

Project Planning & Control

Lesson 4

Problem 1- Two Resources; Resolving Resource Allocation Problems

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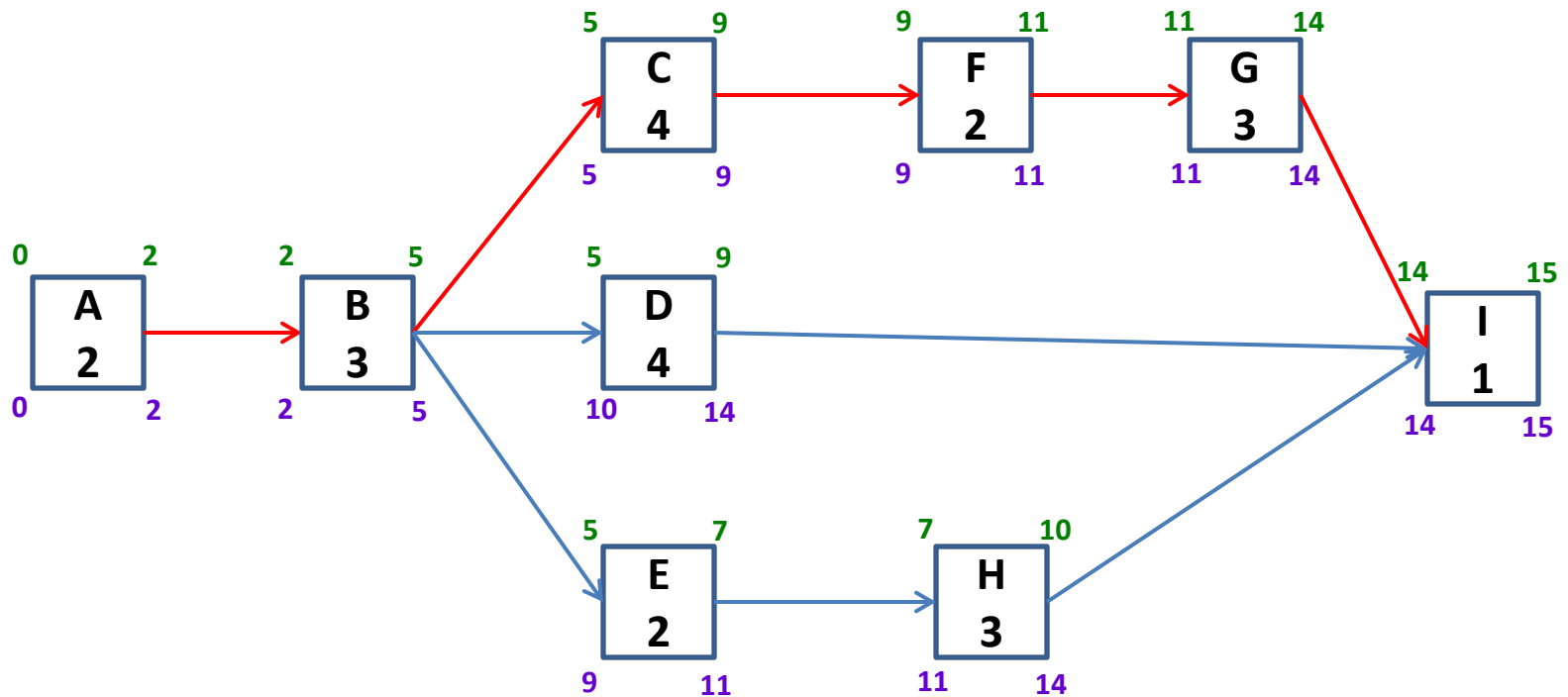
Problem 1 – Two Resources

Activity	Preceded by	Duration	Trucks	Workers
A	-	2	2	4
B	A	3	1	2
C	B	4	6	3
D	B	4	4	8
E	B	2	4	2
F	C	2	2	3
G	F	3	2	8
H	E	3	1	1
I	D,G,H	1	1	3

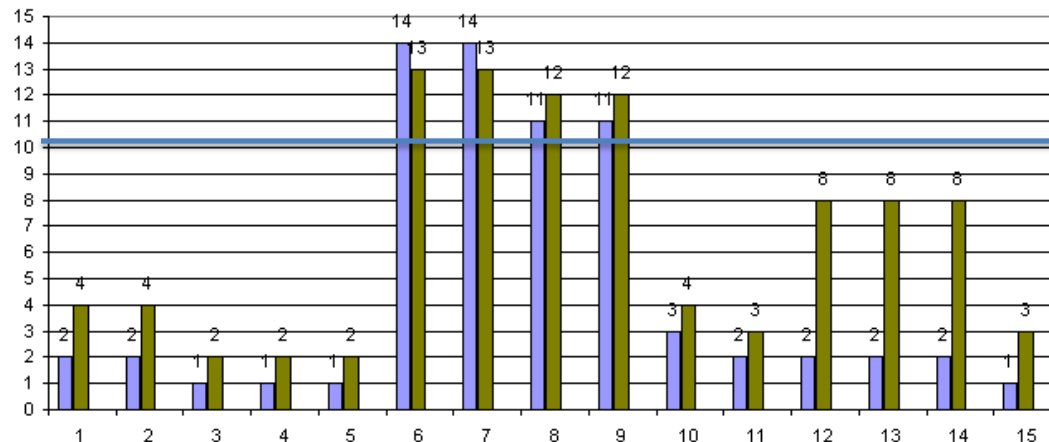
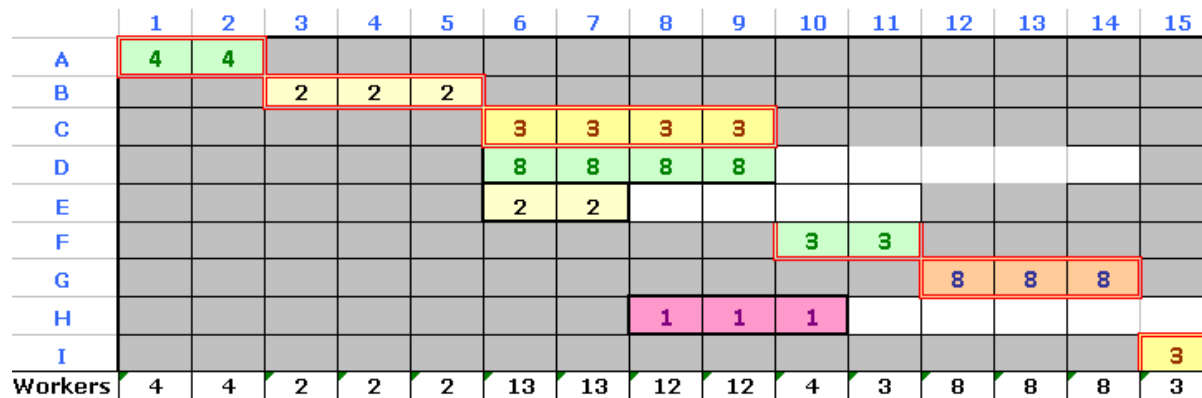
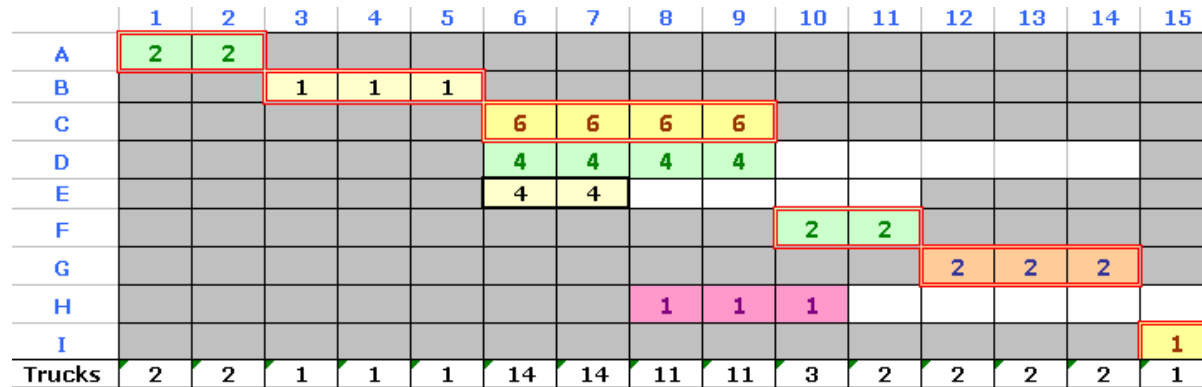
Extension of Problem -1 Illustrating multiple resource conflict.
Use same network analysis results

If only 10 trucks & 15 workers how can over-allocation problem be resolved ?

Problem 1- Network Analysis



Resource Loaded Gantt Charts



Spreadsheet

Resolving Resource Allocation Problems

1. Use float to shift activities
2. Increase activity duration – by reducing resource loaded
3. Decrease activity duration – by increasing resource & shift activity(s) using float
4. Split activity
5. Over-Time / Shift Work (Increased effort)
6. Substitute Resources
7. Increase Project Duration

More on resources in next lecture.....

Questions / Discussion