Summary

The company Frog Navigation Systems (FNS) is an international company specialised in the control and navigation of automatically guided vehicles (AGV's). The AGV's which FNS produces are for instance manufactured for the automotive industry, packaging industry and computer industry. For the control of the driverless vehicles a supervisory system called SuperFROG is used. At present FNS wants to renew this supervisory system in accordance with the object oriented techniques and wants to add the ability to control production systems.

In this project an architecture is proposed for the new supervisory system called MegaFROG. This proposal is made on the basis of a literature scan of object-oriented logistic control systems. To investigate the usefulness of the proposed architecture for MegaFROG a testcase is selected. This testcase, the CIM-Centrum at the Delft University of Technology, is modelled using the MegaFROG architecture. Subsequently this model is compared to the existing shopfloor control system of the CIM-Centrum. The MegaFROG architecture is also compared with the architectures found in the literature.

The main conclusion of this investigation is that the proposed architecture for MegaFROG is useful for the control of production systems. The concept is probably also useful for the control of all kind of logistical systems. It is recommended that a more extensive comparison is made between the MegaFROG architecture and the architectures found in literature. Besides further investigation is recommended for a number of subjects like the connection of MegaFROG with a planner/scheduler and ERP-systems, the communication between the machines and MegaFROG, the addition of simulation possibilities to the system and the development of a graphical user interface.