



RASD

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1 Introduction

1.1 Description of the given problem

The system we are going to develop is a carsharing service called *PowerEnJoy*. The system allows registered users to locate and reserve a car to use.

1.2 Goals

- **G1** The system charges the user for a predefined amount of money per minute.
- **G2** The system starts charging the user as soon as the car ignites.
- **G3** The system stops charging the user when the car is parked in a safe area and the user exits the car. The user must confirm the operation, otherwise the system keeps charging them.
- **G4** A screen on the car notifies the user of the current charges.
- **G5** The system locks the car automatically when the user exits the car.
- **G6** The system allows the user to open the car through a bluetooth system when the user has reserved it.
- **G8** If the user has chosen to keep being charged, the system allows them to exit and close and re-open the car through a bluetooth system.
- **G9** If the user has chosen to stop being charged, the system keeps a 10minutes window of time when they are allowed to re-open the car if it has not already been reserved by someone else.
- **G10** The set of safe parking areas is predefined by the management system.
- **G11** The system allows the user to earn a 10% discount on the current ride if there are at least two other passengers in the car.

1.3 Domain properties

We assume that the following properties hold in the analyzed world:

- All cars are equipped and located with a GPS system.
- All the GPS always give the right position.
- The GPS system cannot be switched off.
- All cars are equipped with a Bluetooth system.
- The Bluetooth system is always on.

- When a user reserves a car, they always use it.
- The safe areas are predefined and within the municipality of Milan.
- The payment of all services is always accepted.
- The cars always ignite when they are charged
- The cars cannot be reserved by more than one user at any given time.
- The system is always able to tell how many people occupy a car.

1.4 Glossary

1.5 Assumptions

1.6 Constrains

1.7 Proposed system

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2 Actors Identifying

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