# ONLINE

August, 1965

DIGITAL EQUIPMENT CORPORATION . MAYNARD, MASSACHUSETTS

## First PDP-8's Aid Important Research

Development of a mechanical hand for deep-space missions and control of psychological experiments are among the tasks facing the first dozen PDP-8s delivered to customers.

Among the first organizations using the table-top \$18,000 computer are the Stanford Medical School, Stanford Research Institute, the University of Southampton, the University of Wisconsin, and Massachusetts Institute of Technology.

Plans to build the computer were announced last year, and an operating model was first demonstrated at the IEEE convention in March. Sales at that time were above the 100 mark and have since passed 200. Deliveries began in late June and now are running at one and a half a day.

The PDP-8 is the first of Digital's seven general-purpose computers to have achieved 200 sales, and its rate of selling is far higher than any of the others. The PDP-5, for example, its predecessor, took more than a year to reach 100 sales, according to Nick J. Mazzarese, computer sales manager.

Mazzarese attributed the new computer's success to its low price, speed, simplified programming system, and attractive mechanical design.

# PDP-8 SALES SOAR PAST 200 MARK



"A great deal of its success is due, also," he said, "to our ground-breaking work with the PDP-5, which showed that it is possible to build a real, modern computer in the \$25,000 class. This price range made computers attainable for the first time to many prospective users with tight budgets. Then, when the PDP-8 appeared, four times as fast and one-third less expensive, it found these people ready and waiting."

MIT's Engineering Projects Laboratory will use its new PDP-8 as the central processor in an experimental simulator for study-



TED JOHNSON
BECOMES DEC
SALES MANAGER

Ted Johnson, a key figure in Digital's sales activity over the past seven years, has been named Sales Manager, according to a recent announcement by Company President, Kenneth H. Olsen.

Mr. Olsen explained that the move was designed to "further separate the service organization from the product lines and to free Harlan Anderson and Stan Olsen to devote full time to their product lines."

All sales offices in this country and abroad will report to Ted, and he, in turn, will report directly to the President.

Ted formerly served as Manager of Regional Sales. Prior to this position, he was in charge of Digital's West Coast sales operation, supervising the Los Angeles and Palo Alto Offices, and coordinating efforts with Digital's Seattle—Washington sales representative.

Since joining the company in 1958, Ted has been the first sales engineer, first regional sales manager, and first employee to undertake an extended duty assignment with one of our overseas subsidiaries.

Ted is an electrical engineering graduate of California Institute of Technology and a graduate of the Harvard Business School.

Listed among his outside interests are golf, music, tennis, and sailing.

Ted is married to the former Ruth Casey, of Los Angeles. They live in Sudbury with their one-year-old daughter Justine Ann.

ing remote manipulation. The study seeks to determine how a human operator on earth can supervise, over a deep-space telemetry channel, the operations of a general-purpose, mechanical hand which can carry out simple reflex actions.

Continued on Page 6

## Graduation Day For DEC Training Class

Students in Digital's fourth Basic Technician Course—the first double class containing 23 employees—graduated this month, after seven weeks of intensive training.

Digital offers this unique training opportunity to selected trainees who earn their regular salary while training five days a week. Their increased ability helps Digital to meet its growing need for skilled technicians, and improves the individual's chances for a more responsible position with the company.

Competition within the class is keen as students apply themselves in the classroom and in lab, often studying after work to gain the type of proficiency that will earn for them a challenging assignment with the company after graduation.

Prerequisites for the course include a basic electronics background and graduation from an approved civilian or Armed Forces electronics school.

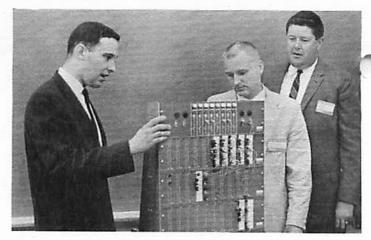
Covered in the basic curriculum are an electronics and solid state review, work on number systems (binary numbers, boolean algebra), logic, modules, oscilloscope work, and an introduction to computers. Computer study includes flow charts and prints, memory reference instructions, memory decoding, IOTs, etc.

New assignments for the recent graduates are as follows: Field Service, Richard E. McDonnell, David M. Tongel, George Newton, Philip S. Charland, and William Freeman; PDP-8 Check Out, John E. Curry, Raymond J. Hatt, Leonard E. Dionne, and Robert Dooley.

Also, PDP-7 Check Out, John D. Learson, Edward A. Reed, Edward G. Weingartner, William Harris, and Joseph P. Zeh; PDP-6 Check Out, Robert H. French and Steven C. Weston (returning to group); Peripheral Test, Henry Gabrish, Earl Haight, Albert W. Walker, and Richard Moffett; Module Test, Abe A. Merriam; and Engineering, Arnold A. Leese.



One of 23—Steve Weston (r) receives his DEC Basic Technician Course diploma from Bob Lassen, Personnel Manager. Steve will be returning to the PDP-6 Group. He has been with the company for 2-1/2 years.



Digital aids pioneering computer aided education project—Bob Maxcy (1) demonstrates Digital's new computer education tool, the Logic Laboratory, to Crayton Bedford (c) of Phillips Academy in Andover and John Dwyer of Lexington High School.

### Digital Helps Pioneer Educational Experiment

Digital will play a leading role in a pioneering computeraided education project planned this Fall by the Massachusetts Department of Education.

At least five Mass. elementary and secondary schools will be connected by teletypewriter terminals to a PDP-1D computer at the Cambridge facilities of Bolt, Beranek and Newman, Inc.

By means of easily learned programming language, students will call upon the Digital PDP-1D to solve problems in math, algebra, trignometry and higher disciplines. The computer will allow students to explore simple and complex mathematical relationships without long, tedious manual computations that detract from class learning time.

Many other schools will have access to the teletypewriter terminals, and State Commissioner of Education Owen B. Kiernan has stated that, "it is not unreasonable to anticipate that every school in the state might someday be tied to a computer, not only for the teaching of mathematics but as a teaching aid for other subjects."

Last month, a number of the teachers who will be instructing this Fall under the computer-aided education program, toured DEC as part of a six week summer institute to train them in computer use.

Organizing the tour was Bob Maxcy of Northeast Sales. The teachers were greeted by Digital President Kenneth H. Olsen and given brochures describing the Company and its products. The tour then covered major areas throughout the plant and was followed by a question and answer session. Judging by the questions and interest generated, it was certainly a success

Of particular interest to the teachers was Digital's Logic Laboratory, an educational tool for the teaching of computer techniques.

### New Office Opened;

### **Gerving Toronto Area**



## "Si" Lyle Managing New Canadian Office

'Si' Lyle

Digital Equipment of Canada Ltd. has announced the opening of a new office at 39 Dundas Street East, Cooksville, Ontario to serve the Toronto area. The area has been served by Digital's headquarters in Carleton Place, Ontario.

Denzil J. Doyle, Canadian manager, said the new office will provide engineering, sales, and service. He said the principal customers to be served from the new office are universities and engineering firms, such as the University of Toronto, Steel Company of Canada, and Canadian Westinghouse Company.

Products to be sold from the new location include generalpurpose PDP computers, digital test systems, and logic circuit modules manufactured in Carleton Place and in Maynard.

#### PDP-5 At Stockholm Show



PDP-5 in Stockholm exhibition—Visitors to the recent 14th International Hospital Congress in Stockholm saw a Digital PDP-5 regulate the first Autochemist—an automatic laboratory technician that can perform up to 6,000 analyses an hour of blood, urine, and other body fluids and print out the results at distant stations.

A PDP-5 controlled a system analyzing and printing the results of blood and urine tests during the recent 14th Annual International Hospital Congress in Stockholm.

The new laboratory system, called Autochemist, is built by Swedish Gasaccumulator AB (AGA AB) of Stockholm. The PDP-5 was supplied by Telare AB, Digital's Swedish representative.

ochemist is believed to be the most powerful of its type. AGAhas not disclosed the work to be done by the first system to be put in use, which is being installed in Stockholm's Hospital for Infectious Diseases. That system is controlled by a faster PDP-8.

Seaforth M. Lyle of Dundas has been named to manage the new Toronto area office by Digital Equipment of Canada Ltd.

"Si" is a former Athlone Fellow and has done research in the field of adaptive control.

While serving on the research staff of McGill University, he wrote a laboratory manual on energy conversion to be used in conjunction with a course on the unified theory of rotating machinery. He later contributed a chapter to a book published in Oxford on "Adaptive Control."

He received his bachelor's degree in electrical engineering in 1958 from McGill and his master's degree in automatic control there in 1960. As an Athlone Fellow, he studied automatic control for two years at Imperial College of the University of London, England.

In 1962, he joined the Electronics Division of Canadian Westinghouse Company, where he was initially in charge of the Mathematical Computational Consulting Group and later named systems engineer on a Navy tactical data system. In January of this year, he was named project leader of the Electronic Division Computer Center, where he directed the programming effort for a dual-computer, real-time system.

During the 1963-64 academic year, he taught FORTRAN programming at McMaster University in Hamilton in a course sponsored by the Engineering Institute of Canada. He was later elected director of the Institute's Professional Development Group and is now serving as past director.

"Si" is presently Vice President of the Computing Society of Canada's Hamilton Chapter.

He lives with his wife and 22-month-old daughter on Mayfair Crescent in Dundas, a suburb of Hamilton.

#### Bermuda Press Uses PDP-8

The first computer for commercial use in Bermuda—a PDP-8—has been delivered to Bermuda Press Limited of Hamilton, which publishes the island's two daily newspapers and operates a job printing shop.

Bermuda Press will use the new machine, a PDP-8 Typesetting System, for a variety of jobs in addition to its basic composing room assignment, according to business manager Collier Elliott.

Initial plans are for the system to set all the straight text matter in the newspapers, both news and classified advertisements. Other activities are also being investigated for possible future applications, Mr. Elliott said.

In the typesetting job, the computer accepts tapes punched by noncounting perforators and generates a clean tape to drive automatic linecasting machines.

# John Jones Small Computer Marketing Manager



John Jones

John Jones has been named Manager of Small Computer Marketing.

In his new position, John will have responsibility for directing the marketing of our small computer products by directly pursuing such promising areas as typesetting, physics, oceanography, and chemistry. He will direct promotional activities (trade shows, literature, advertising), and provide guidance, applications, and product support for our field sales effort. He will also be responsible for the distribution of standard and special software to our customers.

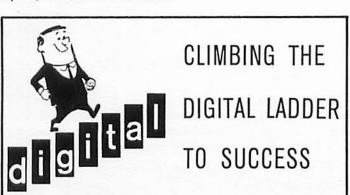
In this position he will report to Nick Mazzarese who will, as a result of this change, be able to spend more of his time in Engineering, Production, and Programming of Digital's small computer products.

John formerly served as Marketing Manager of Physical Sciences. He has been with Digital for two years. During this time, he has made significant contributions to numerous DEC projects, particularly the company's Multianalyzer development.

Digital's new Small Computer Marketing Manager has earned an Electrical Engineering degree and master's degree in Physics from Yale University, as well as a master's degree in Business Administration from Harvard University. He graduated from Harvard with distinction.

His work in a Manufacturing course at Harvard eventually lead to his being co-author of a published book, Management Science; A Primer For Managers. The work was originally written for a course taught by Professor Georges F. Doriot, President of American Research and Development Corporation, principal stockholder of Digital.

In his spare time, John is an eager outdoorsman who enjoys camping and canoeing. He is married to the former Wendy Scott Lutkins of Weston, Mass. They have one child, Stanley, 1 year, and reside in Weston.



# Dave Cotton Marketing Manager for DEC's PDP-7



Dave Cotton

Dave Cotton has been named to the post of PDP-7 Marketing Manager.

He will be involved in all PDP-7 marketing and customer relation functions, including special quotations, product line publicity, and long range marketing decisions. He will also continue to serve as authority on applications in chemistry and chemical engineering.

Dave has been with Digital for a year.

He is a graduate of Harvard University with an A.B. in Chemistry, and the Massachusetts Institute of Technology with an M.S. in Chemical Engineering Practice.

His membership in professional societies includes the Association for Computing Machinery, American Chemical Society, American Institute of Chemical Engineers, and the American Association for the Advancement of Science.

Politics and community activities take up much of Dave's spare time. He serves on Brookline's Town Council for Planning and Renewal and is an elected member of the town representative town meeting.

He is a member of Brookline's Democratic Town Committee, and was a delegate to the 1964 Democratic State Convention, in Springfield. Dave has taken an active part in the campaigns of several State senators and representatives.

# Jean Hanson Appointed Payroll Supervisor



Jean Hanson

Mrs. Jean Hanson is Digital's new Payroll Supervisor.

Accounting of all state and federal taxes and other voluntary deductions comes into the realm of her responsibility. She supervises four other employees in the Payroll Department.

Mrs. Hanson has worked at Digital for two years, first as a clerk and then as Secretary to the Controller. She is a graduate of Maynard High School.

Herhusband, Richard Hanson, works for Atkins and Merrill, of Marlboro. The couple live in Maynard with their four children, Karen, 9; Kathi, 6; Kimberly, 4; and Richard Jr., 2.

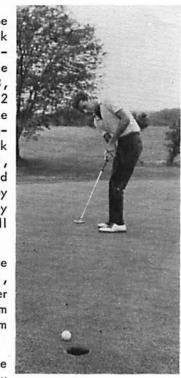
## Team 14 Wins Close DEC Golf League Race

The race for first place in Digital's Golf League went right down to the wire before Team 14 squeaked out a four point victory over Team 11.

The Team 14 quartet of Joe Catalano, Joe Kosiewski, Dick Parks, and Dick Sorenson almost lost the "pennant" on the last Friday of play, August 13, as they managed to win only 2 of 10 points awarded for the night. The second place finishers, Team 11 (Cy Kendrick Jr., Bob Lassen, Jack Smith, and Maynard Sandler) could have taken first place by sweeping 10 points, but they managed to win only 5, to fall short of victory.

Also close were Team 6 (Dave Kicilinski, Fred MacLean, Bruce Garvin, and Walter Majewski) and Team 5, (Tomughes, Jim Scanlon, Tomickson, and Ed Reilly).

Team members listed are the "regulars." There were a few substitutes golfing on the last Friday due to vacationing "regulars."



Joe Catalano Sinks His Putt

## EIGHT'S AND FORE'S HAVE JOE CATALANO'S NUMBER

After a day's work on Digital's "eights," Joe Catalano likes to yell, "fore."

Joe, who helps check out DEC PDP-8 computers, spends much of his spare time on the fairways, trying to cut strokes from his score.

Golfhas been Joe's major sport and hobby for the past seven years and there is good reason for it. He has won a series of golfing honors, starting with his winning of the State Caddy Championship in 1960. He was runnerup New England Junior Champion that same year.

A glimpse at Joe's other honors shows he was three times a malist in the Hearst Golf Tourney, held the low qualifying Jund score in the 1962 Mass. CYO Golf Tournament, and set a course record (66) in 1961, at the Leo Martin Memorial Golf Course, in Auburndale, Mass.

In this year's CYO Tourney, Joe met dissapointment, as he

## Annual Outing Scheduled Sept. 11 At Camp Ararat

Digital's Seventh Annual Outing will be Saturday, September 11, at Camp Ararat. It promises to be the best ever, with a record number of DEC employees to join in the fun.

There will be all kinds of activities: contests, games, amusement rides, hay rides, square dances called by Digital's own Ed Mayall, plus many more suprises. And, of course, food and refreshments will be served.

The full slate of activities will soon be distributed to each employee—look for it—it is your guide to a fun-filled day with the Digital family.

#### 'DIGITS' FINISH THIRD

Digital's entry in the local Little League, the "Digits," made a valliant try to win again the minor league championship this summer, but had to settle for third place in an eight team league.

The DEC sponsored nine still managed to play .500 ball, however, as it posted a creditable 7-7 mark. So Digital still has a "first division ball club."

Aiding the "Digit's" high position in the standings were Manager Gerald Byrne and Coaches Bill Bennett and Paul Lane.

#### LATEST BOWLING

As of On Line press time, it looked as if Digital bowling Team Three had first place sewn up for the second half of the summer league. The winning quintet, of Marilyn Cunningham (Captain), Paul Alizo, Bill Scales, and John Peschier will meet the winning squad for the first half season, Team Four, in a roll off late this month. Next month's On Line will carry the result.

Team Four consists of Charles Mantel (Captain), Jim Sullivan, Derick Chin, and Sue Perry.

Coverage of the Summer League Bowling Banquet, Sept. 9 in the Wayland Carriage House, will also be in next month's On Line.

was upset by Bob Roach in an early round. But Joe bounced right back, as his team warded off stiff competition to place first in Digital's Golf League.

Before coming to DEC, Joe served in Airborne Data Processing, with the 26th Air Division, Otis Air Force Base, Mass.

When he's not playing on golf courses throughout New England, Joe takes pleasure in sports car rallies. Both he and his new Corvette have joined a group in Needham-Wellesley.

Joe is single and currently resides in Needham. He's a graduate of Needham High School and Kessler Tech Training Center, Biloxi, Miss.

## Orders And Deliveries Highlighting The News

#### United Aircraft Corporation

The United Aircraft Corporation has ordered a PDP-6 computer system for use in a variety of simulation studies including real-time flight simulation. Delivery is scheduled in November 1965.

United's Research Laboratories in East Hartford, Conn., will utilize the full time-sharing capabilities of the system in carrying out simulation studies of airframes, engines, fuel flow, and other structure and control parameters in helicopters and other aircraft.

In addition to general computation dealing with these areas, the system will also serve to hybridize the laboratories' existing large capacity for analog computing. A PDP-1 computer supplied earlier by Digital is being used with one or two analog consoles. The PDP-6 will permit simultaneous control over all four consoles.

#### Foxboro Company

The Foxboro Company's Digital Systems Division of Natick, Mass., has purchased six central processors and peripheral equipment for use in Foxboro's Model 97000 Digital Industrial Process Control Systems.

The processors, designed and built by Digital to specifications drawn by Foxboro, are functionally equivalent to Digital's general-purpose PDP computers but with more extensive input/output systems built by Foxboro to meet specific needs of real-time industrial process control.

They are being used in systems built by Foxboro for the Board of Public Utilities in Kansas City, Kans., to log data; the Central Electric Power Cooperative of Conway, S.C., to log



View of the Bell System—Bell Telephone Laboratories sends this photo of their PDP-5/340 system in the Signal and Information Processing Research Department, Murray Hill, New Jersey. The PDP-5 computer and Type 340 Incremental CRT Display form the heart of a new interaction system which will be used both to enter and to receive graphical data in the Laboratories' Computing Center.



What excitement next?—Bill Scales (1) is ready to accompany another PDP-7 on its installation—this one to the University of Texas. Bill still remembers the thrill of another recent assignment at the Jet Propulsion Laboratory in Pasadena, where Digital's PDP-7 helped process first Mariner photographs of Mars. With him in the picture is Dan Grill.

data; Associated Electric Cooperative of Thomas Hill, Mo., to log data and calculate results and efficiency; Chase Brass & Copper Company of Montpelier, Ind., to perform inventory control and other business applications in addition to casting control; and Allegheny Power System's Fort Martin Station in Fairmont, W.V., to log data and calculate results and efficiency.

#### Phillips Petroleum Company

Phillips Petroleum Company of Idaho Falls, Idaho, has ordered a special system for use in controlling the presentation of information gathered in nuclear reactor experimentation at the Spert Project.

The information includes power, temperature, and pressure data collected during nuclear reactor transient excursion tests and recorded in real-time on FM magnetic tape.

#### Ford Motor Company

The Aeronutronics Division of Ford Motor Company in Newport Beach, Calif., has ordered a PDP-7 computer for use in an experimental film-scanning operation.

A long-term goal of the work is to mechanize and automate as many of the steps as possible in detecting and analyzing the data contained in aerial photographs. Shortening the time needed to perform the mapping task in scanning films is an example of the improvements that may be possible through using computer techniques.

#### PDP-8's AID RESEARCH

#### Continued from Page 1

The PDP-8 delivered to the University of Wisconsin will be used at the Goddard Space Flight Center in Greenbelt, Maryland. It will do a status check on equipments for the Orbiting Astronomical Laboratory—a real-time comparison of telemetry data against predicted limits and generation of detailed display information for possible manual action.

## WESCON Surprise: PDP-8s In Two Booths

Digital received a pleasant surprise at this month's WESCON show in San Francisco. A Boston electronic component testing firm, Teradyne, Inc., used an operating PDP-8 as part of the system they exhibited.

The Teradyne system automatically tests and classifies electronic components, and logs the data for each test parameter. An automatic handler bowl-feeds transistors, positions them for a sequence of tests, and files them into one of 14 bins at the rate of 4,000 devices per hour.

The PDP-8, with its store of complex classification programs, controls the Teradyne Test Instrument for each individual test and—on the basis of the test result—reprograms the instrument for the next test. This way, a minimum path for the entire testing and classification sequence is established, and former testing times can be cut by a factor of three.

Without interrupting the testing sequence, the PDP-8 prints out a complete analysis of the performance of the product line being tested.



## HONOR GRAD WORKS AT DEC FOR SUMMER

Malcolm Taylor

Typical of the top grade students who work for Digital during the summer months is Malcolm Taylor, from our Production Stock Room.

Malcolm was recruited from Maynard High School where he recently graduated with high honors. For this distinction, the student must average 90% or better throughout four years. Malcolm was one of four graduating seniors to make the grade, out of a total class numbering 130.

He also was chosen a member of the National Honor Society, on the basis of character, leadership, scholastic achievement, and service to the school.

Malcolm played freshman, junior varsity, and varsity football for Maynard High, and started several games for the school at the defensive halfback slot. His other activities included the Dramatic Club and the Senior Scholastic Society, ganization to foster school spirit.

This Fall, Malcolm will enter the University of Massachusetts to major in chemistry. He has already won two scholarships, one a general Umass grant, and the other a presentation of the Maynard Parent Teachers Association.



PDP-6 a hit in New Mexico—Skip Hickman of our Colorado area office reports that the PDP-6 was one of the features in the Conference on Research and Development for New Mexico Industry, held recently at New Mexico Tech in Socorro. A Teletype unit in New Mexico fed problems into our PDP-6 in Maynard, and the answers were returned to the unit at Tech.

#### JULY ANNIVERSARIES

7 Years Maynard Sandler

6 Years Ed Harwood

5 Years Stephen Lambert Fred MacLean Elizabeth Mariano Barbera Stephenson

4 Years
Robert Beckman
Ron Deyo
Leo Gossel
Ken Larsen
Dave Pinkney
Jack Shields
Ed Unis

3 Years
Rosalie Borzumato
Howard Painter
Dorcas Stoddard
John Streeter
Faye Wise
Ronald Britton

2 Years Donald Call Signe Chapman Ron Chestna 2 Years (Cont.)

Angela Cossette
Joan Cowles
Donald Crowther
Ed Hunt
Martin Liben
Robert Marshall
Joe Nangle
Jack Ridgeway
Pete Waldron
Esther Williams
Ralph Wooldridge
William Lee

1 Year Patrick Amyotte Elliott Hendrickson Beverly Jenks Hillary Cheeke Richard Manion Ed Steinberger Lawrence Seligman Donald Adams Dave Cotton Donald H. Smith Geoffrey Finch Rod Belden William Carpenter Tom Eggers Don Henderson

#### NEW FACES AT DIGITAL

### AUGUST ANNIVERSARIES

Elizabeth Balogh	Maynard
Bruce B. Corbin	Cambridge
Judith B. Cunninghan	
Ronald D'Abbraccio	Lexington
Alan G. Gonzalez	Boston
Linda Gunn	Maynard
Margaret Kizik	Maynard
Caroline Lenzi	Maynard
Barbara Muskovitz	Lowell
Carol A. O'Brien	Natick
Docia Marilyn Sims	Marlboro
Audrey Thompson	W. Acton
Robert M. Weinberg	Waltham
Philip Willinger	Canoga Park
William Arrington	Pacoima
	Carleton Place
Philip Charland	
	Beverly
Leonard Dionne	Maynard
Susan Doughty	W. Acton
Jean Elliott	Marlboro
Robert Fitch	Maynard
Bernard Fitzgibbons	Worcester
William Freeman	Little Commo
Robert Frence	Malden
Henry Gabrish	Boxboro
Eileen Geraci	Hudson
Earl Haight	Boxboro
William Harris	Quincy
Rosalyn Jones	Shirley
Harve Lavoie	Gardner
John Learson	Squantum
Annette Lepire	Hudson
Richard McDonnell	Maynard
Abe Merriam	Boston
Richard Moffett	Portsmouth
Eleanor Nei	Westford
Arlene O'Connor	Maynard
Jacqueline Phillippe	Paris
Miriam Thompson	Stow
David Tongel	Boxboro
Albert Walker	Winchester
Edward Weingartner	Concord
Bernice Young	W. Acton
Joseph Zeh	Concord
Robert Dooley	Everett
Patricia McCarthy	Fort Devens
Walter Paquette	Chelmsford
John Sanguedolce	Lawrence
Karen Brown Ma	inhattan Beach
Doris Boudreau	Hudson
Theresa Cormier	Lowell
Susan Costello	Ayer
Judity Hall	Groton
Jennie Jones	Fort Devens
Dean Lewis	Fayville
Janet Mendes	Lowell

Mother's Shift Programming PDP-6 Module Assembly Final Test Sales Module Assembly Module Assembly Production Control Field Service Draftina Module Assembly Final Test Sales (L.A.) Sales (L.A.) Sales (Ontario) Training Training Module Assembly Module Assembly **Final Test** Accounting n Training Training Training Module Assembly Training Training Module Assembly Final Test Training Module Assembly Training Training Training Module Assembly Module Assembly Sales (Paris) Module Assembly Training Training Training Module Assembly Training Training Module Assembly Field Service Accounting Sales (L.A.) Module Assembly Module Assembly Module Assembly Module Assembly Module Assembly

**Technical Publications** 

Module Assembly

#### 6 Years

Arthur Clockedile Gertrude Loynd

#### 5 Years

Gordon Bell Ruth Dallamora Mary Delgado Edward Mayall

#### 4 Years

Lawrence Conley Miriam Dailey Donald Desrosiers Richard Dreslinski John Duffy Alice Johnson Jack Williams Jean Woods

Bernadette Bubnowicz
Paul Daigneault
C. Stuart Grover
Pauline Molle
Jennie Piantedosi
George Silva
Priscilla Smith
Lawrence White
Robert Korsman
Mary Baum

#### 2 Years

Margaret Boudreau Don Busiek Earl Cain Gino Colicelli Mary Colombo Lincoln Daigle Constance George Marjorie Goodridge Jean Hanson Matilda Jannarelli Jennie O'Clair Frances Piecewicz Loretta Piecewicz Winifred Raikey Alan Ross Barbara Stebbins Anna Tatarunas Edith Wilson

#### 1 Year

Joan Schleede Sarah Mele Dave Edwards Walter Spittle Mary Jeanne Ingalls Lloyd Murray Robert Ziman Richard Lewis Robert Yurick Jean Haynes Paul Dimauro Allen Bennett Thomas Erickson Dorothea Palaima Lorna Wright Henry Burkhardt

Due to space limitations, the July anniversaries were not printed in the June-July On Line. They appear on Page 7 of this month's issue.

Ethel Putz	Lowell
Margaret Pratt	Manitoba
Mary Sanders	Fort Devens
Eleanor Zabierek	Chelmsford
Phyllis Bursaw	So. Acton
Glenda Hicks	Carleton Place
Gertrude Loretta	Maynard
Roberta McMillan	Maynard
Janet Romano	Maynard

Accounting
Sales (Toronto)
Module Assembly
Module Assembly
Sales (Ontario)
Module Assembly
Module Assembly
Module Assembly
Module Assembly