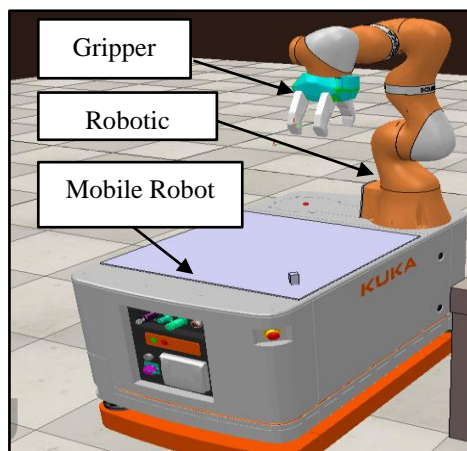


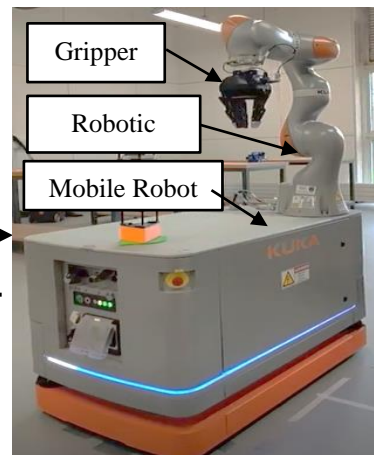
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Activities completed:

- Selection and integration of a mobile robotic platform, a robotic manipulator and end effectors for handling Petri dishes and other equipment used for environmental sampling.
- Design and development of a series of additional supporting hardware required for the safe handling and transportation of Petri dishes using mobile robotic platforms.
- Digital model for simulating the environmental sampling process with the use of a mobile robotic platform.
- Development and testing of an autonomous navigation algorithm for allowing the the same and reliable operation of the mobile robotic platform inside cleanrooms.
- Development of advanced algorithms for controlling the end effector.
- Fully functional hardware setup for testing the system in real industrial settings.
- The initial set of lab tests has been completed successfully. The second set of tests are ongoing. The final set of tests inside the cleanroom facility is planned for the end of 2020.
- The integration of the robotic platform with the laboratory information management system is under progress. This will allow the lab technicians to preschedule the environment monitoring and allow the robot to collect and update the data back to the laboratory information management system.



Digital Model



Actual Robot