

577 WORKSHOP MS PROJECT TRAINING FRD: FEASIBILITY RATIONALE DESCRIPTION

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CS 577a Lecture

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OUTLINE

- Discuss 577 Mechanics
- MS Project – Short Tutorial
- Feasibility Rationale Description
 - Objective & Motivation
 - Audience
 - Document Outline

577 Class Mechanics

- Class Website
- Staff Cooperation
- Homeworks, Quizzes
- Team Assignments (Project)
- Status Check
- Forthcoming

So, how was the journey so far?

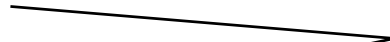
Project Plans May Look Complicated, But They Aren't!

- Why?



Objectives

- What?

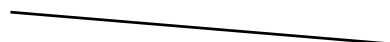


Milestones & Products

- When?



- Who?



Responsibilities

- Where?



- How?



Approach

- How Much?



Resources

- Whereas?



Assumptions

Why have a 'Plan'?

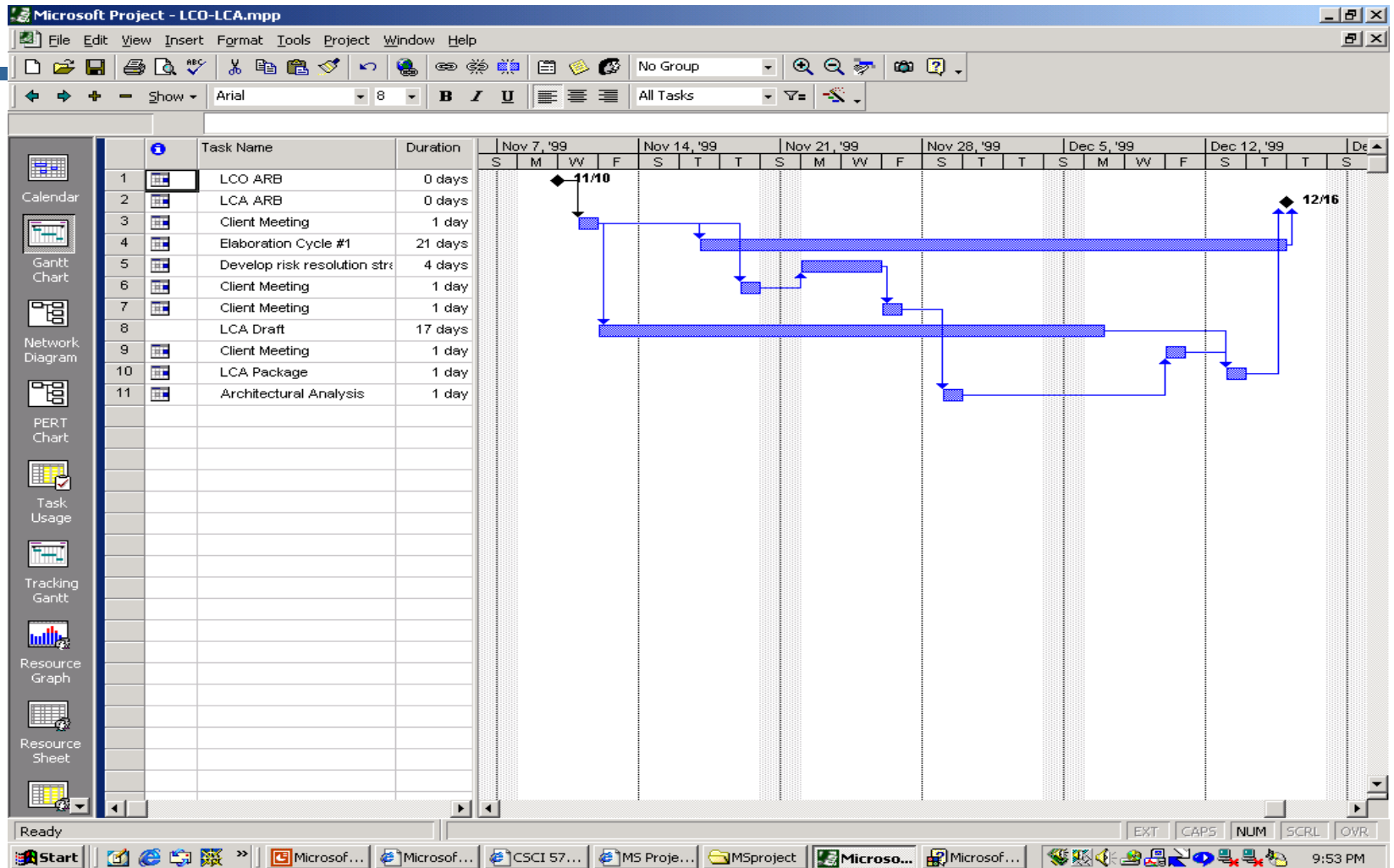
- The underlying tenet in SE is that there should be no surprises – clients hate surprises!
- Multiple stakeholders, limited resources and schedule
- Obtaining and maintaining client sponsorship
- Balancing project critical factors
- Foresight of risks
- Enhanced predictability

What if we never provided we you with a CS577 class schedule and simply posted assignments 4 days in advance?

Gantt Chart

- Represent tasks as lines
- Conveys project status information and calendar-oriented information
- Demonstrate the start dates, finish dates and duration of the activities of a project
- Easier to arrange schedule and personnel

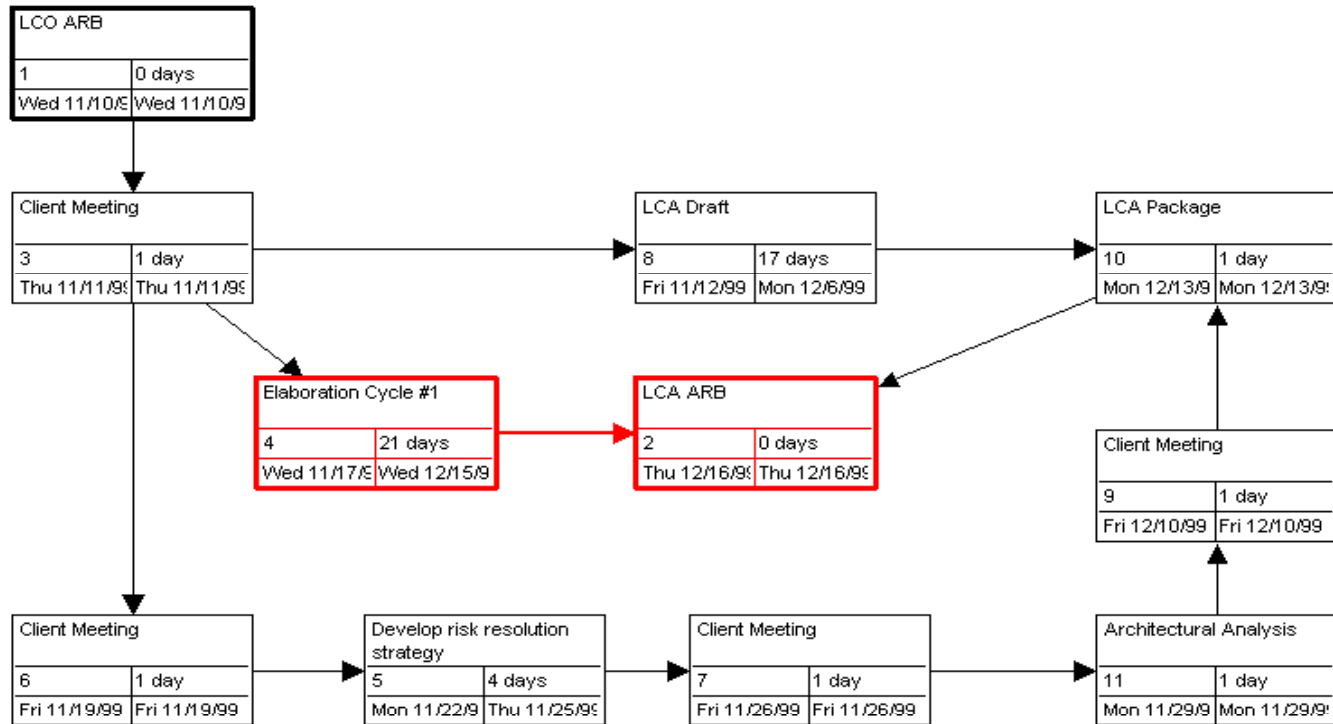
Easy Winwin Example – Gantt Chart



Pert Chart

- A network or acyclic directed graph
- Nodes represent project activities and their associated duration
- Links represent precedence relations between pairs of activities
- Critical path between start and finish

Easy Winwin Example – Pert Chart



MS Project DEMO

In this quick tutorial we'll learn:

- Breaking your project into tasks, phases, and milestones
 - Enter tasks
 - Delete tasks
 - Recurring tasks
 - Milestones
- Getting task done in the right order, at the right time
 - Create a task link
 - Remove a task link
 - Specify working times for a task
 - Set a deadline date for a task
- Assembling your resources and specify working time
 - Create a resource list
 - Set the working time calendar
 - Assign resources to a task
 - Remove a resource to a task

Objective

- Ensure feasibility and consistency of other LCO, LCA package components
 - OCD, SSRD, SSAD, LCP, Prototype
- Demonstrate viable business case for the system
- Identify shortfalls in ensuring feasibility, consistency, and business case as project risk items for LCP

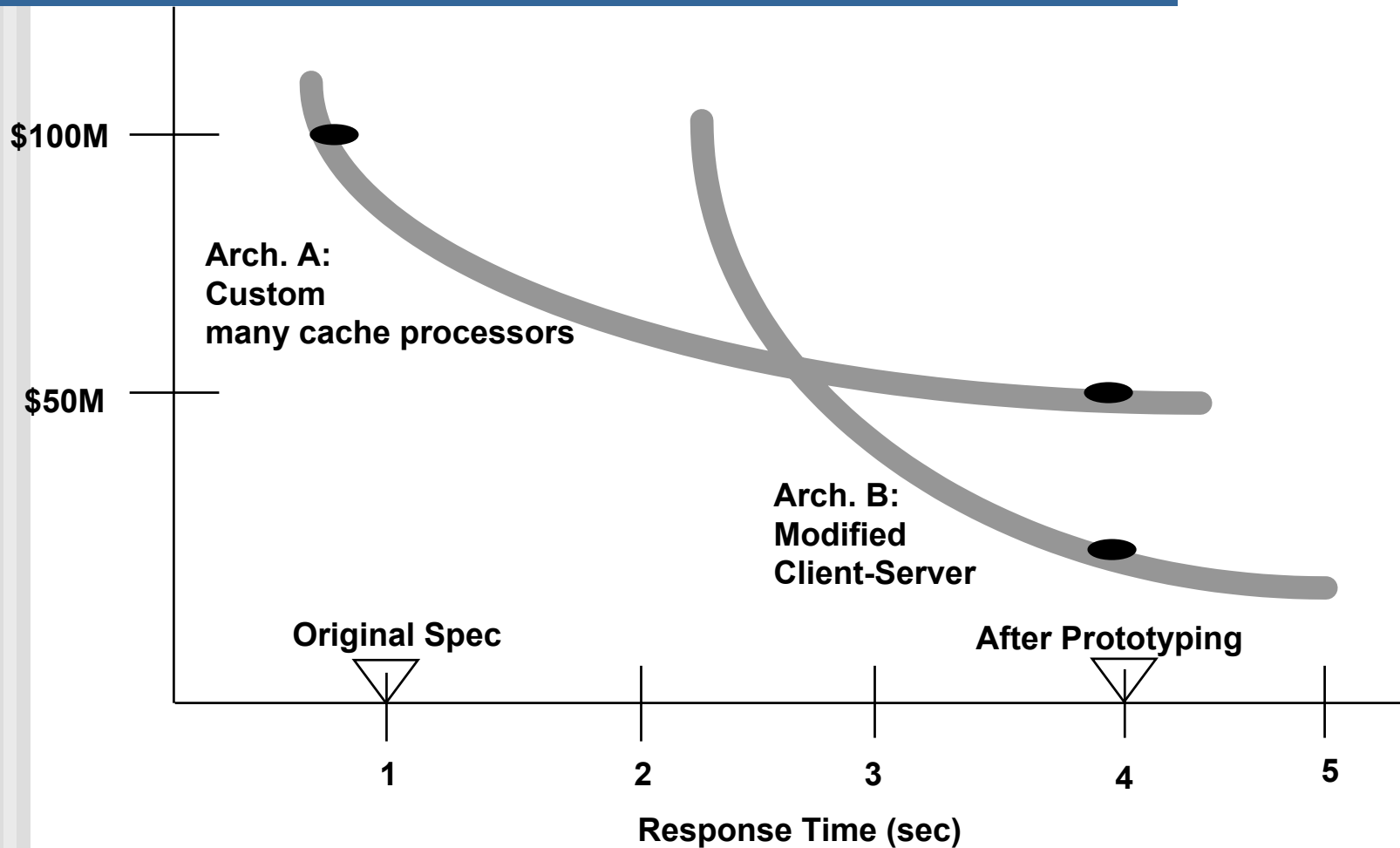
Pass/Fail Condition

- The feasibility rationale covers the key pass/fail question:
 - “If I build this product using the specified architecture and processes, will it support the operational concept, realize the prototyping results, satisfy the requirements, and finish within the budgets and schedules?”

The Need For Feasibility

- A commercial customer specified a natural language interface for an otherwise simple query system. The project was cancelled after the natural language interface caused a factor-of-5 overrun in project budget and schedule.
- A government customer specified a 1-second response time for an extremely large transaction processing system. Meeting this requirement involved a custom architecture and a \$100M project. The customer authorized a prototyping activity, which determined that 90% of the transactions needed only 4-second response time. With this performance requirement, a commercial-technology-based solution was achieved for \$30M.

Need for Feasibility Rationale



Content

- Business Case Analysis
 - Satisfactory (Win-Win) return on investment
- Consistency and Feasibility Rationale
 - If we build to this architecture,
 - We will support the operational concept,
 - Be consistent with the prototypes,
 - Satisfy the requirements,
 - And stay within the budgets and schedules in the plan

Audience and Participants

- Primary audience: ARB members
 - Key system stakeholders
 - Experienced peers
 - Technical Specialists in critical areas
- Also valuable to stakeholders outside ARB
- Project manager responsible for content
 - OCD author should prepare business case
 - All stakeholders responsible for consistency and feasibility via Win-Win negotiations
 - Agreements can be contingent on demonstration of feasibility

1. Introduction

- Describe the purpose of the document, and the intended audience
 - For a commercial system, this would involve a business case analysis demonstrating an acceptable financial Return-On-Investment (ROI).
 - For a research and education support system, the rationale would be expressed in terms of improvements in research and educational effectiveness as expressed by the users

1.1 Purpose of the FRD

- To demonstrate that a system built using the specified architecture and life cycle process will
 - Satisfy the requirements
 - Support the operational concept
 - Remain faithful to the key features determined by
 - the prototype
 - Be achievable within the budgets and schedules in the life cycle plan

1.1 Purpose of FRD (continued)

- To rationalize development decisions in a way the prime audience (the customer and users) can understand
- To enable the customers to participate in the decision process and to express their satisfaction with the product

1.2 References

- Provide complete citations to all documents, meetings and external tools referenced or used in the preparation of this document
- Useful for consistency checking and traceability

2. Product Rationale

- Rationale for the product being able to satisfy the system specifications and stakeholders (e.g. customer, user).
- Should be consistent with:
 - Development costs (from LCP)
 - SSRD and SSAD for Requirements satisfaction

2.1 Business Case Analysis

- Describe the impact of the product in mainly monetary terms.
 - *How much does it cost to develop and to operate?*
 - *How much added value does it generate?*
 - *How high is its return on investment?*
- Non-monetary factors may be also decisive. For instance, “added value” can include the improved quality of the service provided by the product.