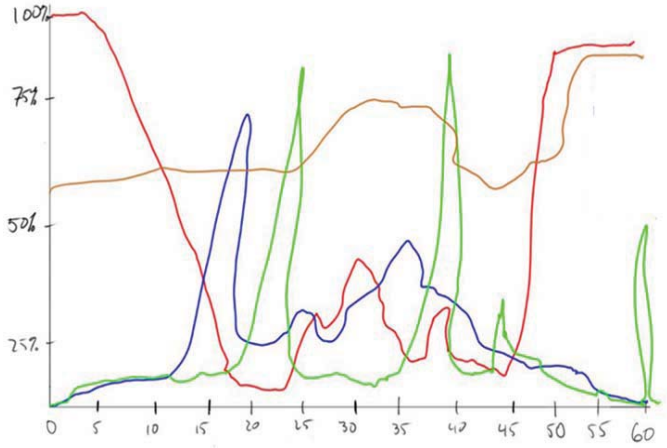
# Project Design Presentation




**Problem Formulation**

- Problem Statement
- Design Requirements

**Solution Generation**

- Individual Ideas
- Pros/Cons
- Selection of 2 designs
- Pros/Cons & Decision Matrix
- Top Solution Design

→ Project Design Presentation

# Presentation Contents

- Why (Background):
- What (Problem Definition): (1)Problem Definition/Statement
  (2)Design Requirements
- How(Solution Generation):
  - (1) Individual Ideas,
  - (2) Top 2 Design Concepts,
  - (3) Top Design Selection through (a) Pros & Cons and (b) Decision Matrix
  - (4) Details of the Top Design (using description and figures (with numbers).
- When (Next step):
- Conclusions:

## Difference between Written Report and Oral Presentation - Pace

- Written Report:
  - Readers have freedom
  - own pace
- Oral Presentation:
  - **Listeners have no freedom**
  - must keep up with the speaker

## Difference between Written Report and Oral Presentation – Content

- Written Report:

– Readers can **scan, reread**, refer text, illustrations, graphics, and back.

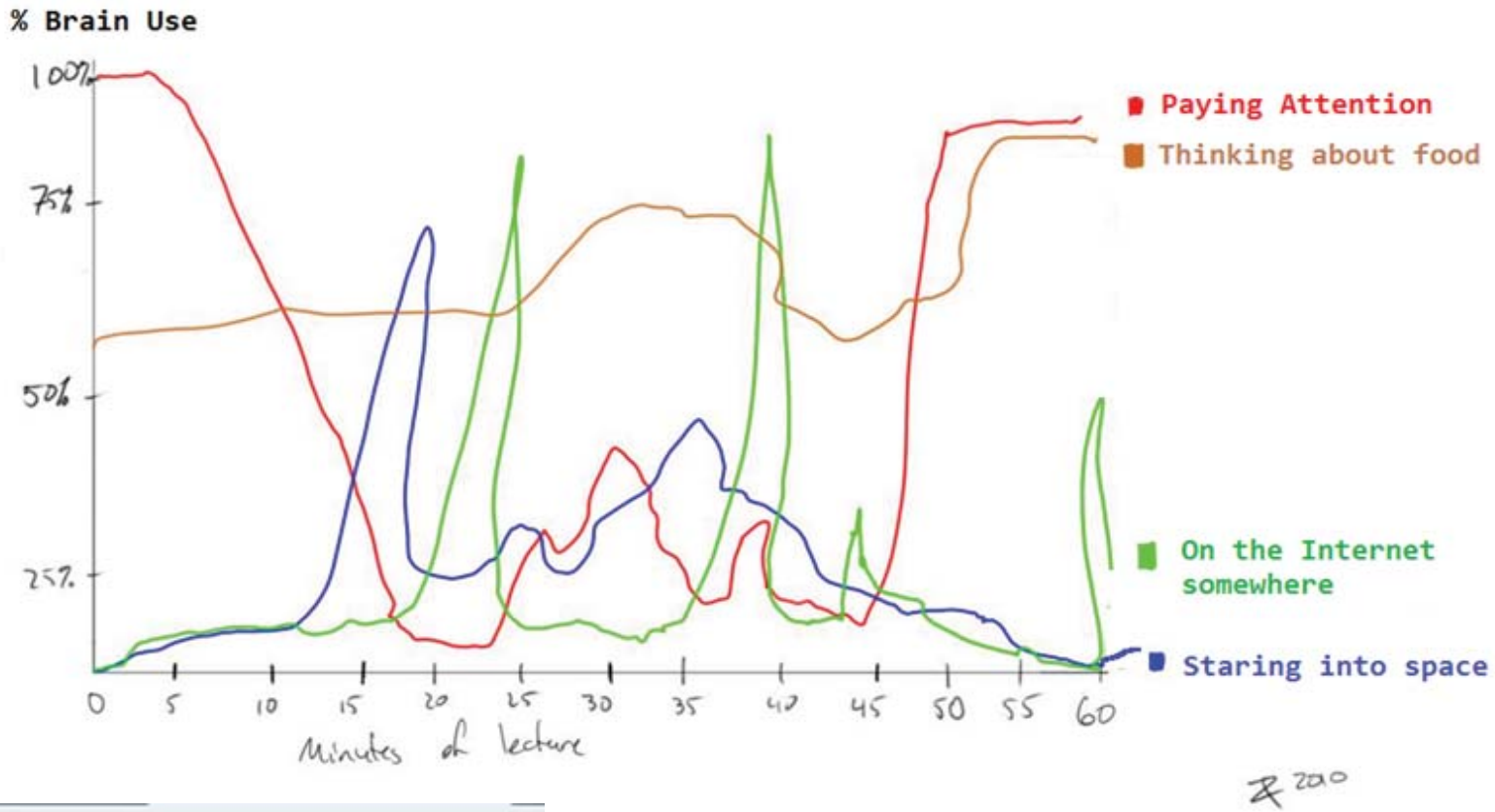
- Oral Presentation:

– **Listeners depend on the speaker** making everything **clear** and in **logical sequence**

## Difference between Written Report and Oral Presentation - Length

- Written Report
  - vary substantially

- Oral Presentation
  - carefully planned **not to exceed the pre-established time allocated**



- Format: Team Presentation
- Date :
  - Monday (Nov 22) 2:00pm: 4 teams
    - Graders: Instructor, outsider (optional).
- Presentation Format: new *PechaKucha* –
  - 20 slides
  - Original:
    - 20 seconds per slide (400 seconds – 6 minutes and 40 seconds)
  - New:
    - 30 seconds per slide(600 seconds – 10 minutes)
  - All member participation

# Team Presentation Content -- **Outline**

- For each team
  - "We have a project.....
  - The team members are ....
  - We do this project because... {**background**, need, demand, importance, etc}
  - In plain English, this is the **problem** statement of the project ....
  - In technical terms, this project aims to satisfy the following **design requirements**... in product (or software) specs, regulatory compliance, and socio-cultural or environmental constraints we have to accept,
  - So we worked and came up with **solution ideas from each member**, and we **selected** 2 solution ideas, and then **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 this and the final product would look like this.
  - The implementation of this solution starts next semester
  - In conclusions, the project ..... " "

# Solution Design Presentation Contents (Suggestion)

- **Cover (p. 1)**
  - Title and Members and advisor and (sponsor)
- **Background (pp. 2 - 3)**
  - Background of the project (industry, technology, customer, etc)
  - Needs and demands in customer's point of view
- **Problem Formulation (pp. 4 – 8)**
  - Problem Statement
  - Design Requirements – Product or software Spec
  - Standards and Regulations to comply (specific)
  - Constraints to work under (socio-cultural, environmental, intellectual, etc)
- **Solution Generation (pp. 9 – 12)**
  - Individual ideas
  - 2 solution designs selected (why these 2 are selected)
  - Analysis of the 2 designs (pros & cons, decision matrix - attributes, criteria, and weights) and selection of the top solution design
- **Top Solution Design (pp. 13 - 17)**
  - 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
- **Future Works (through this semester and the next) (p.19)**
- **Conclusions (p. 20)**
  - Crisp and Clear Summary of all above

# 3 dimensions of for good Presentation

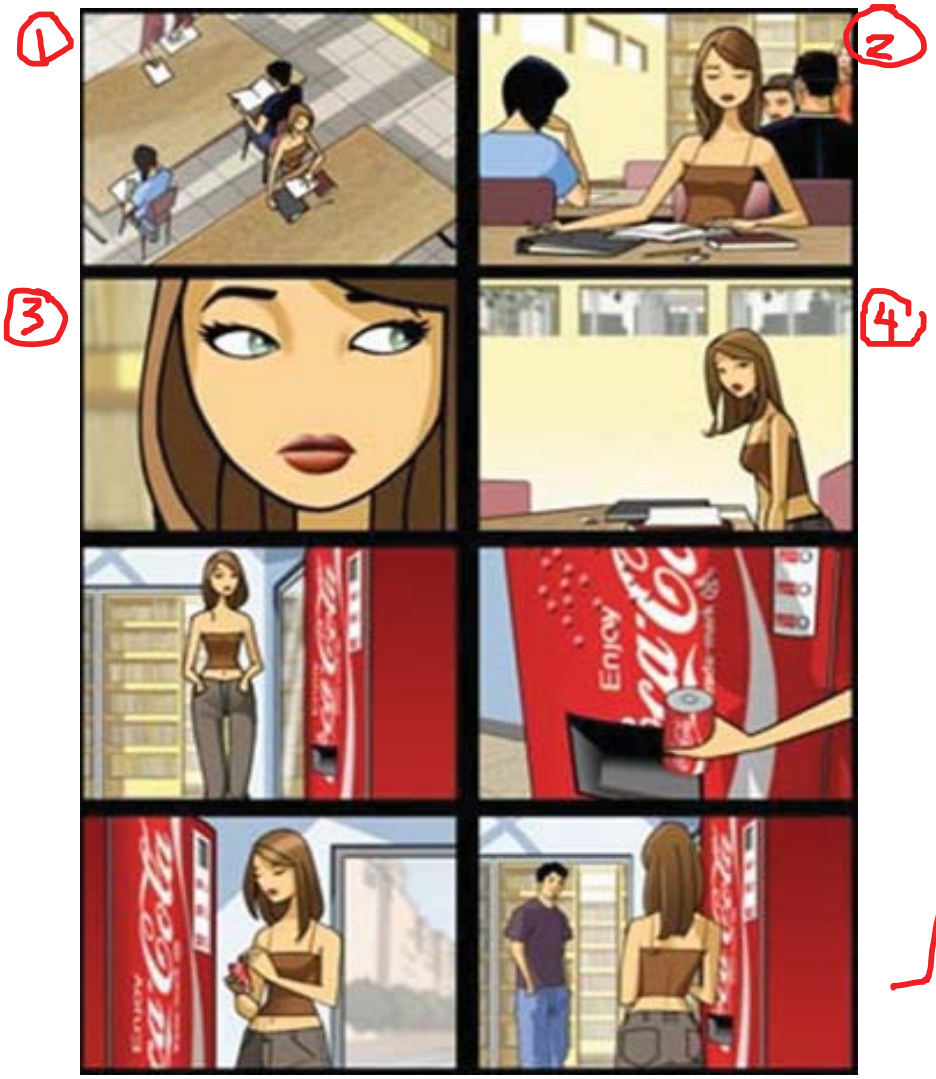
- A. Content
  - Good material
  - Correct delivery of key messages
- B. Visuals
  - Heavily Graphic, Legible font size
  - "Everything on a slide must contributes to its purpose"
- C. Delivery
  - No canned speech
  - Conversational

# Presentation Visuals

- One nice figure
- Discrete, not continuous:
- Make a slide design
- **Layout and Appearance**

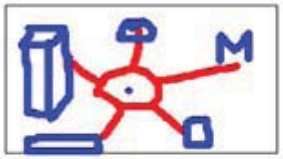
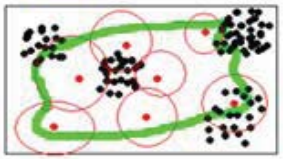
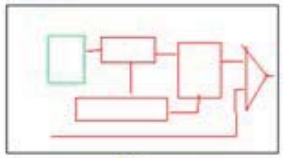
# Storyboard

"a series of diagrams that are used to depict the composition of a video segment (oral presentation)"




# Storyboard Steps for Project Presentation



1. **Cover (p. 1)**
   - Title and Members and advisor and (sponsor)
2. **Background (pp. 2 - 3)**
   - Background of the project (industry, technology, customer, etc)
   - Needs and demands in customer's point of view
3. **Problem Formulation (pp. 4 – 8)**
   - Refined Problem Definition in Engineering point of view
   - Design Requirements – Product or software Spec
   - Standards and Regulations to comply (specific)
   - Constraints to work under (socio-cultural, environmental, intellectual, etc)
4. **Solution Generation (pp. 9 – 12)**
   - Individual ideas
   - 2 solutions designs selected (why these 2 are selected)
   - Analysis of the 2 designs (pros & cons, decision matrix - attributes, criteria, and weights) and selection of the top solution design
5. **Top Solution Design (pp. 13 - 17)**
   - 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
6. **Future Works (through this semester and the next) (p.19)**
7. **Conclusions (p. 20)**
   - Crisp and Clear Summary of all above

- **Steps in storyboarding**
  - Follow
  - Make out
  - Assemble
  - Check
  - Add
  - Add
  - Check

# Team Presentation

- **2 styles**

- **Tips**
  - Plan
  - Remember
  - Share
  - Practice
  - Be familiar with

Presentation Scoring Rubric (Form)

**PROJECT DESIGN SOLUTION PRESENTATION SCORE SHEET**

EECE 401/404 Senior Design Dr. Charles Kim

| | | | |
|---|---|---|---|
| Evaluator | **Name** | Date | **Nov ( ) , 2020** |
| Objectives | The focus of the presentation is Project Solution Design which solves a given problem, under constraints and design requirements, by the process of problem formulation, ideation of multiple solution concepts, analysis of the alternative designs, final solution design Selection, and the details of the final design. | | |
| **Project Team (mark 1 box)** | | | |

## 10 pts each line

| | | |
|---|---|---|
| **A. Content** | 1 The presentation clearly described the background of the project | |
| | 2 The presentation defined problem (goal) of the project following the need-benefit proposition | |
| | 3 The presentation described the design requirements with software/product specs, rules and standards to be complied, and at least one socio-cultural or environmental constraint. | |
| | 4 The presentation clearly described the solution generation steps including top solution design selection with pros/cons and decision matrix | |
| | 5 The presentation clearly described the details of the top solution design | |
| **B. Visuals** | 6 The slides were with images with legible text size | |
| | 7 The slide designs and appearances were helpful in understanding the contents | |
| **C. Delivery** | 8 The presentation was friendly to and could be easily understood by mixed audience (by avoiding heavy technical terms) | |
| | 9 The presentation was smooth in transition of team members in taking turns in speaking | |
| | 10 The presentation was conversational and engaging | |
| **Total** | | |

| Due Date | Items/Assignments |
|---|---|
| (M) Oct 25 | Problem Statement<br>Design Requirements |
| (M) Nov 1 | Section 1: All individual solutions<br>Section 2: Top 2 Design solutions with Pros & Cons |
| (M) Nov 8 | Section 3 : Top Solution Design Selection with Decision Matrix<br>Section 4 : Description of the Top Solution Design |
| (M) Nov 15 | Final Solution Design Report (**Accumulation of all 4 sections in to 1 report**) |
| **(M) Nov 22** | **Project Design Presentation** |
| **(M) Nov 29** | **Ethics Essay (8:00pm)** |
| | **Final Exam** (2:00 pm) |