Project Management for Telecommunications Projects - Ensuring Success

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Definition: Project

What is a project?

- A temporary endeavor undertaken to produce a unique product or service, with limited resources,
  - Start and end dates
  - Clearly defined objective
  - Budget and other resource constraints
  - Temporary team
  - Perhaps initially defined deliverables
  - Performed by people

Project Initiation

Projects are initiated either to take advantage of an opportunity or to solve a problem

i.e.

- Respond to a new customer service request
- Improve trouble handling
- Respond to a regulatory ruling

Examples of Telecommunications Projects

Design, install and configure a network to support certain services and customers

Provide conversion plans for an entire telco network to change technology and architecture from circuit switched to packet switched

Constructing a new facility, data center or a POP

Development of a new feature, product or service according to clients' requirements

Laying of a new fiber optic link develop a new technology to enable the provision of new services

Design a content based peer to peer application to run on the current high speed internet network

September 2005

- eBay (the online auction company) bought Skype
- Google (the Internet portal) announced plans to provide WiFi service in the San Francisco area
- Sprint Nextel now offers Rhapsody (a radio service) to its mobile customers
- Skype reached an agreement to offer services with German mobile operator e-Plus
- and Cingular announced plans to offer Yahoo! Instant Messaging over mobile

November 2005

- Four major US cable operators (Comcast, Time Warner, Cox Communications and Advance/ Newhouse Communications) formed a joint venture with Sprint Nextel to address the convergence of video entertainment, wireline and wireless data and communications services
- SBC (the US regional operator) completed the purchase of AT&T (the US long-distance, global service provider, and iconic telecoms brand); and
- Vodafone broadcast the Holland versus Italy soccer game live to mobile handsets.

2005 Update – Something had to change

The telecom industry has always embraced change, as indicated by:

- The move from operator connection to direct dial
- The move from analogue to digital transmission
- The rapid rise of the Internet

With the advantage of hindsight, we can view these changes as natural evolutions (not that it seemed so at the time).

What does all of this mean?

- The list of telecoms service providers now comprises traditional telcos, software companies, a range of new service providers, portals and media companies in addition to the established cable-TV companies.
- This amounts to a step-function increase in the number of competitors in this already crowded marketplace.
- So the number of providers has expanded, but so has the definition of what a telco actually does

Impact of Disruptive Technologies

- Clayton Christensen writes about disruption in The Innovator's Dilemma
- Technologies that totally disrupt the current balance – Automobiles, aeorplanes, digital pictures, personal computers
- Do we have disruption today?
- How do incumbents fare?

Cellular Local Number Portability

- FCC Mandate in 2003 for LNP between US Cellcos
- US Cellular service commoditized-

Few differentiators:
- Price
- Bundled cell phone
- Technology transparent to users

Retention factors today:
- Contract termination penalty
- Need to change phone # when changing carriers

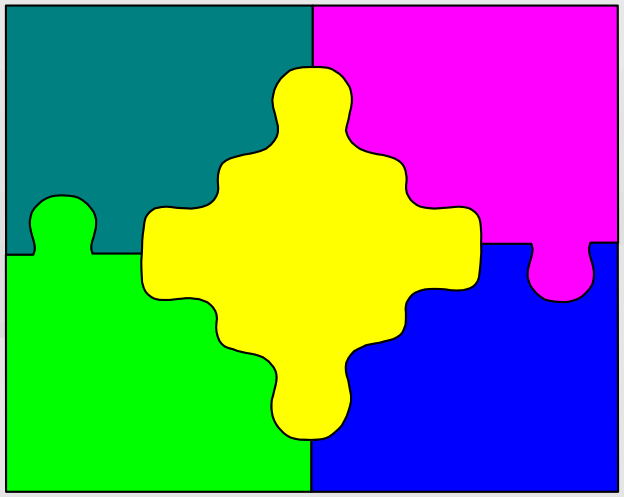
Impact on Cellular carriers: Increased Churn Rate

Requirements for Projects in Electronic Communications Business

- New services must offer value to end user
- Services more content centric
- Intelligence moving to the edge
- Peer to peer services emerging quickly
- Packet switching replacing circuit switching
- Rapid technology and network architecture changes
- Customer service and customer understanding are key

What are the main requirements for projects?

- Need to complete
  - On time
  - On budget
  - With full scope
  - And quality work



How can these be met?

By using Project Management disciplines and tools

By following current Project Management processes

Definition: Project Management

What is Project Management?

- The application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder needs and expectations

What are the typical problems?

Scope not clearly defined when commitment is made to customer

Not enough resources (people, $, lab space, spare circuits)

Changes to scope keep interfering (regulatory, customer demands, related project off track)

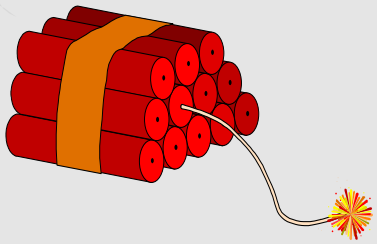
Conflicts (ops vs. eng; sales vs. tech support; line vs. staff)

Committing to unrealistic dates

Things go wrong!

Clear roles and responsibilities

Not clear who is in charge?



Human Resources

So who's involved?

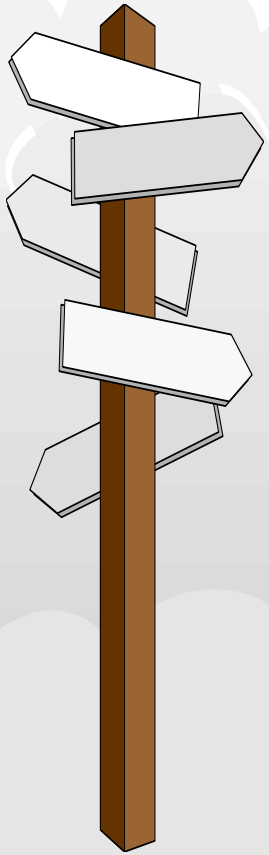
- Project manager
- Team members
- Customer
- Project sponsor
- Extended team members
- Stakeholders

Process Areas

PMBOK describes 44 processes, in 9 process areas

Process Areas Covered

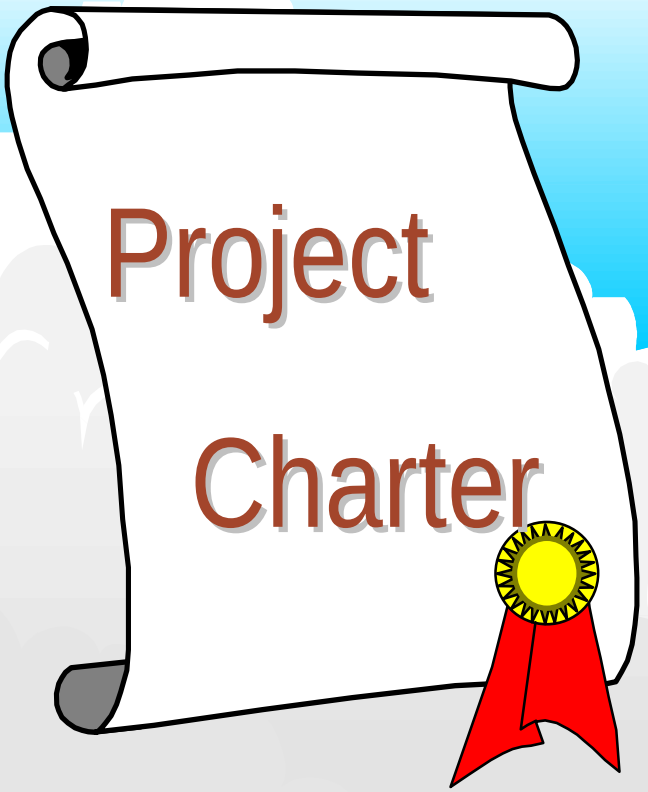
- INTEGRATION
- SCOPE
- TIME
- COST
- QUALITY
- PROCUREMENT



- RISK MANAGEMENT
- COMMUNICATIONS
- HUMAN RESOURCES

Let's Focus on Some Key Areas

- **Scope Management**
  - Charter
  - Scope Definition Statement
  - Work Breakdown Structure
  - Scope Change Requests
- **Time Management**
- **Risk Management**
  - Risk Tolerance
  - Risk Strategy
  - Risk quantification/qualification
  - Contingency (inclusion, plans)
- **Communications Management**
  - Build and socialize plan
  - Objective
  - Clear



- High level project description
- Identifies high-level timeframes, objectives deliverables, indication of budget, assumptions
- Used to initiate a project
- Assigns project manager
- Authorizes project manager to initiate project work

Project Charter

Charter should also specify

- start and end dates
- key contacts
- items which the project/product will not include
- key resource requirements
- how project success will be measured
- project constraints and limitations

Initial Scope Planning

- Review charter
- Identify stakeholders
- Identify potential needs of stakeholders
- Ensure project has appropriate approvals
- Flesh out a narrative scope statement
- Identify risks
- Build scope management plan

Scope Planning

- Identify opportunity or problem to be solved
- Review any project information in existence
- Starting with the information in the Charter, prepare scope statement with team
- Determine criteria for success
- Prepare scope management plan
- Build work breakdown structure

Scope Management Plan

- Identifies expected stability of scope
- Provides a process for handling scope changes
- Should be understood and agreed to by team
- Should be understood and agreed to by customer
- Should be understood and agreed to by stakeholders
- Is required to increase probability of success

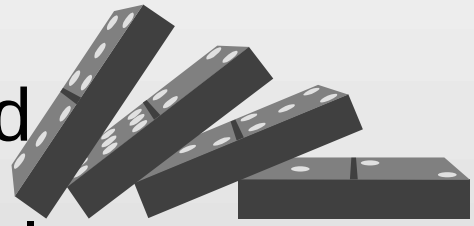
Scope Change Request

- Request Description
- Rationale
- Expected cost
- Impact of go/no go
- Source of additional resources

Work Breakdown Structure

- Identifies all project components and deliverables
- Ensures there are no gaps or overlaps
- Top levels must be deliverable oriented
- Elements must integrate to project whole
- All boxes are numbered in defined patterns
- Cardinal rule:

If it's not in the work breakdown structure,
it's not in the project.

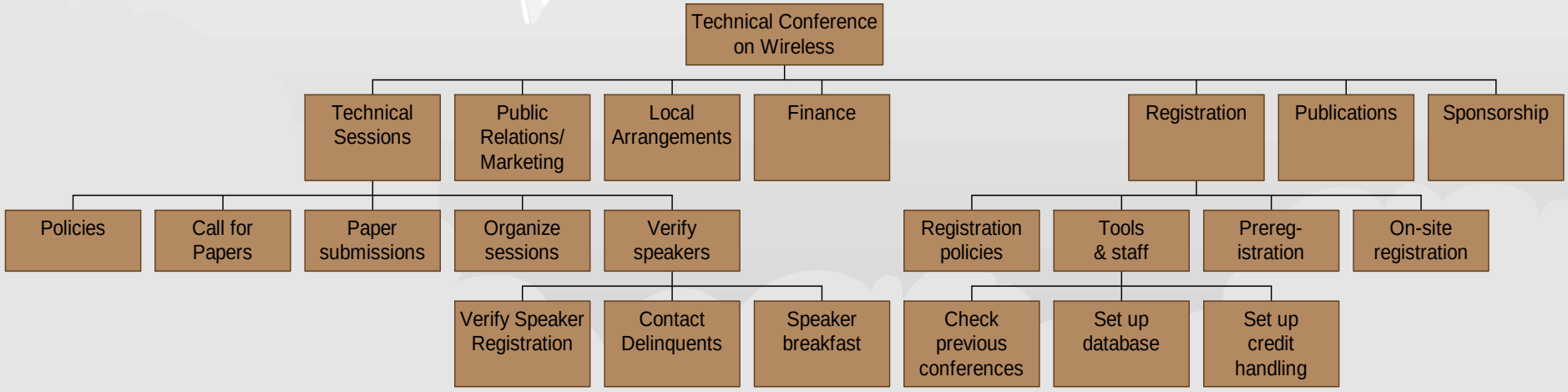


NEXT STEPS

- Planning
  - Activity definition
  - Activity sequencing
  - Duration estimation
- Controlling
  - Schedule development
  - Schedule control

Project Scope

- Every project can be decomposed into a comprehensive work breakdown structure

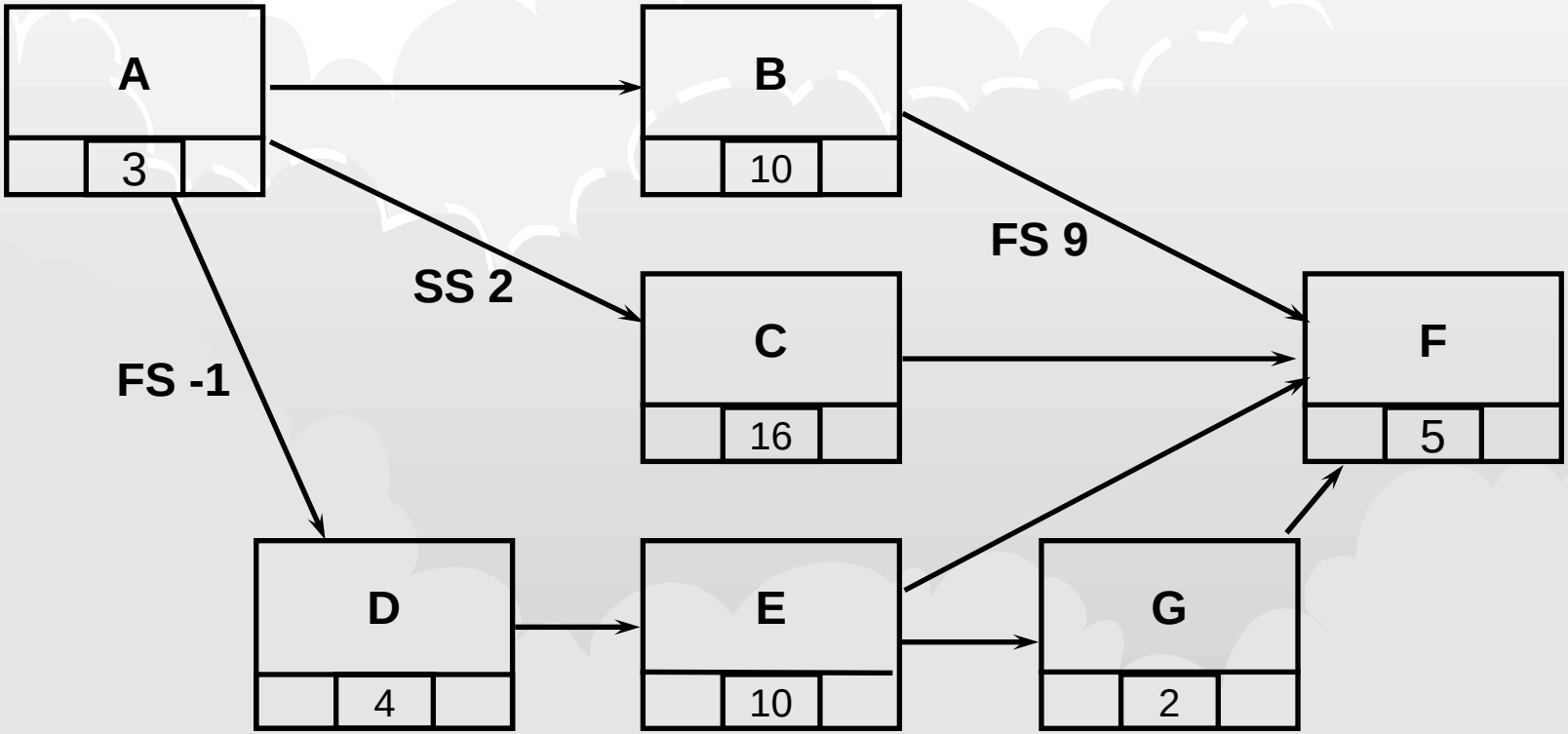


Schedule Development

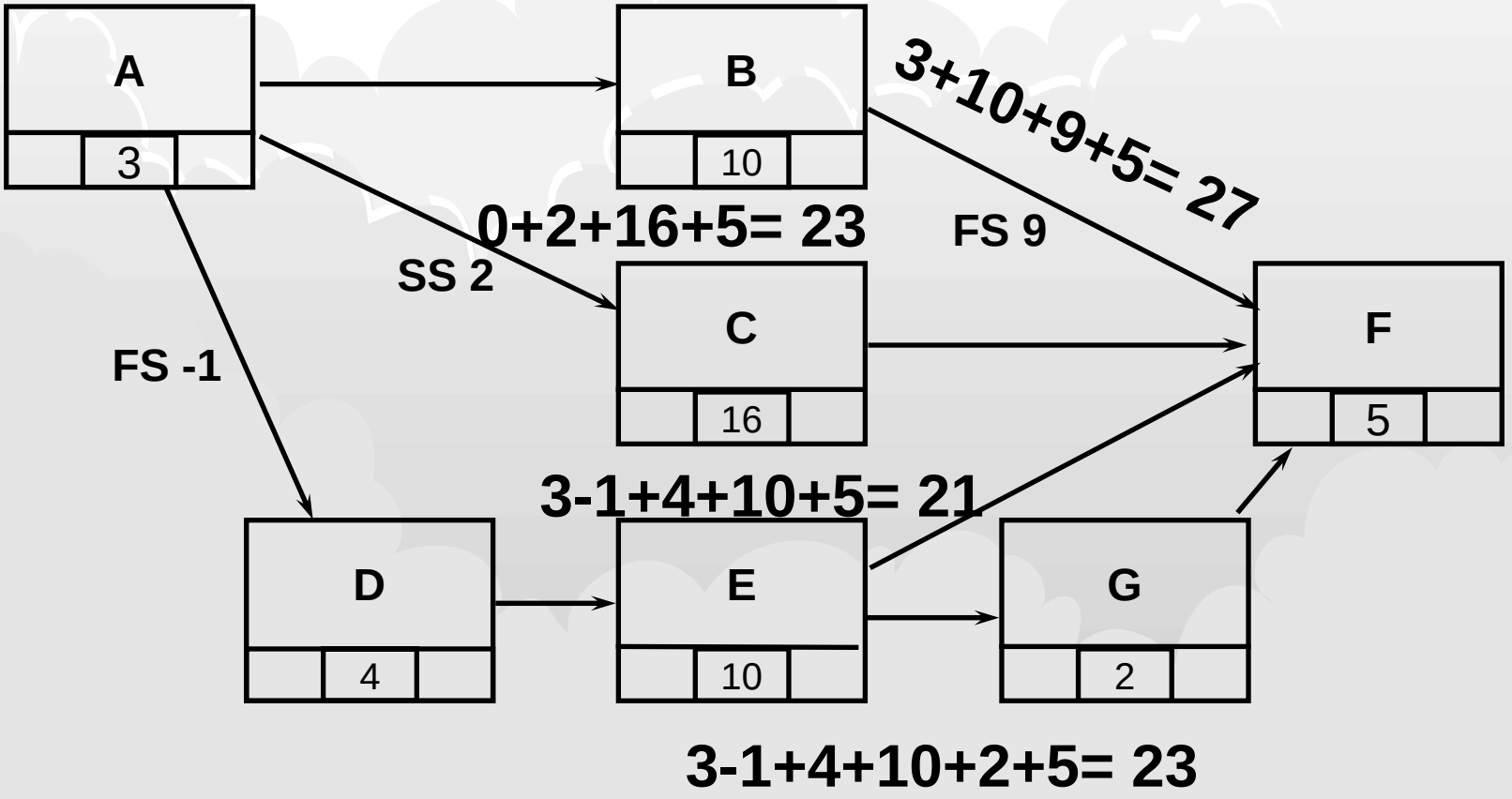
Using activities with their dependencies and constraints

- Develop project flow first
- Then align with calendar

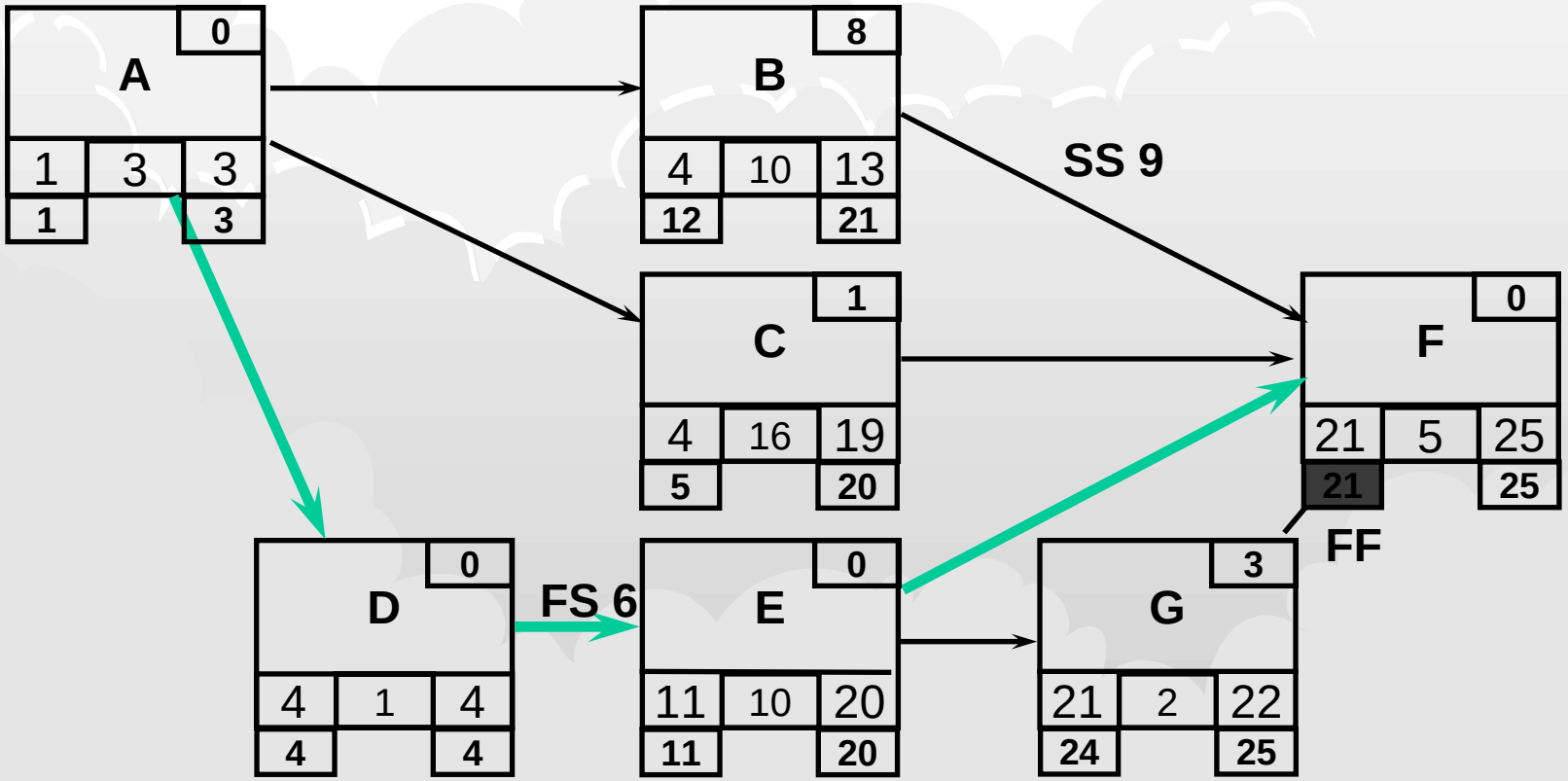
What is the longest path through this network, and how long?



… the answer is A-B-F, 27 days.

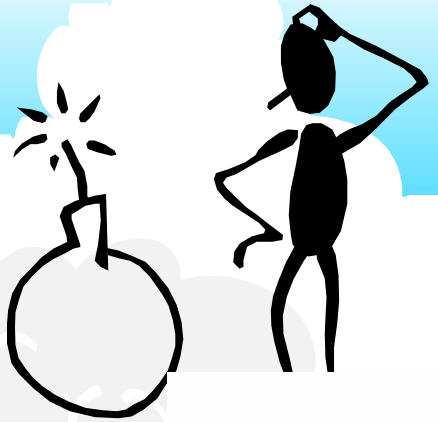


Backward Pass : Completed

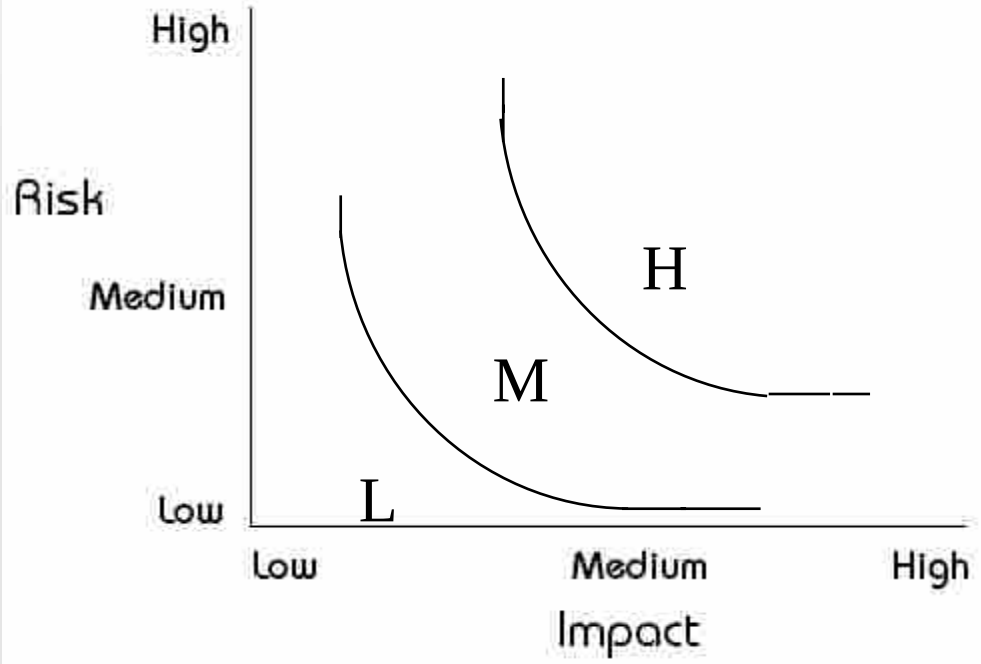


Critical Path Compression

- Attack the logic
  - "fast-tracking"
- Attack the durations
  - "crashing" - trade-off cost vs. schedule
- Warning:
  - Other critical paths may surface
  - Resource loading issues
  - Some activities cannot be squeezed i.e duration driven activities



Risk!



Processes

risk identification
risk qualification
risk response development
risk response control

An art and a science

Techniques for Handling Risk

Avoidance
Mitigation
Transfer
Acceptance

Dealing with Risk

Project Managers prepare for the potential occurrence of risks by building:

- Contingency plans
- Contingency budget
- Contingency time

Communications Planning

What
When
Why
Who
How

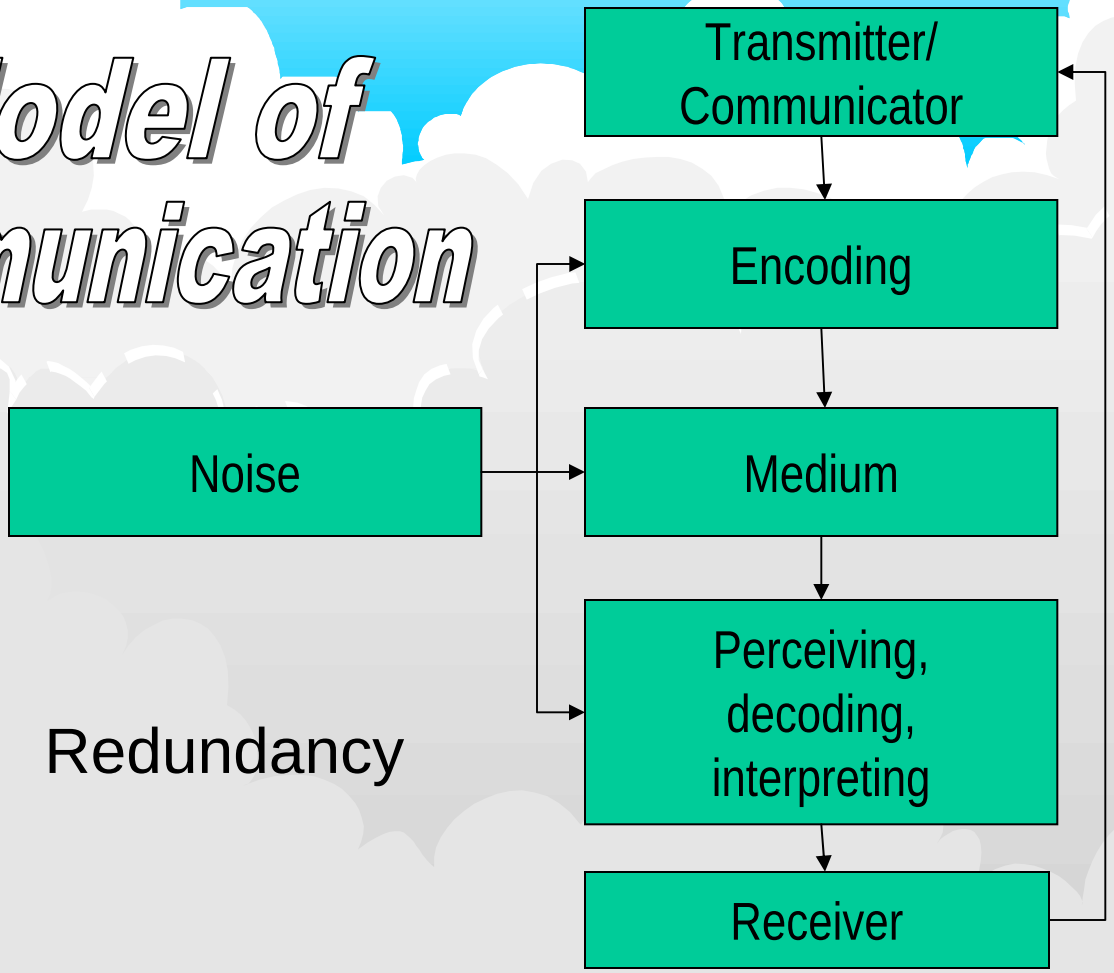
Information Collection

Information distribution

May want to create a matrix to show

Information Distribution…

A Model of Communication



Shannon even applies in projects!

Basic Communications Principles

Be objective
No surprises
Communicate what the listener needs/wants
Establish procedures and guidelines for communication
Keep it focused

What makes a project succesful?

Good people
Clear objectives
Team work
Clearly defined deliverables
Good planning
Strong change control

References

"A Guide to the Project Management Body of Knowledge"
published by Project Management Institute

Project Management for Telecommunications Managers
By
Celia Desmond
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