Motorized head use cases:

1. Panorama

# *Learn Mode.*

*Defined Left Top Corner*

*Define Right Bottom*

# *Web Input:*

1. *Portrait vs Landscape (Default Portret)*
2. *Exposure (If camera in Bulb mode exposure set by app otherwise exposure+1 sec*

# Web Output

1. matrix of pictures eg (5,2) should be calculated by angle

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |

Assume calculated horizontal angle x camera angle of view y overlap 30%.

Therefore, number of pictures would be +1

[Angle of view](https://en.wikipedia.org/wiki/Angle_of_view):

Consider a [35 mm](https://en.wikipedia.org/wiki/35_mm) camera with a lens having a focal length of *F* = 50 mm. The dimensions of the 35 mm image format are 24 mm (vertically) × 36 mm (horizontal), giving a diagonal of about 43.3 mm.

At infinity focus, *f* = *F*, and the angles of view are:

* horizontally, \alpha_h = 2\arctan\frac{h}{2f} = 2\arctan\frac{36}{2 \times 50}\approx 39.6^\circ
* vertically, \alpha_v = 2\arctan\frac{v}{2f} = 2\arctan\frac{24}{2 \times 50}\approx 27.0^\circ
* diagonally, \alpha_d = 2\arctan\frac{d}{2f} = 2\arctan\frac{43.3}{2 \times 50}\approx 46.8^\circ

1. Allow user to set larger number of pictures and different percent of overlap – recalculate
2. Calculate angle of turn for every shot
3. Order first horizontal then vertical and back horizontal (???)

2. Time lapse

# Learn Mode.

Start Point

Define End Point

# Web Input:

1. Portrait vs Landscape (Default Landscape)
2. Exposure (If camera in Bulb mode exposure set by app otherwise *exposure+1 sec*
3. *Real Life Time*
4. Movie Time
5. Or rate instead of 4. And 5. After first learned fragment suggest the rate.

# Web Output

1. Calculate number of pictures and rate (n pic/hour)
2. Calculate angle of turn for every shot
3. Go to another learning fragment or shooting mode