

MEMORANDUM OF UNDERSTANDING  
IN AUTOMATION AND INFORMATION PROCESSING TECHNOLOGIES  
B E T W E E N  
THE INSTITUTE FOR SYSTEMS RESEARCH (ISR)  
OF THE UNIVERSITY OF MARYLAND AT COLLEGE PARK (USA)  
A N D  
THE CENTRE FOR WIRELESS COMMUNICATIONS (CWC)  
OF THE UNIVERSITY OF OULU, FINLAND  
2011 AMENDMENT

In accordance with Articles 7 and 9 of the above referenced Agreement (the "Agreement"), which became effective January 1, 2005 and was extended by Addendum I, effective January 1, 2008, the parties hereby agree to modify this Agreement as follows:

**Article 7: Term and Termination**

The Agreement will be valid for a period of three (3) years commencing January 1, 2011, and expiring January 1, 2014.

Either party may terminate the Agreement at any time upon prior written notice of at least six months. The parties will complete any collaborative project that is still active as of the effective date of termination unless they otherwise agree in writing.

**Article 8: Contacts**

Until further written notice, each party designates the person identified below as its primary contact regarding all matters related to the Agreement.

**CWC, University of Oulu**

Mr. Ari Pouttu  
Director, CWC  
Erkki, Koiso-Kanttilan katu 3  
University of Oulu  
90570 Oulu, Finland  
Telephone: 358 8 553 1011  
Facsimile: 358 8 553 2845  
Email: ari.pouttu@ee.oulu.fi

**ISR, University of Maryland**

Mr. Jeff Coriale  
Director, External Relations  
2181 A.V. Williams Building  
University of Maryland  
College Park, MD 20742  
Telephone: 301-405-6604  
Facsimile: 301-314-9920  
Email: coriale@umd.edu

**Article 10: Additional Terms**

Both parties acknowledge that visits by faculty and students from one party to the other shall be subject to the entry and visa regulations of the United States and Finland, and shall comply with the regulations and policies of the University of Maryland, College Park and the University of Oulu.

It is the policy of the University of Maryland that instruction, research, and services will be accomplished openly and without prohibitions on the publication and dissemination of the results of academic and research activities. As a result, the University of Maryland may not conduct classified or "sensitive but unclassified" work or export controlled work except with the prior written authorization of the President of the University of Maryland and the Chancellor of the University System of Maryland.

To assure compliance with University of Maryland policy and to protect the interests of both parties, if one party wishes to disclose to the other party information that the disclosing party considers to be proprietary, non-public, confidential information in the course of conducting discussions or performing work under a separate subsidiary research agreement, the parties shall execute a nondisclosure agreement.


The export control laws and regulations of the United States, including the Export Administration Act and its implementing regulations, Export Administration Regulations (15 CFR 730 et seq.); the Arms Export Control Act and its implementing regulations the International Traffic In Arms Regulations (22 CFR 120 et seq.) and other laws implemented by the Office of Foreign Asset Controls in the U.S. Department of Treasury (collectively, "Export Control Laws") prohibit the disclosure of controlled technical data and equipment ("Controlled Technology") to particular foreign countries and nationals of foreign countries without first obtaining a license from the appropriate U.S. government agency in certain circumstances. The parties acknowledge that the evaluation, selection and funding of specific projects under the auspices of the Agreement MOU must take into account and comply with Export Control Laws.

Except as modified above, all other terms and conditions of the Agreement remain in effect.

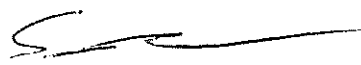
[Signature page follows]

AGREED TO

UNIVERSITY OF OULU, CENTER FOR  
WIRELESS COMMUNICATIONS

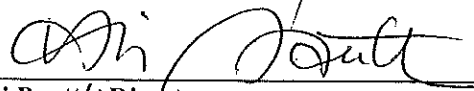
BY   
~~Hannu Pietila~~ *Kauko Leiniska*  
Administrative Director *Dean Faculty of Technology*

Date

  
~~Leila Risteli, Director~~ *Sami Keemola*  
Research and Innovation Services *Financial Director*

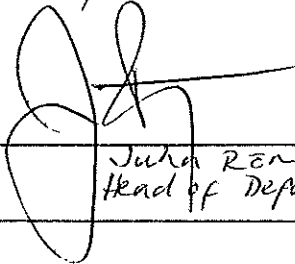
Date

Acknowledged by:

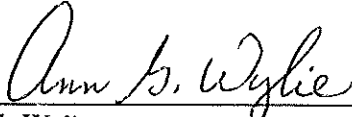
  
~~Ari Poutto~~ *Ari Poutto*  
Director  
Center for Wireless Communications

Date

*March 30, 2011*

  
~~Juhani Rening~~ *Juhani Rening*  
Head of Department

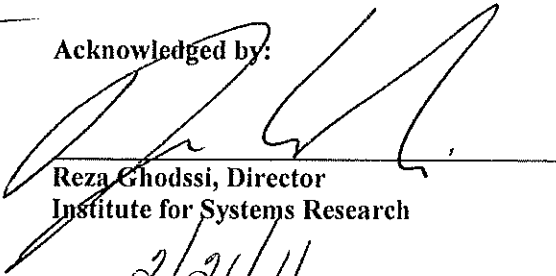
UNIVERSITY OF MARYLAND

BY   
~~Ann G. Wylie~~ *Ann G. Wylie*  
Senior Vice President  
and Provost

Date


*3/17/11*

Acknowledged by:

  
~~Reza Ghodssi, Director~~ *Reza Ghodssi*  
Institute for Systems Research

Date

*2/21/11*

  
~~Anthony Ephremides~~ *Anthony Ephremides*  
Professor Electrical and Computer  
Engineering and ISR

Date

*2-21-11*

April 2, 2008

**ADDENDUM I  
MEMORANDUM OF UNDERSTANDING  
IN AUTOMATION AND INFORMATION PROCESSING TECHNOLOGIES  
BETWEEN  
THE INSTITUTE FOR SYSTEMS RESEARCH (ISR)  
OF THE UNIVERSITY OF MARYLAND AT COLLEGE PARK (USA)  
AND  
THE CENTRE FOR WIRELESS COMMUNICATIONS (CWC)  
OF THE UNIVERSITY OF OULU, FINLAND**

The above referenced Agreement, which became effective on January 1, 2005, is hereby modified in the following manner:

**Article 7: Term and Termination**

This Agreement shall be valid for period of (6) years from the Effective Date and may be extended or renewed upon written agreement of the parties.

Either party may terminate this Agreement at any time upon prior a minimum of six (6) months prior written notice. The parties will complete any collaborate project that is still active on the effective date of termination unless otherwise agreed to by the Parties in writing.

**ALL OTHER TERMS AND CONDITIONS REMAIN IN FULL FORCE AND EFFECT.**


**APPROVED BY:**

UNIVERSITY OF OULU, CENTRE  
FOR WIRELESS COMMUNICATIONS:

\_\_\_\_\_  
Name and title

\_\_\_\_\_  
Date

UNIVERSITY OF MARYLAND:

  
\_\_\_\_\_  
Nariman Farvardin, Senior Vice President  
for Academic Affairs and Provost

4/3/08  
\_\_\_\_\_  
Date

**MEMORANDUM OF UNDERSTANDING  
IN AUTOMATION AND INFORMATION PROCESSING TECHNOLOGIES  
BETWEEN  
THE INSTITUTE FOR SYSTEMS RESEARCH (ISR)  
OF THE UNIVERSITY OF MARYLAND AT COLLEGE PARK (USA)  
AND  
THE CENTRE FOR WIRELESS COMMUNICATIONS (CWC)  
OF THE UNIVERSITY OF OULU, FINLAND**

This Agreement, effective on January 1, 2005, is entered into by and between the **University of Maryland** ("UM"), a public agency and instrumentality of the State of Maryland, located in College Park, Maryland, and the **University of Oulu**, a non profit organization of the wider public section (public body) under the Finnish Law, located in Oulu, Finland on behalf of the Centre for Wireless Communications.

**Article I: Goals**

The goals of this Agreement are to facilitate cooperative research between the parties and between the parties and engineers in the home country of each party in the field of automation and information processing technologies.

**Article 2: Topics for Collaboration**

Priority topics of potential or enhanced collaboration between the parties in the field of automation and information processing include:

Bioinformatics and Systems Biology	Intelligent Control Systems
Chemical Process Modeling and Control	Interactive Collaborative Systems
Cognitive Neuromorphic Systems and Implementations	The Internet and its Extensions
Computational Complexity	Microelectromechanical Systems (MEMS)
Computer and Communication Networks	Mobile/Wireless Networks and Communications
Computer Integrated Manufacturing	Network and Systems Security and Assurance
Data Mining and Knowledge Management	Numerical and Symbolic Software
Embedded Systems and Hardware Implementations	Parallel and Distributed Algorithms
Image and Speech Processing	Robotics
Intelligent Agents	Semantic Web
	Systems Engineering (Object Modeling, Trade-Off, Validation-Verification)

**Article 3: Mechanisms to Foster Collaboration and Cooperation**

The parties agree to explore and assist in developing mechanisms that will serve to encourage and enhance cooperative work between the parties. Such modes of collaboration may include:

- Exchanging researchers, preferably post-graduates and post-doctorates
- Sharing scientific publications, technical information brochures and magazines
- Developing and conducting joint seminars, workshops, symposia and courses
- Conducting joint research in areas of mutual interest, such as those listed in Article 3
- Sharing of software owned by one party with the other for its use in research.

**Article 4: Annual Program; Communications**

The parties will endeavor to develop an annual collaborative research agenda to include exchange visits and a prioritized listing of cooperative research projects. The parties will communicate their annual agenda with government officials, as appropriate; consult with one another on the progress of their agenda, and prepare an annual report summarizing their activities.

#### **Article 5: Implementation of Specific Collaboration Projects**

The parties will execute a separate written agreement for each collaborative project they enter into between themselves or also with industry. The agreements will be subject to the terms of this Agreement and attached to this Agreement as an addendum. The agreements will address the scope of work; the respective roles, contributions and obligations of each party to the project; the administration, coordination and implementation of the project; ownership and rights of each party to use intellectual property that is developed in the course of the collaboration, licensing and patent rights, disposition of research results, duties of confidentiality, and publication rights and other matters agreed to by the parties. Any employees of the parties may submit joint proposals for research funding to appropriate sources both within and outside the United States, but only authorized officials for each party may execute awards to conduct joint research projects.

Unless otherwise agreed to by the parties, all rights, title to and interests in any invention, discovery, copyrightable work, software or other intellectual property that is created exclusively by the employees of one party shall be owned by that party, and all rights, title to and interests in any invention, discovery, copyrightable work, software or other intellectual property that is created jointly by employees of both parties shall be jointly owned by the parties.

The parties will execute written agreements governing specific exchange programs of institute and/or industry scientists and engineers. The agreements will address qualifications and selection of the participating scientists and engineers, responsibility for travel and living expenses and arrangements, and will require the visiting party to comply with the regulations and policies of the host party and will specify that all exchanges shall be subject to applicable entry and visa regulations.

#### **Article 6: Funding**

The parties agree that this Agreement does not commit either to make specific levels of financial or personnel support or to provide specific laboratory or office space for programs. The provision of such support will be based on available resources and provided in accordance with the rules, regulations, laws, and policies under which each party operates.

Notwithstanding the foregoing, the parties will use reasonable efforts to obtain funds and other resources to support the annual agenda.

#### **Article 7: Term and Termination**

This Agreement will be valid for a period of three (3) years from the Effective Date and may be extended or renewed upon written agreement of the parties.

Either party may terminate this Agreement at any time upon prior a minimum of six (6) months prior written notice. The parties will complete any collaborate project that is still active on the effective date of termination unless otherwise agreed to by the Parties in writing.

#### **Article 8: Contacts**

Until further written notice, each party designates the person identified below as its primary contact regarding all matters related to this Agreement.

##### **CWC, University of Oulu**

Name: Dr. Matti Latva-aho

Title: Director, CWC

Address: Tutkijantie 2 E

90570 Oulu, Finland

Telephone: 358 8 553 1011

Facsimile: 358 8 553 2845

E-mail: matla@ee.oulu.fi

##### **ISR, University of Maryland**

Name: Jeff Coriale

Title: Assistant Director, External Affairs

Address: 2181 A.V. Williams Building

College Park, MD 20742

Telephone: 301-405-6604

Facsimile: 301-314-9920

E-mail: coriale@isr.umd.edu

Article 9: General

Each party agrees to subscribe to the principle of equal opportunity and shall not discriminate on the basis of race, sex, age, ethnicity, religion, or national origin in the administration of this agreement and the selection of persons who participate in exchanges.

In the event any provision of this Agreement is determined to be invalid or unenforceable under any controlling law, the invalidity or unenforceability of that provision shall not in any way affect the validity or enforceability of the remaining provisions of this Agreement.

The parties are and shall remain independent contractors and nothing herein shall be construed to create a partnership, agency, joint venture, or teaming agreement between the two institutions.

This Agreement shall not be assignable by either party, in whole or in part, without the prior written consent of the other party.

This Agreement constitutes the entire agreement between the Parties and supersedes all prior agreements and understandings between the Parties. It may be amended only upon written agreement of the Parties.

This Agreement is written English and is executed in duplicate, one copy to be provided to each party.



AGREED TO:

FOUNDATION OF RESEARCH AND  
TECHNOLOGY HELLAS

BY: *Stelios Orphanoudakis*  
Stelios Orphanoudakis, Director and Chairman  
of the Board - FORTH *plp* GEORGE THIREOS  
Vice Chairman of the Board, FO.R.TH.  
Deputy Director, Central Administration

24/11/2004  
Date

Acknowledged by:

Constantine Stephanidis, Director, Institute of  
Computer Science - FORTH

24 November 2004  
Date

UNIVERSITY OF MARYLAND:

BY: *William W. Destler*  
William W. Destler, Senior Vice  
President for Academic Affairs and  
Provost

11/30/04  
Date

Acknowledged by:

Eyad Abed, Director, Institute for  
Systems Research

30 Nov. 2004  
Date