

# Project Management

## Unit 3: Project Budgeting and Estimation

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# Interface Coordination and concurrent Engineering



## Interface Co-ordination and concurrent engineering

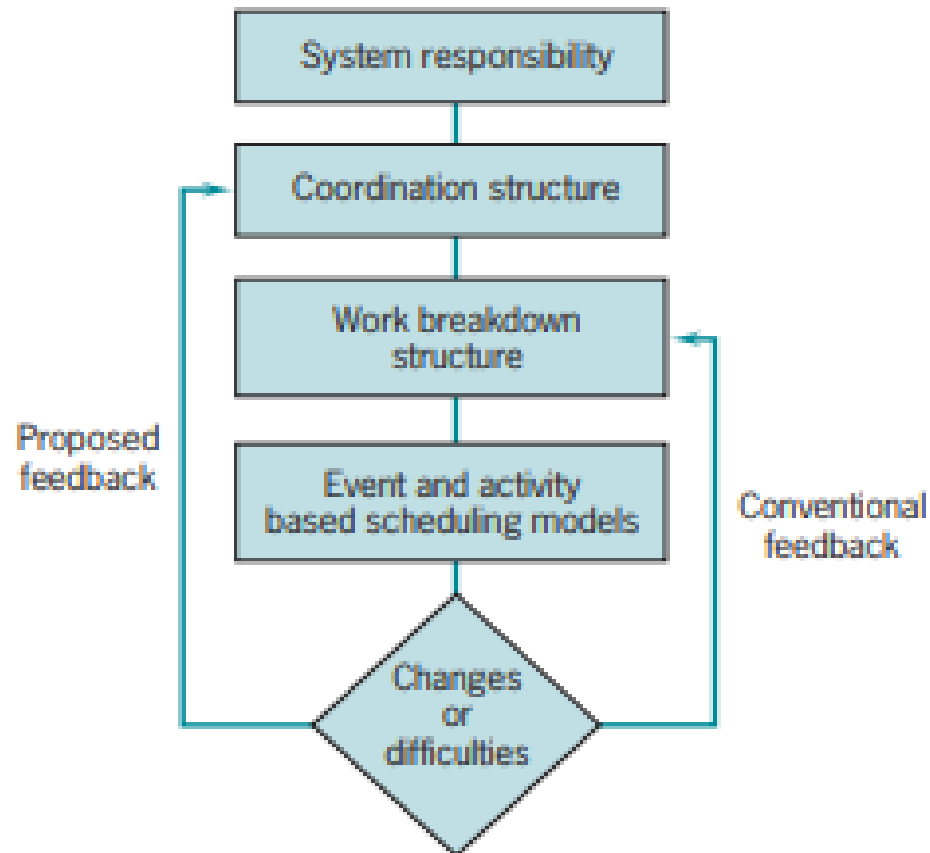
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- The intricate process of coordinating the work and timing of the different groups is called **integration management**.
- **Interface coordination** is the task of **coordinating** work across multiple groups. Multidisciplinary teams (MTs) are often used to facilitate the **coordination** of technical issues.
- An **interface** is defined as a point of connect between entities working on a common **project**.
- This point can be:
  1. **Physical** - Physical interaction between components.
  2. **Functional** - Functional Requirements between systems.
  3. **Contractual** - Interactions between subcontractors/suppliers.



# Coordination structure model of project management.

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## Interface Co-ordination and concurrent engineering

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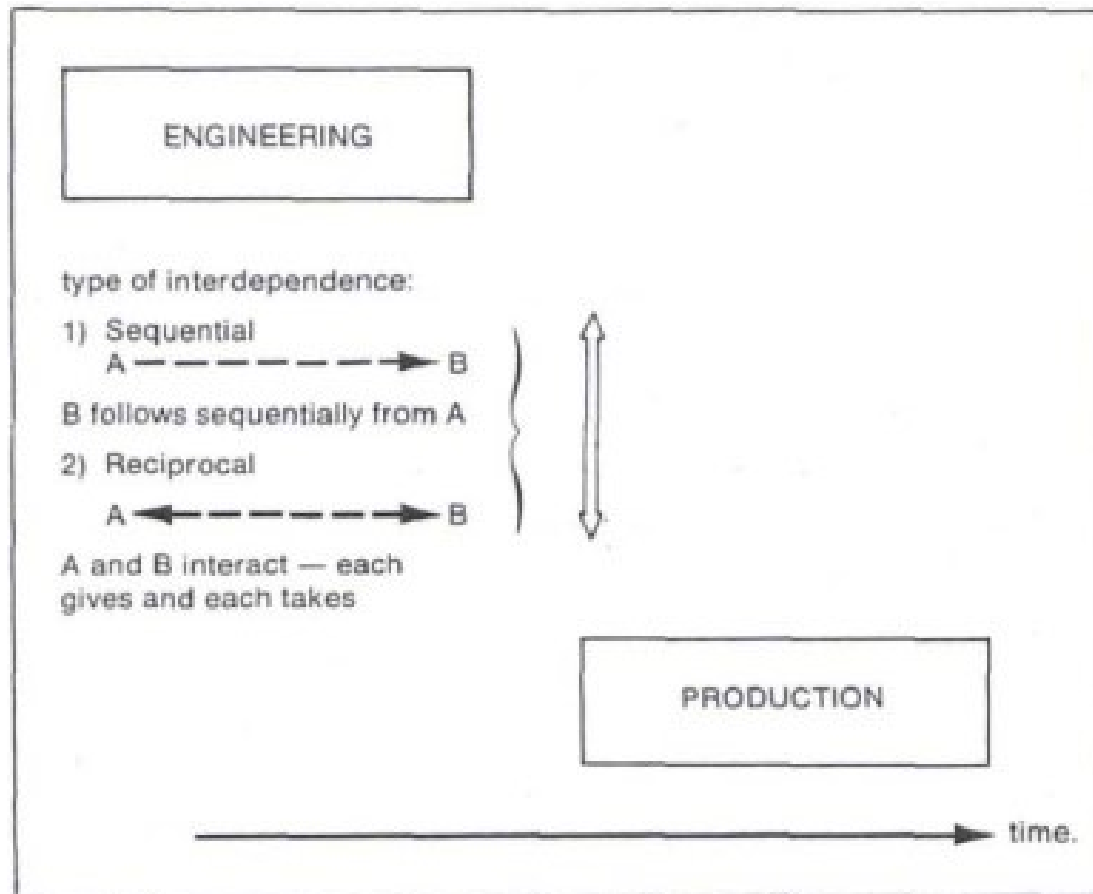
- The linear responsibility chart is a useful aid to the PM in carrying out this Coordination task.
- It displays the many ways the members of the project team must interact and what the rights, duties, and responsibilities of each will be.
- A key point is that mapping all dependencies in the project can show a complete description of project interfaces.
- Recent work on managing the interfaces focuses on the use of MTs to plan the project as well as design the products/services the project is intended to produce.
- There is general agreement that MT has a favorable impact on product/service design and delivery.

## Interface Co-ordination and concurrent engineering

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- The use of MTs in product development and planning is not without its difficulties.
- The PM's negotiating skill will be tested in dealing with intergroup problems, but the outcomes of MT seem to be worth the risks.
- Team members with different technical backgrounds will view the product design task differently. Therefore, initial design ideas will be in conflict.
- e. g.-Project of Mumbai –Pune Express way(1998-99) budget-Rs. 2kCr, Toll outstanding-22370Cr.
- Conflict resolution will result in design improvement, which alters the production plans that are simulated to test manufacturing feasibility.
- Conflict avoidance, on the other hand, will prevent design improvement.

# Types of Interdependence found in Project



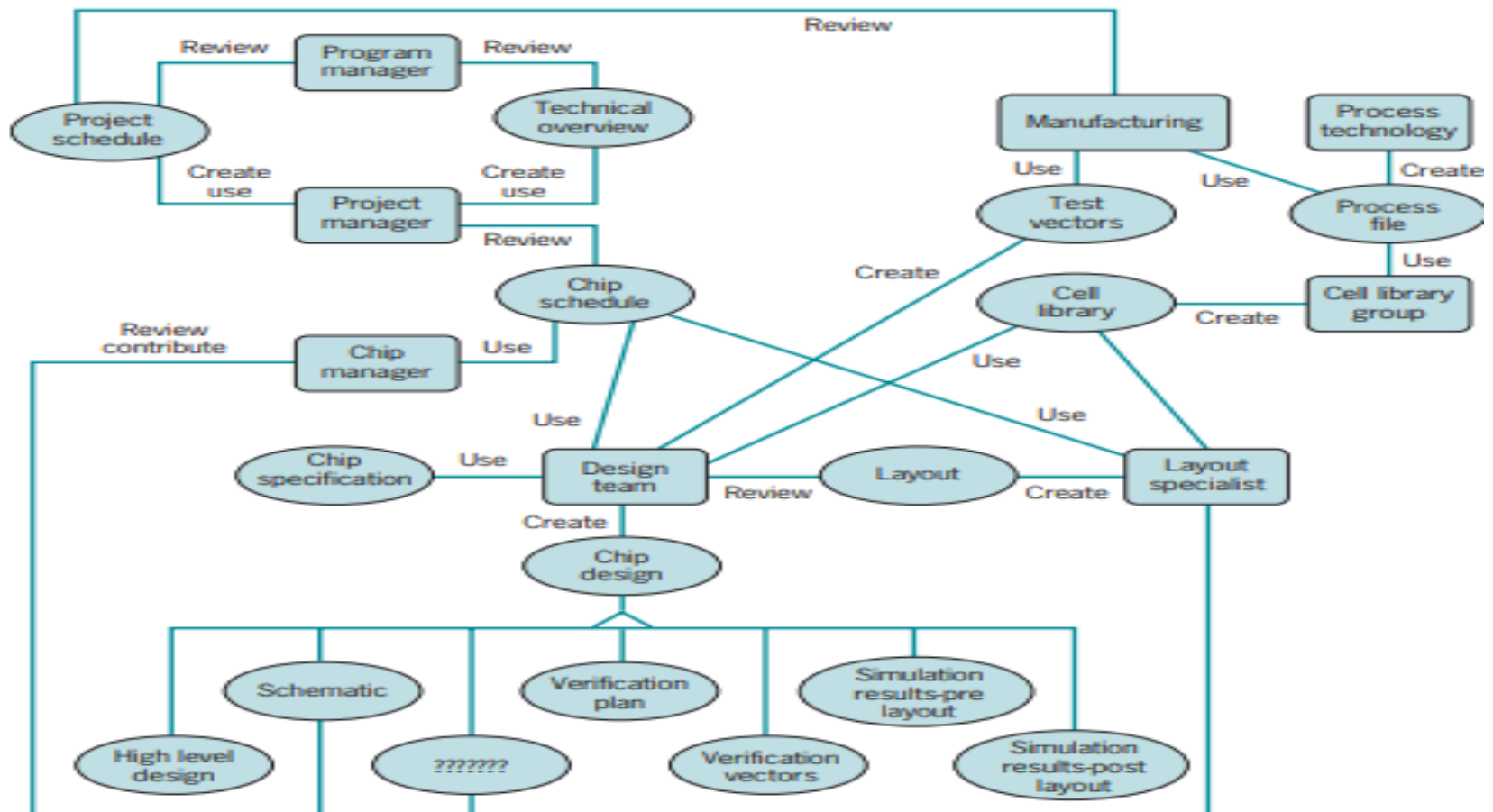
## Types of Interdependence found in Project

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- The type of integration required at an interface is a function not just of the differentiation at the interface, but also of the interdependence between the interfacing subsystems.
- For projects the two key types of interdependence are as: sequential and reciprocal
- Sequential interdependence is where one subsystem follows straight on from another — construction from a completed design, for instance
- Reciprocal interdependence is when each gives and each takes; this is the hardest type to manage.
- Integration by plans and programs may be sufficient for sequential interdependence but for reciprocal cases the more complex mechanism of personal contact is needed



# Interface map



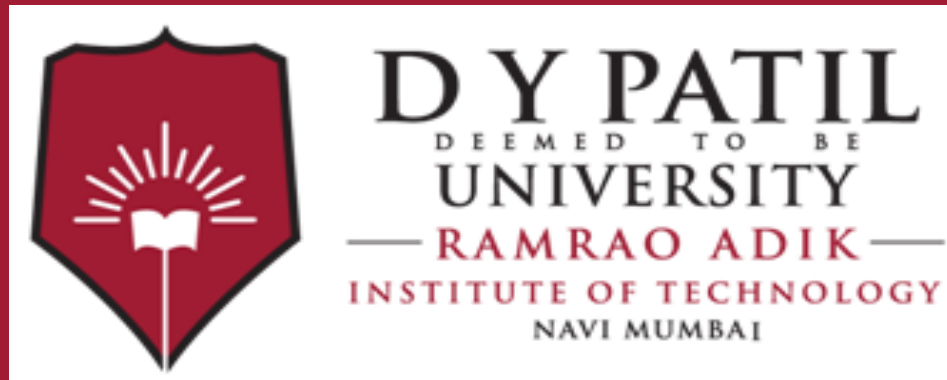
**Figure 6-11** Interface map of silicon chip design. *Source: Bailetti et al., 1994.*

## Interface Map

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- an **Interface Mapping** is used to link a source **interface** to a target **interface** via a **mapping**
- At runtime, you can't have an **interface mapping** without a **mapping** and a **mapping** without an **interface mapping** - they need each other.





**Thank You**