Agenda:

- Email Matt; ask for all the data we can

Useful links:

- https://wiki.cam.ac.uk/cl-design-projects/British_Antarctic_Survey
- https://en.wikipedia.org/wiki/British_Antarctic_Survey
- http://www.telegraph.co.uk/science/2017/01/16/british-antarctic-survey-abandons-polar-base-worrying-crack/
- https://www.zotero.org/
- http://www.bbc.co.uk/news/science-environment-36197657

Workload:
No more than 60 hours per team member,
Keep records of time invested.
Involve:

- ➔ test harnesses or scripts
- ➔ data conversion utilities
- ➔ a tutorial system
- ➔ external interfaces
- ➔ demonstration examples

- Client meeting 2/02/17 -- 2pm
- **Specification** and **project plan** (sent to client and project organizers)
- Design brief→ proper specification of requirements (3000 to 5000 words long.):
    - a general **investigation** of the problem and its background;
        - Julia, Val
    - deciding on the **facilities** to be provided;
        - We need this and we'll provide this
        - James, Matt
    - planning the major **components** of the system;
        - Andreea, Nand
    - specifying the **acceptance criteria** for the finished product;
        - Matt, Andreea
    - deciding on a **management strategy** for the group
        - Val, Julia
    - each member **responsibilities**
        - Nand, James
- Project Plan
    - **who** will do what
    - **time** needed for developing and testing each module
    - dependencies between **modules**
- Task:
    - make a 3D immersive visualisation of the growing chasm
    - use machine learning to extrapolate the growth of the chasm over time
    - animation of the crack propagation - compressed in time
    - ~5 minutes representing ~50 years

- We will be GIVEN:

    - aerial scans/photographs/video
    - multispectral satellite imagery,
    - (entire length) ground penetrating radar cross section of the crack
    - photogrammetric modelling of a ~300m section of the chasm.
- Challenge:
    - the crack propagation trajectory is unknown
    - some image footage is missing;
        - due to flat light (no shadow) problems
        - the scale (4k video, 25fps, 40km) -- drones are not perfect.
        - extrapolation of known data to model unavailable/unknown aspects

Structure of project:

There are three tasks:

1. 3D visualization of current situation
2. Extrapolate places where data is missing
3. Model the growth of the chasm for a view of the future

Stretch goals:

- Adding audio

Workflow:

1. Pre-process data
    a. Images
    b. Videos
    c. (audio)
2. Categorise data
    a. This can be given by GPS data attached to images
3. Put together the data we have. Tools:
    a. opengl
4. Extrapolate data - how are we going to decide how the missing information should look like?
5. Model future growth