

Summary of the FIRST CLIENT MEETING

- Available data
 - Aerial imagery from planes/satellites (to fairly high resolution, should be available online, Matt says he'll send a link)
 - Aerial fly-over with lidar and sonar mapping of surface and subsurface
 - GPR - Ground Penetrating Radar; 10 (evenly spaced?) pairs of sensors mapping a cross section of the crack over time
 - Drone double-fly-by can be used for accurate 3d mapping but only for small area (useful to see what it should look like)
 - Mentioned that rate of change of propagation data is already available
- Prediction
 - Talk to science guy at some point
 - Only rough idea, artistic licence is acceptable
- Visualisation
 - Matt seems keen on something immersive
 - Wants to include the base to give a sense of scale
 - Wants audio, but by his description this audio is related to the crack, so we just need to correctly choose some samples and play them according to where the user is (e.g. high above crack = wind, in crack = quiet with popping sounds)

More details (courtesy of Julia)

Chasm 1 was opening from the bottom

Matt Polaine joined BAS in July 2016, so quite new

44 km of movement so far

Ice shelf has different elements and it might follow a weak point (like the table)

The space between the cracks(Halloween Crack and the Chasm 1) is getting smaller where the Station is moving (in the next three years)

data from 1950s, but only recently it's better

Satellite images have improved

Mountain range underneath and the ice on top

Rates of propagation of various cracks

Ground penetrating radar -- once the chasm gets to a certain size, sensors are moved (caterpillar) - cross-section is seen over time

Not have: audio

Near the ice -- all you can hear is cracking of the ice. But in a chasm there is almost no noise, only when ice falls down. When it's windy -- shhhhhhshhh :)

Audio would add to an experience of being present

The sense of going from the top over the edge -- suddenly quiet

There is clearly some inevitable path, we can't be miles out

It's just a prediction, but we need to talk to Hilmar

Artistic licence is okay

End output - first goal -- get our project for a presentation in March

Could give a presentation to 10-15 scientists who look at portions of data, but they can't sell it to laymen. Soon another BBC programme, so they might request our animation.

Every 6 hours, for 3 years -- frames
10-15 Gb from drones
X ray through the ice - no idea
We need to filter the data!!!

Need a sense of scale, use Halley station as a reference point and the path (where they are moving in 3 years). Antarctica is huge, on the map it's actually pretty small 100x100km

Harder bits of ice have been distorted (like teeth) and create a shadow. Other places - ice is pushed together and results in bumps. McDonald Ice Rumples mountain range.

Hard to differentiate the horizon - no contrast between the ice and the sky. Most footage is pretty good with contrast.

Chunk will break first (not a separate iceberg) and float away. McD rumples crashed into a rock and a halloween crack was in a strange position. Moves 5-7km per month!!

Ocean water found its way, bad -- ocean is far away, water was supposed to be clear
It melts the ice, has a different melting point, added lubricant
Easiest energy escape, could potentially accelerate and catch up

3D model:
Fixed time: You can go into, out, fly around
Different time: but stay at one point and see animation