CS 428 – Creating a Requirements Document

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The Many Challenge of Requirements

- You're writing them before you (fully) know what you want to build
- You're writing them before you know for sure if you can build it
- The wrong people are often involved writing them
  - Managers who don't know or understand what's technically feasible in the desired time-frame
  - Engineers who are more interested in building something cool rather than what the customer will pay for
  - Marketers who want the impossible
- Customers usually don't know what they really want until they see something working
- General simple requirements explode into large numbers of detailed design and implementation requirements
- Failure to formally manage requirements (change control) leads to massive scope creep
- Strengths & weaknesses of waterfall-ish vs. agile-like approaches
  - Waterfall: risk of 'analysis paralysis'
  - Agile: risk of blind canyon/stuck on a local maximum

Approaches to requirements

◈ Core goal: your requirements should form the project baseline that defines what you're building

　　◈ Bob Millar at ARINC: "If you don't know what you're building, how will you know when you're done?"

◈ Watch Dr. Knutson's podcast on software requirements [here]

◈ It is as important to define what you are *not* building as what your *are* building (cf. Pages spreadsheet)

◈ For this class, you'll want to keep them lightweight, but express it in terms of explicit features that define what you want to demo on the last day of class (Dec 10th) with the interim demo (Nov 12th) as a progress check

◈ You should be revising this document constantly throughout the semester

For this week: create first-draft of project requirements document

◈ Should be on your team's wiki in GitHub by Saturday at midnight (which means you also have to create your team's wiki by then)

◈ I will build a presentation based on your requirements documents for next week (10/8/18)

◈ Monday afternoon, in class, each team leader will have to explain the rational for that team's approach to requirements docs