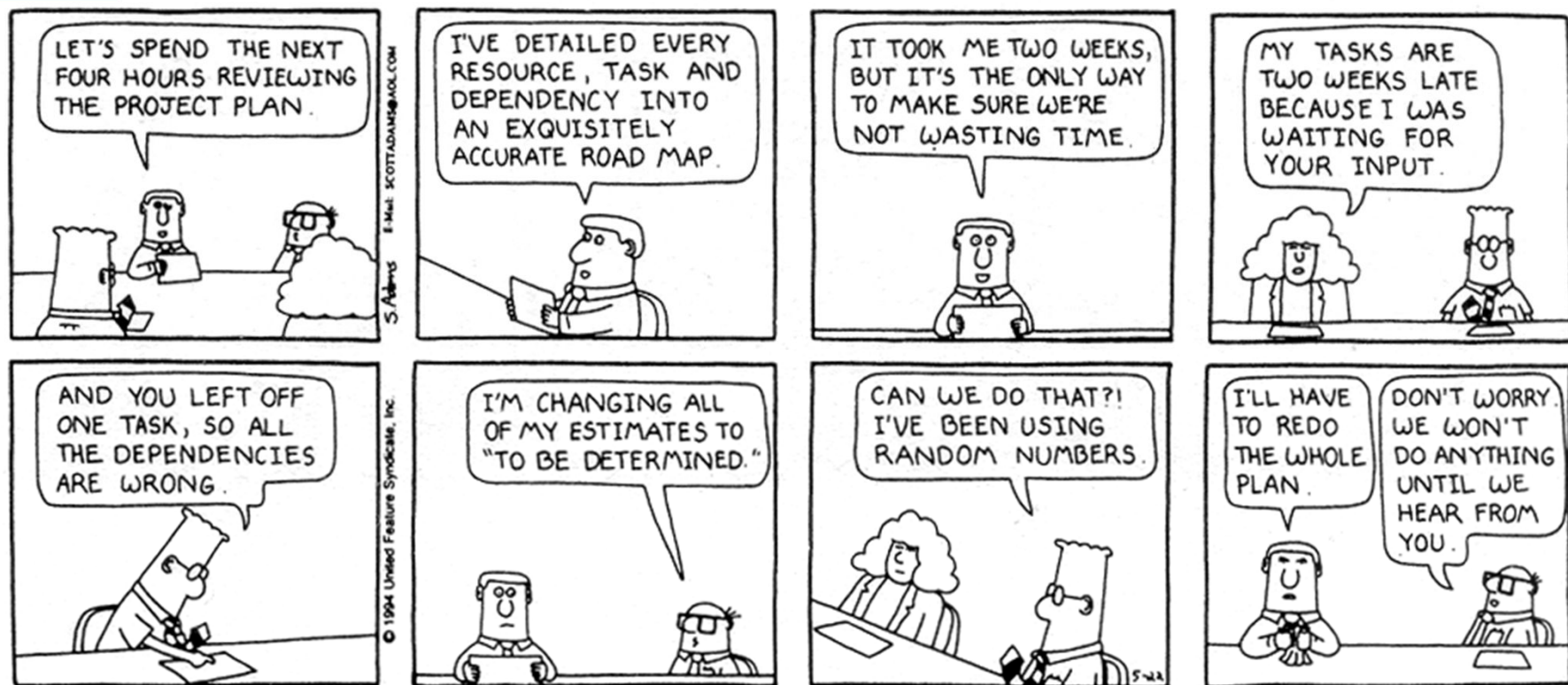# Info6007
Project Management in IT

Lecture 4 – HR Management
Dr Steven Sommer

Agenda

- Group Formation and Exercises
- Assignment Brief
- HR Management

Team Formation

○ Personal Team Role

- Fill in the Belbin Questions – 10 mins
- Score your sheet to determine your preferred team roles – 5 mins
- Read about yourself – 5 mins

Groups

- Form Groups
  - 5 people per group
    - ~14 groups of 5.
  - If possible, 4 different Belbin types
    - (Unless you choose not to disclose yours)
  - Definitely no more than 1 driver.
    - Spread out the Drivers & Coordinators
- In your group
  - Write down group number, names, and SIDs and give them to me
  - Exchange contact details
  - Explain to the other members your strengths and weakness and your Belbin type.
  - Complete page 1 of the Group work planning sheet – except "Scope" and "Deliverables"

Assignment Brief
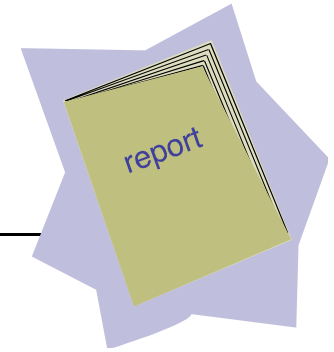
- Look through assignment
- Library Search:
  - Contact the library to help
  - Library > Databases > Sciences and Technology > Project Management
    - In class Proquest Demo
      - Set Date, "Information Technology", Project or Implementation, and "case"
  - Warning: Do not want teaching case studies (used in MBA classes)
  - This is hard.

- The university takes cheating and plagiarism very seriously

- Plagiarism and Academic Dishonesty will result in penalties. This includes a permanent record in the Uni database and may result in deduction of all marks for the assignment, failure in the unit, and/or expulsion from the University

- Please read the Uni policy on Academic Honesty carefully: http://sydney.edu.au/elearning/student/EI/academic_honesty.shtml

- We will use similarity detection software to compare your assignments with these of other students (current and previous) and the Internet. These similarity detection tools are extremely good

Plagiarism includes:

- not using quotation marks for copied material
- underquoting copied material, that is, quoting only some of the copied material
- not giving references or attributions where you use someone else's work
- not giving correct references or attributions of the material used
- using graphs/images from a source without appropriate references or attributions

Academic Dishonesty includes:

- fabrication of data
- copying from or using other student's work
- recycling previously submitted material- taking section(s) from a previous assignment and using them in a current one, whether in the same unit, another unit or another semester
- engaging someone else to complete an assessment or examination on one's behalf
- working too closely with other students whereby the bounds of legitimate cooperation are exceeded
- Making your work available to somebody else to copy

Info6007
Project Management in IT

Lecture 4 – HR Management
Dr Steven Sommer

Admin

- Required Reading
  - Schwalbe 8Ed: Ch 9: p343-348, 359-379.
  - Schwalbe 7Ed: Ch 9: p359-364, 373-394.
- Practice Questions:
  - Schwalbe 8Ed: Discussion Questions 2 & 7, Exercises 3 & 4
  - Schwalbe 7Ed: Discussion Questions 2 & 5, Exercises 3 & 4
- References
  - Schwalbe, K. 2015, *Information Technology Project Management (8e)* Cengage Learning
  - Schwalbe, K. 2012, *An Introduction to Project Management (Fourth Edition)*
  - Pinto, J. 2012, *Project Management: Achieving Competitive Advantage (Third Edition) Global Edition,* Pearson Education

Lecture Objectives

○ Describe and demonstrate the processes for organising and managing Human resources

○ Create and interpret a staff management plan, resource usage chart, and resource histogram

○ Understand resource loading, resource levelling, and over-allocation.

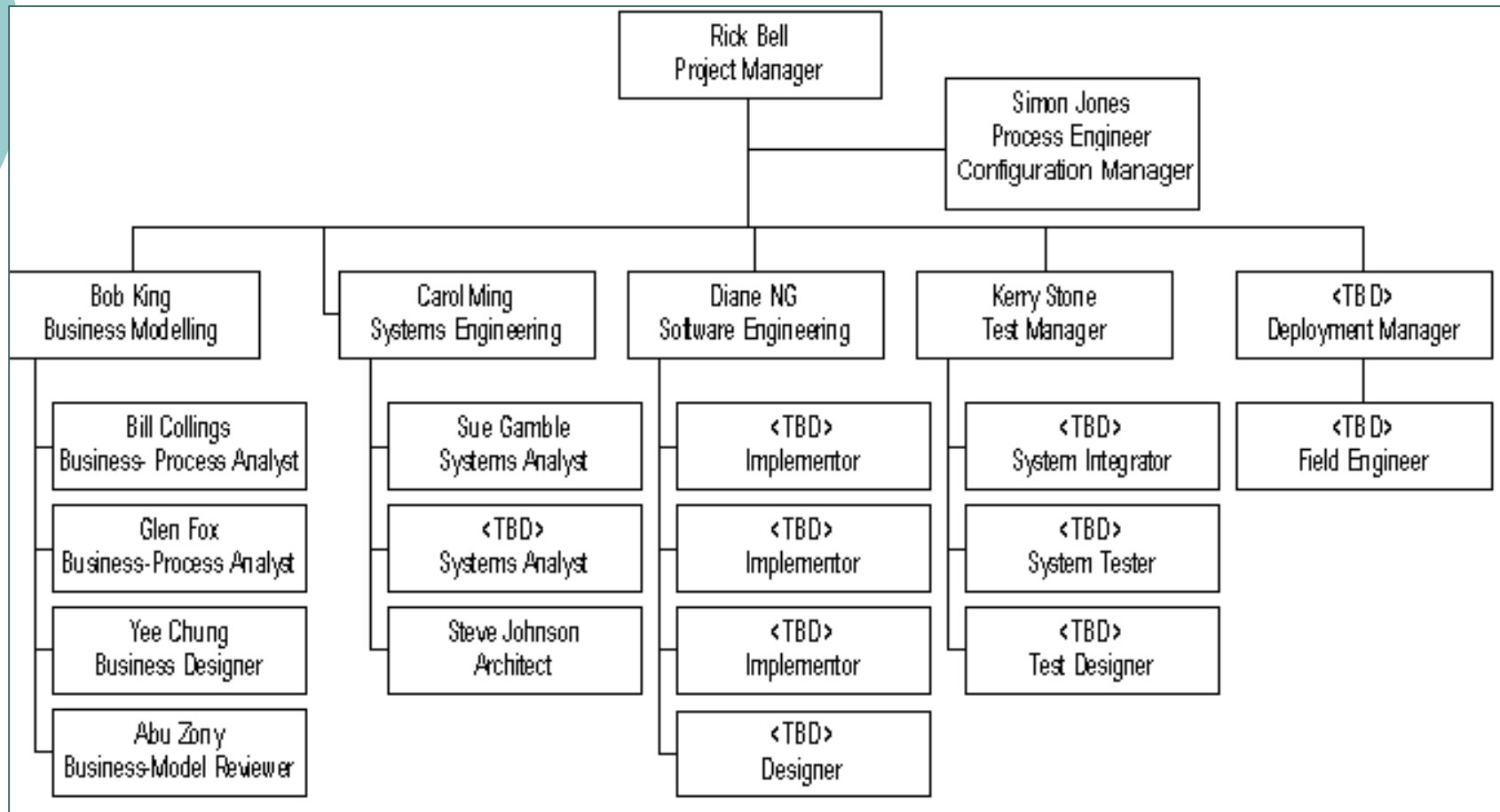○ Perform resource levelling for a project, using different heuristics

Agenda

- HR Management Processes
- Planning
  - Project Organisation Chart
- Managing
  - Resource Constraints
  - Staffing Management Plan
  - Resource Loading
  - Resource Levelling
- Developing
  - Team Development
- Leading - Week 12

What is Project Human Resource Management?

- Making the most effective use of the people involved with a project
- Processes include
  - **Planning human resource management**: identifying and documenting project roles, responsibilities, and reporting relationships
  - **Acquiring the project team**: getting the needed personnel assigned to and working on the project
  - **Managing the project team**: tracking team member performance, motivating team members, providing timely feedback, resolving issues and conflicts, and coordinating changes to help enhance project performance
  - **Developing the project team**: building individual and group skills to enhance project performance

Sample Organizational Chart

Source http://files.defcon.no/RUP/examples/creg/elaboration_e1/sdp.htm

Exercise

- ○ In groups
  - Draw up an organisational chart for a new company you wish to start.
  - Time: 5 mins

Agenda

○ HR Management Processes
○ Planning
  • Project Organisation Chart
○ **Managing**
  • **Resource Constraints**
  • **Staffing Management Plan**
  • Resource Loading
  • Resource Levelling
○ Developing
  • Team Development

Resource Management

○ Most projects are either constrained by:

- Time – Critical launch date
- Resources – Cannot exceed predetermined resource availability
- Mixed – Mainly resource constrained but with some time critical milestones.
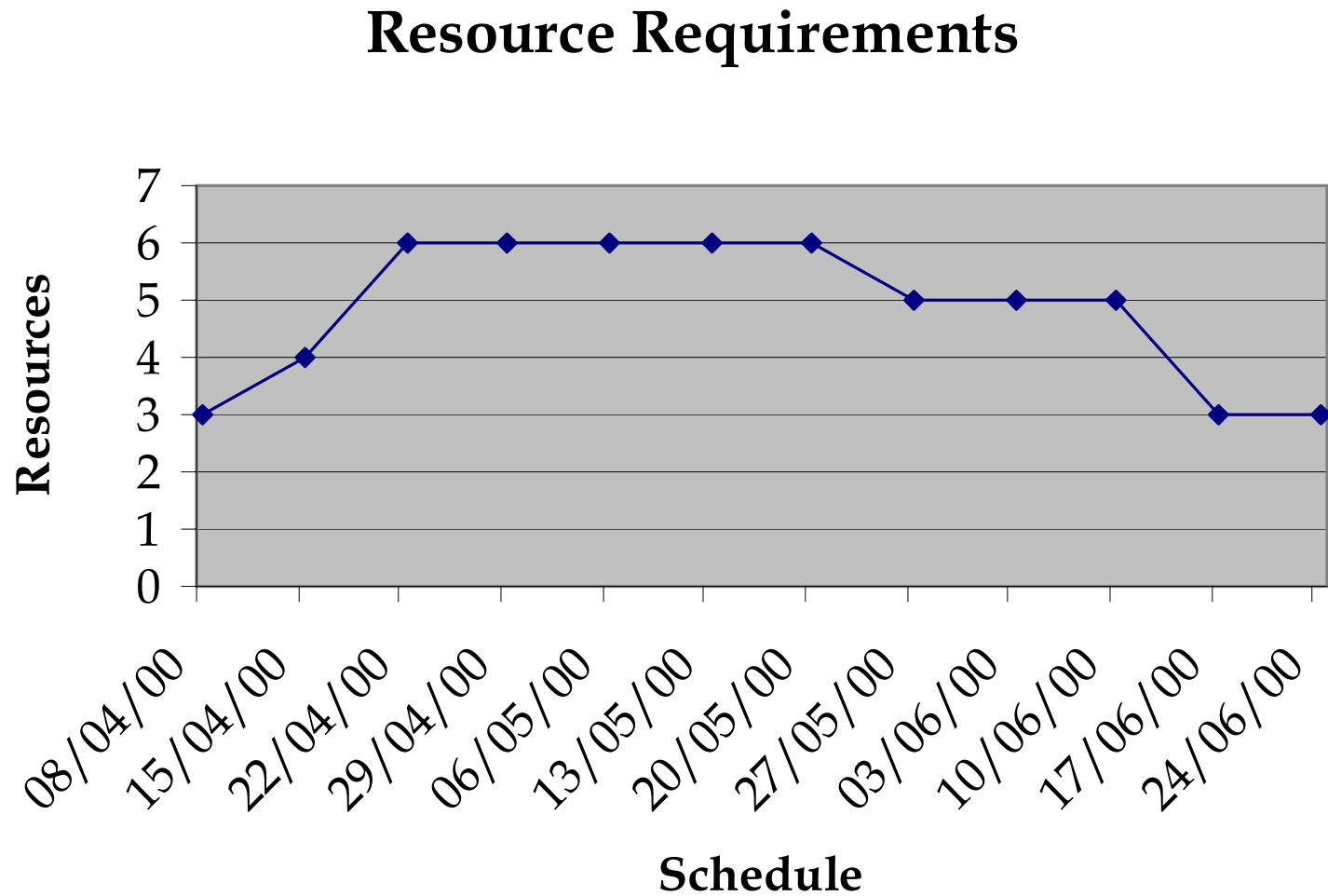
Staffing Plans

- A **staffing management plan** (Or Resource Plan) describes when and how people will be added to and taken off the project team
  - Length of assignment
  - Scheduled leave / project down-time
  - General role description
  - Any resource requirement gaps

Resource Plan in Table format

	08-Apr	15-Apr	22-Apr	29-Apr	06-May	13-May	20-May	27-May	03-Jun	10-Jun	17-Jun	24-Jun	BUDGET
Project Manager	5	5	5	5	5	5	5	5	5	5	5	5	60
Expert User	5	5	5	5	5	5	5	5	5	5	5	5	60
Senior Analyst	5	5	5	5	5	5	5	5	5	5	5	5	60
Programmer 1			5	5	5	5	5	5	5	5			40
Programmer 2			5	5	5	5	5	5	5	5			40
Training Developer		5	5	5	5	5	5						30
Days	**15**	**20**	**30**	**30**	**30**	**30**	**30**	**25**	**25**	**25**	**15**	**15**	**290**
People	**3**	**4**	**6**	**6**	**6**	**6**	**6**	**5**	**5**	**5**	**3**	**3**	

Resource Plan graph
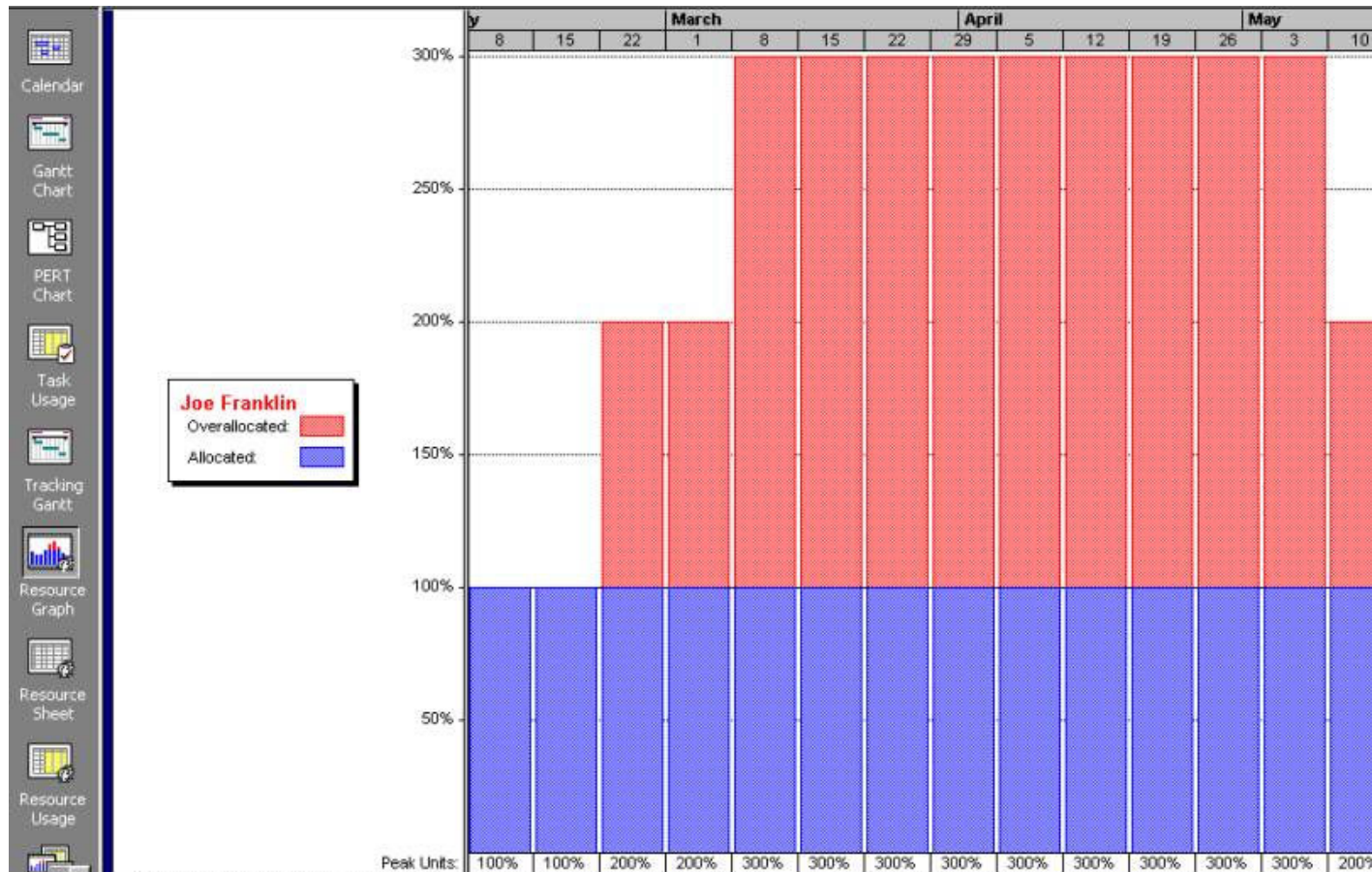

Resource Requirements

Exercise

- In groups, create an hourly staffing plan for the wedding reception day.
- Time: 10 mins

Resource Loading

- **Resource loading** refers to the amount of individual resources an existing schedule requires during specific time periods.

- Helps project managers develop a general understanding of the demands a project will make on the organization's resources and individual people's schedules.

- **Over-allocation** means more resources than are available are assigned to perform work at a given time.

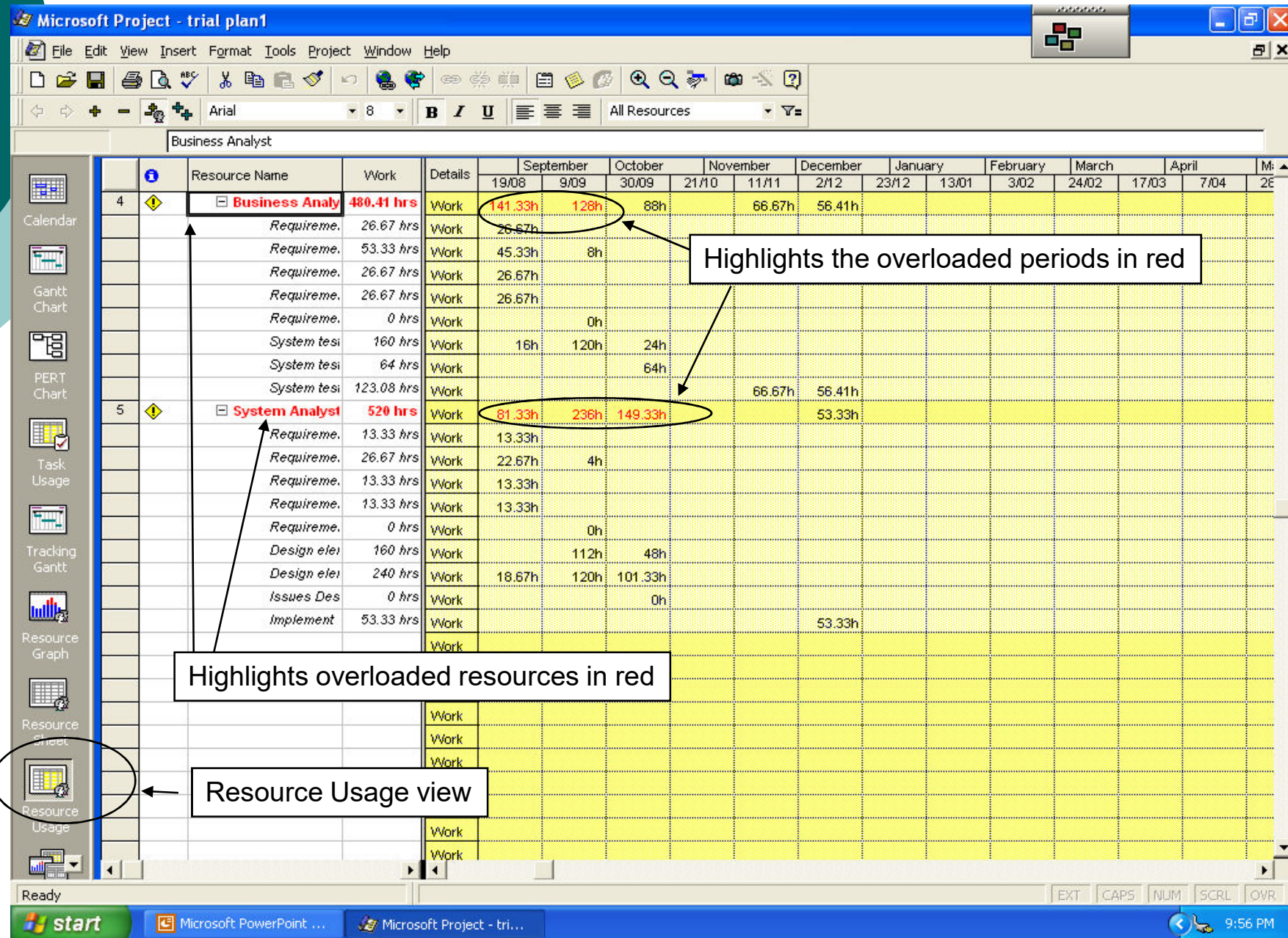 - Often also used to refer to an individual being over-allocated

Histogram Showing an Over-allocated Individual

Schwalbe: Fig. 9-7

What's wrong with this picture?

MS Project Version

Highlights the overloaded periods in red

Highlights overloaded resources in red
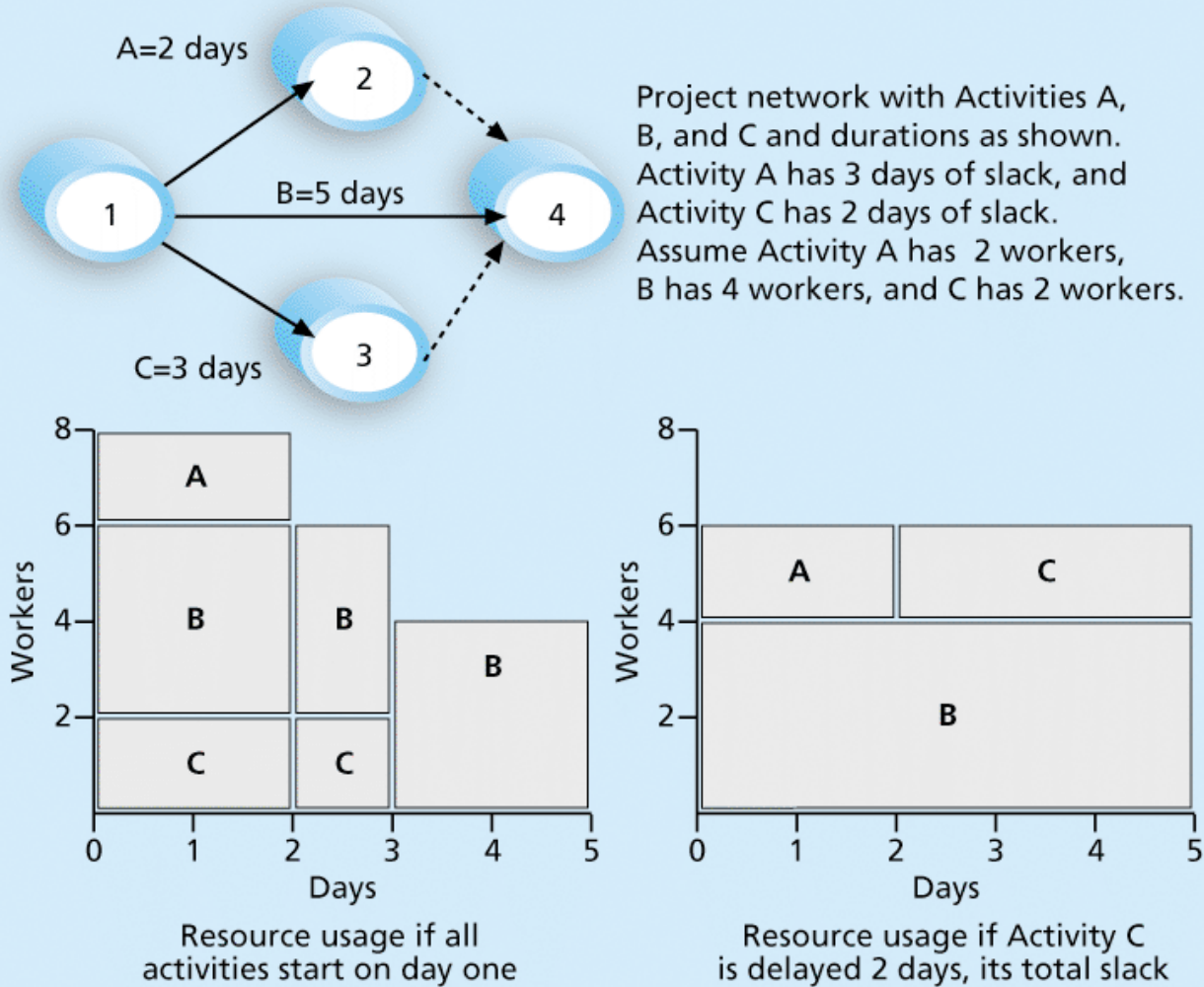
Resource Usage view

Resource Leveling

- Used to:
  - Create a smoother distribution of resource usage.
    - Less management required
    - Smoother cash flow.
    - Can improve morale [Schwalbe] – more stability for personnel.
  - Resolve resource conflicts (individual over-allocation) by delaying tasks.

- Usually lengthens task duration and sometimes lengthens project duration.
- Can do this automatically using PM tool functionality but can usually be done better manually (still using the tools)

Resource Leveling Example

Project network with Activities A, B, and C and durations as shown. Activity A has 3 days of slack, and Activity C has 2 days of slack. Assume Activity A has 2 workers, B has 4 workers, and C has 2 workers.

A and C could conceivably be done by the same workers

Prioritization Heuristics for Leveling

○ Give Resource Priority to
- Smallest amount of slack
- Greatest number of successor tasks
- Requiring the most resources
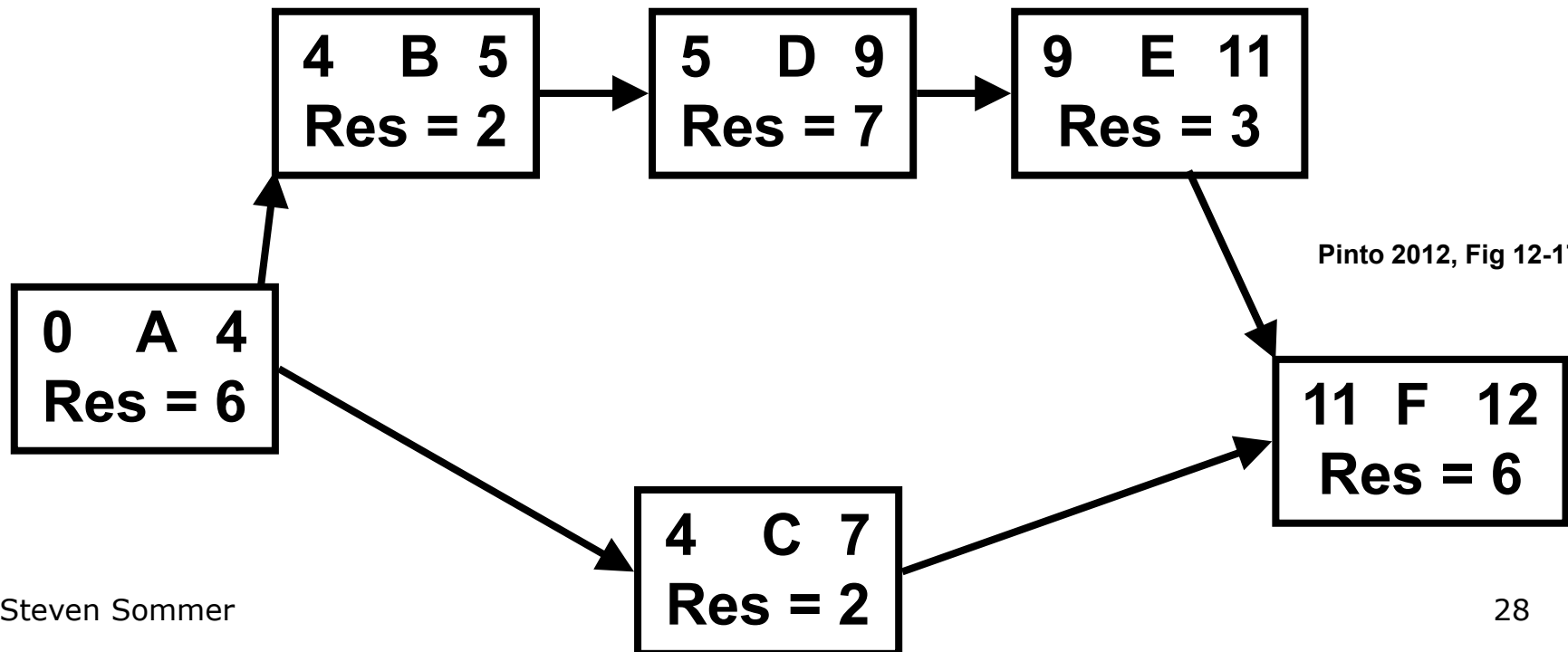- Smallest duration
- Lowest ID number (FCFS)

Quiz

○ Assume everyone in the class is a resource assigned to the "Info6007 Learning Project"

- Are there any over-allocations?
- Is this project resource balanced?

Exercise

○ Draw the resource usage chart (with boxes) for the AON below:

   a) With no levelling
   b) With levelling, without extending the completion date

Pinto 2012, Fig 12-17

Agenda

○ HR Management Processes
○ Planning
  • Project Organisation Chart
○ Managing
  • Resource Constraints
  • Staffing Management Plan
  • Resource Loading
  • Resource Levelling
○ **Developing**
  • **Team Development**

Developing the Project Team

- The main goal of **team development** is to help people work together more effectively to improve project performance
- It takes teamwork to successfully complete most projects
- Main Techniques:
  - Train them (next slides)
  - Create the environment for it (see week 12)
  - Intervene when required.

Team Training

- (Aside from functional and technical training) Team Building and Training activities can help people understand themselves, each other, and how to work better in teams. They can also accelerate the "teaming" process.
- Activities include
  - Teaming:
    - E.g.: Tuckman Model of Team Development: Forming, Storming, Norming, Performing, Adjourning
  - Physical challenges
    - E.g.: Build towers out of newspaper
  - Psychological preference indicator tools
    - Belbin, "Colours", MBTI (next slide), …
  - More in text.

Meyers-Briggs Type Indicator (MBTI)

○ MBTI is a popular tool for determining personality preferences and helping teammates understand each other. Also apparently good for dating ☺.

○ Four dimensions include:

- Extrovert/Introvert (E/I)
- Sensation/Intuition (S/N)
- Thinking/Feeling (T/F)
- Judgment/Perception (J/P)

○ NTs or "rationals" are often attracted to technology fields

○ "Computing" people vary most from the general population in being neither extroverted nor sensing

Class MBTI

		Sensation		Intuition	
		Thinking	Feeling	Feeling	Thinking
Introvert	**Judge**				
	Perceive				
Extrovert	**Perceive**				
	Judge				

The Sixteen Types

US Population Breakdown

The table organizing the sixteen types was created by Isabel Myers (an INFP person).

ISTJ 11–14%	ISFJ 9–14%	INFJ 1–3%	INTJ 2–4%
ISTP 4–6%	ISFP 5–9%	INFP 4–5%	INTP 3–5%
ESTP 4–5%	ESFP 4–9%	ENFP 6–8%	ENTP 2–5%
ESTJ 8–12%	ESFJ 9–13%	ENFJ 2–5%	ENTJ 2–5%

Estimated percentages of the 16 types in the U.S. population.[30]

Source "CAPT—Center for Applications of Psychological Type"