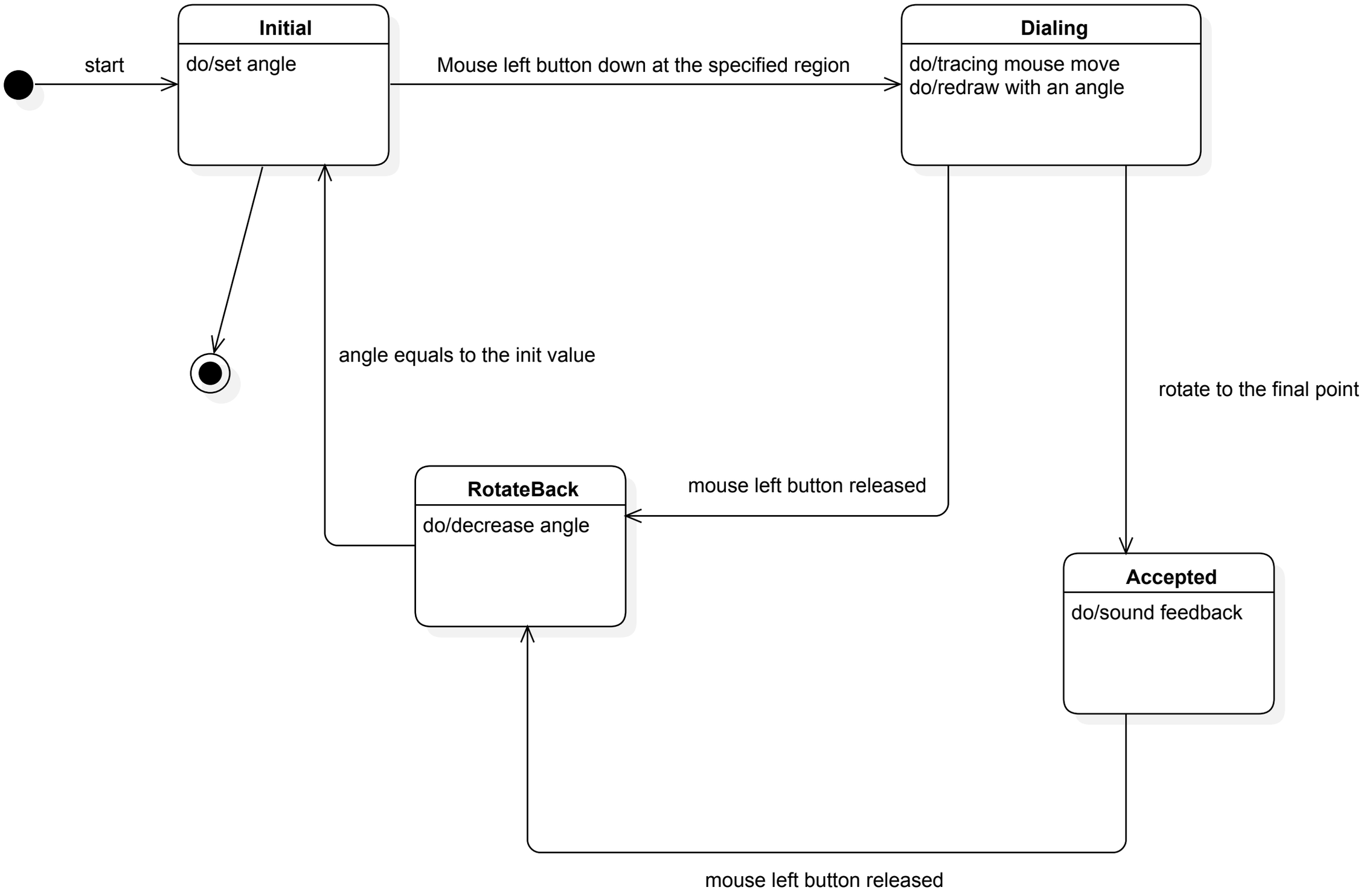
从一份作业谈起

sphone

4 3 5 2 6 1 7 8 9 0


Initial
do/set angle
start
Mouse left button down at the specified region
Dialing
do/tracing mouse move
do/redraw with an angle
angle equals to the init value
rotate to the final point
RotateBack
do/decrease angle
mouse left button released
Accepted
do/sound feedback
mouse left button released

```
enum State
{ S_INIT, S_DIALING, S_ACCEPTED, S_ROTATE_BACK };
```

```
State state;
```

```
switch (state)
    {
    case S_INIT:
      angle = 0.0;
      if (event->type == SDL_MOUSEBUTTONDOWN)
        {
          int flag = IsInNumer (x, y);
          if (flag == -1)        //如果鼠标不在数字上，则不做处理。
            break;
          call_number = flag;
          initial_angle = GetAngle (x, y);
          cout << "init angle: " << initial_angle << endl;

          state = S_DIALING;
        }

    break;
```

```
case S_DIALING:
      if (event->type == SDL_MOUSEBUTTONUP)
        {
          state = S_ROTATE_BACK;
        }

      if (event->type == SDL_MOUSEMOTION)
        {

          double current_angle = GetAngle (x, y);


          // angle = current_angle - initial_angle;
          angle = current_angle;

          // the final position is reached
          if (finalPositionReached (x, y))
            {
              state = S_ACCEPTED;
            }
          SDL_Delay (20);

        }


break;
```

```
    case S_ACCEPTED:
         if (event->type == SDL_MOUSEBUTTONUP)
           {
             //PlaySoundFeedback();
             state = S_ROTATE_BACK;
           }

         break;
       case S_ROTATE_BACK:

         // rotate with a descending speed
         angle -= delta;
         delta *= 0.9;

         if (angle < 0 || angle > 360)
           state = S_INIT;

         SDL_Delay (20);

         break;
    }                                   // end switch
```

```
//redraw the entire scene with
 //   an angle ...


 // It may be something like this
   Show (angle);
   SDL_Delay (20);

   cout << "angle:" << angle << ' ' << "state: " << state << endl;


}
```

控制帧率