Project Management Advanced Diploma

Computers & PM – Josephine Coffey

Computers & PM – Week 6

- Preparing the Computer Schedule

- **Resource Management & Reporting**

Objectives

- Managing Resource Data in computer schedules

- To gain an understanding of "Output Reports"

Resource Aggregation

- The software schedules activities at earliest start date with resources assigned
  – no attempt to optimise schedule
- Resource Aggregation chart
  – Resource usage profile
 – snapshot of resource requirements for schedule
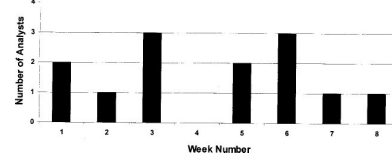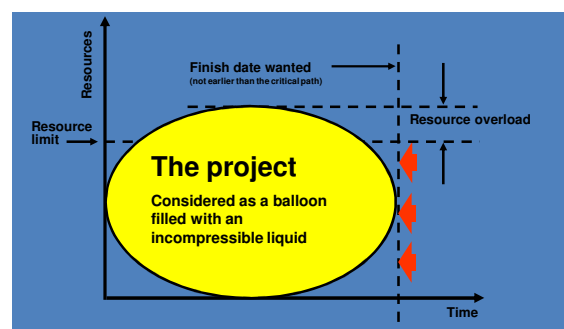
Resource Levelling or Scheduling

- Optimising resource availability and usage
  - Attempts to keep demand for resources constant
  - Need accurate & relevant resource data
  - Constraints will reduce effectiveness

Resource Levelling or Scheduling

- Priority rules (Lock):
  - Influence of float
  - Time-limited scheduling
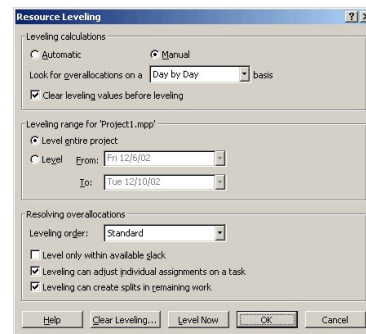 - Resource-limited scheduling
  - Quality issues
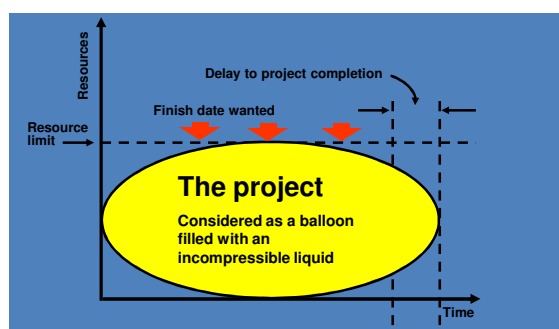
Time-limited *versus* resource-limited constraints
1: The resource-limited option

Time-limited *versus* resource-limited constraints
2: The time-limited option

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Resource Levelling or Scheduling

- Manual or automated in software
- Methods
  - Using software heuristics
  - Looking at activity float
  - Splitting tasks
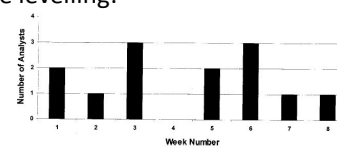 - Reviewing constraints
  - Reviewing priorities

Resource Levelling or Scheduling

- Before levelling:

- After:
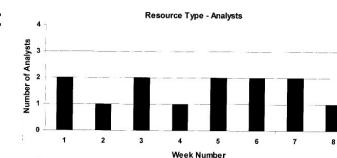
Limitations of Resource Levelling

- Peaks and troughs may still remain and need manual intervention
- Works better for larger projects and when resource requirements are close to numbers available
- Multiple iterations may be necessary
- Experience of PM and their knowledge of project & resources can not be automated!

"Work to List"

- View of activities showing 'scheduled' dates

- Recommended start and finish dates for each activity after resource scheduling process

- Needs to be reviewed by PM

Output Reports

- Reports are important communication and project tracking tool

- Two categories:
  – Standard reports (Built-in)
  – Customisable

Output Reports

- Often available in 'dashboard' form
- May be too large to print

- Lock recommends:
  – Filtering
  – Sorting
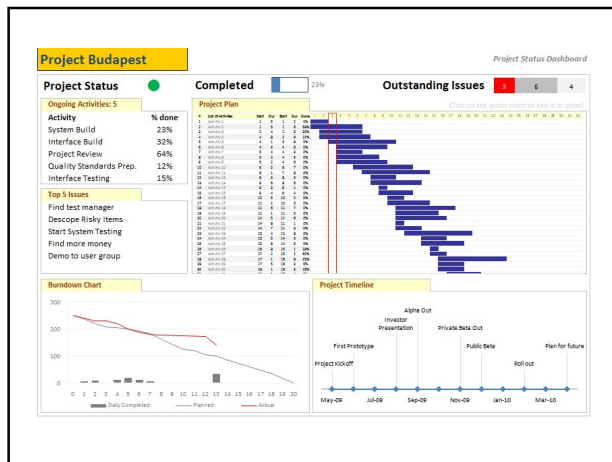
Output Reports - Filtering

- Editing reports to exclude unnecessary data
- Know your audience and filter accordingly
- Filtering options:
  - ➢Assign report codes to activities
  - ➢Specify milestone of key activities
  - ➢Report on selected resources
  - ➢Exclude unwanted data e.g. completed tasks, also confidential data
  - ➢Choose some other parameter to reduce output size and target readers

Output Reports

- Sorting: reports should present data in sequence required by reader e.g. date, activity id, resource etc.
- Other useful reports:
  - ➢Combined cost & resource table (Lock)
  - ➢Project summary report (R-A-G)
  - ➢Time Analysis Report
  - ➢Resource Aggregation\Usage Profile

Date	Resource LA: Labourer				Resource SK: Skilled				Task materials £	Cumulative project cost £
	Available	Used	Unused	Cost £	Available	Used	Unused	Cost £		
10 May 10	1	1		120	1	1		160	50	330
11 May 10	1	1		120	1	1		160		610
12 May 10	1	1		120	1	1		160	100	990
13 May 10	1	1		120	1	1		160	100	1 370
14 May 10	1	1		120	1	1		160	175	1 825
17 May 10	1	1		120	1	1		160	525	2 630
18 May 10	1	1		120	1	1		160	65	2 975
19 May 10	1	1		120	1	1		160	65	3 320
20 May 10	1	1		120	1	1		160	65	3 665
21 May 10	1	1		120	1	1		160	65	4 010
24 May 10	1	1		120	1	1		160	65	4 355
25 May 10	1	1		120	1	1		160	65	4 700
26 May 10	1	1		120	1	1		160	65	5 045
27 May 10	1	1		120	1	1		160	65	5 390
28 May 10	1	1		120	1	1		160	65	5 735
31 May 10	1	1		120	1	1		160	65	6 080
01 Jun 10	1	1		120	1	1		160	40	6 400
02 Jun 10	1	1		120	1	1		160		6 680
03 Jun 10	1	1		120	1	1		160		6 960
04 Jun 10	1	1		120	1	1		160	65	7 305
07 Jun 10	1	1		120	1	1		160	55	7 640
08 Jun 10	1	1		120	1	1		160	200	8 120
09 Jun 10	1	1		120	1	1		160	360	8 760
10 Jun 10	1	1		120	1	1		160	40	9 080

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Summary

- Resource optimization may be necessary either automated or manual

- Output reports should be tailored to their audience and use filtering and sorting