Reverse Engineering and Design Recovery: A Taxonomy
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This article attempts to lift some of the confusion surrounding the many different terms having to do with reverse engineering. It provides a definition and clarification for the following terms:
- *Reverse Engineering* - the process of gaining a enough design-level understanding about a product to help with its maintenance, enhancement, or replacement. This is the part of the software maintenance process that helps you understand the system enough to make decisions about it. Nothing in this process involves changing the system in any way.
- *Redocumentation* - this is a subarea of reverse engineering where the intent is to recover lost or non-existent documentation about the system.
- *Design Recovery* - a second subarea of reverse engineering where the goal is to "reproduce all of the information required for a person to fully understand what a program does, how it does it, why it does it, and so forth."
- *Forward Engineering* - while the subject system is the starting point of a reverse engineering exercise, it is the end point of forward engineering. This is the process of moving from requirements to design to implementation of a product.
- Restructuring - or refactoring as it is known today is the process of changing the underlying structure of a system without effecting it's external behavior
- *Reengineering* - is the redesign and implementation of a system into a new form

The authors also talk about the goals of reverse engineering:
- Coping with complexity
- Generating alternate views
- Recovering lost information
- Detecting side effects
- Synthesizing higher abstractions
- Facilitating reuse

Bib reference:
@article{
  author = {Elliot J. Chikofsky and James H. Cross II},
  title = {Reverse Engineering and Design Recovery: A Taxonomy},
  journal = {IEEE Softw.},
  volume = {7},
  number = {1},
  year = {1990},
  issn = {0740-7459},
  pages = {13--17},
  doi = {http://dx.doi.org/10.1109/52.43044},
  publisher = {IEEE Computer Society Press},
  address = {Los Alamitos, CA, USA}
}