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Universitatea
Ștefan cel Mare
Suceava

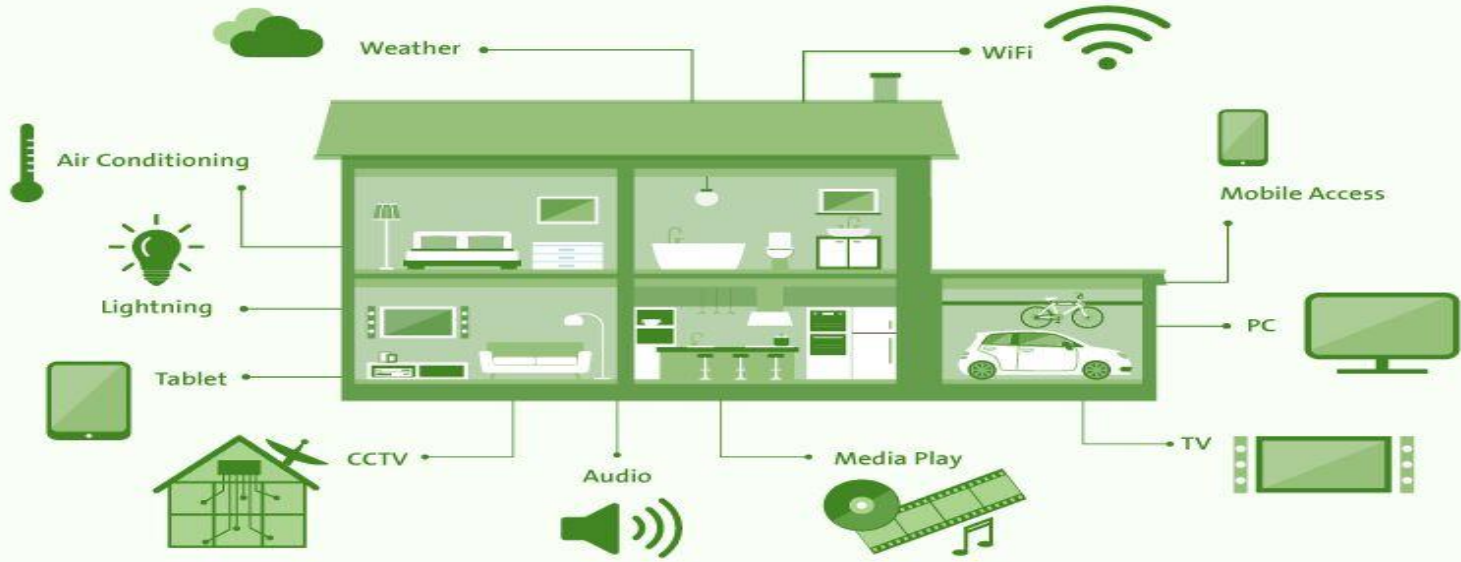
HARD & SOFT 2024 SUCEAVA

19.05.2024 – 26.05.2024

Cognizant Mobility Romania

Topic 2024

Smart Home System

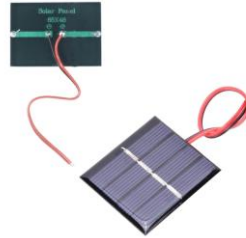


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WHAT YOU GET



Dev board



Mini solar panel



Motor



Camera web Logitech

...and many more useful components

WHAT YOU HAVE TO DO

- Build a smart parking access system; based on the camera feed, an algorithm should decide if the house guest can enter or not the garage/parking.
- Automatic control of the blinds based on the sun position.
- Maintain a constant level of luminosity inside the house. The natural light will have priority over artificial one.
- Green energy management -> storage of extra/unused solar energy
- Implement a monitoring and management backend / application

THE JURY EXPECTS YOU TO:

- ✓ Apply the principles of good engineering design, in particular design features that should serve a real function and be part of an overall design strategy.
- ✓ Include all key HW elements received (BeagleBone Green WiFi, Camera, RF-Id, Linear Motors, Barrier – Concept, Solar panels, Battery pack)
- ✓ Pay attention to the security of the smart house
- ✓ Good management of the green energy

HOW WILL THE JURY ASSESS YOUR WORK?

- A brief design PDF document by 10:00am Tuesday by email to Jury Email.
- Jury visit of about 15 minutes to your lab on Wednesday to view work –in-progress
- A final summary PDF document by 8:00am Friday by email to Jury Email.
- Final test and public demonstration on Friday morning

FINAL TEST

Criteria for final test:

- Brief design document and summary PDF document are delivered to Jury Email
- Green energy management
- Security concept
- Algorithm for luminosity control
- Monitoring and management backend / application

JURY

President:

- Nicolae-Bogdan FOICA - Cognizant Mobility GmbH, Munich

Members:

- Constantin Teodor Ardeiu – Cognizant Mobility Romania
- Ciprian Sorin Teletin – Cognizant Mobility Romania
- Denis Ardeljan – Cognizant Mobility Romania
- Ladislau MATEKOVITS - Politecnico di Torino, Italy
- Daniel MOGA - Univ Tehnica din Cluj Napoca, Romania

Thank You

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