Appendix A

CLUSTER Dual Master Agreement between

Instituto Superior Técnico (IST) and **Helsinki University of Technology (TKK)**

Duration: Academic Year 08/09 to 10/11

Degree programme at IST:	**Master Program in Information Systems and Computer (MEIC) Major: Distributed Systems** (120 ECTS)
Degree awarded:	M.Sc.
Language of instruction	English
Entrance admission criteria:	Bachelor's degree encompassing a minimum of 180 ECTS credits in Engineering (Computer Science or Information technology)
Degree programme at TKK:	**Master Program in Mobile Computing – Services and Security** (120 ECTS)
Degree awarded:	M.Sc.
Language of instruction	English
Entrance admission criteria:	Bachelor's degree encompassing a minimum of 180 ECTS credits in Engineering (Computer Science or Information technology)
Number of students	2

Schematic Study Plan

Option 1			
Year	Institution	Studies	Remarks
1	TKK	Compulsory and elective courses	60 ECTS
2	IST	Courses + Master Thesis (co-supervised)	30+30 ECTS
Option 2			
Year	Institution	Studies	Remarks
1	IST	Compulsory and elective courses	60 ECTS
2	TKK	Courses + Master Thesis (co-supervised)	30+30 ECTS
The schematic study plan is applicable to students originated from TKK or IST indifferently. The detailed study plan must be defined by the academic coordinators for each student, avoiding redundant courses.			

Contacts:

Academic responsible for the programme Prof. Paulo Ferreira (paulo.ferreira@inesc-id.pt)	*Academic responsible for the programme* Prof. Antti Ylä-Jääski (antti.yla-jaaski@tkk.fi)
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Signatures:

Date: November 30th, 2008	Date: November 30th, 2008
For IST	For TKK
	Professor Olli Simula Dean of the Faculty of Information and Natural Sciences, Helsinki University of Technology TKK
Prof. Carlos Matos Ferreira President, Instituto Superior Técnico	

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FIRST YEAR STUDIES	
IST (Major Distributed Systems)	TKK
Fall Semester (minimum of 30 ECTS)	
Compulsory courses	Compulsory courses
Network and Computer Security (7,5 ECTS)	T-110.4206 Information security technology (3 ECTS)
Parallel and Distributed Computing (6 ECTS)	T-110.5100/ T-110.5200 Laboratory works course (4 ECTS)
Potfolio III (1,5 ECTS)	T-110.5210 Cryptosystems (4 ECTS)
	T-110.5120 Next generation wireless networks (4 ECTS)
Elective Courses in Software Engineering	T-110.6120 Special course in datacommunications software (5)
Software Architectures (7,5 ECTS)	T-106.5600 Concurrent programming (5 ECTS)
Software Quality (6 ECTS)	T-110.5290 Seminar on network security (3 ECTS)
IT Project Management (7,5 ECTS)	
	Elective Courses
	Foreign language test / course (3 ECTS)
Spring Semester (minimum of 30 ECTS)	
Compulsory courses	Compulsory courses
Middleware for Distributed Internet Applications (7,5 ECTS)	T-109.4300 Network services business models (3 ECTS)
Virtual Execution Environments (7,5 ECTS)	T-110.5190 Seminar on internetworking (4 ECTS)
Mobile Computing (7,5 ECTS)	T-106.5300 Embedded systems (5 ECTS)
Portfolio IV (1,5 ECTS)	T-61.5010 Methodological principles course: Information visualization (5 ECTS)
	T-79.5303 Safety critical systems (4 ECTS)
Elective Courses in Software Engineering	
Advanced Programming (7,5 ECTS)	

SECOND YEAR STUDIES

IST (Major Distributed Systems)	TKK
Autumn Semester (minimum of 30 ECTS)	
Compulsory courses	*Students must take at least 30 ECTS according with the student's mentor.*
Master Project in Information and Software Engineering (12 ECTS)	T-110.5100 Laboratory work on Datacommunications software (4 ECTS)
Other courses available to students chosen in accordance with student's mentor respecting the rules of MEIC	T-110.5200 Laboratory work on Datacommunications on Information Security (4 ECTS)
	T-110.5116 Computer networks II (4 ECTS)
	T-110.5290 Seminar on network security (4 ECTS)
	T-110.5210 Cryptosystems (4 ECTS)
	Foreign language test / course (3 ECTS)
	Scientific methods (5 ECTS)
	Other courses chosen in accordance with student's mentor
Spring Semester (minimum of 30 ECTS)	
Thesis related activities 30 ECTS supervised by both partners.	