fortiss

# Platooning Team

**Group Status Presentation**

May 29, 19

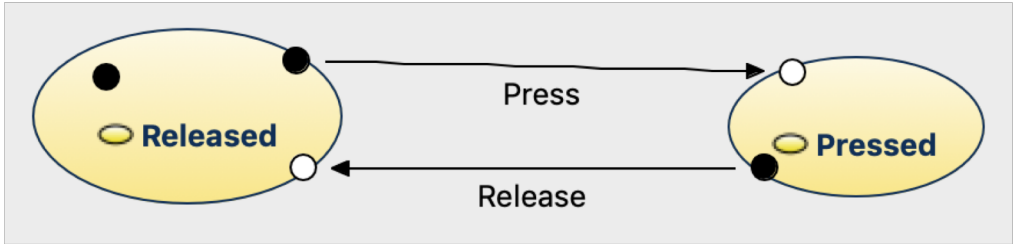
# Status

- Sprint 1 bug fixes
- V2V message filtering: temporary fix
- Updated & improved fuse functionality
- Implemented sync handshake
- Sprint 2 test with 2 cars

## Sprint 1 Bug Fixes:

- Issue: As long as controller button (activate platoon) is pressed we continuously switch states

- Fix: Change idle action in Pressed state from pressed() to notPressed()

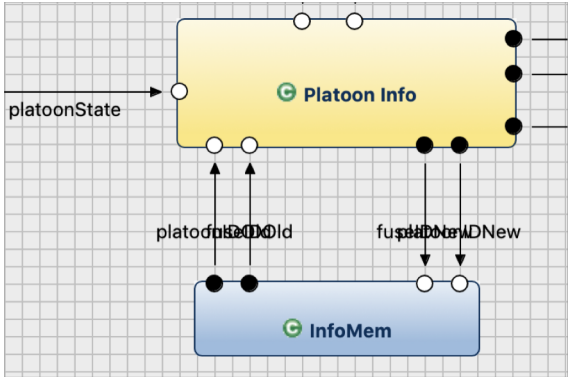



- Also fixed the V2V message consistency issue

# Autonomous Driving Component

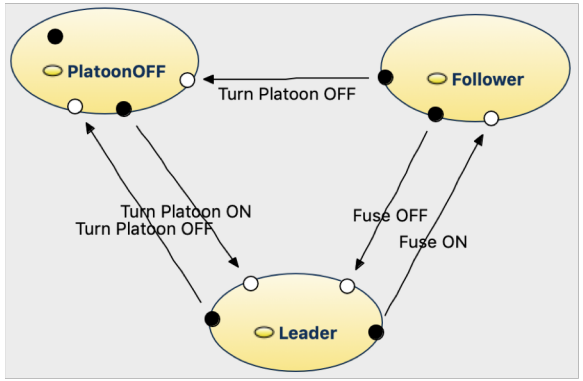
## V2V message filtering:

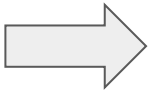
- Issue: Filtering does not work, the cars receive their own messages
- Fix: Temporary fix in AF3 using platoonInfo-memory and simple if-statements

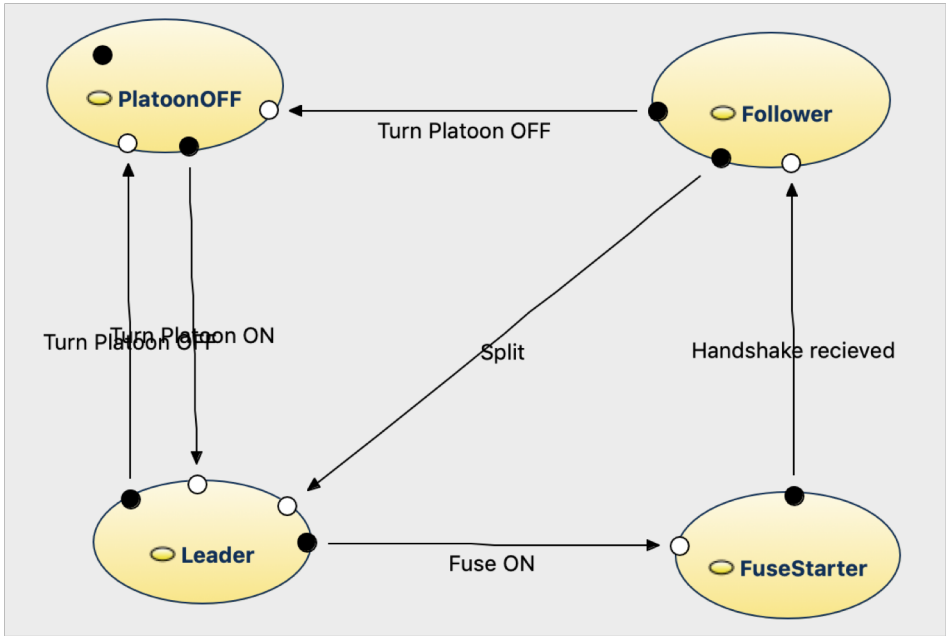



```
    if (receiveMessageType != NoVal && receiveMessageType == handshake()) {
        if (platoonInfoIn != NoVal && platoonInfoIn.leaderID == fuseIDOld) {
            sendMessageType = platoon();
        platoonInfoOut = { amount:2, id: (roverID()), leaderID: (roverID()), myPosition:1, oldLe
        }
    }
}
if (platoonStateIn != NoVal && platoonStateIn == fuseStarter()) {
    if (receiveMessageType != NoVal && receiveMessageType == platoon()) {
        if (platoonInfoIn != NoVal && platoonInfoIn.id != platoonIDOld) {
            platoonIDNew = platoonIDOld;
            sendMessageType = fuse();
        }
        else {
            platoonIDNew = platoonIDOld;
        }
    }
platoonInfoOut = { amount:1, id: (roverID()), leaderID: (roverID()), myPosition:1, oldLeaderID:
}
if (platoonStateIn != NoVal && platoonStateIn == follower()) {
    if (receiveMessageType != NoVal && receiveMessageType == handshake()) {
        if (platoonInfoIn != NoVal && platoonInfoIn.leaderID != platoonIDOld) {
            platoonIDNew = platoonInfoIn.id;
```

# Updated & improved fuse functionality:



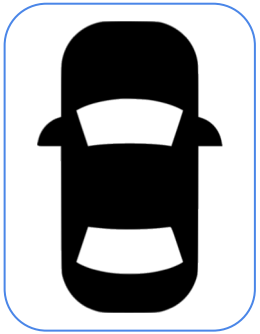


# Autonomous Driving Component

## Sprint 1 test:

```
Socket to control center not open.: Success
Socket to control center not open.: Success
Received message of type: Platoon
Current state: Leader
Sent message of type: Platoon
wR: 0.000000
Socket to control center not open.: Success
Socket to control center not open.: Success
Socket to control center not open.: Success
Socket to control center not open.: Success
```

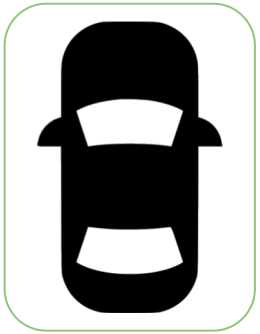
1



State: **Leader**
In platoon: 1

Message:
**platoon**

2



State: **Leader**
In platoon: 2

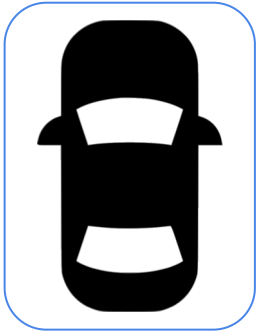
Message:
**platoon**

# Autonomous Driving Component

## Implemented sync handshake:

```
Socket to control center not open.: Success
Received message of type: Platoon
Current state: FuseStarter
Sent message of type: Fuse
wR: 0.000000
Socket to control center not open.: Success
Socket to control center not open.: Success
Socket to control center not open.: Success
Socket to control center not open.: Success
```

1

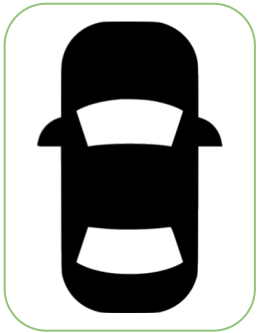


State: **Leader**
In platoon: 1

Message:
**platoon**

fuse button pressed →

2



State: **fuseStarter**
In platoon: 2

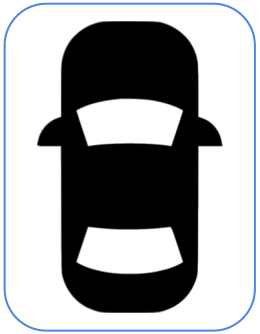
Message:
**fuse**

# Autonomous Driving Component

## Implemented sync handshake:

fuse message received →

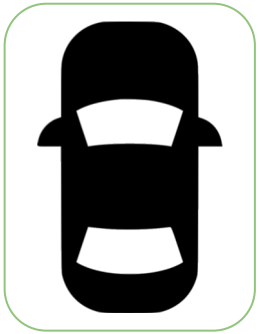
1



State: **Leader**
In platoon: 1

Message:
**handshake**

2



State: **fuseStarter**
In platoon: 2

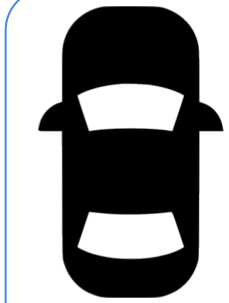
Message:
**fuse**

```
Socket to control center not open.: Success
Received message of type: Platoon
Current state: FuseStarter
Sent message of type: Fuse
wR: 0.000000
Socket to control center not open.: Success
Socket to control center not open.: Success
Socket to control center not open.: Success
Socket to control center not open.: Success
```

# Autonomous Driving Component

## Implemented sync handshake:

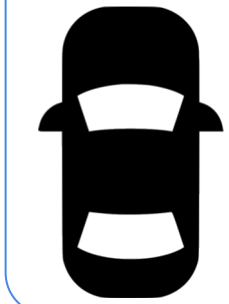
1



State: **Leader**
In platoon: 1

Message:
**platoon**

handshake message received →



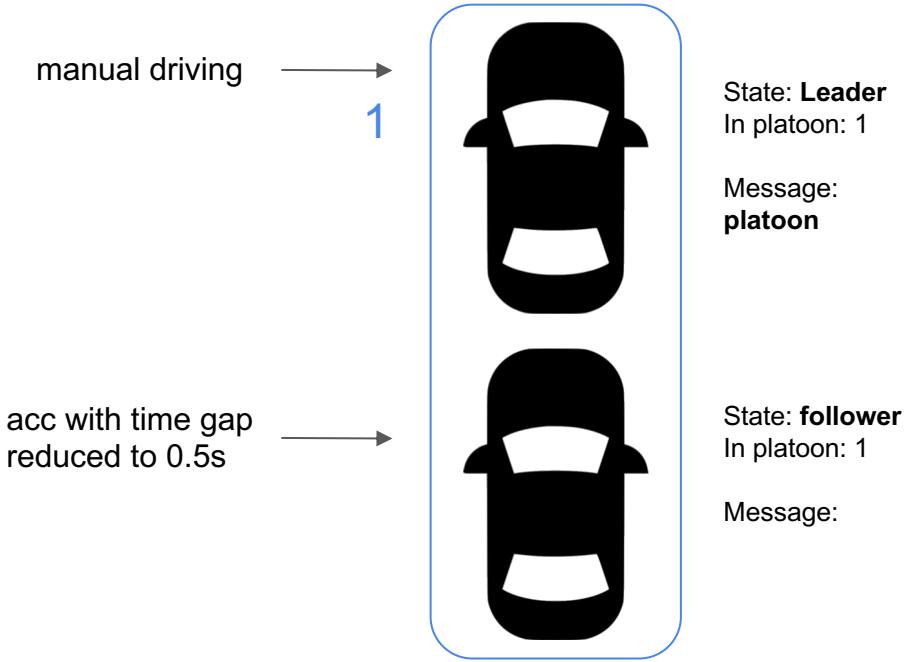
State: **follower**
In platoon: 1

Message:
**handshake**

```
Socket to control center not open.: Success
Received message of type: Handshake
Current state: Follower
Sent message of type: Handshake
wR: 0.000000
Socket to control center not open.: Success
Socket to control center not open.: Success
```

# Autonomous Driving Component

## Implemented sync handshake:



# Plan for Next Week

- Presentation in front of the chair
- Implement split functionality
- Implement leave functionality

Issues:

- Solution for V2V  message filtering not ideal
- ACC target velocity stays constant