**Assignment A. Remote Control Gate**

Actors: Remote Controller (RC), Obstacle Sensor (OS), Gate Sensor (GS)

Signals: (RC) to (GS), (OS) to (GS)

Examples of interaction:

When (RC) is pressed, it signals (GS) to either open or close the gate. Before the (GS) can open or close the gate, it signals (OS) to check whether there is debris in the way. The (GS) waits until (OS) reports that there is no debris in the way, then it opens or closes the gate, depending on whether the gate was closed or open in the first place.

LTL Formulas:

Assumptions made:

1. The gate starts closed
2. (OS) reports that there is debris

1. Eventually the debris will be cleared

2. Eventually the gate will be open

3. If we have the gate closed, but the debris is clear, the gate will open