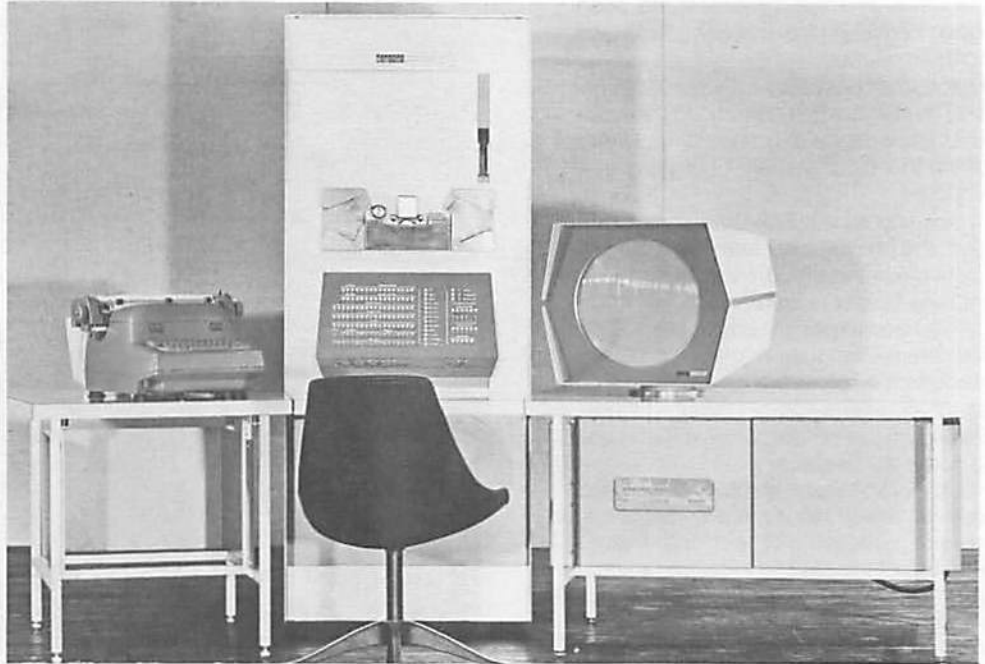
At the same time, Vice President Gordon Bell, through his travels around the world, was accumulating artifacts like modules of the Atlas, the IBM 650, the ILLIAC II, memory devices that predated the core and calculators that preceded the computer.

When Digital purchased the RCA building in Marlboro, its grand lobby and open balcony became the showcases for the collections. The Digital Computer Museum was inaugurated on September 23, 1979 with a lecture on EDSAC by Maurice Wilkes.

Digital's own part in history making is apparent in the display called the Four Computer Generations. Each generation is marked by its base technology, major invention, classic and smallest computer and significant software.

In the third generation, Digital joins the minicomputer era with PDP-8. Integrated circuits, the critical invention of the era, allowed further miniaturization and mass production of computer systems. The fourth generation traces the entry of the microprocessor.

The Museum invites all Digital employ-



Digital's first computer, the PDP-1, was created in 1960 from a base of early logic modules. The 18 bit computer is on display at the Computer Museum.

ees to play a role in the preservation of computing history by becoming a member of the Digital Computer Museum. Membership is a contribution of \$25 (that will be

matched by Digital through the Matching Gifts Program). Individual Founder's contribution is \$250. For more information call the Museum at 617-467-4036.

Corporate Contribution programs highlighted

The Corporate Contributions Committee sponsors several employee programs that are considered special benefits. "Digital This Week" will highlight a different program in each issue. In this edition, DTW focuses on Matching Gifts.

Who may participate in the Matching Gifts Program?

Permanent full time employees and their spouses; retired employees and their spouses; members of the Board of Directors and their spouses.

What organizations are eligible?

Educational institutions and organizations, cultural organizations, social service organizations, and health agencies and hospitals are all eligible for match provided they are non-profit and classified as 501(c) 3 tax exempt by the Internal Revenue Service of the U.S. Treasury Department.

How much will be matched?

The minimum amount matched is \$10.00. The maximum amount matched is \$1,000 per institution, per employee, per calendar year. Cash and securities will be matched.

Where are forms available?

Field Personnel Administrators stock the Matching Gift Program forms. Additional information regarding the program is printed on the form.

How many employees actually participate in the Program?

Approximately 9% of Digital's domestic

population donate through Matching Gifts. In FY82 \$403,450 was matched to qualifying organizations.

Digital's history...

continued from page 1

DECsystem-10 and DECSYSTEM-20 series.

Digital began a decade of phenomenal growth with the introduction of its 16-bit minicomputer family, the PDP-11, in 1970. From 1974 to 1977 its employee population doubled, from 18,000 to 36,000. By July of 1977, Digital had recorded annual revenues of over one billion dollars in one fiscal year.

In 1977, Digital unveiled the 32-bit VAX family of "superminicomputers," offering a wide range of communications and networking capabilities for distributed data processing.

This year, the company that pioneered the concept of making computing power affordable and easily accessible to users, introduced a whole new generation of personal computers. These new computers allow relatively inexperienced users to take advantage of the most advanced hardware features and the fullest range of software options offered by any computer company.