Scoping GIS projects

GIS Project Steps

1. Define problem and project goals
2. Develop methodology and analysis flow
3. Data inventory, input, manipulation, and management
4. Analysis and accuracy assessment
5. Presentation
   - Poster-sized map,
   - Journal paper,
   - PowerPoint presentation, etc.

1. Scope of GIS projects

- Single-purpose GIS project
  - Initiated to serve one-time objectives
- Departmental GIS project
  - A department is responsible for implementing GIS functionalities
- Enterprise GIS project
  - Many functions are shared between different department, thus implementing GIS projects across multiple departments make sense
  - Will benefit from system integration
  - Increasing strategic roles of GIS in an organization
- Consortium GIS project
  - Cost sharing by the society as a whole

2. Methodology for GIS project implementation – the core

- Needs assessment
  - Data needs
  - Functional needs
  - Processing needs
- System requirement
  - Hardware/software needs
  - Personnel/training needs
  - Procedural needs
  - Institutional needs

Data needs

- Geographic information needs inventory
- Identifies which maps or data are important for successful completion of each function in the unit
- Describe problems of current data and point out future needs as well
- Map inventory form will help you clarify issues involved in map use

Functional needs

- Identify activities which an organization perform to carry out its mission
- Identify all of their organizational units
- List the functions that require maps or other geographic information

Processing needs

- Define how the data are to be used to fulfill the functional needs of the organization
- Application definition form contains data input requirements, processing requirements, and output products

3. Project management

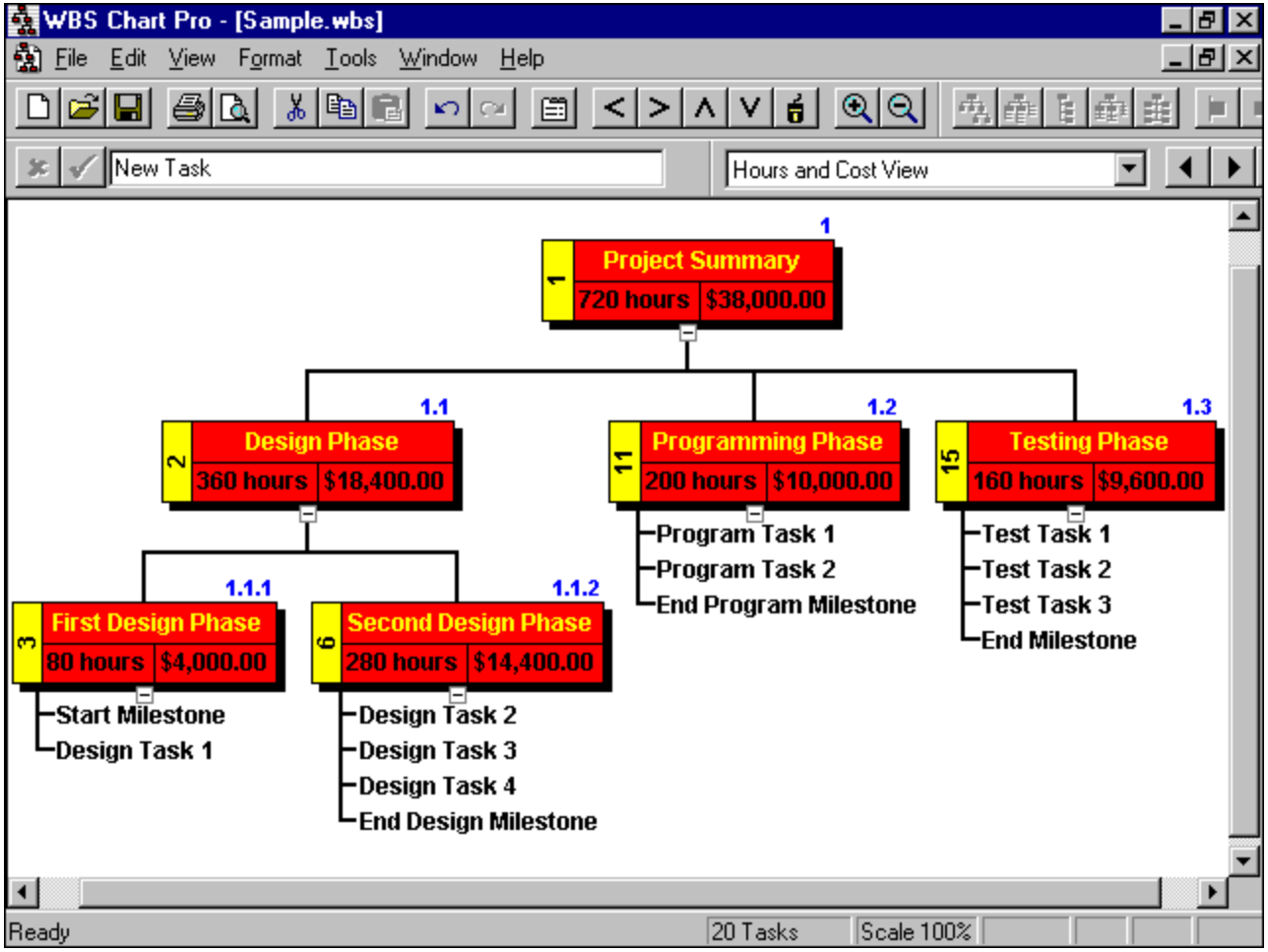
- Project Management Job Functions
- Management tools
  - WBS (Work Breakdown Structure) chart
  - Gantt chart
  - PERT (Program Evaluation and Review Technique)

Fifteen Project Management Job Functions

- Define scope of project
- Identify stakeholders, decision-makers, and escalation procedures
- Develop detailed task list (work breakdown structures)
- Estimate time requirements
- Develop initial project management flow chart
- Identify required resources and budget
- Evaluate project requirements
- Identify and evaluate risks Prepare contingency plan
- Identify interdependencies
- Identify and track critical milestones
- Participate in project phase review
- Secure needed resources
- Manage the change control process
- Report project status

"Building a Foundation for Tomorrow: Skills Standards for Information Technology," Northwest Center for Emerging Technologies, Bellevue, WA, 1999

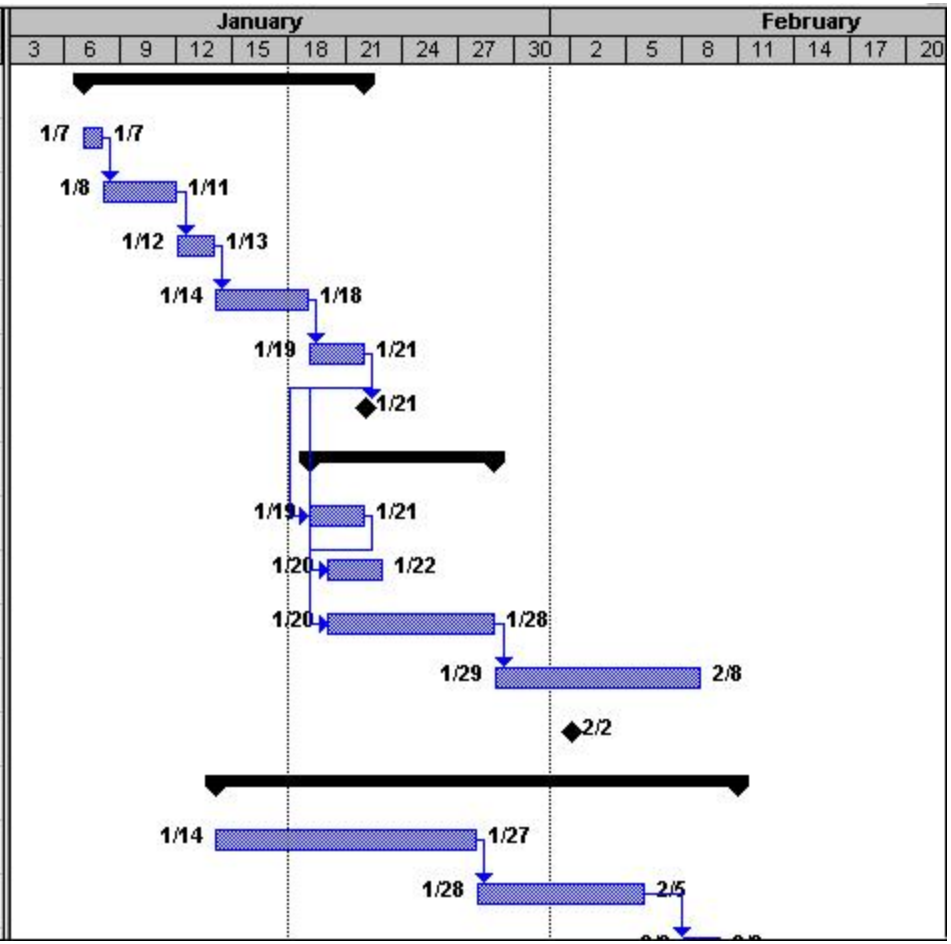
WBS



A WBS chart displays the structure of a project showing how a project is organized into summary (phase) and detail levels.

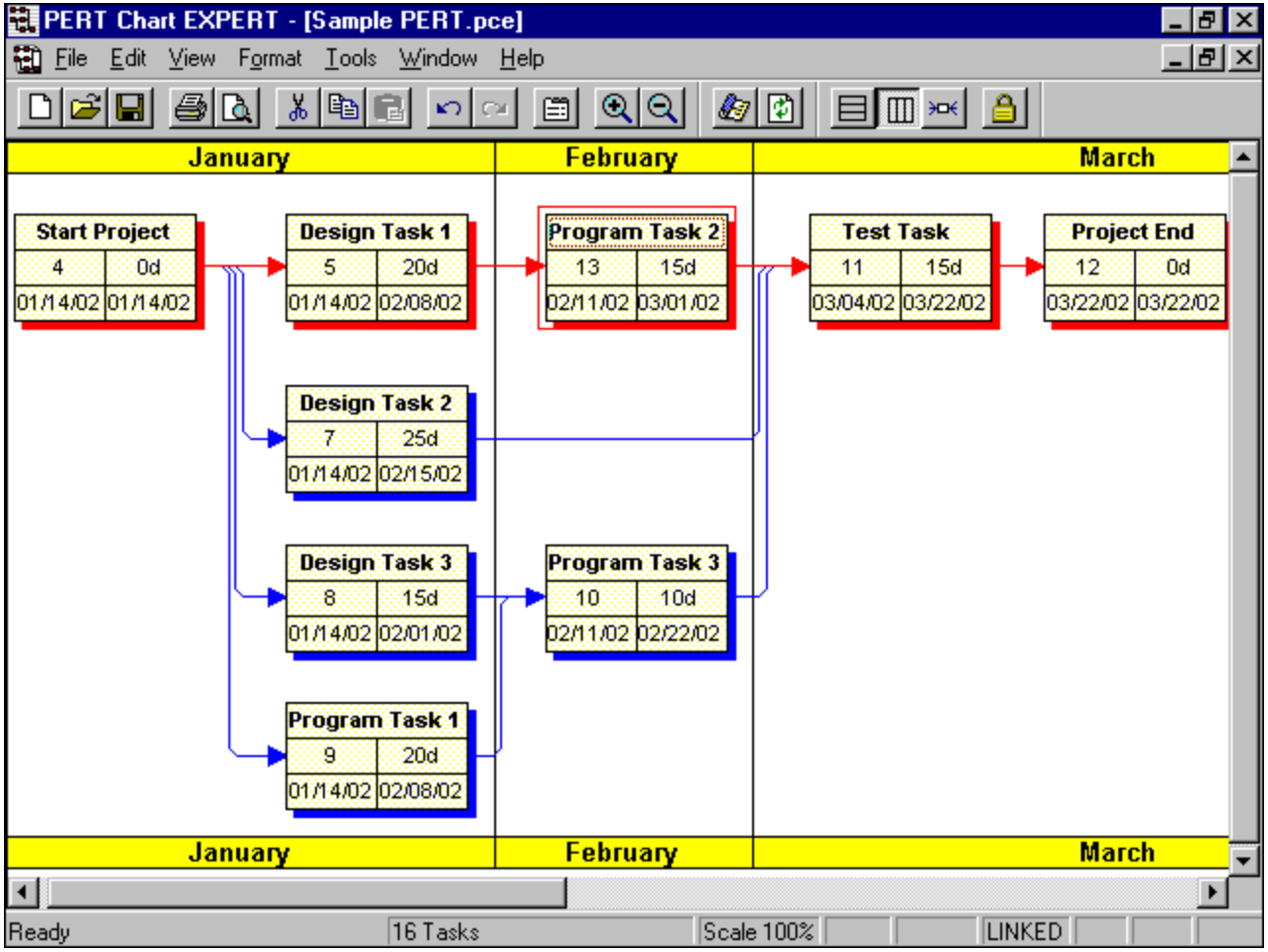
Gantt chart

WBS	Task Name
1	**Define specifications**
1.1	Identify customers
1.2	Interview 10 customers
1.3	Interpret requirements
1.4	Benchmark products
1.5	Define target PDS
1.6	Target PDS Released
2	**Generate concepts**
2.1	Review comp products
2.2	Search patents
2.3	Brainstorm concepts
3	Select top 2 concepts
4	MQ Presented
5	**Profile motor power**
5.1	Design test stand
5.2	Build test stand

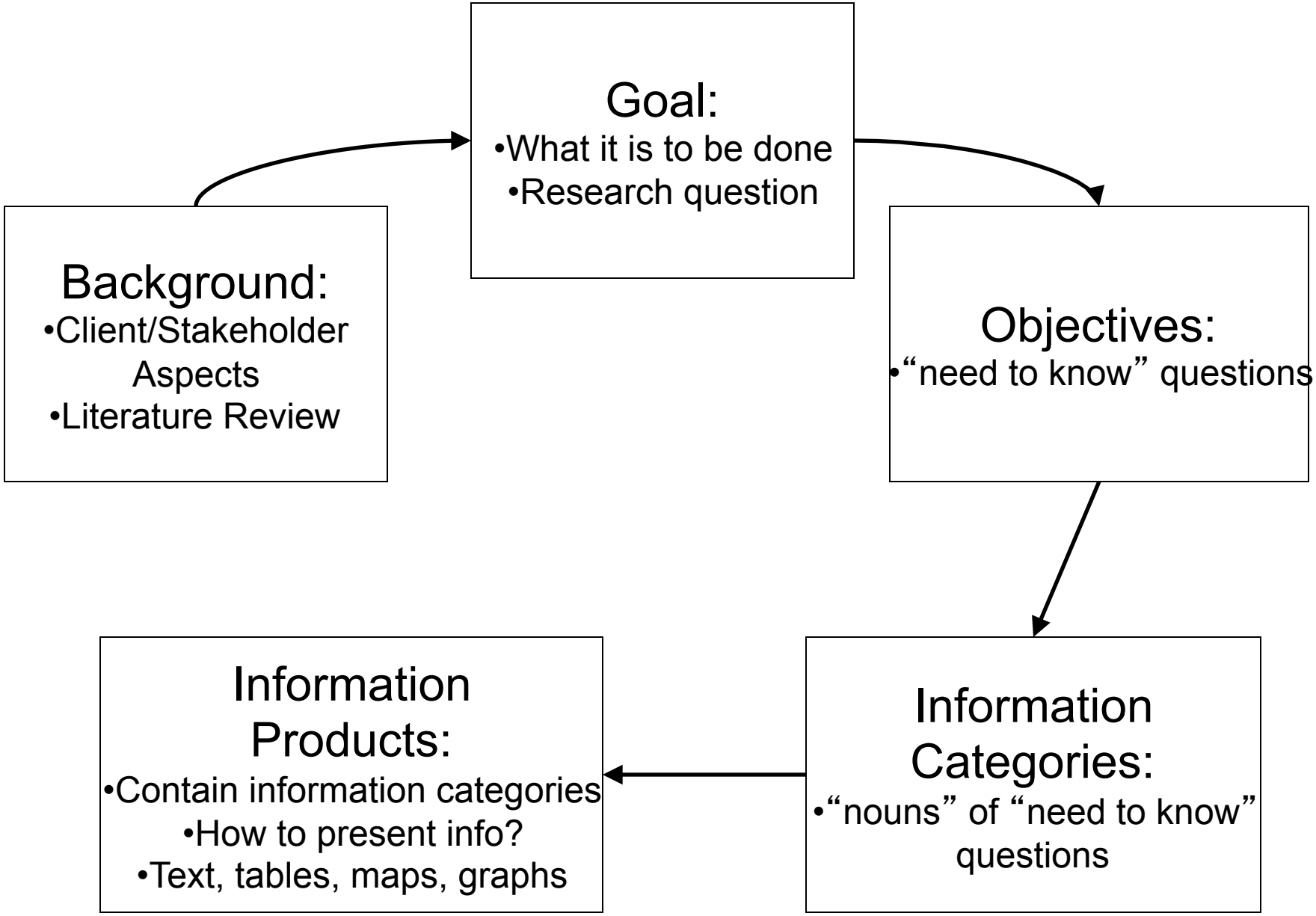


a tool for displaying the progression of a project in the form of a specialized chart

PERT



A PERT chart displays the tasks in a project along with the dependencies between these tasks. Using a PERT chart is a great way to define and display the dependency relationships that exist between tasks.


Goal:
•What it is to be done
•Research question
Background:
•Client/Stakeholder Aspects
•Literature Review
Objectives:
•“need to know” questions
Information Products:
•Contain information categories
•How to present info?
•Text, tables, maps, graphs
Information Categories:
•“nouns” of “need to know” questions