

Developing a Function-Means Tree

What functions will the design have? By what means will those functions be achieved?

Taken from *engineering design: a project-based introduction* by dym & little

- It helps to go beyond the terminology and to know what you're really trying to do.
- Think of the "functions" as *what* you must do.
 - Think of the "means" as *how* you might do it.
 - The Function-Means Tree is a tool for listing the primary functions of a design and various means of achieving those functions.
 - The Function-Means Tree should flow out of the Attributes List, PCC, Objectives-Constraints Tree, and Design Specifications.

- Before you start too far down the path of "brainstorming" various design alternatives...
- Determine the primary functions that are required.
 - Show these on the top level of the tree
 - List various means by which each function may be implemented.
 - Show these on the next level of the tree
 - Determine secondary functions that would result from implementing each of the means.
 - Show these on the next level of the tree
 - The tree continues to alternate between means and functions until you reach a reasonable termination point.

