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REMOTE CONTROL FOR INDUSTRIAL ROBOT

## PRODUCTION MANAGER VERSION

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Objective of the training

- In the training lecture, you will learn and get insight into how multiple robots can be programmed through one simple interface in a general Internet browser such as Chrome. This is a crucial part of digitalization and Industry 4.0.

- The training material will also show how to set up a simple user interface for robot control.

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1.Module component

- This module offers a robot controlling method through industrial internet of things (IIoT) by using an information server. A graphical user interface (GUI) takes input from the robot operator and the operator is able to program or move robots remotely

- Remote control and monitoring are usually needed in the modern industrial 4.0 factory. The module demonstrated how to control the industrial system with a platform independent interface.

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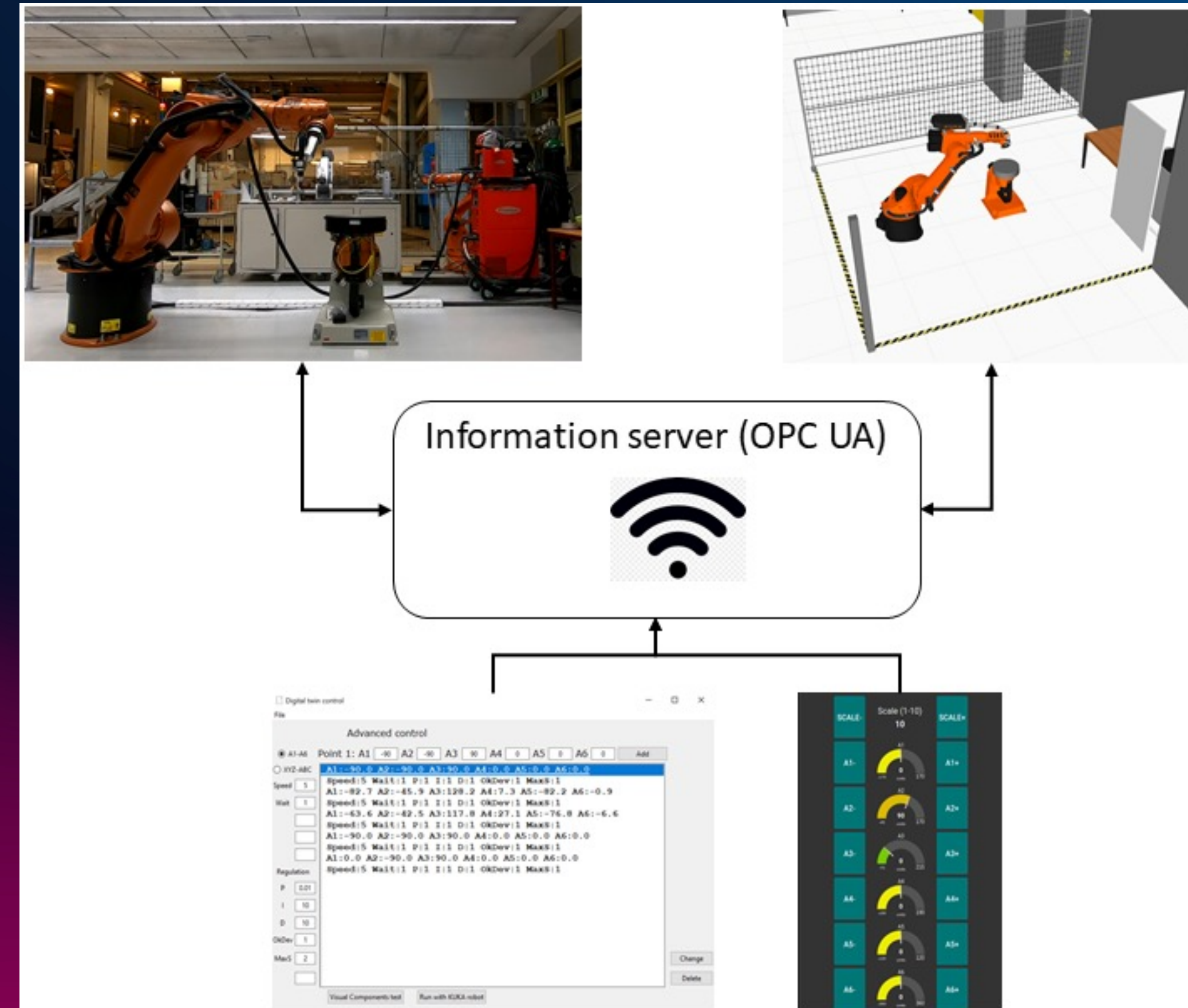
2.Module environmental requirements

- The module requires the industrial information server (e.g., OPC-UA) for communication with the robots. The information server can be used for direct control of the robots and collect/monitor data from the robots.

- The module requires one server PC (can be the same one for the industrial information server) for hosting the GUI server.

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3.How to integrate this system with the rest of the production line

- The module is the addon function for previous modules. As long as the industrial information server running as expected, the module offers flexible GUI for the industrial system.

- Robots usually have their own robot controller, and it can be time consuming to re-program robots with these controllers. The platform independent GUI can be a general system that supports multiple industrial machine types from different vendors. This can allow for fast re-programming of the robots and reduce changeover time between productions.

4.Adaptability

- This module can be used in production environments with robot arms or other machines.

- The major changes for integration of the system:
  - Connect all industrial devices to the network with a central network server. (Extra controller for each of industrial devices may need)
  - Install the GUI server.

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Thank you.

If you are interested in more tutorials on this module or other use cases, please follow the links in the use case lectures.

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