



## Second Technical Committee Meeting



I'm Inspired

Organized By: 

Sponsored By:   

# Objective



1. To **discover design talents** and unleash their creativity in product design and innovation.
2. To demonstrate the capabilities of the **industrial problem solving**.
3. To promote **innovation in 3D design** in institutes of higher learning (IHL) and industry.

# Theme



We are looking for a **product design that will ease the lives of Malaysians during natural disasters or accidents.**

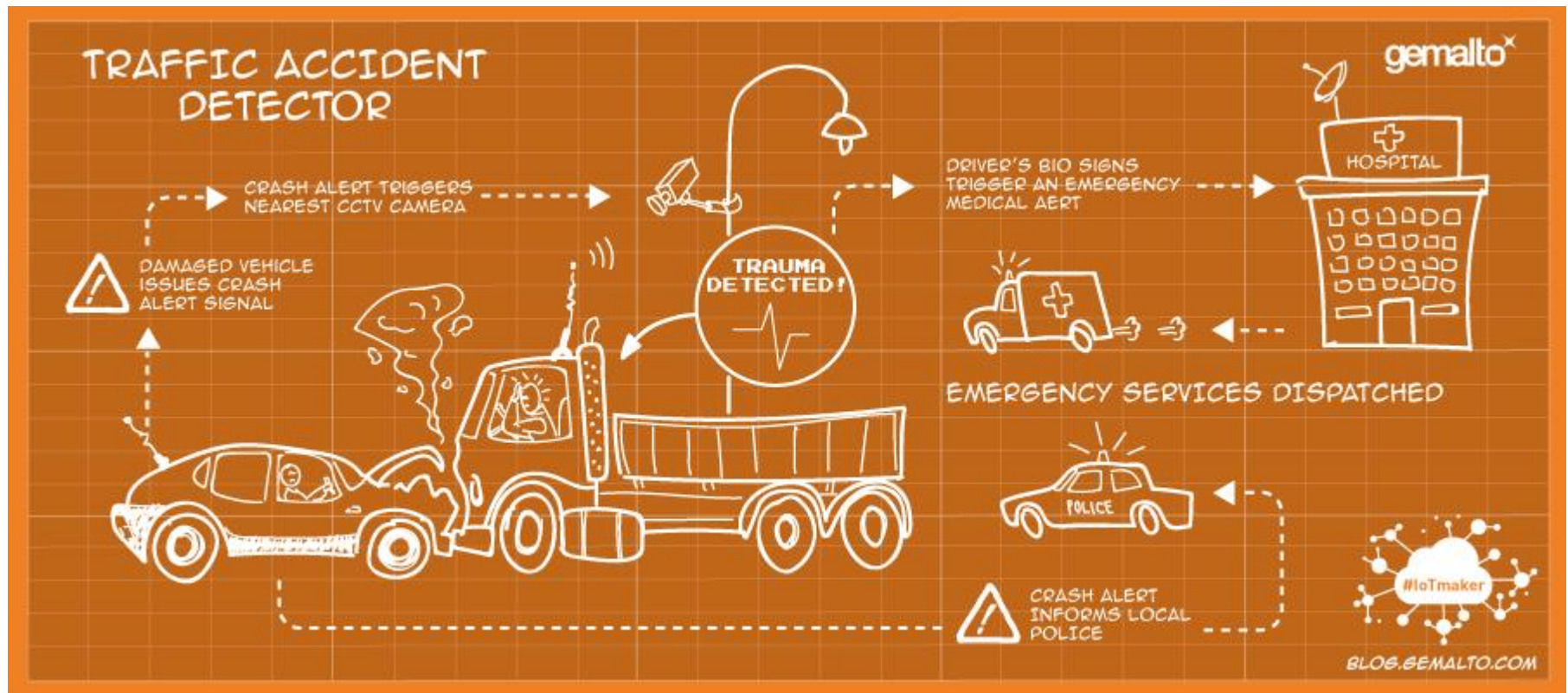
**Solution For Natural Disasters Or Accidents**



*\*Natural disasters & accidents are defined as activities that may rob / severe the life of Malaysians.*

*\*Natural disasters are referred to natural event relevant to Malaysia such as flood and land slide, whereby accidents are referred to road accidents, industrial & workplace accidents.*

# Theme - Examples



# Theme - Examples

D.R. TOILET  
DISASTER RELIEF  
Discovery  
Global Centre of Excellence 11



# Questions?

2015



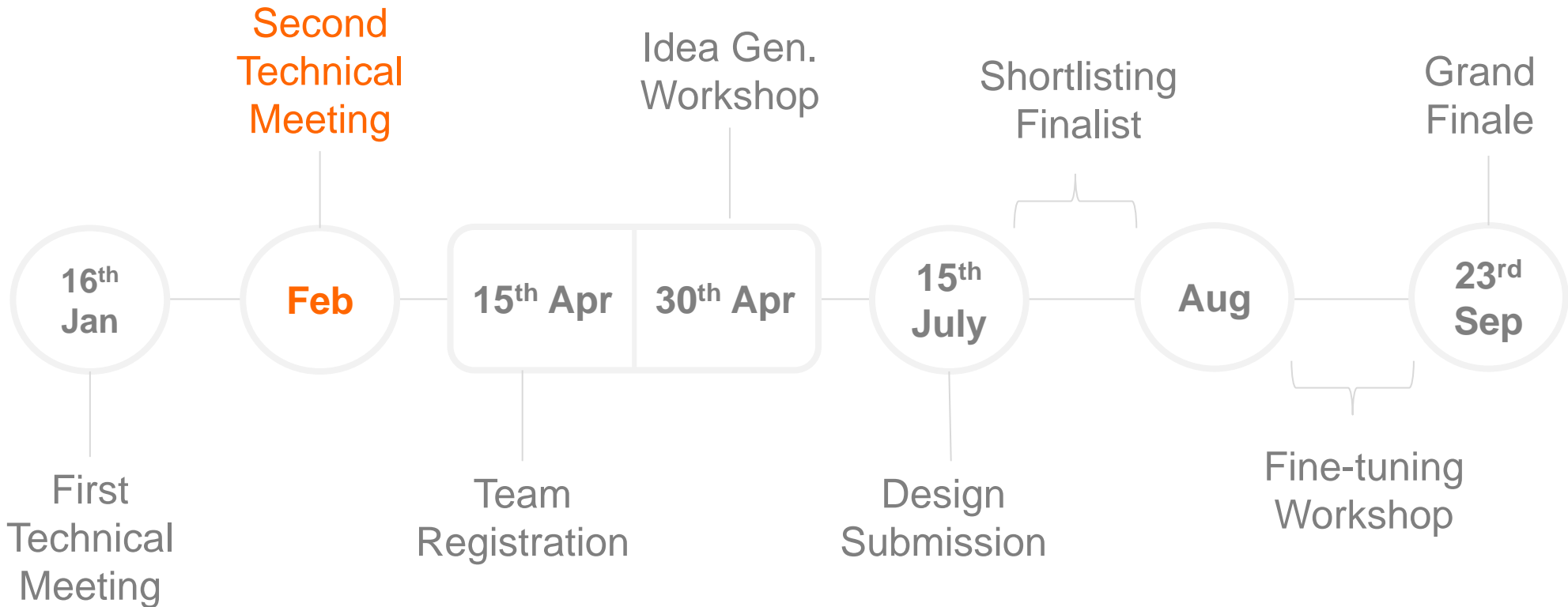


# Participating Eligibility



- Registration is open to all **undergraduate students** who are pursuing **certificates, diploma or degree** program in institutions recognized by the Malaysian Government.

# Competition Timeline



Please visit [www.cadcam.com.my](http://www.cadcam.com.my) for latest updates of important dates & events.



# Prizes For Winner



3 winners will walk away with attractive cash prizes and awards

<b>1st Prize</b>	<b>: RM 5,000</b>
<b>2nd Prize</b>	<b>: RM 3,000</b>
<b>3rd Prize</b>	<b>: RM 2,000</b>

Please visit [www.cadcam.com.my](http://www.cadcam.com.my) for latest updates of important dates & events.

# Terms & Conditions



1. Entry submission must be submitted by an **individual or a maximum of THREE (3)** persons per group.
2. Each institution may select the **Best FIVE (5) entries** to participate in this competition.
3. **Complete SolidWorks or CATIA database** required to be submitted. **Incomplete database will result in deduction of marks.**
4. Entries will be judged by **panel of judges**, comprising of the representatives from IME, industry associations and partners.

# Terms & Conditions



5. The participating institution or company shall approve the use of images created from parts and assemblies provided by the student or engineer (thereafter known as participant) for use in **marketing materials** to be produced by the organiser and its assigns. **Participant grants** the organiser and its affiliates, and assigns, the right to use, reproduce, or incorporate in any manner whatsoever all or any portion of the aforementioned images.

# Terms & Conditions



6. Participant represents and warrants that the materials are **owned by the student participant** and is free and clear of any liens or claims of any third-party, that the participant has a **legal right to grant the permission** herein given, and the **participant will indemnify and hold harmless the organiser, its affiliates**, assigns, agents, and employees, against liability should any third-party claim that the use of the materials by the organiser and its affiliates, assigns, agents, and employees, violates any right of such third party to the materials.

# Terms & Conditions



7. The participating institution or company shall hereby grant the **organiser permission to cite this institution** on a general client list for possible distribution to the press, analysts, prospects, and other customers.
8. The **organiser shall not be held liable and responsible** for any damages or claims for any damages or loss of documents or products before or after the competition.
9. All participants are encouraged **to register their designs** under the relevant industrial design and intellectual property laws in force in Malaysia and to keep all documentations as proof of ownership before sending and displaying their designs to the organiser.

# Terms & Conditions



10. The **organiser shall inform the participants** if their submissions are selected for further development.
11. The organiser and/or panel of judges reserve **the rights to alter competition terms and conditions** which deemed necessary, in the best interest of this competition.

# Questions?

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# Design Requirements

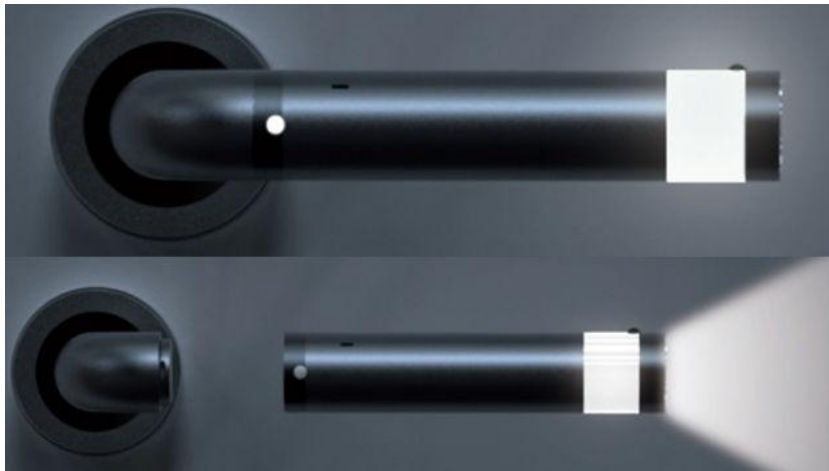


1. The end product should be **portable and prove to solve difficult situation during natural disaster or accident.**
2. The end product should have a duration of use of at least **3 to 6 months.**
3. **Prototyping** the product.
4. Total **production cost** can be equal or less than **RM500.**
5. Must include **proof of concept.**
6. Using **SolidWorks** or **CATIA** tool.
7. The product design must take consideration of **manufacturability.**

# Portable



Portable Water Filtration System



Multi-purpose Door Knob

# Natural Disasters & Accidents



- Natural disaster & accidents are defined as activities that may rob / severe / greatly damage the lives of Malaysians.
- Natural disasters are referred to natural event relevant to Malaysia such as **flood and land slide**, whereby accidents are referred to **road accidents, industrial & workplace accidents**.



# Production Cost

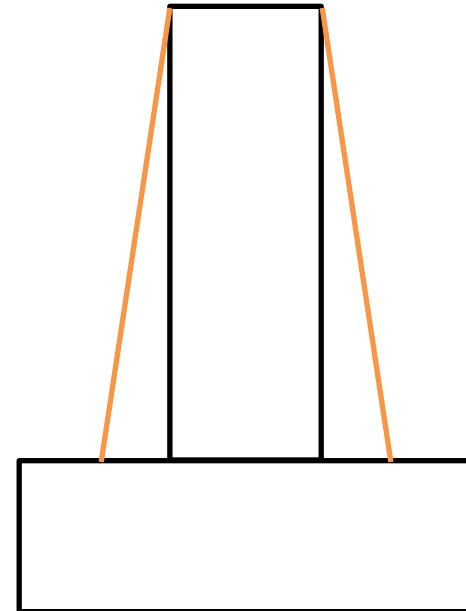
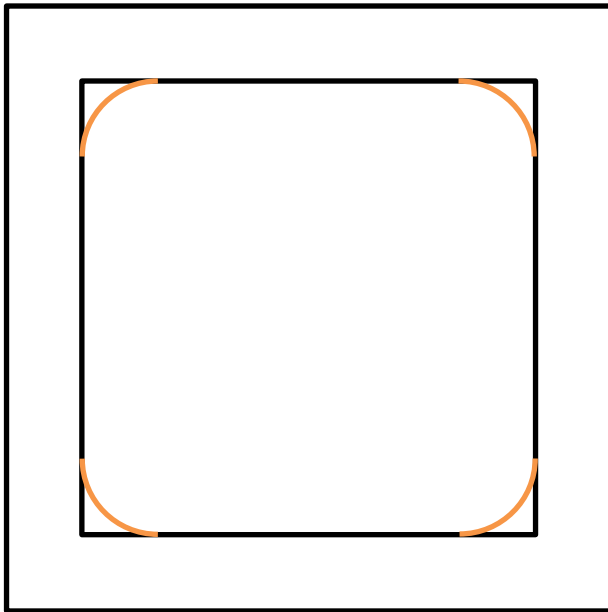


- Narrow down the design variation to make them comparable
  - To engage students to think about:
    - How to produce the part?
    - What kind of production technology is suitable?
    - What is the value of a part?
  - Cost calculation must not be supported by quotations
  - Example: Plastic injected part
    - Mold: RM 20,000
    - Total produced parts per mold: 5,000
    - Material per part: RM 2
- Part price: RM 6

# Manufacturability



- All parts must be manufacturable as cost efficient as possible
- Necessary features for the manufacturing must be highlighted
- Example:



# Proof of Concept

- Functionality:  
How is the product working?  
Any collusion between parts?  
What kind of mechanism is used?
- Physical criteria: Force, Strength, Fatigue, Weight, Electricity etc.
- Example:

What kind of size is  
in the market?

Can the part be deformed  
under the load of a human?



Can the metal part deform?  
Can the plastic part deform?  
Where is my weakest point?  
What is the maximum  
human weight?

# Questions?

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# Judging Criteria



1. Creative & innovative design - 40%
2. Ability to proof of concept - 40%
3. Ability to apply systematic design methodologies and market research - 20%

*\*Top 10 finalists will be short listed based on the first three criteria.*

*\*All finalists must submit prototype on final presentation.*

*\*The judging criteria above will be reevaluated during finals with an additional 10% on stage presentation.*

# Creative & Innovative Design



*To evaluate the ability of a creative and innovative design.*

## 1. Uniqueness

- The only one of its kind
- Different with existing characteristics
- Reconfigure the value to enhance uniqueness.

## 2. Practicality

- Useful or general purpose
- Concern with experience or actual use

## 3. Value

- Value for money
- Value for time

# Ability to Proof of Concept



*To evaluate the ability to show proofs in supporting claims related to the design .*

## Areas for “Proof of Concept”:

1. Accurate modelling
  - No interference, No collision, Smooth surface
2. Level of environment impact
  - Level of Carbon footprint, air and water pollution, energy saving
3. Cost saving or reduction
  - Calculate manufacturing cost, material cost.
4. Validation of strength or functionalities
  - Maximum force, mechanism

# Ability to Apply Systematic Design Methodology



- Market research
- Patents search
- Specification definition
- Idea development (brainstorming, mind mapping)
- Concept generation (eg: morphological method)
- Evaluation/selection
- Documentation.

# Questions?

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# Submission Requirements



## 1. 3D SolidWorks or CATIA Model

(the model must be 100% created from SolidWorks or CATIA)

2. **2D Drawing** for main assembly with basic dimension, BOM, section view, exploded view with critical portion.

# Submission Requirements



## 3. Design & Idea Development Report that contain:

- The study & research (market research, background study and etc)
- Design Methodology.
- Proof of concept (can include image or animation).
- Design advantages highlight.



# Submission Requirements



4. You must include your **SolidWorks** or **CATIA** product serial number to create the design & modeling.
5. **High resolution images** : Images must at least **300 DPI** and approximately **86 x 64 mm** (3.4 x 2.5 inches) in size, or greater; or the image must be large enough so that the density will be print quality when the image is reduced to these dimensions. The preferred formats are **JPEG** and **TIFF** with preferred image dimensions of approximately **1800 x 1200** pixels, or greater.

# Submission Method & Format



- Submission items must consist of all items described in the submission requirements.
- All the items can be:
  - Zip all files and folder and send to [imedc2015@cadcam.com.my](mailto:imedc2015@cadcam.com.my)
  - (hand-over /postage) to organizing committee or
  - Submit to Organizer office at:  
**30, Jalan PJS 1/46, 46150 Petaling Utama**  
**Petaling Jaya, Selangor Darul Ehsan**

# Design File Structure



Design Folder Name (University name\_Faculty\_Group Name)

Complete SolidWorks / CATIA Design Data

▪ E-Drawing Files for 3D Model / 3DXML for Catia

▪ High-resolution images (JPEG, TIFF)

Animation (AVI) files

▪ Design and Ideas Development Report

▪ SolidWorks / CATIA Edu Edition

▪ License Serial Number

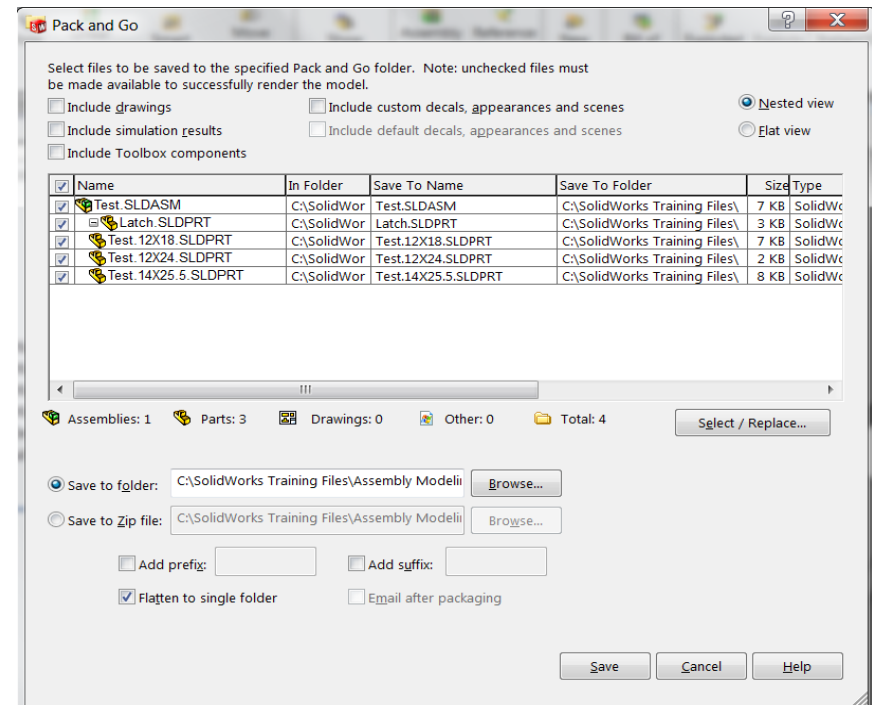
# File Structure



## 1. SolidWorks or CATIA Design data folder

### a) SolidWorks

- Use pack and go to store SolidWorks part, assembly drawing files and simulation.



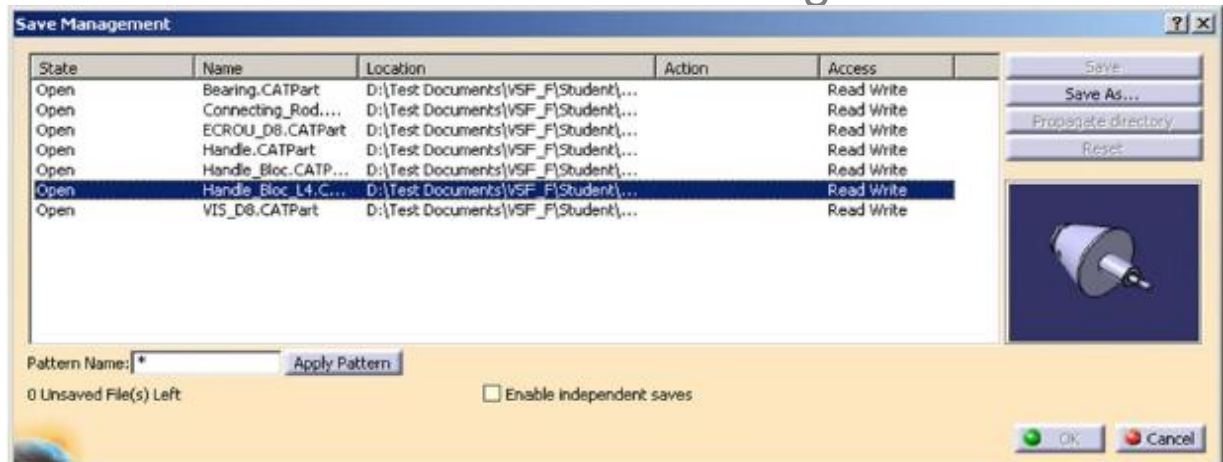
# File Structure



## 1. SolidWorks or CATIA Design data folder

### b) CATIA

- Use Save Management and Propagate directory to pack all the parts in the assembly.
- Drawing and simulation data should be included in the Design Data folder



# File Structure



2. Photo rendering folder (to store rendered image)

a) **SolidWorks**

- Photoview 360

b) **CATIA**

- Photo rendering folder (to store rendered image)
- Video folder (to store avi file)

# File Structure



3. Video folder (to store avi file)
  - Animation / Manipulate
  
4. Design & Ideas Development Report
  - Microsoft Word document
  
  - Solidworks EDU Serial number folder ( to store print
  - screen image of Solidworks EDU Serial number)

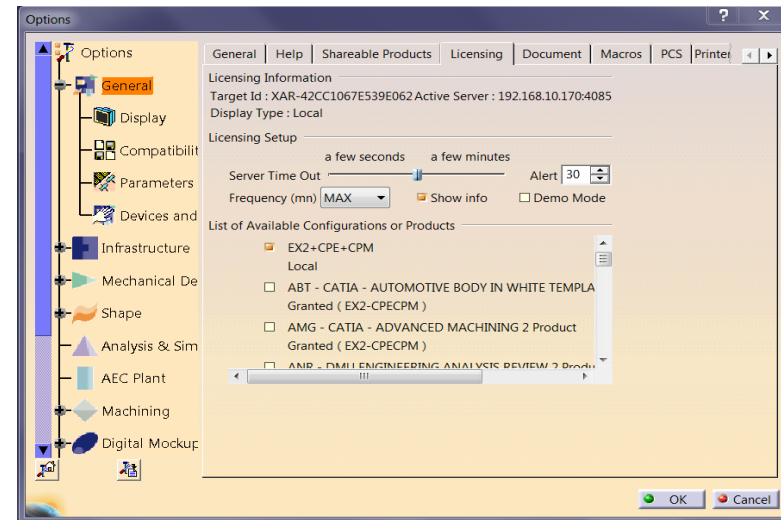
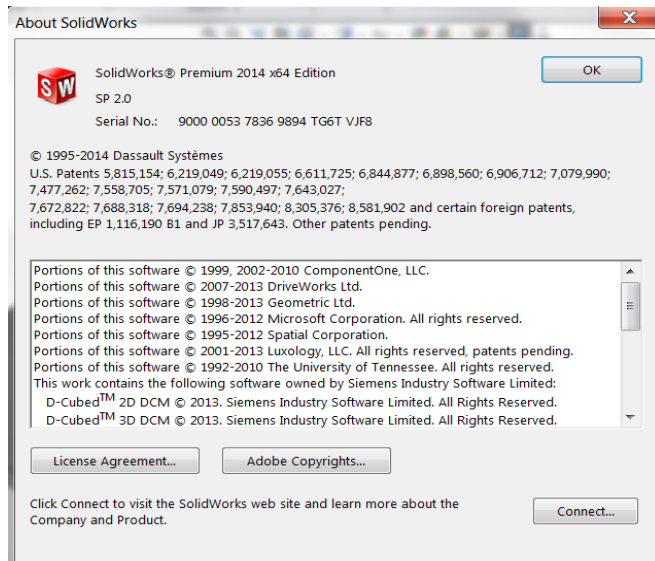


# File Structure



## 5. SolidWorks or CATIA Edu Serial number folder

- to store print screen image of SolidWorks or CATIA Edu Serial number.



# Questions?

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# Contact Information



## IME

Attn: Technical Committee of IME Design Competition 2015  
30, Jalan PJS 1/46, 46000 Taman Petaling Utama, Petaling Jaya

General competition **enquiries**: 03-7783 6866 (ext. 121 or 136)

E-mail : [imedc2015@cadcam.com.my](mailto:imedc2015@cadcam.com.my)

Website : [www.cadcam.com.my](http://www.cadcam.com.my)



**Thank You For Participating!**



**I'm Inspired**