In this paper we present a case study with AutoFocus, a tool prototype for the development of distributed embedded systems. We develop a controller of an elevator system using different description techniques to illustrate the development process. Furthermore we use the simulation component of AutoFocus, SimCenter, to validate the behavior of the specified system. Using a device independent interface SimCenter can control both external multimedia applications for visualization as well as real hardware for rapid prototyping. We use the AutoFocus specification of the elevator control system to control a Fischertechnik model of an elevator.