IMPROVE OUR LAST MODEL USE CAMERA POSE

PREVIOUS RESULT

- Use the ICP Algorithm

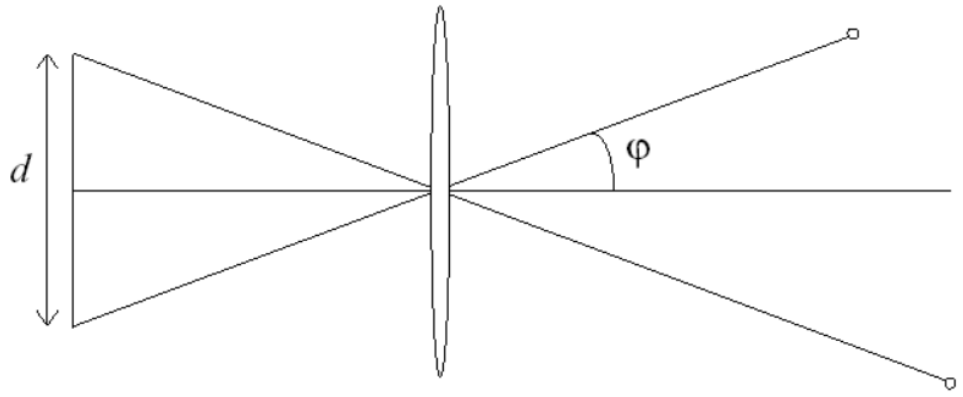
CLOUDCOMPARE

- CloudCompare is an open-source software designed for 3D point clouds and mesh editing.
- Support .PLY format.
- Used for registration (alignment) using ICP (Iterative Closest Point).
- Can provide the relative pose and field of view (FOV) of the camera.
- However, Dust3D gives us the focal length (in pixels).

CONVERT FOCAL LENGTH TO FIELD OF VIEW (FOV)

- FOV depends on:
  - The sensor size
  - The focal length

$$\varphi = \arctan\left(\frac{d}{2f}\right)$$



F: Focal lenght
D: sensor size

WHAT WE HAVE UNTILL NOW?

- Focal lenght(from dust3r)
- Field of view(from our computation)
- Relative pose(from dust3r)

UPDATE MY PREVIOUS CODE

- Uses relative pose to help the algorithm for better initialization.

USE CLOUDCOMPARE SOFTWARE

- Set FOV (Field of View) and relative pose in CloudCompare.
- Apply the ICP algorithm in the software.