

NFC Like Wireless Technology for Monitoring Purposes in Scientific/Industrial Facilities

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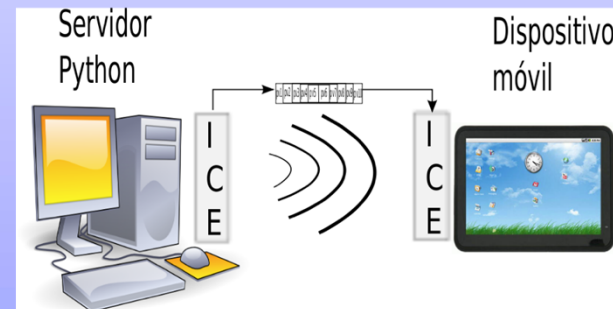
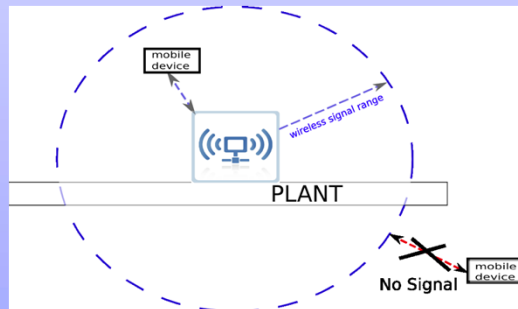
MOMMU002

Project Goal

- It is intended to set out a wireless monitoring architecture valid on large scientific facilities. More specifically is applied in ESS-Bilbao.
- The goal is to ease the task of the operators during normal operation mode and maintenance stages.
- All the desired information from the EPICS control system is displayed in a mobile device.
- The project is applied to monitor the vacuum system of negative ion source, ISHN.

Solution Outline

- The security of the communication can be assured by means of a weak wireless signal, following the same idea as in NFC.
- Client/Server based application.
- The server based on Python gets the EPICS PVs from the network.
- The client, located on an Android based mobile device request those PVs values from the Server and displays them.
- Communication is managed with the ICE middleware.



Conclusion

- A rapid and flexible monitoring system is achieved, helping operators to know machine status avoiding the dependence of a central computer.
- The limited wireless signal transmission provides protection against external attacks.
- Security related features, as message encryption will be implemented. In addition, EPICS Gateway will be used.

