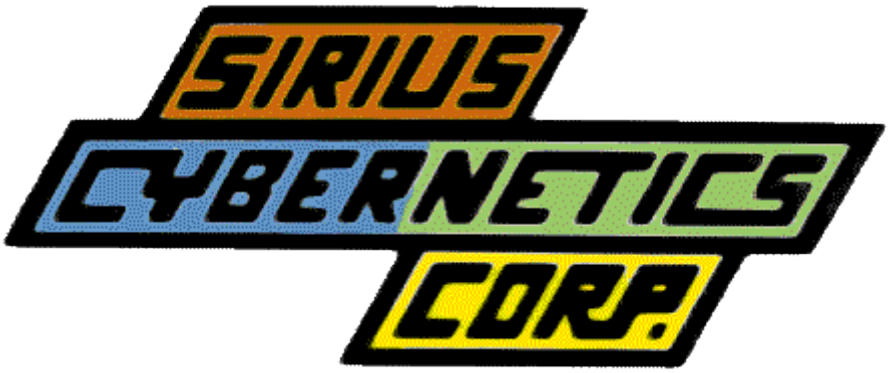


SIRIUS CYBERNETICS SENSOR MANAGEMENT SIMPLE

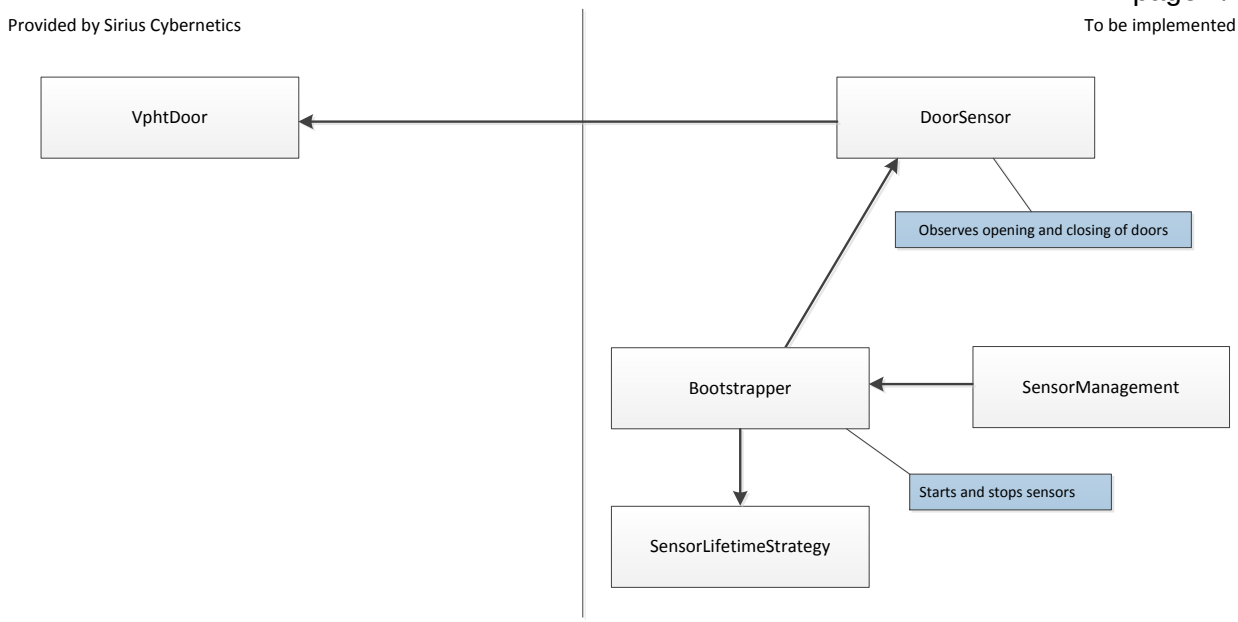
Sirius Cybernetics uses a lot of sensors to get the status of their vertical happy people transporters (VHPTs). Since ages these sensors have been used in the same application which controls the VHPT. Because VHPTs do not like to be monitored directly (yes they have feelings too!) Sirius Cybernetics wants to move the monitoring into a new sensor management application.

Sirius Cybernetics heard that bbv has a lot of great open source tools. They asked us if we could implement the sensor management application for their VHPTs. They have the following requirements

- The sensor management application must be easily extendable with new sensors
- Sensors must undergo a strict startup and shutdown pattern
- The sensor management application itself must be easily extendable with new functionality
- A door sensor must be developed which observes VHPT doors for state changes

Sirius Cybernetics decided to start with a low budget sensor management application. Because the last application built by bbv in summer 2011 in Schruns was way too expensive. Only if the architecture of the application is proven to be intergalactic rocket science, further budget will be provided to extend the application.

The system idea of the solution is as follows:



Sirius Cybernetics provides the VHPT door implementation, which is responsible of managing a VHPT's door.

Our job is to implement the sensor management application. It uses a bootstrapping mechanism with a sensor life time strategy to start and stop various sensors. The sensors need to be designed as extensions for the bootstrapping mechanism so that more sensors can be added hassle-free. For the proof of concept and further budget a door sensor needs to be integrated into the sensor management application.

Management Application

The management application shall be a simple console application. When the application is started information about the product shall be printed to the console. All sensors are started after the first and stopped after the second user interaction. For the purpose of information overview the management console shall be closed after the third user interaction.

Your Job

Your job is to implement a first version of the sensor management application and make our customer happy so that we get further revenue from Sirius Cybernetics. The application will be reviewed with our customer this evening (they are currently hitchhiking through galaxy!).

Unfortunately, due to the distance to Proxima Prime, where our customer has its office and the limitation of speed of light, we cannot ask him further questions about the application. Therefore design your application in a way that assumptions will not prevent future development.

Tips

1. Rumors have it that there is an ultimate "speed up the developer process until light speed" tool from far behind the Milky Way. Our espionages claim it's called "nuget". We should definitely use it!