CPSC 587 Assignment 2

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Running Low

In this animation a mouse struggles to replace its low battery. The original storyboard idea can be seen in the images at the bottom of the document. Due to time constraints the more complex actions were simplified in the implementation and due to exceedingly long rendering times much of the pacing in scenes were accelerated or removed entirely and rendering was done in 1920x1080 at 25%. Soft body rope physics was implemented for the cord but due to issues with pinning it to the articulated end section and the inconsistent appearance was later removed.

Models and textures were taken from a variety of sites but the mouse and mouse cord were solely created by me.

The elements of motion can be observed through the animation but below are specific examples of each with timestamps which I believe best represents them:

Squash and Stretch: (28s-29s) As the cord pulls at the stuck battery, it **distends** itself to emphasize the force it is applying to the battery.

Anticipation: (20s-21s) Since the rotation of the cord was intended to be quite fast immediately after this, the cord first counter swings to improve realism by showing a buildup of momentum as well as priming the audience for the following faster action.

Staging: (15s-19s) This section was staged with a direct frontal view and with the mouse in the center to help move the attention to the mouse and a bit away from the connector. Since most other scene encourage only looking at the connector, this emphasizes that the connector was only a part of what the scene is trying to display which was the puzzlement of the mouse.

Straight Ahead and Pose-to-pose: Since none of the scenes required extreme precision or detail, pose-to-pose with keyframes was used throughout to reduce work and allow more smooth motions that come from the autogenerated between frames.

Follow Through: (20s-23s) The point of force for the rotations is being applied from the center which is causing the rest to swing. This shows follow through in the connector and intervening cord as it over swings initially and eventually flies off to the top left.

Overlapping Action: (3s-6s) With only one articulation arm there is little overlap during the animation, the closest being the overlap in motion between the connector as it moves to push the cover off, and the motion of the cover which both move and come to reset independently.

Slow In and Slow Out: (15s-16s) As the mouse scratches its chin, each scratch starts slow, accelerates to the other side, and then decelerates until stationary instead of moving at a constant velocity and then stopping instantly.

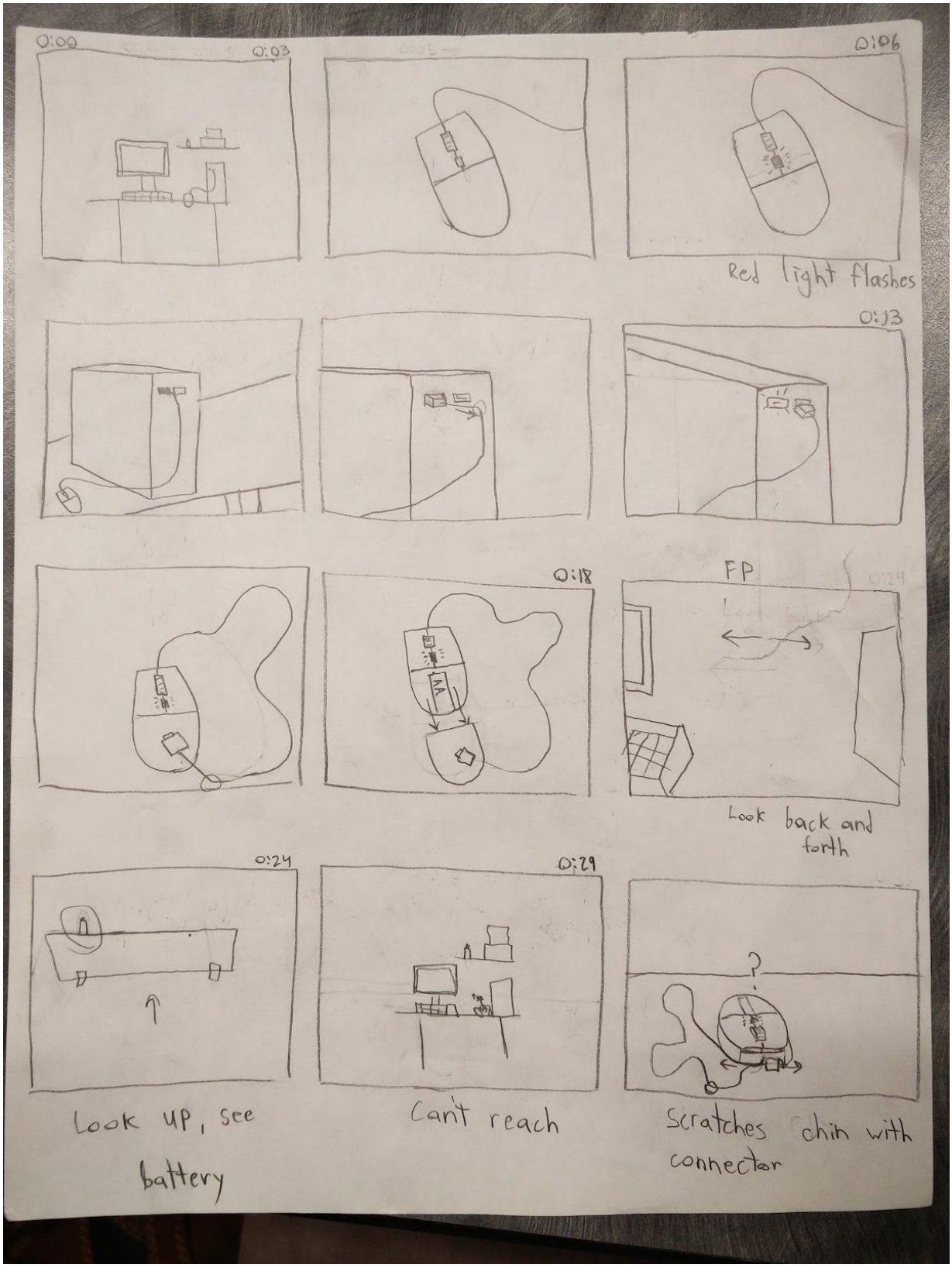
Arc: (20s-23s) The arc for the rotation of the cord looks both aesthetically pleasing and is accurate to reality since no distortions were used making it uniform and exact.

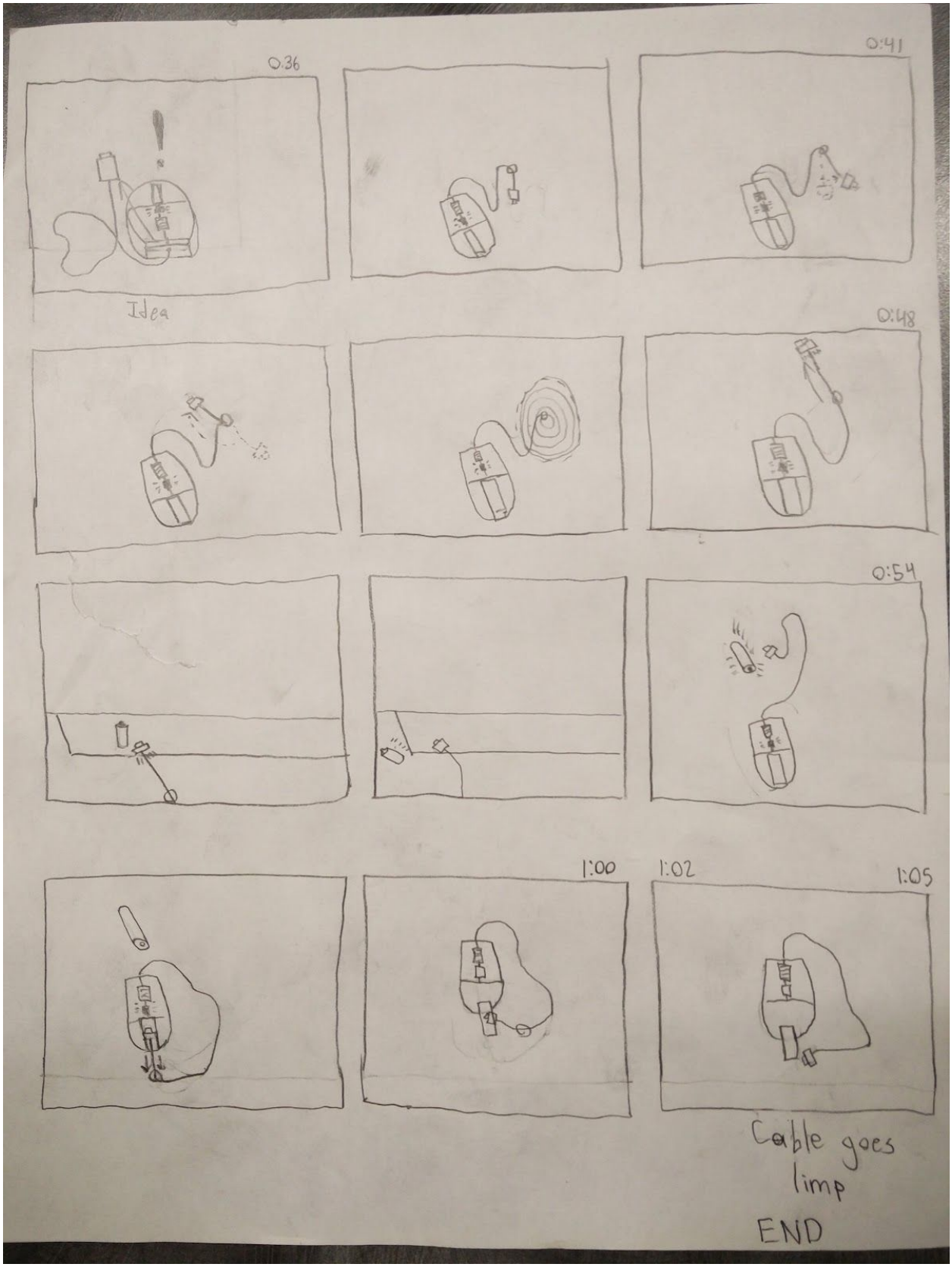
Secondary Action:(14s-17s) When scratching its chin, you can see the rigid straight section intended to be under the mouses control but to the left the cord also shifts and bends as the controlled section moves closer and farther, despite not directly being moved.

Timing: (4s-7s) In contrast to the swinging cord later in the video with relatively few frames, this section is given much more time to show the slower methodical movements. This was done to set a baseline for the movement of the mouse and allow more accuracy in the animation.

Exaggeration: (20s-24s) The rotation of the connector remains true to reality in the sense that the cord needs to gain momentum, but the acceleration and weight for the cord are exaggerated to keep the pacing of the scene and so the cord can actually make it to the upper shelf.

Appeal: (15s-19s) By putting the focus of this scene on the mouse and less on the connector, it develops a bit of character for the mouse by showing that it is an actor that is analyzing the situation and has intelligence that can be related to. It also allows a closer view to appreciate the modeling of the mouse.


0:00
0:03
0:06
Red light flashes
0:13
0:18
FP
0:24
Look back and forth
0:24
0:29
Look up, see battery
Can't reach
Scratches chin with connector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Idea
0:41
0:48
0:54
1:00
1:02
1:05
Cable goes limp
END