

Guidelines for Annotation with RoboMAE Tool

Video Annotation:

At each frame we should mark the users by delineating a bounding box at each one. At each frame, the bounding box of a user is the minimum box that covers every pixel of him/her. In some cases the bounding boxes of different users are overlapped, i.e. a part of a one's user bounding box is on the top of a bounding box of another user. Moreover there are some other guidelines that indicate the state of a user and in which frame a state should change to another state:

- State **“Lie”**: when the user is lied down completely, where his/her head is in the same “imaginable straight line” with his/her feet
- State **“Lie2Stand”**: when it is obvious that the user gets up from the bed (ex he/she makes the move to get up) until he/she reaches the “Sit” state (i.e. he/she sits on the bed and both feet are touching on the ground)
- State **“Stand2Sit”**: when the user is standing still and it is obvious that he/she starts to sit (i.e. makes the characteristic move when he/she sits)
- State **“Sit”**: when a user sits on a chair/sofa
- State **“Sit2Stand”**: when it is obvious that the user gets up from the chair (ex he/she makes the move to get up) until he/she reaches the maximum height of standing up (i.e. he/she stands up completely)
- State **“Stand”**: when the user stands up and stands still, even if he/she moves his/her body a bit or makes a step back or forth
- State **“Walk”**: when it is obvious that the user starts to walk and moves around the place. The first frame for walking is the one where the user raise his/her leg, while the last one is where he/she stands still (just before putting his/her leg on the ground).
- State **“Pill Intake”**: when the user takes and picks up the bottle with the pill until he/she swallows the pill and removes the bottle of his/her mouth
- State **“Watch TV”**: when the user turns on the TV (from the remote control) until he/she turns it off or stops watching and starts to be in another state (i.e. he/she starts the Sit2Stand or Walk State etc)
- State **“Eat”**: when the user picks up the food (with a fork or his/her hand) from the plate until he/she leaves the plate on a table or he/she changes state (i.e. he/she starts the Sit2Stand or WatchTV State etc)

Laser Scanner Annotation

At each scan we should mark the users by delineating a bounding box at each one. At each scan, the bounding box of a user is the minimum box that covers every point of him/her, if it is possible. But be careful, the bounding boxes should not overlap. You can use *A+left click* in order to add a single point and connect it to the bounding box that you previously drew. Also notice that there is a preprocessing step where the walls are set and the bounding boxes are created automatically. The walls are marked with black lines while the points are marked as blue circles. There are only 2 types of states:

- Walk and Stand (check the video for the specific time)

Some other general guidelines:

- You should also mark the extra points (that do not apply to a user) into bounding boxes, with state=Clear and id=-1
- Usually the laser scanner marks the user earlier (because it s has a larger range than the camera), thus you should mark him/her earlier too.