

RECOMP II USERS' PROGRAM NO. 1126

PROGRAM TITLE: PERT Expenditure Forecast

PROGRAM
CLASSIFICATION: General

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PURPOSE: This program when used in conjunction with
RECOMP II Program #58 (Critical Path Scheduling)
will compute a weekly hours expenditure rate
for a given PERT network.

DATE: 15 November 1961

Published by
RECOMP Users' Library
at
AUTONETICS INDUSTRIAL PRODUCTS
A DIVISION OF NORTH AMERICAN AVIATION, INC.
3400 E. 70th Street, Long Beach 5, California

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PERT EXPENDITURE FORECAST

RECOMP II Users' Program No. 1126 will forecast a weekly hours expenditure rate using the estimated activity hours, the activity times, and the expected activity times for a given network. The program has the capability to be used after hours have accumulated for the activities and for activities with zero (0) estimated hours. The program will adjust the forecast for ahead or behind schedule condition.

The expected activity times are found using RECOMP II Program #58 (Critical Path Scheduling). The remainder of the data is taken from the PERT network.

After the worksheet has been prepared, all information is punched on tape (Versatape). This data tape and the program tape are then read into the Recomp. By pressing the appropriate start button the forecast is computed and all information is typed. This typed sheet is suitable for management presentation and for reproduction.

Additional problems can be run by merely reading in the data tape and pressing the appropriate start button.

All activity estimated hours are spread on a 60/40 ogive pattern. (See table in appendix)

I Versatape Instructions

- A. Use decimal integer cartridge
- B. Set location to 6500.0
- C. Enter week number that actuals have been accumulated thru.
- D. Enter all event numbers ("From" event number, "To" event number, "From" event number, etc.
- E. Enter a minus zero after last event number
- F. Set location to 4000.0
- G. Enter all cost data (est. activity hours, accumulated hours, activity time, expected activity time, etc. activity hours, etc.)
- H. After last expected activity time, enter a minus zero.

PERT EXPENDITURE FORECAST

II Operating Instructions

- A. Set margin for single space
- B. Margins at 15 & 100, tabs at 32, 46, 57, and 70.
- C. Read in and verify program tape.
- D. Read in and verify data tape.
- E. Press start 3. This will type all activity information and will compute and type the forecast.
- F. Start 2 will compute and type answer only.

III RESTRICTIONS

Activity numbers can be from 1-4 digits.

Activity times are limited from 1-25 weeks.

Activity limit is 330.

Answer can be up to 240 weeks in length.

Activity hours are limited to six digits.

Total forecast hours is limited to seven digits.

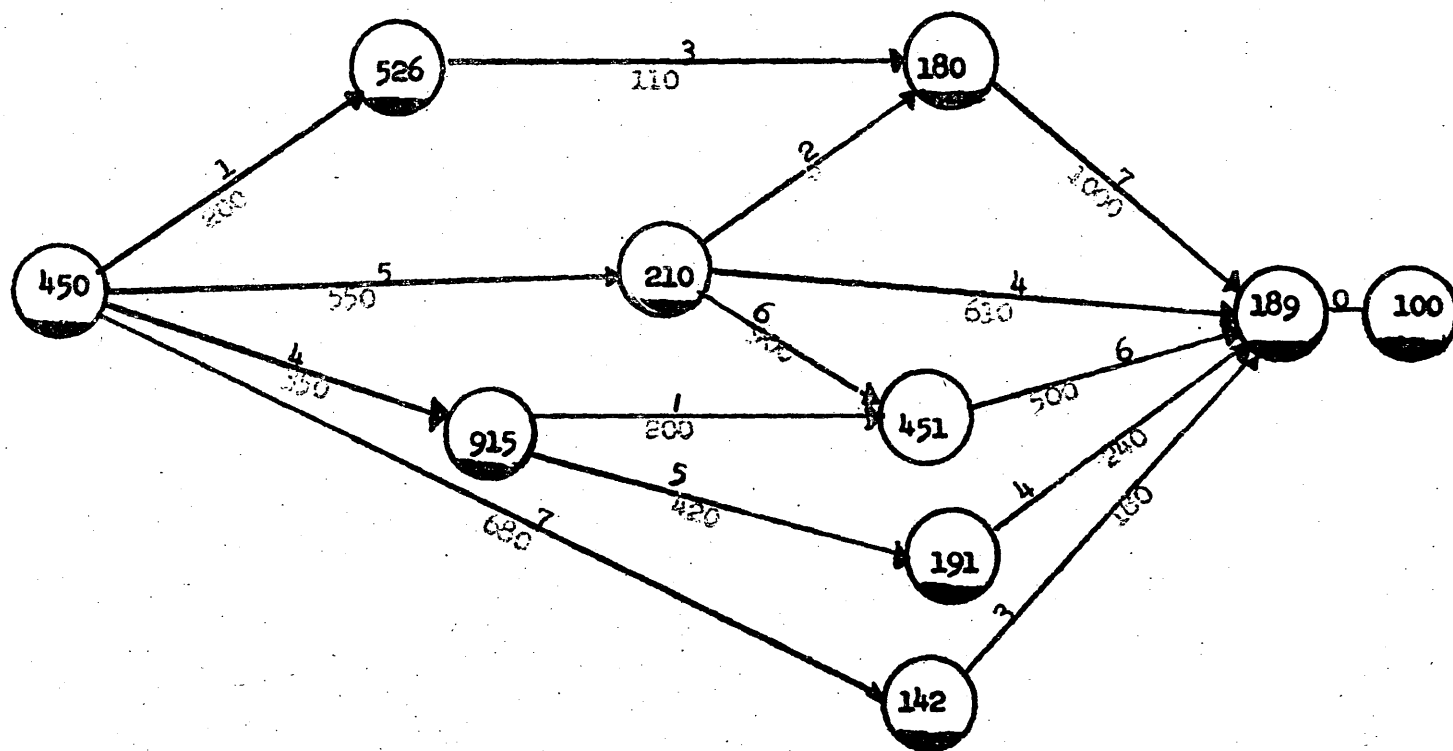
The forecast must be continuous in its entirety and start within six weeks after the week that actuals have been accumulated thru. (If more than six weeks ahead of schedule, adjust the actuals thru week number.)

IV EXAMPLES

Two examples appear in the appendix. The first example is solved prior to the start of the program. The second example is six weeks after the program has started.

The author realizes that when this program is used for different functions a larger percent of the activities will have zero estimated hours.

PERT EXPENDITURE FORECAST



RED - EXPECTED ACTIVITY TIME
 GREEN - ESTIMATED ACTIVITY COST (HOURS)

NETWORK

PERT EXPENDITURE FORECAST

ACTUALS THRU WEEK NO. 0

Activity From To	Estimated Hours Cost	Cum Hours To Date	Activity Time	Expected Activity Time
450 526	200		1	1
450 210	550		5	5
450 915	350		4	4
450 142	680		7	7
526 180	110		3	4
210 180	0		2	7
210 189	610		4	9
210 451	900		6	11
915 451	200		1	5
915 191	420		5	9
451 189	500		6	17
191 189	240		4	13
142 189	180		3	10
180 189	1000		7	14

ACCUMULATED HOURS

FORECASTED HOURS STARTING AT WEEK NO. 1

424	437	470	306	415	430	570	640	543
462	348	272	234	190	100	70	30	

TOTAL FORECASTED HOURS 5941

PERT EXPENDITURE FORECAST

ACTUALS THRU WEEK NO. 6

Activity From To -----	Estimated Hours Cost -----	Cum Hours To Date -----	Activity Time -----	Expected Activity Time -----
450 526	200	200	1	1
450 210	550	550	5	5
450 915	350	350	4	4
450 142	680	600	7	7
526 180	110	110	3	4
210 180	0		2	7
210 189	610	40	4	9
210 451	900	80	6	11
915 451	200	200	1	5
915 191	420	80	5	9
451 189	500		6	17
191 189	240		4	13
142 189	180		3	10
180 189	1000		7	14
ACCUMULATED HOURS		----- 2211		

FORECASTED HOURS STARTING AT WEEK NO. 7

839 640 543 462 348 272 234 190 100

70 30

TOTAL FORECASTED HOURS 3728

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Listed below are suggested expected activity times to be used with RECOMP II USERS' PROGRAM NO. 1126.

	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
January	1	13	25	37
February	2	14	26	38
March	3	15	27	39
April	4	16	28	40
May	5	17	29	41
June	6	18	30	42
July	7	19	31	43
August	8	20	32	44
September	9	21	33	45
October	10	22	34	46
November	11	23	35	47
December	12	24	36	ett.

Expected Activity Time (ATE) The necessary elapsed time from the beginning of the project to the completion of an activity.

Activity Time (te) The estimated time necessary to perform an activity.