

# CS 428

## Week #4

# Readings

WINTER 2020, WEEK #4

BRUCE F. WEBSTER

- ▶ “Amid a wash of paper, **a small number of documents** become the critical pivots around which every project’s management revolves.”
  - ▶ Objectives, specifications, schedule, budget, system requirements, organization chart
- ▶ “Only when one writes do the gaps appear and the inconsistencies protrude. **The act of writing turns out to require hundreds of mini-decisions**, and it is the existence of these that distinguishes clear, exact policies from fuzzy ones.”
- ▶ “The documents will communicate the decisions to others. **The manager will be continually amazed that policies he took for common knowledge are totally unknown by some member of his team.**”
- ▶ “By reviewing them periodically [the manager] sees where he is, and he sees **what changes of emphasis or shifts in direction are needed.**”

# MMM CH 10: The Documentary Hypothesis

- ▶ **Work in small batches**
  - ▶ Allow for frequent releases and integration
  - ▶ Understand data- and workflow from end to end
  - ▶ Adapt quickly and work around barriers that arise
- ▶ **Be open to experimentation**
  - ▶ There's a good chance that some of your ideas and/or solutions aren't good; be willing to quickly adapt
- ▶ **Active, supportive management is essential**
  - ▶ Project managers: work to keep team members informed and cooperating with one another
  - ▶ React quickly when problems (technology, scope, etc.) arise
- ▶ Observations and experience?

# ACC #8: Product Development

- ▶ Trying to solve team issues at Pages Software – did a team offsite
  - ▶ Each engineer explained what her/his goals were for being at Pages
  - ▶ As a team, we crafted team goals that supported individual goals
  - ▶ We then determined how those team goals would support company goals
- ▶ Result: zero (0) voluntary turnover in engineering staff over 4.5 year period
- ▶ Problem: upper management tends to see engineers are interchangeable and subject to simple motivations
  - ▶ “Don’t they realize they’re dealing with grown-ups?”
- ▶ Observations and experiences?

“How to retain IT talent with Goal Alignment” (Baseline, 2008) [[Link](#)]

- ▶ Experience reviewing massive (\$500M) failing IT project at Fortune 50 corporation



“Remember Conways Law” (2013)

[\[Link\]](#)

- ▶ Coined by Fred Brooks in *The Mythical Man-Month*:
  - ▶ Any organization that designs a system (defined broadly) will produce a design whose structure is a copy of the organization's communication structure.
- ▶ Put simply, **architecture tends to follow organization**, not the other way around
- ▶ Thus, you need to **make sure your organization reflects your anticipated architecture** (hint: **you may end up revising your org charts**)
- ▶ Observations and experience?

“Remember Conway's Law” (cont.)

- ▶ Concept: applying n-player game theory to organizational software engineering
  - ▶ IT engineers (Geeks)
  - ▶ Management (Suits)
  - ▶ End-users (Users)
- ▶ **The three groups have a hard time agreeing on what 'game' they're playing, much less what 'winning' looks like**
- ▶ Each group tends to have negative stereotypical views of the other two
- ▶ Result is a lot of mistrust and miscommunication

“Negotiations and Lovesongs” (2008) [[Link](#)]