**Metaphors for a Richer Understanding of Software Development**

Basically, metaphors serve to make explaining and conveying information easier to grasp. Conveys at a higher plane such that low level mistakes can be avoided

**How to Use Software Metaphors**

* Software metaphors are more like a searchlight than a road map
* It doesn’t tell you where to find the answer, it tells you how to look for it. Thus, they serve more as a heuristic than as an algorithm
* Algorithm is a well-defined instruction set
  + like street directions
* Heuristic is a technique that helps you look for an answer
  + Tells you how to look, not what to find
    - Find last letter mailed
    - Drive to town in return address
    - Ask someone in town for directions

**Software Penmanship: Writing Code**

* the term "writing code" implies that it’s a casual affair
  + you sit down
  + write a script start to finish
  + and then you’re done
  + and once its been sent, it can never be modified
* Writing original work is often less effective than reusing design ideas code and test cases from previous projects

**Software Farming: Growing a System**

* Some say creating software is like plating seeds and growing crops
  + Design a piece
  + Code a piece
  + Test a piece
  + Add to system
* By taking small steps, minimize trouble one can get into at any given time

**Software Oyster Farming: System Accretion**

* Accretion = growing in size by gradual addition
* Basically, this is incremental design
  + First step is to design simplest possible version of the system that will run
  + Add dummy classes
  + Replace dummy classes with real classes

**Software Construction: Building Software**

* "building" is better suited than "writing" or "growing"
* Also, you won’t try to build things that you know you can buy
  + washer, dryer, freezer
* Lots of planning and revisions
* Treat code as structural components (or nonstructural)

**Applying Software Techniques: The Intellectual Toolbox**

* Techniques are not rules, they are analytical tools
* A good craftsman knows the right tool for the job and how to use it correctly
* Also, some consultants many tell you to buy into certain methods and to exclude others. That’s no good