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# Project Concepts

CSE 403, Winter 2003  
Software Engineering

<http://www.cs.washington.edu/education/courses/403/03wi/>

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# Readings and References

- References
  - » *Rapid Development*, Steve McConnell
    - Chapter 10, Customer-Oriented Development
  - » *User Interface Design for Programmers*, Joel Spolsky
    - Chapter 12, The Process of Designing a Product
  - » *Anchoring the Software Process*, Barry Boehm, USC
    - <http://citeseer.nj.nec.com/boehm95anchoring.html>
  - » *I Have Abandoned My Search for Truth, and Am Now Looking for a Good Fantasy*, Ashleigh Brilliant

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# Elements of Lifecycle Objectives (LCO)

- Operational Concepts What is it?
- System Requirements What does it do for us?
- System and software architecture How?
- Lifecycle plan Who wants it? Who'll support it?
- Feasibility Rationale Is this really true?

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# Definition of Operational Concept

- Top-level system objectives and scope
  - » User community?
    - business, personal, demographic
  - » Environment this program works in?
    - device availability, networking fabric, ...
  - » Major benefits?
    - Given the above, will the potential user be interested?
  - » Establish what the system does and does not do
    - Realistic expectations now avoid disappointments later
    - "Warning: system will not make you young, sexy, rich."





## Elevator Pitch



- “Okay, we're going to the 75<sup>th</sup> floor. You've got a minute and a half. What is this thing of yours is supposed to do anyway?”
- Don't sell yourself on something that isn't true
  - » You are **not** marketing something that's already been made
  - » You **are** trying to figure out if there is a need for this wonder-blob that is being proposed



CueCat 2000



BackRub 1996



VisiCalc 1979

## There is one *today*, many *tomorrows*

- Early discussion of objectives and scope is great
  - » you can make radical changes now to improve capability for growth and change in the future
- Don't create a product that is static by design
  - » A “point-solution” solves a particular problem at a particular time for a particular user group
- Don't need to design the changes, just show that they can happen in various ways
  - » think abstraction and layers



## Who will use it?

- Create typical scenarios for product usage
- Make up various example users
  - » if you can't think of one, what does this tell you?
- Be specific
  - » assign them names, job titles, working relationships
  - » dream up situations - typical, busy, breakdown, ...
- Talk to the customer about these scenarios
  - » you'll be amazed - they know what's hot or not

## A scenario from WhatTimeIsIt.com

Cindy is a teenager in high school. She goes to a pretty pathetic public high school, and she's pretty smart, so when she gets home at 2:00 pm, it only takes her about 7 minutes (on average) to do her Algebra homework. None of her other teachers even bother to give her homework. Her baby brother (half brother) is vegged out in front of the only TV set watching Teletubbies, so she spends the afternoon (from 2:07 until about 6:30, when her *new* mommy serves dinner) surfing the net and chatting with her friends on AOL. She's always looking for exciting new web sites. As a result of typing "What Time Is It?" randomly into a search engine (by mistake, she meant to ask one of her friends using Instant Messenger) she gets to WhatTimeIsIt.com, and sets up a new account. She chooses a user name and "RyanPhillipe" as her password, selects her time zone, and *voila* -- finds out what time it is.

## Other Usage Scenarios

- Who is responsible for on-going funding?
  - » Can you imagine the scenario in which the funding for maintenance is requested? Is any money forthcoming?
- Which group is doing sysadmin for this?
  - » Are they glad about it? Does it totally mess them up?
- Who will support it when it breaks?
  - » 1-hour on-site support? 3-month bug fix release cycle?
- Who will be responsible for new features?
  - » requirements? implementation?

## What is the Life-Cycle plan?

- “The WWWWWHH principle”
  - » Why is the system being developed? Objectives
  - » What will be done When? Schedules
  - » Who will do it? Where are they? Responsibilities
  - » How will the job be done? Approach
  - » How much of each resource? Resources
- This can be done in one or two slides early on in the project, more detail in later spins

## Feasibility Rationale

Confirm the conceptual integrity and compatibility of the various components described above.

or

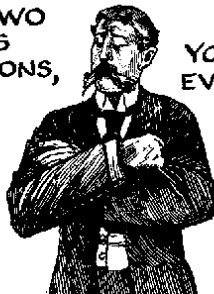
Take a reading on the plausibility meter.  
Is it trying to tell you something?

IF YOU MAKE  
ONE OR TWO  
RIDICULOUS  
ASSUMPTIONS,

YOU'LL FIND  
EVERYTHING  
I SAY  
OR DO  
TOTALLY  
JUSTIFIED.

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