A Few Industry Lessons on Designs, Teams, & Projects

or

what I wish I’d learned in grad school

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Intro: What does this have to do with you?
You have a great opportunity to learn
  ▪ You have a project
  ▪ You have a team
  ▪ Now what?
What I’ve found to work better in
  ▪ Designs
  ▪ Teams
  ▪ Projects

Choose some and try them!
Context: Moving from Good to Great

What is the difference between a good developer and a great developer?

- **Design skills**
  - lets you create technical excellence

- **Values skills**
  - lets you be assessed as knowledgeable
    - teams
    - coordinating
    - managing commitments
    - customer relations
    - lifelong learning
    - business & entrepreneurship

Design: Small simple steps

- **Keep it simple**
  - design, actions, code, ...
  - defer optimizations
  - optimize design before code
  - adaptive systems $\rightarrow$ emergent behavior

- **Build Version Zero first**
  - focus on product (app, docs, install/uninstall, training, ...)
  - get to maintenance ASAP
  - rapidly adapt to change

- **Integrate continuously**
  - catch problems early
  - get lots of successes
  - rapidly adapt to change
Design: Keep your system healthy

- Allow no code redundancy
  - creates clean code
  - “sufficient” to let design patterns emerge
- Keep names up to date
  - they communicate semantics
  - metaphor can help design
- Refactor relentlessly
  - keep code up to date with your understanding
  - browser support very helpful: VAJ, Eclipse, IntelliJ, ...
- Use test-first programming with unit-tests
  - enables relentless refactoring
  - changes nature of programming

Design: Be Aware

- Use 3x5 cards to:
  - design with CRC cards
    - Class, Responsibilities, Collaborators
    - enables conversations
  - record your pending actions
- Write things down
  - The state of a project can be determined by how much stuff is on the wall
- Keep a journal
  - 5 minutes a day
  - writing enhances reflection
  - develops writing skills
- Change your environment
Teams: Getting more out of Life

Team's are great, but how do I work in one?
- How is your team going to work together?
- How will you divide up the work?
- How will you keep track of your progress?
- How will you maximize your chance of success?
- What does it mean to be in a team?
- How can I be part of a highly effective team?
- What should I expect from my teammates?
- How can I work with that jerk?

Team: What is a team?

A team is a set of ongoing conversations taking place in a community of people

- People
- Conversations
- Commitments
- Mission

- Share vision
- Coordinate action
- Own mission
- Fulfill role
- Anticipate
- Follow leader
- Trust
- Mood for success
- Care for future
- Standards
- Mood for success
- Care for future
- Standards
Team: Making requests

- A request
  - asks a performer to do something
  - based upon a mutual understanding
  - to satisfy a need of yours
  - by a certain time
- Make sure to include all parts
- Choose appropriate strength
  - Weak: “Wouldn’t it be nice if ...”
  - Strong: “Will you ...”
  - Command: “You will ...”
- Weak requests cause confusion

Team: Declining

- There are four possible replies to a request:
  - request → accept
  - → decline
  - → counter-offer
  - → commit-to-commit
- Decline if you need to!
  - Without declines, there are no acceptances
- Close the loop
  - Let them know you did it
  - Make sure it satisfies them
  - Tell people when it satisfies you
Projects: Planning ~ Navigating

*Plans are produced and live in the conversations & commitments of people*

The important part is the *Planning*

- The plan document is a tool, not a goal
- Nautical analogy
  - know destination (mission)
  - have map (plan & schedule)
  - track progress
  - adjust course
  - avoid risks
  - coordinate navigation
  - revise map & destination

Projects: Project Action Report

Doc to update at each planning meeting (weekly)
- date, time, place of next meeting
- overall project promise
- team leader’s overall assessment
- Red flags
- overall condition of satisfaction
- announcements
- attendees
- review & assessment of team’s promise
- pending milestones
- pending actions
- attachments
Conclusion: Ward’s Way

The essence is to:

work efficiently
on the right stuff
in a visible way