

“Project Management Using Earned Value”
Case Study Solution 11.1

11.1

C A S E

S

Crashing the

T

Network

U

or ‘What If’

D

Y

Crashing the Network or 'What If'

Part 1 - Activity L must begin on or before Day 30.

<u>Activity</u>	<u>Normal Duration</u>	<u>Normal Cost</u>	<u>Crash Duration</u>	<u>Crash Cost</u>	<u>Cost Slope</u>
C	4	\$ 8,400	2	\$ 9,600	\$ 600
G	8	\$12,000	5	\$24,000	\$4,000
H	3	\$ 3,000	1	\$ 4,500	\$ 750
I	2	\$ 6,000	1	\$ 8,000	\$2,000
J	4	\$ 8,500	3	\$10,000	\$1,500
K	2	\$ 3,800	1	\$ 6,000	\$2,200

First Day Reduction

Options: Reduce G at \$4,000 or
Reduce H at \$750 or
Reduce K at \$2,200.

Decision: Reduce H at \$750. At this point all three paths become critical.

Second Day Reduction

Options: Reduce G at \$4,000 or
Reduce H and I and J at \$4,250 or
Reduce K and J at \$3,700.

Third Day Reduction

Options: Reduce G at \$4,000.

Total additional cost to allow Activity L to begin on Day 30 is \$8,450.

Part 2 - Activities Q, W, and X use the same facility, therefore no two can be performed at the same time.

Options: Delay Q until W is complete, then delay X until Q is complete.
Delay W and X until Q is complete.
Delay Q until W and X are complete.

Decision: Delaying W and X until Q is complete or performing Q between W and X each delays the project one day.