

EVM - EXAMPLES

To illustrate the concept of EVM and all the formulas, assume a project that has exactly one task. The task was baselined at 8 hours, but 11 hours have been spent and the estimate to complete is 1 additional hour. The task would have been completed already.

Assume an Hourly Rate of \$100 per hour.

Using this information -

PV or BCWS = Hourly Rate × Total Hours Planned or Scheduled

$$PV = 100 \times 8 \text{ hours} = 800$$

AC or ACWP = Hourly Rate × Total Hours Spent

$$AC = 100 \times 11 \text{ hours} = 1100$$

EV or BCWP = Baseline Cost × % Complete Actual

$$EV = \text{baseline of } 800 \times 91.7734$$

NOTE to get the 91.7%)

BAC = Baseline Effort – hours × Hourly Rate

$$BAC = 8 \text{ hours} \times 100 = 800$$

EAC = AC + ETC

$$EAC = 1100 \text{ + } 100 = \$1200$$

VAC = BAC – EAC

$$VAC = 800 - 1200 = -\$400$$

% Completed Planned = PV / BAC

$$\% \text{ Complete Planned} = 800 \text{ PV} / 800 \text{ BAC} = 100\%$$

% Completed Actual = AC / EAC

$$\% \text{ Complete Actual} = 1100 \text{ AC} / 1200 \text{ EAC} = 91.7\%$$

SV = Earned Value EV – Planned Value PV

$$SV = 734 \text{ EV} - 800 \text{ PV} = -\$66$$

SPI = Earned Value EV / Planned Value PV

$$SPI = 734 \text{ EV} / 800 \text{ PV} = 0.91$$

CV = Earned Value EV – Actual Cost AC

$$CV = \$734 \text{ EV} - \$1100 \text{ AC} = -\$366^*$$

* indicates a cost overrun

CPI = Earned Value EV / Actual Cost AC

$$CPI = 734 \text{ EV} / 1100 \text{ AC} = 0.66^*$$

** indicates over budget*