

Application Number: ES422350 Project Number: 0

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## Applicant

### Project Owner

Project Owner (norwegian name)	Høgskolen i Agder
Faculty	Teknologi, Realfag, Økonomi og Samfunnsfag
Institute	
Departement	
Address	Serviceboks 422
City code	4604
City	Kristiansand
Country	Norge
E-mail	frank.reichert@hia.no
Website	www.hia.no
Enterprise number	970546200
Auditor	Office of the auditor general

### Administrative responsibility

First name	Gunnar
Last name	Oftedahl
Position/title	Director, Faculty of Engineering
Phone	37253005
E-mail	gunnar.oftedahl@hia.no
Confirmation	<input checked="" type="checkbox"/> The application has been approved by the Project Owner

### Project manager

First name	Frank
Last name	Reichert
Institution / company (norwegian name)	Høgskolen i Agder
Faculty	Engineering and Science
Institute	
Departement	

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Address	Grooseveien 36, Servicebox 509
City code	4898
City	Grimstad
Country	Norway
Position/title	Prof.
Academic degree	PhD Electrical Engineering
Preferred language	Bokmål
Phone	3725 3266
E-mail	frank.reichert@hia.no

## **Project info**

### **Project title**

Wireless Short Range Communications & Applications for Higher Student Education and Common Work Places

### **Principal objective and sub-goals**

The project shall build up key competence in the thematic area of "Wireless Short Range Communications and Applications" for "Ubiquitous Computing".

The project shall study how we can improve the quality of education and work environments, and how they benefit from future mobile devices and new applications.

The project results shall address user needs and requirements, business aspects and opportunities, wireless applications, underlying service and communication platforms, context awareness, trust and security, as well as deployment and software development aspects.

Finally, the project corresponds closely to HiA's strategy plan "Mot 2010 - Strategiplan for Høgskolen i Agder" by executing research that is (1) at a high scientific level, (2) relevant to society, (3) involving a wide spectrum of different scientific areas, and that (4) gives students knowledge and understanding that they can apply today and to future social and work challenges.

### **Project summary**

In three to five years the industry will turn to new applications that take advantage of "WiFi" (IEEE 802.11) short range communication links in mobile devices. Around that time we can expect WiFi to be a common feature in most mobile devices just as Bluetooth, cameras, and media-players are today. For the first time, technology will be mature enough to get us closer to a vision of "Ubiquitous Computing" where applications and services are supporting our daily lives in an easy and natural way. Devices will be aware of their immediate, local environment, and will be used in many innovative ways.

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We foresee that wireless short range communications will turn our mobile devices into extremely useful tools supporting, e.g., education, industrial applications, entertainment, and our relations to people around us.

In this project we would like to understand how "Ubiquitous Computing" as described above can enhance student education and common work places. To ensure a successful project and meaningful, exploitable results we need to assemble a number of key competences allowing us to study our target area from a user, business, applied technology, and theoretical research point of view. An iterative research process requires access to representative target organizations and end-users.

The project combines the competence of three faculties at Høgskolen i Agder (HiA): Fakultet for Økonomi og Samfunnsfag, Fakultet for Teknologi, and Fakultet for Realfag. Thus we are able to study user needs and requirements, business aspects and opportunities, wireless applications, underlying service and communication platforms, context awareness, trust and security, as well as deployment and software development aspects.

HiA has an existing wireless infrastructure and testbeds that can be enhanced to fit our project. HiA's employees and students are representative for the target segment that shall benefit from the proposed project.

## Placement

### Research Council funding division - supplementary info from applicant

Program / activity	SHP
Application type	Institusjonsforankret strategisk prosjekt
Other relevant programmes/activities	
Discipline(s)/specialist field	Teknologi, Realfag, Økonomi og Samfunnsfag
If applying for additional funding, specify project number	
Have any related applications been submitted to the Research Council and/or any other public financing scheme	No
If yes, enter further information	

## Project timetable

### Main activities and milestones in the project period (year and quarter)

Milestones throughout the project	From		To	
Project Kickoff	2007	3	2007	3
Early Overall Concepts	2007	3	2007	4
Consolidation of State-of-the-Art	2007	3	2007	4
Trial of early selected user applications	2007	4	2008	3

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Base logic and deductive system	2007	4	2008	3
Analysis of user trials	2008	3	2008	4
Workshop 1 with industrial & academic experts	2008	4	2008	4
Trial of First Application & Trusted Services	2008	3	2009	3
Analysis of first application cluster trial	2009	3	2009	4
Workshop 2 with industrial & academic experts	2009	4	2009	4
Major Trial of Final Set of Applications	2009	3	2010	2
Analysis of final user trials	2010	2	2010	4
Workshop 3 with industrial & academic experts	2010	4	2010	4
Final Project Report & Conclusions	2010	4	2011	2

## Project period

From date (yyyymmdd) 20070801

To date (yyyymmdd) 20110731

## Project publication plan

During the project we will include a number of workshops to present results and gain feedback from academic and industrial experts.

The target user group is HiA, their employees, and students. HiA is actively participating in the project through trials and research, and thereby knowledge transfer and impact of results should be ensured.

The results will be published at international conferences and in journals.

The results will influence our research strategies and be part of new course content that we teach our students.

We have active contacts with regional and international partners, e.g., trolltech, ericsson, telenor, mobikom, with whom we share our results.

## Budget

### Cost plan (in NOK 1000)

	2007	2008	2009	2010	2011	2012	2013	2014	Sum
Personnel costs and indirect	946	1891	1891	1891	946				7565

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costs									
Purchase of R&D services									0
Equipment									0
Other operating costs	54	109	109	109	54				435
<i>Totals</i>	1000	2000	2000	2000	1000	0	0	0	8000

Specifications

3 PhDs students funded 75% over 4 years (1 for each of the three faculties) 1 researcher (10 hours/month) funded 75% over 4 years (handling overall system strategy and architecture) Time by professors not included in budget

**Cost code (in NOK 1000)**

	2007	2008	2009	2010	2011	2012	2013	2014	Sum
Business and industry									0
R&D Institute sector									0
University sector	1000	2000	2000	2000	1000				8000
Other sectors									0
Abroad									0
<i>Totals</i>	1000	2000	2000	2000	1000	0	0	0	8000

**Funding plan (in NOK 1000)**

	2007	2008	2009	2010	2011	2012	2013	2014	Sum
Own funding	250	500	500	500	250				2000
International funding									0
Other public-sector funding									0
Other private funding									0
From Research Council	750	1500	1500	1500	750				6000



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Documentation for calculation of overseas fellowships and guest researcher fellowship

Name	N.N	Travelling with family	Travelling expenses
Address		No	
City code		<b>Period</b>	
City		From date (yyyymmdd)	
Country		To date (yyyymmdd)	

First name	Last name	Personal number
N.N	N.N	

Documentation for calculation of position

Type of fellowship	From date (yyyymmdd)	To date (yyyymmdd)
Doctoral fellowship	20070801	20110731

	2007	2008	2009	2010	2011	2012	2013	2014
Position-%	100	100	100	100	100			

Documentation for calculation of overseas fellowships and guest researcher fellowship

Name	N.N	Travelling with family	Travelling expenses
Address		No	
City code		<b>Period</b>	
City		From date (yyyymmdd)	
Country		To date (yyyymmdd)	

First name	Last name	Personal number
N.N	N.N	

Documentation for calculation of position

Type of fellowship	From date (yyyymmdd)	To date (yyyymmdd)
Researcher fellowship	20070801	20110731

	2007	2008	2009	2010	2011	2012	2013	2014
Position-%	8	8	8	8	8			

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Documentation for calculation of overseas fellowships and guest researcher fellowship

Name	N.N	Travelling with family	Travelling expenses
Address		No	
City code			<b>Period</b>
City			From date (yyyymmdd)
Country			To date (yyyymmdd)

**Allocations from the Research Council (in 1000 NOK)**

	2007	2008	2009	2010	2011	2012	2013	2014	Sum
Student fellowships	691	1381	1381	1381	691				5525
Doctoral fellowships									0
Post-doctoral fellowships									0
Fellowships for visiting researchers									0
Overseas fellowships									0
Researcher positions	18	37	37	37	18				147
Hourly-based salary including indirect costs									0
Purchase of R&D services									0
Equipment									0
Other operating expenses	41	82	82	82	41				328
<i>From Research Council</i>	750	1500	1500	1500	750	0	0	0	6000

**Partners**

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Institution/ company	Høgskolen i Agder
Responsible name	Gunnar Oftedahl

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Responsible phone	37 25 30 05
Responsible email	gunnar.oftedahl@hia.no
Partner's role	executive

## Attachments

### Project description

Filename	SHP-ecorn-19.pdf
Reference	ES422350_001_1_Projektbeskrivelse_20070220

### Curriculum vitae (CV) with list of publications

Filename	070215-frank-reichert-cv-publications.pdf
Reference	ES422350_002_1_CV_20070215
Filename	andreas-prinz-cv.pdf
Reference	ES422350_002_2_CV_20070215
Filename	hans-christian-garmann.pdf
Reference	ES422350_002_3_CV_20070215
Filename	rolf-nossum-cv.pdf
Reference	ES422350_002_4_CV_20070215
Filename	tom-eikebrokk-cv.pdf
Reference	ES422350_002_5_CV_20070215
Filename	Vladimir-Oleshchuk-cv.pdf
Reference	ES422350_002_6_CV_20070215

### Course marks (grades) (Doctoral and student fellowships)

Filename
Reference

### Experts

Filename
Reference

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## Recommendation and invitation (overseas fellowship)

Filename

Reference

## Confirmation from partner(s)

Filename

Reference

## Other items

Filename

Reference