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To: **Scientific and Engineering Computation Group Staff**

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SUBJECT: PAYROLL DEMONSTRATION ROUTINE

Abstract: Description and operation of a payroll program for use in demonstrations.

Introduction:

       A payroll program has been prepared for use in demonstrations. It computes hours worked, regular earnings, premium earnings, gross earnings, F.O.A.B. (social security) tax, withholding tax, and net pay. Regular earnings are the product of regular hours by hourly rate. Premium earnings are the product of premium hours by 150% of hourly rate where premium hours are defined as time in excess of 8 hours in one day, more than 40 hours in one week, and any time worked on Saturday. Gross earnings are the sum of premium and regular earnings. F.O.A.B. tax is two percent of gross earnings. Withholding tax is $.18(G-13d)$ where G is gross earnings, d is the number of dependents, and 13(dollars) is the weekly exemption for each dependent. Net pay is gross earnings minus deductions.

Inputs:

       There are two inputs to the routine, one fixed and one variable at the pleasure of the demonstration audience. The fixed input represents the file of employee records. The file contains for each of five employees, employee number, employee name, hourly wage and number of dependents. The variable input represents the weekly time cards. The time cards contain an employee number and in "in" and "out" punch for each day of the week from Monday through Saturday. The details of the employee record file are:

Employee Records

Number	Name	Hourly Rate	Number of Dependents
260	George Brown	$1.70	3
273	John Green	2.00	4
286	Albert Smith	1.60	5
299	James Adams	1.90	2
312	Samuel Jones	1.80	2

Time card data have been included in the program for the five employees above but the demonstration audience may be invited to prepare time cards on Flexo tape for any number or all of the employees using the following conventions:

1. We will suppose that the Flexowriter is the "time clock" and that it records time in hours and tenths of hours for 24 hours. For instance, 8:10 AM would be recorded as 8.1, 5:15 PM would be recorded as 17.2.

2. Each time card must have a three digit employee number to enable the computer to match it with the appropriate employee record for processing. No sequencing of employee numbers is necessary but an "e" must follow the last time card to indicate to the computer that all the time cards have been read in.

3. A carriage return must follow every employee number and every "in" and "out" punch to indicate the end of the number.

4. An "in" and "out" punch must be recorded every day. If the employee does not report for work, 0.0, 0.0 must be recorded.

Example: Albert Smith, employee number 286, punched in at 8:00AM and punched out at 4:30 PM on Monday through Thursday. On Friday, he did not report for work. On Saturday, he punched in at 8:00 PM and out at 12:10 PM. The Flexo tape appears as follows:

286	(Employee number)
8.0	(Monday in)
16.5	(" out)
8.0	(Tuesday in)
16.5	(" out)
8.0	(Wednesday in)
16.5	(" out)
8.0	(Thursday in)
16.5	(" out)

0.0?   (did not
0.0?   report)
8.0?   (Saturday in)
12.1?   ("   out)
e   (End of tape)

If there is an error in the format of the time card, the Flexowriter will
print an "e". Errors detected are invalid employee numbers, failure to
follow the carriage return convention, and no "e" at the end of the tape.
In case of error, prepare a new tape and begin the program again.

Output:

The output is printed in employee number order and in succession –
hours, regular earnings, premium earnings, gross earnings, F.O.A.B., with-
holding tax, net pay, employee number, employee name, check number, and
amount. The output format is designed for a Standard Register NCR 31-A
continuous two-part check and deduction form. To use the forms, insert
them in the Flexowriter engaging the left hand pin-feed holes. The left
hand margin must be set and the forms vertically aligned so that the first
character will be printed on the form under the "h" in the center of the
box labeled "hours". (This is the normal position of the left hand margin.)
Set the carriage return selector to single space.

Operating Instructions:

Audience prepared input – E, fb 131-209-8, RI, insert audience
prepared tape in PETR, RS.

No audience input – E, fb 131-209-8, RI, start at 1000 octal.