

***An-Najah National University  
Faculty of engineering  
civil engineering department  
Presentation show***

**CHAPTER 12**

***Construction  
Delay Claims***

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# Major Topics

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- Introduction and Definition.
- Delay Claims and Change Order.
- Reasons for Delay Claims
- Types of Delays Resulting in Claims.
- Delay-Claims Prevention.
- Project Schedule Documentation.
- Delay-Claims Resolution.
- The Importance of CPM Schedule in Delay Claims.
- Methods of Schedule Analysis.
- Float Ownership.

# INTRODUCTION AND DIFINITION

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- A **DELAY** is an event or a condition that results in finishing the project later than stipulated in the contract .
- A **CLAIM** is a request from one contracting party(contractor) to another party for additional compensation, a time extension, or both .
- If we put the two terms together, a delay claim simply means a claim related to delay.
- Claims may be initiated by any project participant against any other participant. An architect may file a claim against an owner or vice versa. A supplier may file a claim against a contractor or the owner and so on.
- A claim is not always a negative action, nor does it automatically indicate a confrontation. Many claims are legitimate and are routinely resolved to the satisfaction of both parties.

# DELAY CLAIMS AND CHANGE ORDER

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- A delay claim may ask for a time extension, monetary compensation, or both. Delays that result in claims are classified as excusable, nonexcusable and concurrent.
- A claim for only monetary compensation often forms the basis for a change order (**CO**). A **CO** may be initiated at the request of the owner, contractor, sub contractor and so on. For example , an owner may want to change the color of the walls, the type of floor tile, or the type of light fixtures from that specified in the contract. In this case owner should submitting a request for quotation (**RFQ**).
- To minimize the number of COs, owners should do a thorough job of defining the scope of the project and selecting a competent designer. Many projects suffer from scope-creep syndrome, in which COs keep adding to the project budget and put it at levels far beyond what the owner originally planned.

# REASONS FOR DELAY CLAIMS

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- Claims usually occur because of unexpected events or development , regardless of who is at fault.
- Unlike projects in other industries, no two construction projects are the same. Even when two projects have the same design and are performed by the same company , they may differ with regard to site conditions, climate, regulations, subcontractors, market condition, and team members. When the projects are substantially similar, a claim may arise during any construction project for several reasons.

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- **Differing site conditions**

A contractor may initiate a claim if the actual site conditions differ from those mentioned in the contract documents. For example existing of ground water that are not mentioned in contract document, or differing in soil types that mentioned in geological report.

- **Design Errors or omissions**

Errors or omissions in the design require the contractor to perform additional work than originally contemplated. However not all design errors or emissions from the basis for a compensable claim. Judges have rejected some claims when an error was patently obvious and a construction professional could have discovered it during the bidding or negotiation phase.

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- **Changes in Owner's Requirements**

Changes in the owner's requirement may constitute in the contract and provide a foundations for COs .

- **Unusually Adverse Weather**

- **Miscellaneous Factors**

Failure of the owner to provide a project site, a late notice to proceed (NTP), labor strikes, a delay in the delivery of the owner's furnished equipment....

- **Force Majeure**

- This terms usually involves three important elements:

- 1.sth superior, over whelming, or overpowering(can not be prevented).
- 2.sth unexpected or cannot be reasonably anticipated or controlled.
- 3.sth destructive or disruptive effect on the construction process.

Examples: earthquakes, hurricanes ,tornados, wars..

# TYPES OF DELAYS RESULTING IN CLAIMS

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- 1) **Excusable delays** : it entitles the contractor to additional time to complete the contract work
  - a) Noncompensable delays: it is beyond the control and not the fault such as weather conditions, natural disasters, wars...
  - b) compensable delays: caused by the owner or the designer.
- 2) **Nonexcusable delays** : it caused by contractor and does not entitle the contractor to either a time extension or monetary compensation.
- 3) **Concurrent delays**: involves a combination of two or more independent causes of delay during the same period. Often, a concurrent delay involves an excusable delay and non excusable delay.<sup>1</sup>

# DELAY-CLAIMS PREVENTION

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- 1) Baseline schedules that do not show logic.
- 2) Baseline schedules with dates rather than logic.
- 3) Overuse of constraints.
- 4) “Erasing Footprints”.
- 5) Unrealistic baseline schedule.
- 6) Schedules with logic errors.
- 7) Skipping periodic updates.
- 8) Lack of proper documentation.
- 9) Lack of a reasonable time contingency.

# PROJECT SCHEDULE DOCUMENTATION

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- Documentation generally means saving the information in an organized manner for possible future retrieval.
- For delay claims prevention and resolution the following 14 pieces of information must be documented:-
  - 1) The project baseline schedule that the owner accepted.
  - 2) Periodic schedule updates.
  - 3) Change orders.
  - 4) project manager's daily log, includes information such as :
    - a) weather conditions .
    - b) Work performed during that day .
    - c) The number of workers on-site (including work and overtime hours).
    - d) Equipment on-site and its condition
    - e) Any material delivered to the site
    - f) Materials used and stored on-site
    - g) Any telephone calls.
    - H) Any visitors to the site
    - i) Any accidents that occurred on-site.
    - j) Any other events that may be related to the project.

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- 5) Job diary, contain personal observations, suggestions, and opinions.
- 6) Submittal records, such as shop drawings and material samples.
- 7) Records of any transmittals.
- 8) Correspondence with the owner, architect or engineer, subcontractors, vendors and suppliers, and other contracting parties.
- 9) Correspondence with the home office.
- 10) Meeting minutes. subject, date, location of meeting, names of people.
- 11) Procurement records: materials and equipment orders .
- 12) Government records include permits, code nonconformance reports, and (OSHA) forms and citations.
- 13) Record of payments (owner to general contractor and general contractor to subcontractors and vendors).
- 14) Photos of important events.

# DELAY-CLAIMS RESOLUTION

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- The following five methods are usually used in resolving claims:
- 1) **Negotiation**, it is the most direct method for resolving any type of construction claim.
- 2) **Mediation**, When negotiation does not work due to lack of trust or a lack of skills, **mediation** may be an option. A mediator may be an individual or a team.
- 3) **Dispute review boards (DRBs)**: it resolve disputes as they arise rather than waiting until the end of a project to settle claims.
- 4) **Arbitration** defined by the (AAA) as a "referral of a dispute to one or more impartial persons for final and binding determination.
- 5) **Litigation** : the last resolution that can be followed to go to judges and it is lengthy and expensive.

# THE IMPORTANCE OF CPM SCHEDULE IN DEALY CLAIMS

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- CPM schedules are important in delay claims because, on the one hand, the claimant usually provides at least two CPM schedules-one without the impact of the change and one with the impact- in an attempt to prove that the change caused the claimed delay. On the other hand, the investigator builds several CPM schedules, each representing one factor isolated from other factors, to show exactly how much of the alleged delay, if any, can be attributed to the change.

# METHODS OF SCHEDULE ANALYSIS

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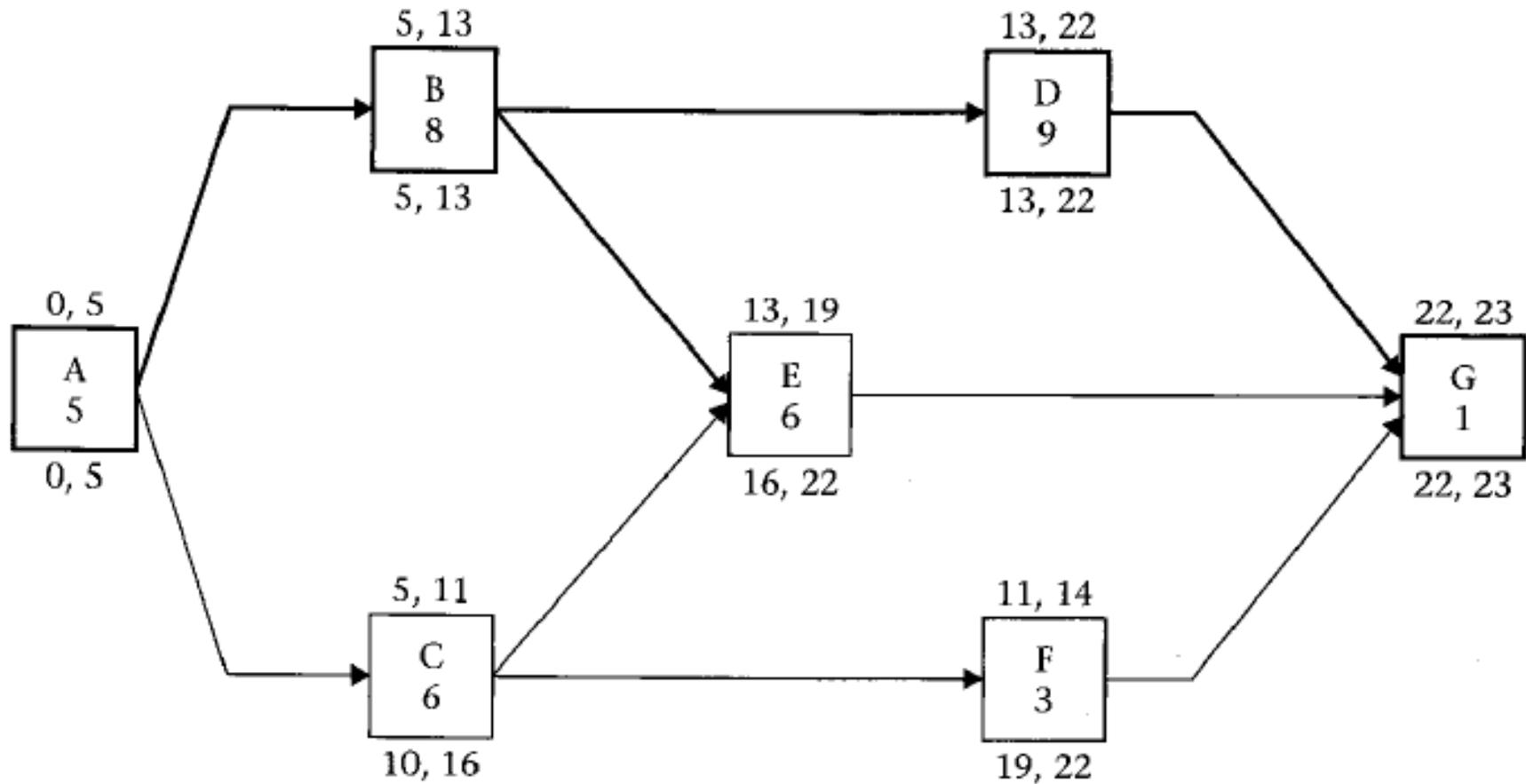
- **As-Build schedule:** reflect what actually happened in the field, activities plotted by their real start and finish with no logic ties.
- **Updated impacted schedule:** The original schedule is updated with progress information and then compared with impacted completion date on another schedule on which a delay is included.
- **As-Planned schedule:** describes the manner in which the contractor intended to build the project.
- **Comparison schedule:** based on comparing two schedules for a delay claims, one without the causative factors and another with causative factors(impacted schedule)
- **Accelerated schedule:** the contractor try to collect the cost associated with the acceleration of the project so he can finish by contract finish date. The owner make sure that the contractor used all available float without crashing any schedule.
- **Recovery schedule:** same as accelerated schedule in trying to compress the schedule to finish in the certain time.

# FLOAT OWNERSHIP

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- Float (sometimes called slack) may be defined technically as the maximum amount of time an activity can be delayed from its early start date without delaying the entire project.
- In the next example owner issued a work order to the contractor that would delay the start of activity E till day 16(LSD), would the contractor be entitled a time extension, compensation, both or neither?

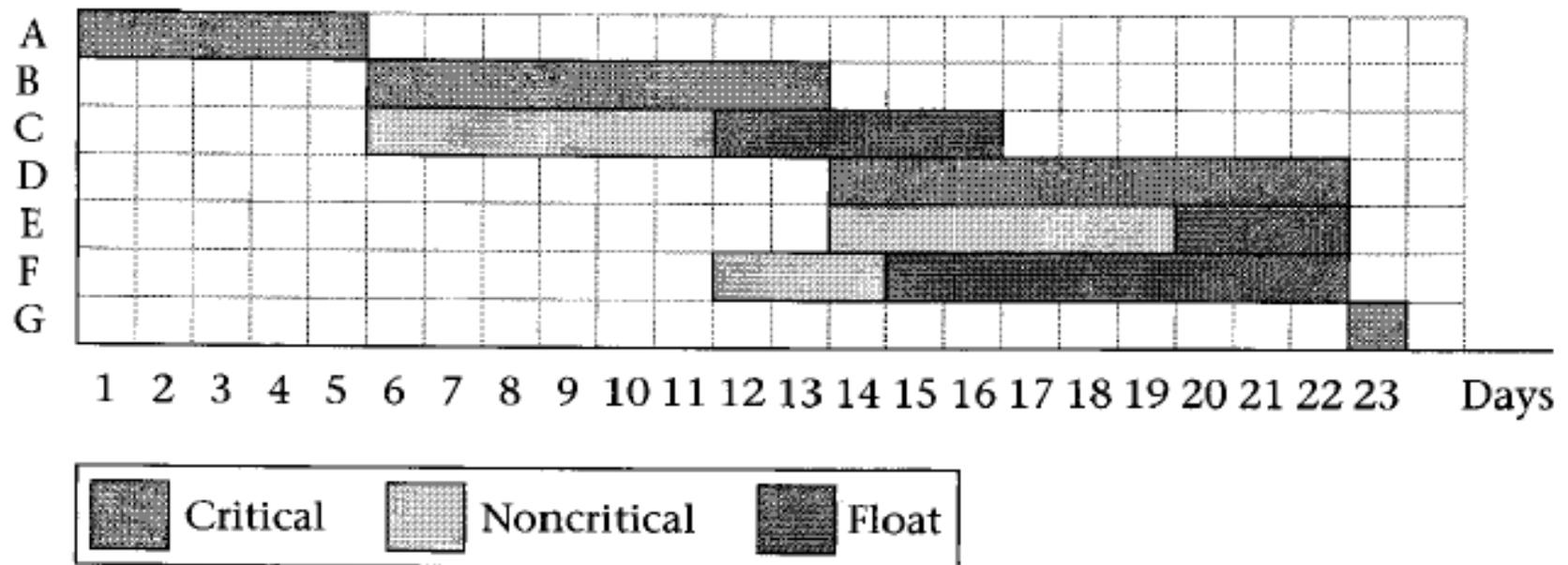
# EXAMPLE 12.1



**FIGURE 12.1** Logic network for example 12.1

## EXAMPLE 12.1 solution

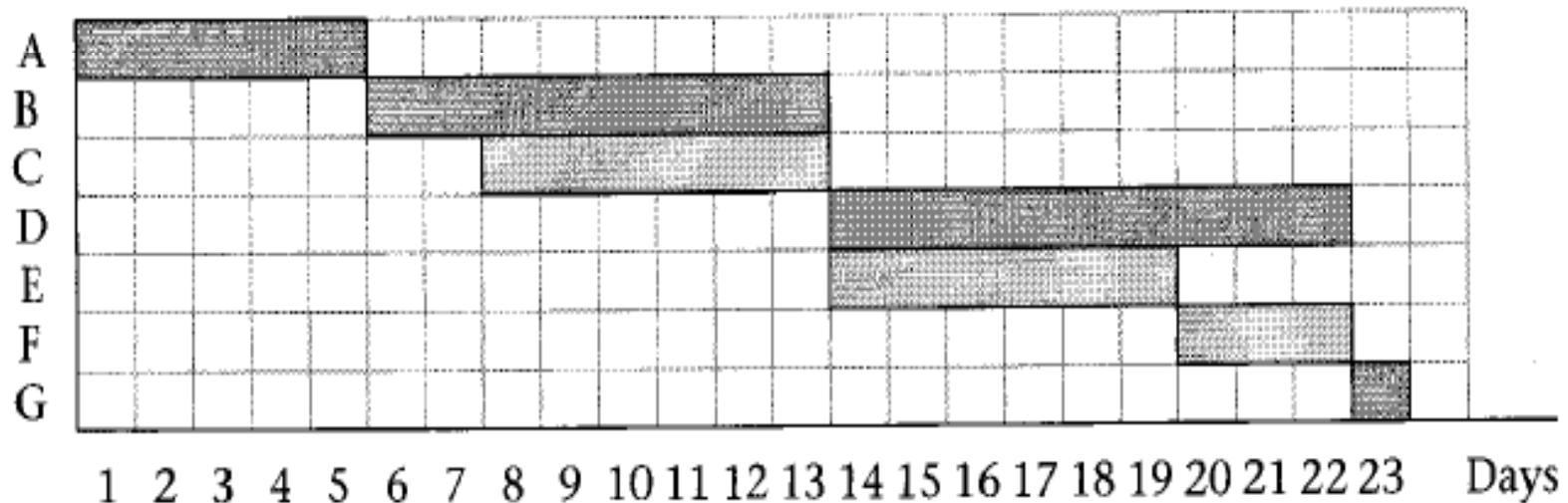
- We see that activities C,E and F have total float 5,3 and 8 respect.
- Now see the schedule as bar chart.



**FIGURE 12.2** Bar chart for example 12.1, showing float

## CONT EXAMPLE 12.1

- Assume these three activities require the same crew, for the most efficient use of crew contractor choose the plan shown which indicates that all activities are critical.



**FIGURE 12.3** Final plan for example 12.1