

Fachbereich Ingenieurwissenschaften
Abteilung Elektrotechnik und Informationstechnik
Institut für Nachrichten- und Kommunikationstechnik

Prof. Dr.-Ing. K. Solbach
Prof. Dr.-Ing. A. Beyer

Studienarbeit / Bachelorarbeit

AUFGABE DER STUDIENARBEIT im Hauptstudium II

für: Herrn Ali Sen
gestellt von: Herrn Prof. Dr.-Ing. K. Solbach
Fakultät für Ingenieurwissenschaften - Hochfrequenztechnik

Thema: Developing module for automatic phone UI testing

Aufgabenstellung:

Nokia ABL (Automotive Business Line) is developing car solutions. Within this student research project a professional car kit will be used including a Bluetooth connected phone and remote functionality.

While developing this car kit the whole system has to be tested in two ways, manually and automatically. To perform automatic tests we have already a well working test environment with predefined test structure. The test environment is running with HP Vee.

Nevertheless we need a reliable system to analyze the phone display for both NOKIA and Non-NOKIA phones.

Therefore the first step would be to generate screen shots via USB commands. Subsequently the generated screen shot should be compared with a reference picture. All this have to be done while the phone is connected to the car kit via Bluetooth (i.e. via Handsfree Profile) and data connection setup to the PC via USB.

Next step would be to analyze if and which menu is currently selected at phone. Further on the module should be able to select any predefined menu and analyze the current screen shot by extracting textual information (this module is already available).

During the testing procedure the module has to provide information

- if actual menu is like the expected (Passed/Failed)
- which menu is currently selected (i.e. Call menu)
- select special textual information such as phone number

At the end of the workings a presentation of the results will be obligatory in the department.