Example of GPS data for video

000000, SEQID 12926, CYCLE 045 0500, SIZE 3951104, LAT 22.99767583, LON 120.21871867, ALT 41.900, GAMMA 0.000, GAIN 64, SHUTTER 103

000001, SEQID 12927, CYCLE 045 0999, SIZE 4149248, LAT 22.99767583, LON 120.21871867, ALT 41.900, GAMMA 0.000, GAIN 64, SHUTTER 103

000002, SEQID 12928, CYCLE 045 1500, SIZE 3858432, LAT 22.99767583, LON 120.21871867, ALT 41.900, GAMMA 0.000, GAIN 64, SHUTTER 103

000003, SEQID 12929, CYCLE 045 2000, SIZE 3951104, LAT 22.99767583, LON 120.21871867, ALT 41.900, GAMMA 0.000, GAIN 64, SHUTTER 103

000004, SEQID 12930, CYCLE 045 2500, SIZE 4148224, LAT 22.99767567, LON 120.21871867, ALT 42.000, GAMMA 0.000, GAIN 64, SHUTTER 103

10 data fields

1. (Field01) = **Frame number** (starts with frame 0)
2. Sequence ID
3. Cycle
4. Size
5. **Latitude**
6. **Longitude**
7. Altitude
8. Gamma
9. Gain
10. Shutter

1st Part:  
Use lat and long (fields 5,6) to select a set of frames (field 1). Selection options:

* Input is ‘interval’. Returns set of frame numbers that are equidistance apart.
* Input is ‘coordinate’. Returns frame number that is closest to input coordinates.

2nd Part:  
Backtrack to find image of manhole cover. Use image to create a full 360 scene in the next frames.

* Requires some ‘rectification’.
* Maybe use ‘manhole detection’ algorithm.

Driving suggestion:

* Try to record during lowest traffic periods.
* Keep a good distance from vehicle in front to capture road and don’t drive too fast.
* Test the calibration before starting mission (stitching)
* Estimate how much road/video can be recorded before running out of disk space.