

Report on an Exchange Visit Funded by PerAda

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Between Edinburgh Napier University and NXP Eindhoven

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Background

NXP Semiconductors are active in research in the field of pervasive computing environment. NXP has had a collaboration with the Edinburgh Napier University in this field for a some years now. The researchers involved are, Prof. Jon Kerridge, Anna Kosek (Ph.D Student) and Dr. Aly Amer Syed of NXP. The goal of our research is to develop an architecture for self configuration in pervasive computing environments.

In this work, we are making use of CSP (communicating Sequential Processes)-based software techniques that can be used to model parallel processing in the smart spaces.

Between 3rd and 5th of March, Dr. Aly A. Syed of NXP Semiconductors Eindhoven visited Edinburgh Napier University. The purpose of this visit is to set forth the scientific discussions started during the visit of Prof. Jon Kerridge to NXP in 2009. During this visit, we discussed how we could use the CSP based techniques for modeling the HW-SW environment of smart spaces. We discussed how to model a HW-SW system based on ontology using CSP and identified an application that represents the intricacies of a smart lighting environment that can subsequently be modeled as a test case.

The visit

During this visit, Aly A. Syed visited Napier school of computing and had discussions with a number of people who are working on aspects of pervasive computing systems. Notable were discussions with:

Kevin Chalmers, Alistair Armitage, Jon Kerridge, Olle Mival, Jennifer Willies and Ben Paechter

Also a visit was made to the ICE Lab that is being set up in Napier by the Future Living, Future Life project. This Lab. shows very interesting interaction technologies for a future meeting room. In addition to having technical discussions, we took a peak behind the walls to see the computer racks that are needed to build this smart environment today. We discussed the need for autonomous embedded devices that will be needed in the future to enable such environments in the future. We discussed on how the research that we are doing could be used in this environment.