



Final Year Project (FYP) Proposal Form

Engenharia de Telecomunicações e Informática (*Telecommunications and Computer Science Engineering*)

Informática e Gestão de Empresas (*Computer Science and Management*)

HOST INSTITUTION

NAME: ISCTE (IN COOPERATION WITH CISCO/LINKSYS)
ACTIVITY: UNIVERSITY
DIVISION/DEPARTMENT: DCTI

SUPERVISOR APPOINTED BY THE HOST INSTITUTION

NAME: RUI LOPES
POSITION: AUXILIARY PROFESSOR
TELEPHONE: FAX: E-MAIL: RUI.LOPES@ISCTE.PT
ADDRESS:

PROJECT DESCRIPTION

TITLE: FRAMEWORK FOR AUTOMATED TESTING OF SOHO NETWORKING EQUIPEMENT
OBJECTIVES, GENERAL DESCRIPTION AND CONTEXT: With the mass availability of Internet connection in the small office and home environments (SOHO) networking equipment designed for use in these contexts play an important role for many manufacturers. The consumer satisfaction for these products depends strongly on the degree that their functional and non-functional (performance) requirements are met. Due to the low cost per unit of these products, testing their functional and non-functional characteristics must be kept at a reasonable cost, thus implying an as much as possible automated process. The main objective of this final year project is to define the requirements, to design and implement a framework for the automated testing of functional and non-functional characteristics of networking equipment for the SOHO environments.

DEVELOPMENT TOOLS AND COMPONENTS:

- SOHO networking equipment (e.g., routers, switches)
- Network monitoring and analysis tools (e.g., tcpdump, Wireshark, MRTG)
- Network traffic generators (e.g, SIPp, ipperf)
- Generic software development tools (e.g., Eclipse)

EXPECTED SCHEDULING AND MAIN PRODUCTS:

- Initial report on SOHO networking equipment and its functional and non-functional requirements
- Test framework requirements definition
- Design, implementation and testing of the framework
- FYP report

THE FYP WILL JOIN A TEAM AT THE HOST INSTITUTION? ___ Yes; ___ No

PROJECT FASE (select only one option): ___ In definition, ___ Launching, ___ In course

THE PROJECT WILL START WITH THE FYP GROUP?: ___ Yes; ___ No

STUDENT REQUIREMENTS:

TECHNICAL SKILLS:

- Good background on networking
- Good software design and implementation skills

AVAILABILITY:

WORK PLACE:

_____, on the _____

(Responsible for the project coordination at the host institution)

Lisbon, on the _____

(Responsible for the project at ISCTE)