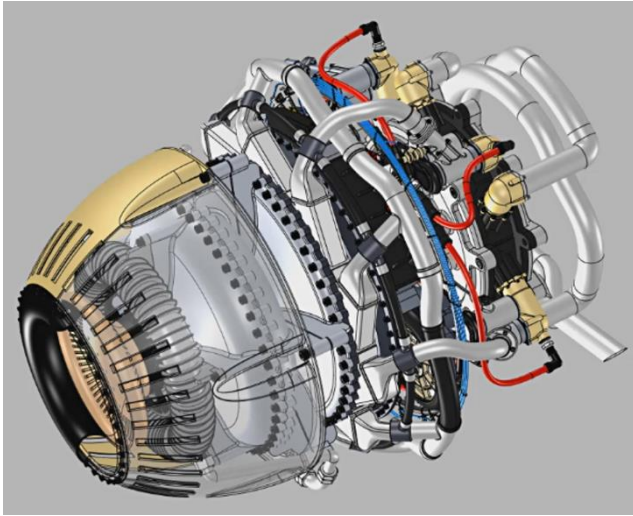# Computer-aided Design (CAD)

Topics

- What is CAD

- Basic CAD procedure

- Good CAD practice

- Live demo

On a scale of happy Kanye to unimpressed Kanye, how is CAD so far?

Total Results: 165

A look back to the past

- It wasn't that long ago where if we wanted to represent something in 3D, we had the following options

  – A 3D sketch

  – Prototyping

  – Our imagination

- The advent of the digital age saw us dramatically increase our ability to visualise our designs
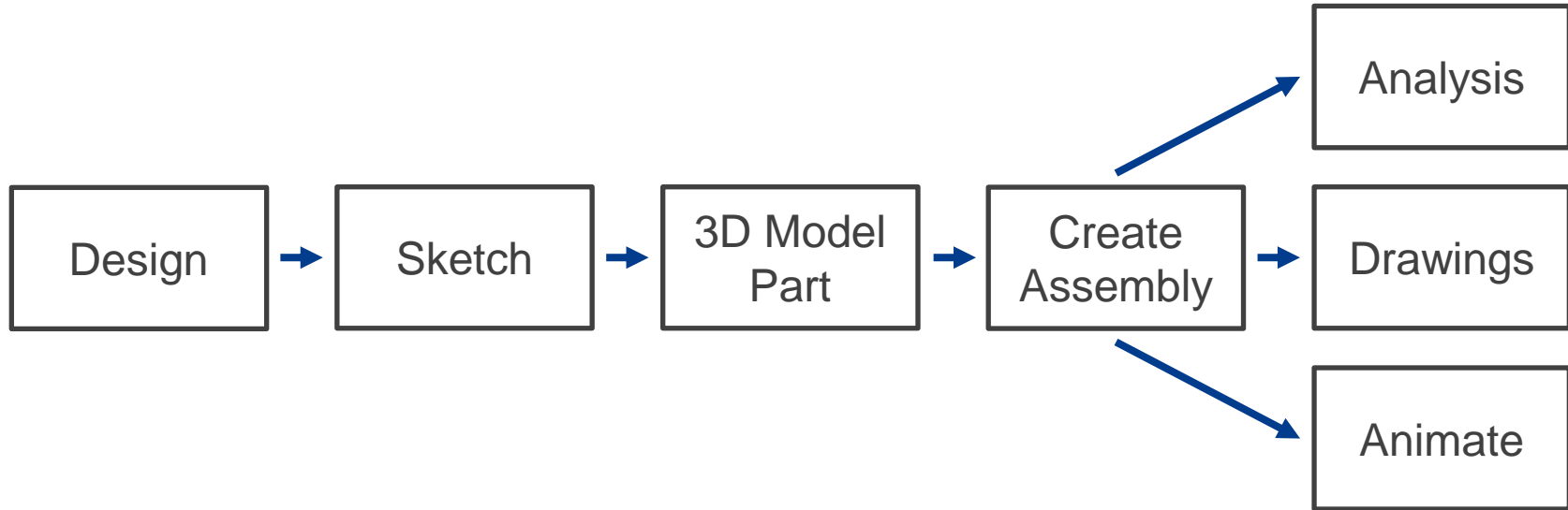
Where we currently are now

- Gone are the days of tedious reproduction and document sharing

- The ability to design, sketch, then render a component in 3D is easier than ever

- However, with new technologies comes new problems to manage
  - We will discuss some of these a bit later

CAD in a nutshell

- As you have all have no doubt experienced, the process for creating 3D models is not particularly difficult

```
Design → Sketch → 3D Model Part → Create Assembly → Analysis
                                                   → Drawings
                                                   → Animate
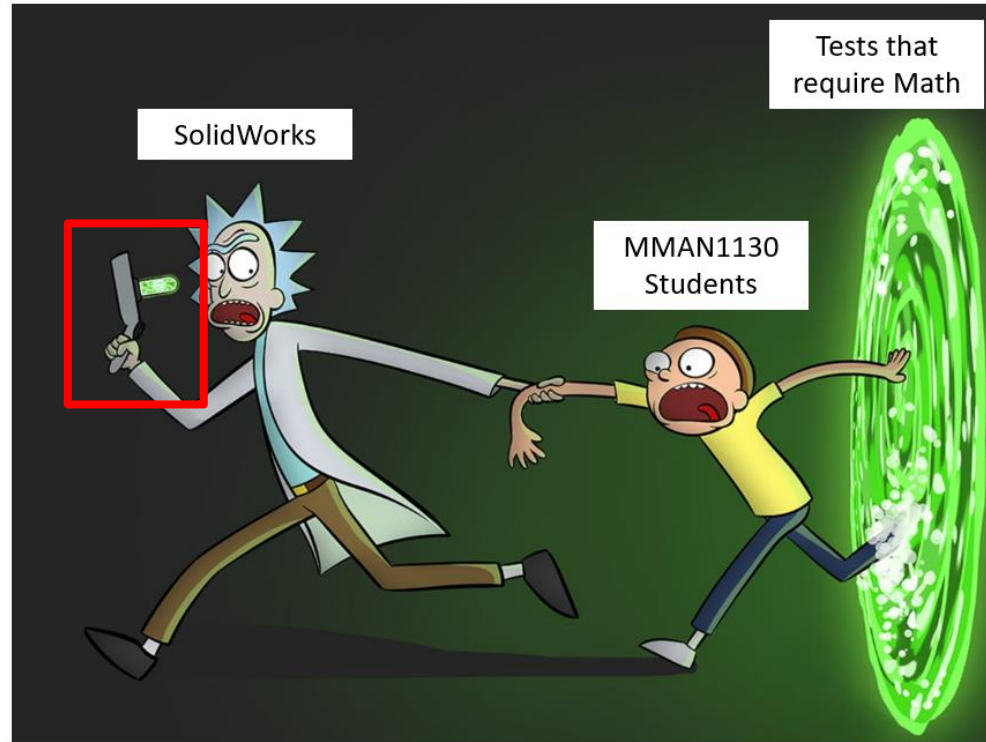```

# Good CAD Practice

- Mindset

  – Additive vs Subtractive Mindset

  – Superficial vs Manufacture

- Clear and understandable

  – You may not be the only person required to work on the models

- Redesign Friendly

  – If you need to make modifications, you want it be intuitive.

- Naming convention

  – Thing.prt, blah.prt, test.asm
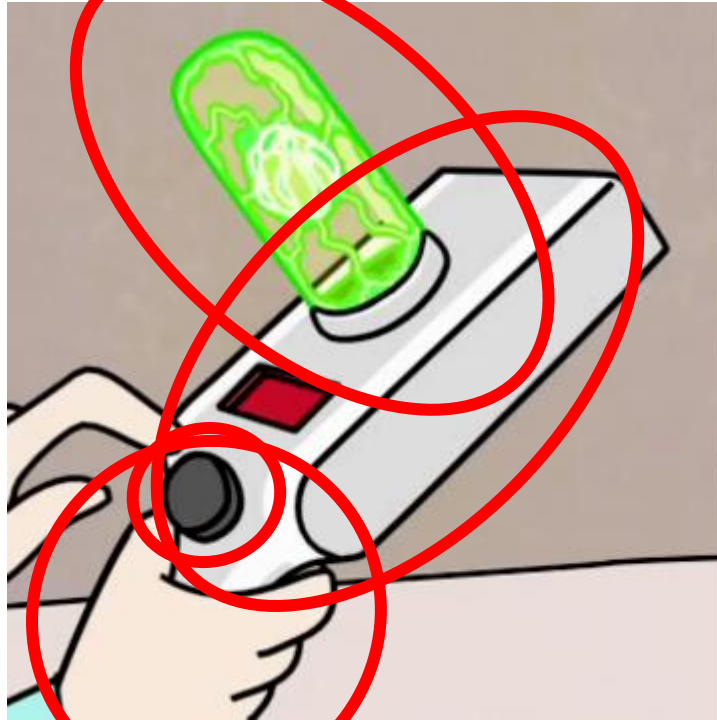
# Live Demonstration

- There were a lot of amazing suggestions. Here are some of my favourites

  - Zinger box

  - Lightsaber/Darksaber

  - Among Us Sus Person

  - Portal companion cube

  - BLT sandwich
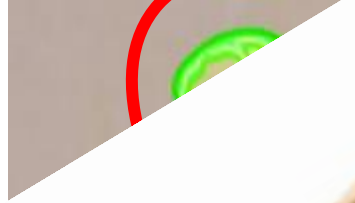
- Ok, so what are we actually making?



UNSW
SYDNEY

# Live Demonstration

# Portal Gun Strategy

# Portal Gun Strategy



We'll make a box too!

# Ok, let's do it!