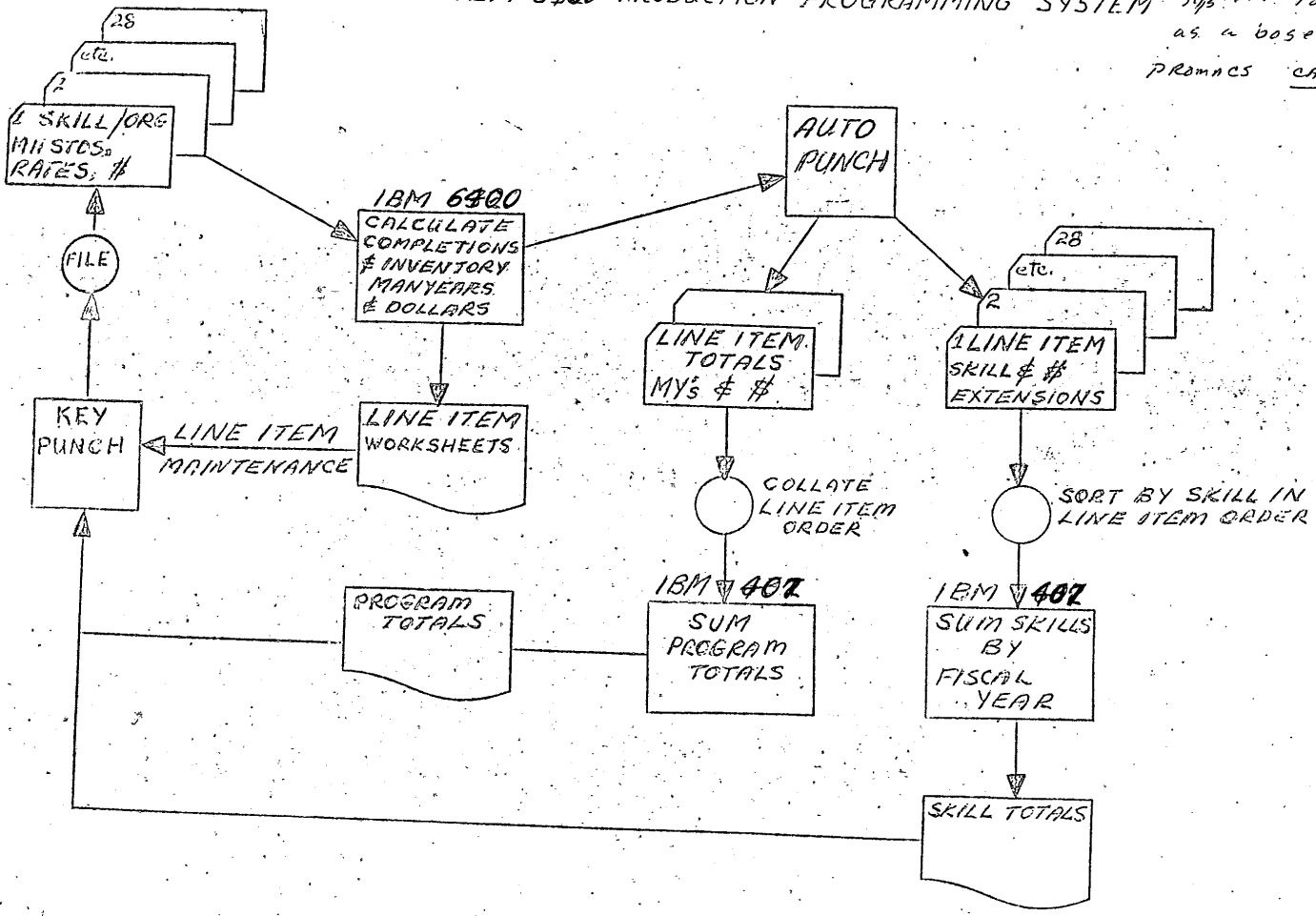


IBM 6400 PRODUCTION PROGRAMMING SYSTEM

GENERAL Description
of our present program
system. To be used
as a base for
PROGRAMS CAPS Phase II



2 Nov 66

WHAT HAPPENS TO THE SKILL ENTRY CARD?

Prior to processing this card on the IBM 6400 the operator keys two items into storage words within the machine. They are "2080", which is the constant for converting the manhour standard to a manyear standard, and the current date. The manyear standard will be computed to five (5) decimal places. The date will appear as numeric month, day, and year (05*18*66) on the same line of the printout as the totals.

As the input card goes through the reading station on the card reader, Column 1 will be punched into the first column of the extension card if something is present in the input card.

Column 2 of the input card will be evaluated for a "9" punch; and, if present, it will be punched immediately into Column 2 of the extension card. A program sub-routine is alerted to store the completions actual number of jobs in a separate storage word in order to save it for later punching into the line item total card.

The code identification is read, printed, and punched into the extension card.

The manhour standard is read, printed, and stored.

The adjustment factor is read, printed, and multiplied by the previously stored manhour standard. The product is divided by 2080 (which was stored by keying) and the quotient is stored and printed as the manyear standard.

The equivalent completion rate is read, printed, punched into the extension card, multiplied by the manyear standard, and, after the actual number of jobs is printed and punched into the extension card, this product (completion manyears) is printed, punched into the extension card, and stored for totalling.

The machine has saved the manhour standard and loops back through identical steps to compute inventory manyears. If no inventory adjustment factor exists, the input card, extension card, printer, and 6400 program all skip to contract unit cost.

Unit cost is read, printed, and stored.

Completion contract rate is read, printed, punched into the extension card, multiplied by the unit cost, and the product, or completion dollars, is printed, punched into the extension card, and stored for totalling.

The machine has saved the unit cost for contract inventory dollars and loops back through the same steps for this computation.

If no unit cost were in the card, the printer, punch, and program skip to the plain language identification which is read, printed, and punched into the extension card through Column 78 - the input card and extension card are skipped

out of the reader and punch respectively - the typing head returns to the left margin, the paper is advanced one line and the cycle repeats itself.

TOTALLING: A blank card signals the requirement for totalling the line item. (Actually Columns 5 and 6 are inspected for "both zero"). The results of each manyear and dollar calculation have been incrementing four storage locations throughout the skill entry card processing. A "both zero" condition in Columns 5 and 6 calls for the data to be printed near the left margin, the code ident of the preceding extension card to be auto-duplicated into the total card. The document rate is punched into the total card; completions manyears are printed under the manyear column. Inventory manyears are punched and printed under the inventory manyear column. These are added together and punched into the total card. The same procedure is followed for contract dollars. Then both the sums are printed near the right margin. The plain language identification of the preceding extension cards is auto-duped into Columns 68-78 of the total card--these two cards skip out of the punch, the typing unit returns to left margin, and the paper advances two spaces.

NOTE: Continuous tab paper seems to be the most advantageous for the 6400; therefore, the following precautions have been taken:

A certain number of printing lines have been assigned for a page. When the 6400 gets to the next-to-last line on a page, it makes a decision. If the next card is a skill entry card, the paper is skipped across the tear line, and processing continues. If, however, at the preceding decision point the next card is a blank totalling card, then the date and totals are printed on the last line of the same page. Then the paper is skipped across the tear line, and the next line item begins processing. Stated more simply - the last assigned printing line on one page is never used unless a total is required.

IBM 6400 PRODUCTION PROGRAMMING SYSTEM

Instructions for AF Form 1530

Although the phasing in of the IBM 6400 in place of the IBM 632 was designed to minimize both changes in procedure and changes in format, some do exist. These changes are marked with an asterisk.

- *Column 1 - This column is not needed by the 6400 as was the case for the 632, but we will show the one digit number that identified the reprogramming action, i.e., 1 for Format A, 2 for Format B, 3 for normal CIP, 4 for Manhour Standard Changes, 5 for Directed Changes from Higher Headquarters, 6 for ACODA changes.
- *Column 2 - Leave blank unless the skill completions actual number of jobs can be used for the CIP rate. If such is the case, put a "9" in Column 2. This may be indicated only once in any line item deck. If it should inadvertently be shown more than once, the last time it appears is the number that will punch in the total card.

Columns 3 thru 11 - Code Identification

Col 3 - ACIC Field Unit

Use: 1 for ACIC St. Louis
2 for Det 1
3 for 7650th
4 for Det 4
5 for 7651st
6 for Det 6

Col 4 - Fiscal Year - use last digit

Cols 5 and 6 - Skill Number - 01 thru 28

Col 7 - Major Program

Cols 8 and 9 - Line Item Code - double alphabetic

Cols 10 and 11 - Sub Item Code - double alphabetic

Columns 12 thru 18 - Manhour Standard - show to two (2) decimal places. This is a multiplier.

Columns 19 thru 22 - Geographic area or other adjustment to manhour standard for completions. Show as 1.00 if no adjustment. This is a percent figure and multiplier. If the adjustment is quite large, the 6400 can use the full four digits.

*Columns 23 and 24 - Leave Blank - no longer required.

- Columns 25 thru 31 - Equivalent Completions Rate for a skill. Show to one (1) decimal place. A multiplier.
- Columns 32 thru 35 - The actual number of jobs on which the equivalent rate is based - whole numbers (integers) only - no decimal places.
- *Columns 36 thru 39 - Inventory geographic area or other adjustment factor to manhour standard - show as 1.00 if no change. This is a percent figure and multiplier. If, in fact, no inventory manhour requirements are in the skill, please leave blank since this is one point the IBM 6400 uses for minimizing processing time. If, on the other hand, the inventory manhour standard is different from the completions manhour standard, for whatever reason, here is the place to control the data rather than utilizing another card.
- *Columns 40 and 41 - Leave Blank - no longer required.
- Columns 42 thru 48 - Equivalent rate for skill - show to one (1) decimal place; a multiplier.
- Columns 49 thru 52 - The actual number of jobs on which the equivalent inventory rate is based - whole numbers (integers) only - no decimal places.
- Columns 53 thru 59 - Contract dollar standard or unit cost expressed to nearest dollar - no decimal; a multiplier.
- Columns 60 thru 63 - Contract Completions Rate - no decimal - a multiplier.
- Columns 64 thru 67 - Contract inventory rate - no decimal - a multiplier.
- *Columns 68 thru 80 - These columns should be used to further identify the line item in abbreviated plain language for your benefit. The following outlines the usage of these columns:
- Columns 68-70 - These three columns are to be used to flag unique differences between the skill entry cards in one line item deck.
 - *Column 68 - In this column an "I" for inside manpower has first priority, and an "I" in this column will be construed as "inside" to provide for sorting manpower on an "I" or "not I" basis. Other use of these three columns is not restricted.
 - Columns 71 thru 78 - That identification that the cards in the deck have in common. Past usage indicates that chart series and type job, as an example, are fairly satisfactory.

Columns 79 and 80 - These two columns, because of electrical systems difficulties, are effectively not in the system. We can neither print them nor punch them into either skill extension cards or line item total cards. These columns have been punched in our present holdings - you may fill them in if it makes you feel better, but you won't see them except in the skill entry cards.

NOTE: All data fields are right justified.

Project Officer Procedures - IBM 6400 System

1. AF 1530's will be filled out according to instructions furnished.
2. Key-punched SKILL ENTRY cards will be returned to project officers for edit before processing. When required, project officers will interfile cards into SKILL ENTRY decks for processing.
3. Printed line item computations, skill entry decks, skill extension decks, and line item total cards will be delivered to appropriate project officer.

At This time:

- a. Project officers will forward appropriate card decks to the machine operator for further duplicating, fiscal year changing, etc., as required.

- b. Interfile (until further notice) skill entry decks, interfile and delete appropriate SKILL EXTENSION and LINE ITEM TOTAL cards.

4. Project officers will notify the ACODA Program Simulation and Analysis officer as each fiscal year is completed for summarizing purposes.