Next milestone: API design

• Deadline: **Sunday 10. April** (3 weeks)
• Deliverable: **Design document, API classes**
• Presentation: **Tue 12. April / Mon 18. April**
Design document

1. Purpose
2. Class diagram
3. Architectural design
   1. Component-level design
   2. Design patterns
   3. Discussion
4. Post-design changes
API classes

• Design for usability
  – How will a client use your library
  – Is it easy to perform important tasks
  – Write use case examples

• Design for extensibility
  – Adding new functionality
  – Changing existing functionality

• Design for testability
  – Modular and observable effects
Parts of API

• Class-level
  – Class name
  – Inheritance structure
  – Documentation

• Feature-level
  – Feature name
  – Arguments and return type
  – Contracts
  – Documentation
Design principles

- Information hiding
- Command-query separation
- Option-operand separation
- Self-documentation
Talk: How To Design A Good API and Why it Matters

- http://www.infoq.com/presentations/effective-api-design

- Youtube version: http://www.youtube.com/watch?v=aAb7hSCtvGw