

Design Document for the Autoware components #3524

TakaHoribe started this conversation in **General**



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edited ▼

We now have [a design document](#) for each component (e.g. Localization, Planning). Since they have a different format, I want to clarify what should be written in the documentation.

Currently, we are writing the [planning design document](#). Here is what I'm thinking to write:

(Current status of the planning design document: The high-level sections, such as the concept, are still ambiguous, and revisions need to be made in the future. On the other hand, specific details are already provided for implementation and feature lists.)

- **Roles and Design Concepts of Each Component**

- For example, following the concept of [microautonomy concept](#), the design concept of planning component should be "to creating a component that can expand (or reduce) its functionality according to user requirements" rather than "creating a perfect component for a specific ODD as an autonomous driving system."

- **High-Level Module Design**

- Component Interface: how the Planning Component communicates with other components.
- Internal Interface: in the case of the current planning, this refers to the role/interface of the behavior planner and motion planner. Developers will develop functionalities within this design.

- **Architecture Trade-offs and Limitations**

- Every architecture has trade-offs. For example, by decomposing planning into behavior and motion components, as in the current configuration, we can have better visibility of individual functionalities (high modularity and extensibility). However, it becomes challenging to achieve overall optimization between behavior and motion, resulting in reduced performance. Aligning understanding in this aspect is crucial for efficient development. Of course, this should be an ongoing discussion.
- Note that the performance limits of each feature will not be discussed here. That is a separate topic from high-level design, and it should be explained in the readme of each feature.

- **Providing an Overview of Features**

Category



General

Labels

None yet

1 participant



- Users should be able to quickly see what functions Autoware can offer and how to enable them. This allows users to consider the services provided.

- **Explaining How to Extend and Add Features**

- Explicitly documenting how users can add new features is essential for the evolution of the open-source software.

- **Showing Actual Implementations**

- Providing a reference implementation enhances user understanding.

We look forward to hearing your opinions.



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0 comments