

# Semantic Maps: Discussion

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The aim is to design something on the lines of [Layered Semantic Maps Google Maps](#).

## Basic Representations

- Defining Zones/Areas/Rooms as well as giving them labels and attributes. To start with can define a few properties for zones like KeepOut and SpeedLimit.
- Defining Nodes/Points of interest with labels
- Defining Objects along with their properties
- Adding relations between Objects, Zones and Nodes.

## Storage Format

Instead of integrating everything into YAML format. We define the semantic information in a separate file format (Possibly an OSM compatible file format) and link this file in the YAML file.

The other alternative is we ditch the YAML file in support of this new format which and provide a converter to convert YAML file into this format.

## GUI

### 1. RViz Integration

Integrating map editor directly into RViz will remove any extra dependency required to run and will add a visualization of the semantic map during the run without any extra effort. Some issues faced will be that as we add more features to the GUI editor, RViz it will become too cluttered.

### 2. Qt Based Editor

There is a lot of support available online for creating map editor applications. Storing, visualizing and editing of information will be much easier compared to RViz based editors. Having a standalone app will also remove a lot of hassle when creating multilayered maps.