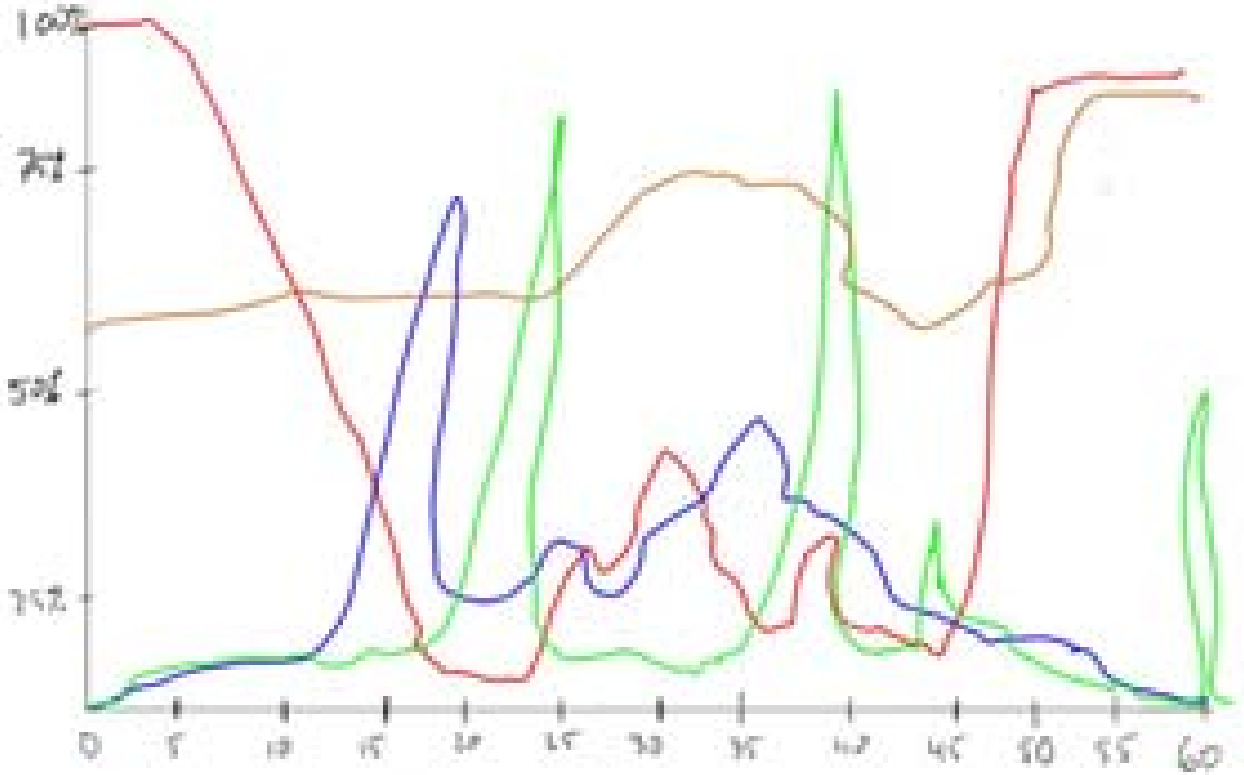
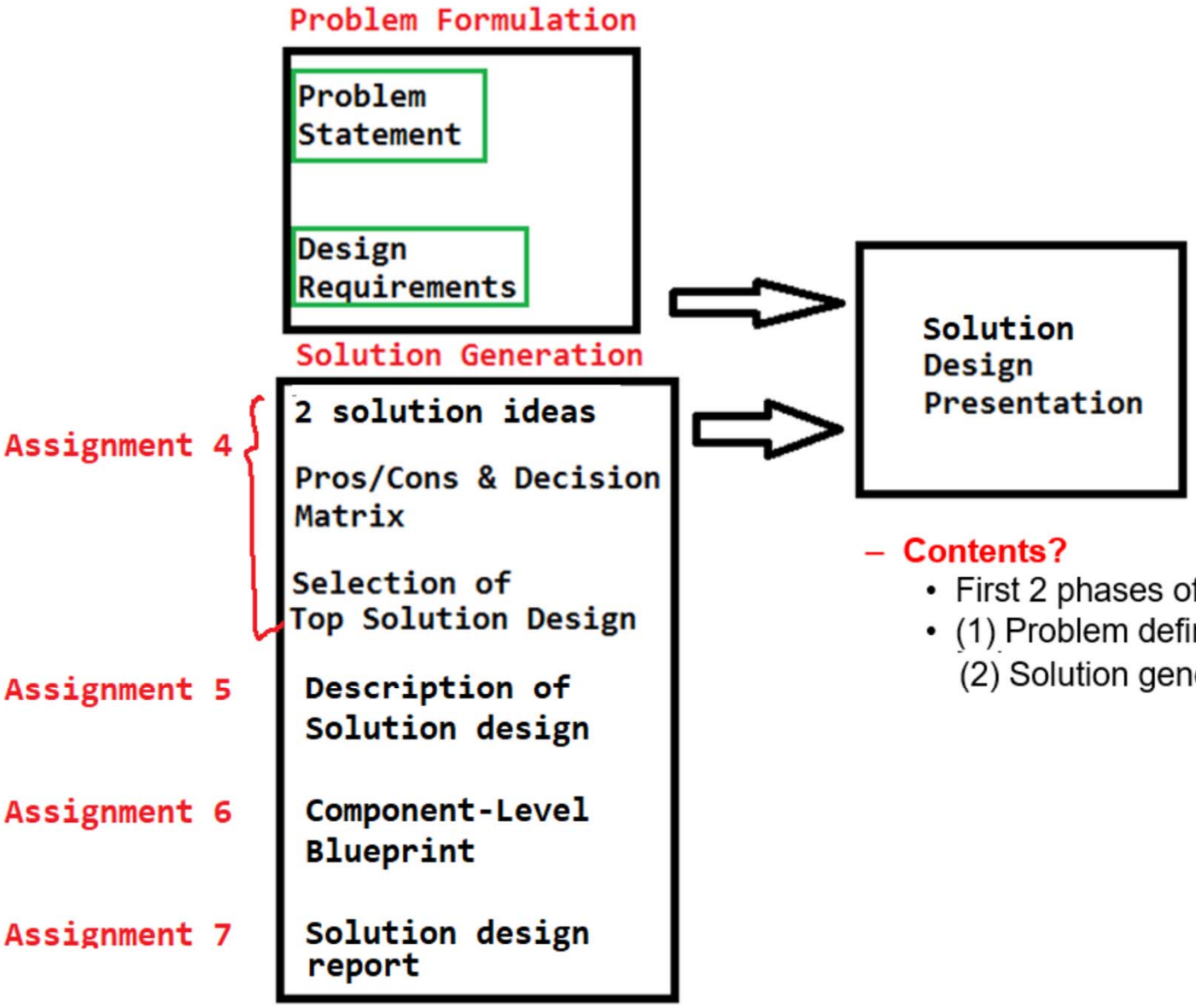
Solution Design Presentation for **Mixed Audience**



Solution Design Presentation for **Mixed Audience**

- What we are doing now in each team:



– **Contents?**
  - First 2 phases of design process
  - (1) Problem definition
    (2) Solution generation

Presentation Contents

- Why (Background): **Needs and demands ("dissatisfied conditions")**
- What (Problem Definition):
  - (1)Problem Definition/Statement,
  - (2)Design Requirements
    - **Product Specs**
    - **Constraints: Standards, regulations, codes to be complied & Socio-cultural, environmental, constraints in solving the problem**
- How(Solution Generation):
  - (1) Alternative Solutions: 2 Ideas,
  - (2) Selection of Top Design via Pros & Cons and Decision-Matrix
  - (3) Details of the Top Design (using description and figures following patent filing document)
  - (4) Component-Level Blueprint
- When (Next step):
  - Through this semester and the next semester **– implementation**
- Conclusions: **summary**

Difference between Written Report and Oral Presentation - **Pace**

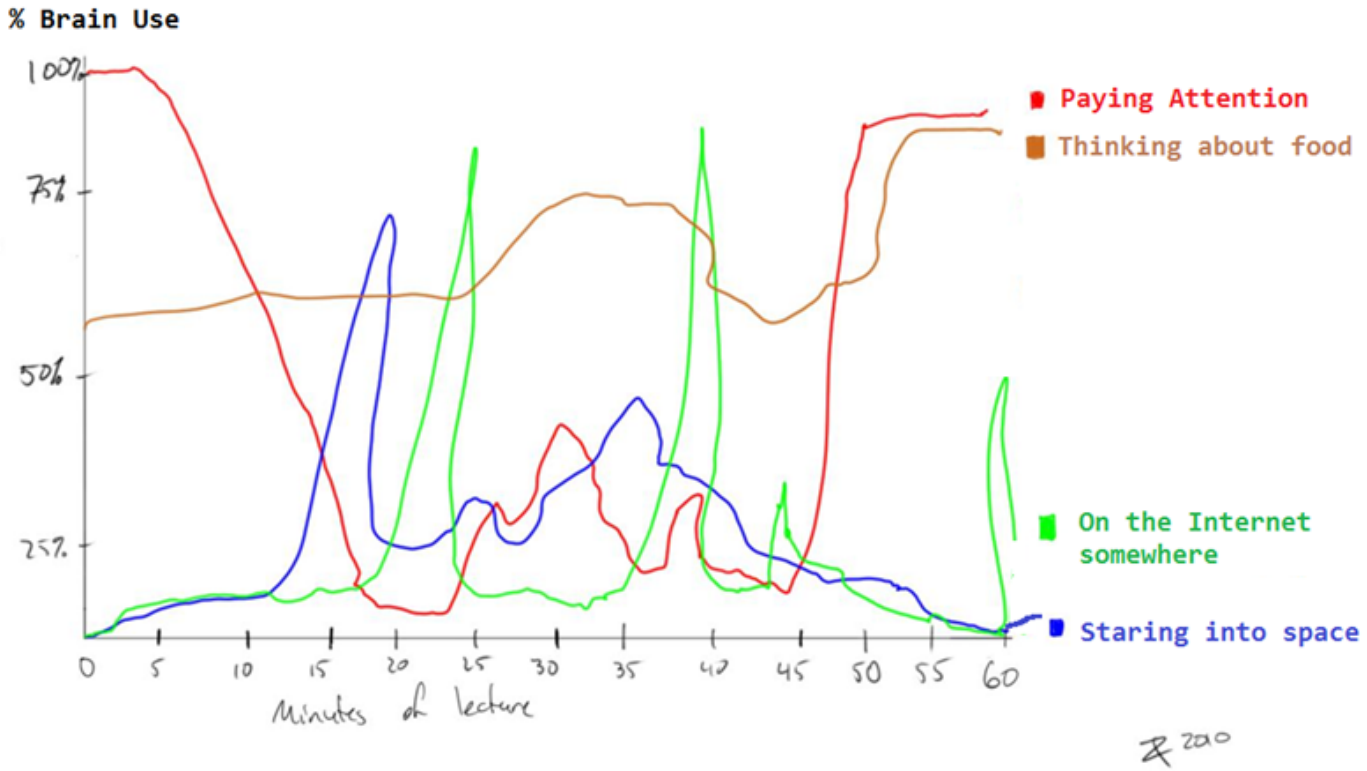
- Written Report:
  - Readers have freedom
  - own pace
  - control the amount of time
  - **Read parts and change order**
- Oral Presentation:
  - **Listeners have no freedom**
  - must keep up with the speaker
  - **no control over the time and topics**

Difference between Written Report and Oral Presentation – **Content**

- Written Report:
  - Readers can **scan, reread**, refer text, illustrations, graphics, and back.
  - **If too technical, readers can stop and search and consult dictionary or encyclopedia**
- Oral Presentation:
  - **Listeners depend on the speaker** making everything **clear** and **logical in sequence**
  - Mixed audience (general public or remote discipline scientist/engineer) may not fully understand the technical terms

Difference between Written Report and Oral Presentation - **Length**

- Written Report
  - vary substantially
- Oral Presentation
  - Should carefully plan **not to exceed the pre-established time**
  - Should consider audience's very short attention time span
  - Engage with audience to get their attention



Solution Design Presentation Format

- In-Class Team Presentation
- Dates:
  - Monday (Nov ??) 1:00pm – 3:00pm: 4 teams
    - Graders: Instructor, outsider (optional), the other 7 teams
  - Monday (Nov ??) 1:00pm – 3:00pm : 4 teams
    - Graders: Instructor, outsider (optional), the other 7 teams
  - Presentation Duration (max 30 min):
    - 15 - 20 slides
    - 15 – 20 minute presentation
    - 5 – 10 min Q&A

Team Presentation Content -- **Outline**

- "We have a project…..
- The team members are ....
- We do this project because… {**background**, need, dissatisfied conditions, etc}
- In plain English, this is the **problem** statement of the project ….
- In technical terms, this project aims to satisfy the following **design requirement**s… in product (or software) specs and in constraints which include regulatory compliance, socio-cultural or environmental constraints.
- So we worked and came up with **solution ideas from each of the 2 sub-groups**, and we **analyzed** them and **selected** the top design,
- And this is the **final design** which has this hardware structure and software blocks (with figures), the operational principle is like this.
- The hardware components which we will use to realize the solution design into reality are here, and the final product would look like this.
- The implementation of this solution starts next semester
- In conclusion, the project …. "

Solution Design Presentation Contents (Suggestion)

- **Cover**
  - Title and Members and advisor and (sponsor)
- **Background**
  - Background of the project (industry, technology, customer, etc)
  - Dissatisfied conditions/situations
  - Needs in customer's point of view
- **Problem Formulation**
  - Problem Statement
  - Design Requirements – Product or software Spec
  - Constraint of Standards and Regulations to comply (specific)
  - Constraints of Society, Culture, and Environment
- **Solution Generation**
  - 2 solution ideas
  - Analysis of the 2 designs (pros & cons) and (decision-matrix)
  - Top solution design selection
- **Top Solution Design**
  - Schematics of the Top Solution Design
  - Detailed Description of the Design – Hardware and Software block diagram
  - Operation of the solution: how the final product would work
  - Component level blueprint
- **Future Works (through this semester and the next)**
- **Conclusions**
  - Crisp and Clear Summary of all above

3 dimensions of for good Presentation

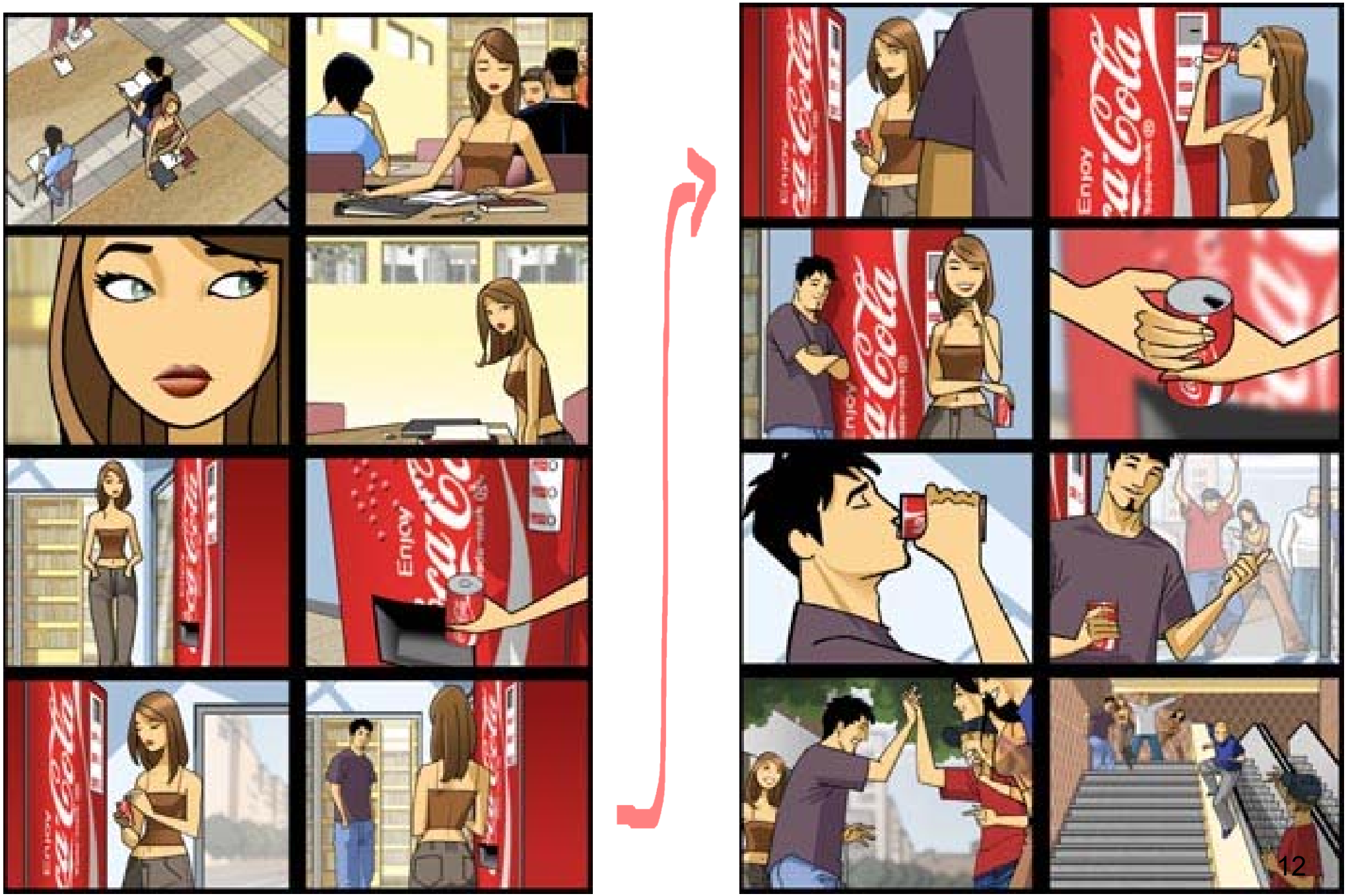
- A. Content
  - Good material
  - Correct delivery of key messages
  - **Know you subjects- Do your homework**
- B. Visuals
  - Heavily Graphic, Legible font size
  - “Everything on a slide must contributes to its purpose”
  - **Just 1 subject per slide**
- C. Delivery
  - No canned speech
  - Conversational
  - **Engaging**

Presentation Visuals

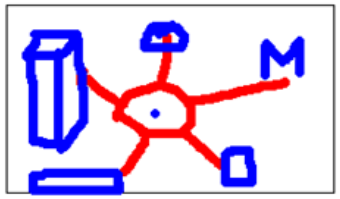
- One nice figure is **better than a thousand words**.
- Discrete, not continuous **(texts): Bullet Items (no complete sentences)**
- Make slide design **simple and crisp**

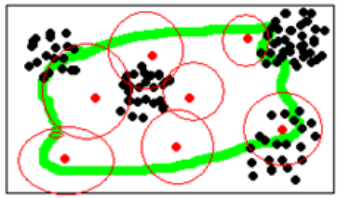
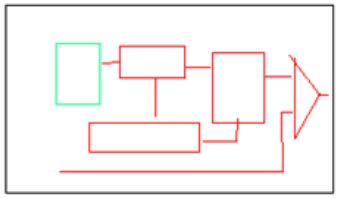
- **A good way to start? Storyboard**
- **What is a storyboard?**
  - "a series of **diagrams** that are used to depict **the composition of a video segment (oral presentation)"**

Storyboard - Example







Storyboard Steps for Solution Presentation

- **Steps in storyboarding**
  - Follow a **story line of presentation**
  - Make out **1 diagram for each of the presentation 7** Content **Categories**
  - Assemble **7 diagrams into a storyboard file**
  - Check if **"Project story" can be made out from the diagrams.**
  - Add **more diagrams**
  - Add **texts**
  - Check **if the 15 - 20 diagrams of storyboard make sense**

Team Presentation

- **2 styles**
  - Dialogue Style presentation
    - Group conversation style
    - No moderator
  - Tag Style presentation
    - (Ex) main anchor and correspondents
- **Tips**
  - **Plan ahead and do practice, a lot.**
  - Share **equal amount** of presentation time
  - **Practice Smooth Transition** from a presenter to another
  - Q&A

Presentation Scoring Rubric

A. Content [60]
- The presentation clearly described the background and problems with dissatisfied situations and benefits [10]
- The design requirements described quantitative product specification [10]
- The design requirements considered standards/regulations, societal-cultural-environmental constraints [10]
- The design process of initial ideations and selection of top design was well presented.[10]
- The top design was clearly described in its features with block diagrams as well as operational principles [**20**]

B. Visuals [20]
- The slides were enjoyable with graphics and legible texts [10]
- The slide design was helpful in understanding the contents [10]

C. Delivery [20]
- Presentation was well engaged with audience in good pace and transition [10]
- Q&A session was dealt informatively [10]

Timeline

Due Date	Items/Assignments
(M) Oct 16	Due: Assignment 4
(M) Oct 23	Due: Assignment 5
(M) Oct 30	Due: Assignment 6
(M) Nov 6	Due: Assignment 7 (Report)
(M) Nov 13	Due: Ethics Essay Solution Presentation 1
(M) Nov 20	Solution Presentation 2
Dec ?	**Final Exam**