



# AIT news

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### Gratitude for Generous Donation

The President of the Board of Trustees of AIT, **Mr. Socrates Kokkalis**, and its members, would like to express their deep gratitude to **Mr. Constantine Dimitriadis**, Vice Chairman of INTRACOM Holdings, *for his donation to AIT of 2 million euros.*

Mr. Dimitriadis' generous gift gives AIT the opportunity to move more rapidly towards achieving its mission and vision.

We would like to recognize the core role Mr. Dimitriadis is playing in providing educational opportunities to deserving students and to preparing our next generation for the ever – changing world.



## Strategic International Education and Research Collaboration between Athens Information Technology (AIT) and Aalborg University Center for TeleInfrastruktur (CTiF)



A Memorandum of Understanding (MoU) between Athens Information Technology (AIT), and Aalborg University, Denmark, was signed Wednesday, June 13, 2007 at AIT premises in Peania. The MoU concerns the development of collaborative research and educational initiatives between AIT and the Center for TeleInFrastruktur (CTiF) <http://ctif.aau.dk/>, which operates within Aalborg University.

These common initiatives will target leading edge research, high quality postgraduate education, as well as development of doctoral theses in the fields of information technology and telecommunications.



The agreement was signed by AIT's Dean Prof. Christos Halkias, AIT's Executive Director Mr. Petros Kokkalis, and the director of CTiF Prof. Ramjee Prasad.

The MoU sets an umbrella collaboration framework for the development of concrete educational and research activities, starting from September 2007. The launching of this set of collaborative activities include the exchange of students, research and faculty, the delivery of common courses, as well as the collaboration in research projects.

Moreover, selected AIT graduates will be given the opportunity to join CTiF either as researchers or PhD students of the Aalborg University. Longer term plans of the AIT-Aalborg collaboration include the development of common educational programs.

It should be noted that Aalborg University is among the most prominent universities worldwide in the areas of telecommunications and information technology. CTiF operates within Aalborg University and constitutes one of the most recognized research centers in wireless communications. CTiF has a leading role in large scale research projects, as well as direct research collaborations with major industrial players in wireless communications (including SIEMENS, NOKIA, ERICSSON, SAMSUNG, SONY). CTiF has already expanded its research collaborations to other countries, the most recent being the with Italy (University of Rome Tor Vergata) and India.

AIT's collaboration with Aalborg University constitutes its second strategic partnership, following AIT's collaboration with the Information Networking Institute (INI) of the Carnegie Mellon University (CMU - <http://www.cmu.edu>). Based on the AIT-CMU collaboration, AIT offers the Master of Science in Information Networking (MSIN).



## MSIN graduation: Class of 2007



On Monday, 11 June, at 19:30 AIT's MSIN graduates were accompanied into the amphitheater by bagpipe music – in the spirit of CMU founder, Andrew Carnegie. The graduation ceremony was about to begin.



Welcoming remarks were made by Ms. Dena Haritos-Tsamitis, Director of the Information Networking Institute at the College of Engineering, CMU, Dean Halkias of AIT, and Mr. Socrates Kokkalis, founder of AIT.

They reminded the students that both CMU and AIT will always be by their side and will be following their progress through life with great pride.

Mr. Kostas Mallios, Senior Director, Office of the CTO and Rich Media, Microsoft Corporation was the guest speaker at the graduation. His remarks, advice, and helpful tips on what life will be like for our students after they graduate were greeted enthusiastically. They must believe in their capabilities, they must not be afraid of what they do not know or if they feel they don't yet have the necessary knowledge or skills, they must exude confidence and they must be willing to try new things. He reminded them that if they go into a job knowing everything there is to know about it, they will outgrow it very soon.

Mr. Mallios was followed by Ms. Chinwe Abosi of Botswana, a MSIN graduate, who spoke eloquently of her experiences at AIT and in Athens. Ms. Abosi thanked individuals at AIT with whom the students have a close relationship, the AIT faculty and administration, Mr. Kokkalis, and of course her family, who were the ones who helped make an inspiration into reality.

Following the graduation, the students and guests left the amphitheater, once again accompanied by bagpipe music, and spent the rest of the evening relaxing together at the reception.

### AIT's Open Days in Athens, Patra, Thessaloniki, Iraklion and Chania

AIT's Open Days in **Athens, Patra, Thessaloniki, Iraklion** and **Chania** attracted many interested students and provided them with information on the full range of programs offered at AIT.

A faculty member and an administrative coordinator were available at each event to answer any questions.

### 35 AIT students graduated from the MSITT postgraduate program



On Saturday, 24 February 2007, the ceremony for the second graduating class of the Master of Science in Information in Telecommunications and Technologies (MSITT) of 35 Greek and foreign student, took place at Athens Information Technology.

During the Graduation Ceremony, greetings were expressed by **Mr. Petros Kokkalis**, Executive Director of AIT; **Prof. Christos C. Halkias**, Dean of AIT; and **Dr. Anna Tzanakaki**, MSITT program coordinator. **Mr. Christos Tsangos**, Managing Director of Microsoft Hellas, was the guest speaker.

The Dean of AIT, Prof. Christos Halkias, opened the ceremony by warmly congratulating the graduates. He spoke of their hard work and achievement, supported by AIT's academic qualifications and scholarships, while encouraging them to use their newly acquired knowledge as a means of progress in their professional careers.



Mr. Petros Kokkalis, Executive Director of Athens Information Technology, said: "We can promise you that AIT will always be there for you, to assist, support and contribute to your efforts to excel in an internationally challenging and competitive environment." Mr. Kokkalis referred to the role of the Intracom Holdings Group of Companies, which founded AIT in 2002, emphasizing that the Group, through AIT, has created a link between academic research and industrial production. "We set the foundation of a constantly developing process towards transforming innovative ideas into everyday tools."

Mr. Christos Tsangos, Managing Director of Microsoft Hellas, the guest speaker, focused on the increasing importance of technology and innovation in our economic growth and daily life, and on the very important role that the graduates will play in today's new socio-economic environment. Mr Tsangos elaborated on the efforts that companies in this sector, such as Microsoft, are making, toward the competitiveness of European economies, and that participating societies, with the force of technology, create possibilities for all, as mandated by the EU's Lisbon Agenda.



MSITT program coordinator, Dr. Anna Tzanakaki, congratulated the graduates and spoke of the valuable qualifications offered by the program and AIT's commitment to top quality education.

The ceremony was attended by academics, ambassadors and representatives of diplomatic missions in Greece, high level executives, journalists, members of the prefecture, and, of course, relatives and friends of the graduates, from Greece and abroad.

## Meet The Industry Series of Seminars:

**13 Mar 2007 - "Destined to Fail: Ethical Spillovers in the Vehicle Emissions Testing Market"** Lecturer: Prof. J. Lamar Pierce, Visiting Professor of Strategy, Tepper School of Business, Carnegie Mellon University.

This talk addressed the relationship between the corporate ethics of a firm and individual behavior --- how unethical and fraudulent behavior is adopted, constrained, and influenced by individuals in firms. Using the Vehicle Testing market as a case study, Prof. Pierce presented recent research results indicating strong evidence of ethical spillovers from firms to individuals both through organizational and peer-level effects. These findings suggest that managers have considerable influence over the ethics of individual employees, both through formal norms and incentives, and through the peers with whom the employee works. Such results are consistent with the literature on productivity spillovers (Huckman and Pisano, 2006), as well as peer influence and productivity (Mas and Moretti, 2006).

**21 Feb. 2007 - "Hellenic Technology Clusters Initiative (HTCI): Develop Regionally – Compete Globally"** Lecturer: Dr. Jorge- Andres Sanchez Papaspiliou, HTCI Director for Strategic Planning and Business Development.

Dr. Sanchez introduced the [Hellenic Technology Clusters Initiative \(HTCI, www.htci.gr\)](http://www.htci.gr), a first of its kind cluster initiative in Greece, recently launched under the auspices of the Hellenic Ministry of Development that targets the establishment and development of competitive technology clusters in knowledge-intensive and exports-oriented industrial segments. HTCI is currently setting up an incubator and cluster center for start-ups and ongoing semiconductor and microelectronic businesses in a renovated office complex in the municipality of Maroussi.

### Regional Development in the New ICT Environment: Business Models, Policy Regulation & Strategic Planning

Executive Education Program



College of Europe  
Collège d'Europe



»» **2-5 October, 2007**

Athens, Greece

Co-organised by Athens Information Technology, the Kokkalis Foundation and the College of Europe.

#### The Program

In the new information age, where business management and technology are converging, leadership in innovation is a key competitive advantage for companies but the management of innovative products, services and strategies in a changing global environment is challenging and risky.

"Regional Development in the New ICT Environment" is an executive training program that helps individuals and organisations meet their development needs by enhancing professionals' knowledge of how information technologies and markets are linked.

The course analyses technology strategies and offers tools to market products and services.

The program merges the College of Europe's expertise in professional training on European Affairs and AIT's information and communication technologies expertise. The executive program is a unique learning experience combining lecture style presentations, readings, case study methodology and interactive scenario exercises. The skills developed in the training course are applicable across organisations.

The program will provide professional training in three main modules:

- Module I - Market Perspective of the ICT Industry
- Module II - The EU and the ICT Industry: Policy, Programs and Best Practices
- Module III - Strategic Management of Innovation

#### » PARTICIPANTS

The program is designed for senior professionals in the public and the private sector wishing to develop strategic management skills and critical insight on how the EU regulatory framework shapes their business environment. Fluency in English is essential. Applicants from diverse professional and cultural environments will be selected.

#### » REGISTRATION

The participation fee for the four-day program is €1,100, which covers:

- Tuition
- Course materials
- Certificate of completion
- Lunches
- Social events

Early applications are strongly recommended as there is heightened interest in the program and space is limited.

To guarantee participation, payment must be made in full by 14 September, 2007. Bookings paid before 10 July, 2007 receive a 10% discount on the registration.

#### Deadline and how to apply

The application deadline is 10 September, 2007. To apply please complete and submit the online application at <http://www.regionaldevelop-ict.org/>

#### » VENUE

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## The seminar on negotiation by renowned Harvard professor was attended by more than 100 participants from SE Europe and the M. East



“**The Art and Science of Negotiation**”, organized by Athens Information Technology for the third consecutive year at its state-of-the-art facility in Peania from 17-21 April, was completed with great success. The program, taught by Dr. Brian Mandell, Director of the Kennedy School Negotiation Project at Harvard University, was organized within the framework of the collaboration between AIT and Harvard University in Europe.

Dr. Brian Mandell has been teaching negotiation, conflict resolution, and scenario planning for the past 15 years to private and public sector professionals and has trained senior managers from Pfizer, Heinz, Novartis, and Shell. He has taught negotiation in Greece, Ireland, Israel, Mexico, Singapore, Taiwan, and throughout the United States to elected officials, senior public servants, and government ministers.

The success of this year’s program exceeded expectations with over 100 top executives in the private, research and public sectors from Albania, Bangladesh, Bulgaria, Egypt, FYROM, Greece, Jordan, Serbia and Turkey. The seminar lasted 40 hours and was followed by a two-day program titled “Advanced Negotiation Skills: Barriers and Opportunities in Multiparty Negotiations” on advanced negotiation skills. Both programs are designed to improve the ability of senior organizational leaders to confront internal strife and successfully drive and navigate increasingly complex transactions and relationships.

This seminar is now an established event for Southeastern Europe and the Middle East participants. More than 250 high-level executives, politicians and government officials from the region have attended the program over the last three years.

The seminar was organized under the auspices of the Federation of Greek Industries and OTE Academy sponsorship.

## 11th Conference on Optical Network Design and Modeling 2007



The ONDM2007 three-day international conference, co-organised by ifip, e-Photon/ONe and COST concluded successfully on 31 May at AIT. This was a major event in the rapidly growing area of optical networking addressing recent advances in the design, modeling and implementation of optical networks, including novel switching schemes and paradigms, network optimization and design, new concepts for link and control layer protocols, advanced network subsystems and node architectures, and network inter-working schemes.

A significant number of excellent invited speakers from leading academic and industrial institutions from the Americas, Europe and Asia, presented their research work and results: Professors Allan Willner (University of Southern California, USA); Keren Bergman (Columbia University, USA); Piero Castoldi (SSSUP, Italy); Piet Demeester (GENT, Belgium); Andrea Fumagalli (UTD – Texas, USA); Maurice Gagnaire (GET, France); Ken-ichi Kitayama (Osaka University, Japan); Chunming Qiao (University at Buffalo, USA); Jian Wu (BUPT, China); Dimitris Papadimitriou (Manager, Alcatel-Lucent, Belgium); Hans Martin Foisel (Project Manager, T-Systems, Deutsche Telekom); Haruhisa Ichikawa (Executive Director, NTT, Japan).

More than 80 international participants attended the ONDM2007 from: Austria, Belgium, Brazil, Denmark, France, Germany, India, Ireland, Spain, Italy, Japan, China, Korea, Croatia, Cyprus, Holland, Hungary, S. Korea, Norway, Portugal, Slovakia, Chile. The Organising Committee included Professors I. Tomkos, AIT; Fabio Neri, Politecnico di Torino; Dr. D. Klonidis, AIT; Stelios Sygletos AIT; Josep Solé-Pareta; and Sergi Sánchez-López, UPC, Catalunya; Xavier Masip-Bruin, UPC, Catalunya, Spain.

For more information please visit <http://www.ondm2007.gr/>



**“Cognitive Radio: an Emerging Wireless Technology for Efficient Spectrum Utilization”  
by Dr. Constantinos B. Papadias, Professor, Broadband Wireless & Sensor Networks Group,  
AIT**

Cognitive radio (CR) is a recently emerged concept that promises to improve significantly the overall spectral efficiency and reliability of future wireless communication systems. The term was first coined by Joseph Mitola, who came up with the concept in his Ph.D. thesis at KTH as recently as in 1999. According to the original definition, CR is “a radio that is aware of its surroundings and adapts intelligently.”

In other words, a cognitive radio device should have the intelligence to collect information about its environment (i.e. be “context aware”), and combine it with knowledge about its own and other user’s needs in order to make intelligent decisions that optimize overall spectrum utilization.

Awareness of its own location and service needs, awareness of the surrounding environment and other users’ needs, learning capability, and re-configuration ability are some core attributes of a CR system. Via these, it is envisioned that future wireless networks will achieve better spectrum utilization, network operation, planning and co-existence, higher quality / reliability of communication and an overall better / cheaper service experience to wireless users.

While still at its infancy (and so far mostly a theoretical concept), CR has attracted a large amount of attention, due both to its promising applications (emergency communications, broadband and multimedia wireless networking, among others) and to its appeal to several different players in the wireless telecommunications arena. These include commercial operators and service providers, regulatory agencies, standards bodies, radio device manufacturers and users of wireless devices. As a result, a hot debate about the topic is being played on two fronts: technical and regulatory.

On the technical front, the debate concerns the implementation of the CR concept. Mitola’s original idea involves ideally all 7 layers of the communication protocol, coupled with model-based reasoning relying on the good understanding of the communication context. However, that goal remains quite far-fetched, giving rise to a more pragmatic set of requirements that might enable CR at a much earlier time, say within the next 5 years or so. According to a report published by the UK spectrum regulator Ofcom, a CR could be limited, in a first stage, to the physical layer of a wireless system (without ignoring the other layers), combining two main functionalities: intelligent signal processing (ISP) and software defined radio (SDR). ISP is a core technology for adapting a radio transceiver’s functionality to its environment (e.g. by adjusting power levels, hopping in and out of different frequency bands, avoiding interference from undesired sources, etc.). As an example, Figure 1 shows how a radio receiver equipped with an antenna array can avoid interference by an undesired transmitter by shaping a beam that places a null in its direction.

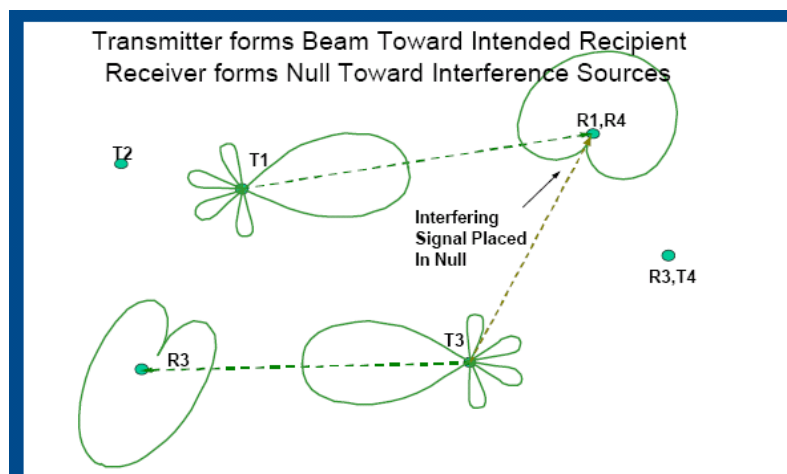


Figure 1: Smart antenna beamforming for spatial reuse

This beam-shaping capability is enabled at the receiver via ISP. On the other hand, SDR (a concept also attributed to J. Mitola) is a radio equipped with a software module that makes it “programmable in the field,” thus providing real-time reconfiguration capability. ISP and SDR are indeed prime enablers of cognitive radio and, in this sense, primitive types of CR functionalities already exist (such as spectrum sensing in WiFi systems, interference robustness mechanisms in the WiMax family of standards, etc.).

However, a number of technical challenges still remain before the CR concept is widely adopted by key wireless telecommunications stakeholders.

What is called "radio scene analysis," i.e. the radio's ability to recognize activity of other radios in specific parts of the electromagnetic spectrum is an important requirement for CR. (It can help, for example, opportunistically use what is called "spectrum holes," i.e. chunks of spectrum that are temporarily free from activity).

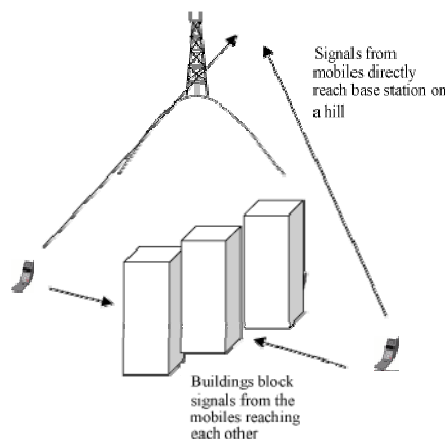
In order to achieve this, the radio should perform some type of spectrum estimation (such as the multitaper approach suggested by S. Haykin in his tutorial paper on CR).

Judging whether a frequency band is available for activity depends of course on receiver sensitivity and is aided by the definition of a quantity called "interference temperature" (attributed to P. Kolodzy) that provides a received power threshold for the band to be deemed available for transmission.

Despite these technologies, identifying available spectrum holes is a task complicated by the inability of a transmitter to sense the presence of competing transmitters that are in the vicinity of the receiver.

This is the well-known "hidden terminal problem," depicted in Figure 2, and is reminiscent of a speaker's inability to recognize how loud a competing speaker that whispers into the ear of the intended listener is perceived. Mechanisms for solving this problem exist in the 802 family of standards (the well-known RTS/CTS procedure) but require centralized processing and feedback channels. Achieving spectrum awareness with distributed radio nodes and / or without feedback is a much harder problem and remains a challenge for CR.

While several candidate approaches exist for the implementation of re-configurability in radio transceivers (such as adaptive modulation and coding, smart antennas, interference-aware pre-coding, combinations of access schemes such as OFDMA, CDMA, SDMA that exploit the time / frequency / spatial dimension for separating users, etc.), all of which have something to offer to the CR concept, what still needs to be clarified is the architecture (centralized / vs distributed vs. combined, feedback mechanisms and protocols) that will enable the accurate sensing of the environment data and their timely distribution to the concerned radios modules.



**Figure 2: The hidden terminal problem: a challenge for cognitive radio**

The IEEE has recently formed a working group (IEEE-1900-B) to develop a data protocol for CR that takes into account not only spectrum sensing and data dissemination but also privacy, authenticity and other security needs.

On the regulatory front, an even hotter debate (sometimes coined as the "licensed vs. unlicensed" debate) has been taking place over the last few years. Stretched to the limit, the CR concept ideally allows multiple operators to provide competing service in the same frequency band, as long as they do not interfere with each other. This was seen, on one hand, as a way to lower the bar for entry to newcomers into the game (such as small (e.g. municipal) wireless internet services providers – WISPs) that could not otherwise afford to pay the steep license fees imposed by governments for the right to use spectrum nation-wide for commercial purposes. |

On the other side of the debate, legacy wireless operators typically oppose this idea, as they have pre-paid for rights of access and would rightfully like to keep exclusive rights in these frequency bands. To support their respective arguments, the former resort to civic arguments such as the freedom of speech protected in the US by the constitution's First Amendment, whereas the latter rely on the lack of convincing technical data to support the claims of guaranteed grade of service with CRs.

The debate has been fueled by regulatory agencies, who on their side, target the best possible use of spectrum; the end-user's right to choose from several service providers; the lowering of prices expected from higher competition, the prospect of fairer pricing policies and even potential environmental / public health benefits. Most notably, the Federal Communications Committee (FCC) issued a ruling in 2003 (FCC-03-322) that encourages the exploration of opportunities for CR-based flexible spectrum utilization. Ofcom has also issued several studies exploring the applicability of CR to commercial systems. It should be mentioned that several EU-sponsored research projects (such as the IST FP6 projects E2R and OBAN, among others) have started exploring various facets of the CR concept. Finally, the adoption of the concept also strongly interests the military (see DARPA's XG project on next generation networks).

It should be recognized that future variations of the CR concept are also possible (e.g. it may not have to be always tied to the SDR concept; it might find a place even within licensed operation, e.g. for better joint spectrum utilization by competing operators, etc.). Applications beyond communications (such as e.g. cognitive radar, proposed very recently) are also foreseen.

Overall, cognitive radio is a recently emerged wireless communication concept that holds the potential / promise of revolutionizing not only the way wireless data is transmitted, received and shared between users in a most spectrally / power efficient manner, but also the way the wireless landscape will be shaped, controlled and operated in future wireless and converged networks.

## FACULTY NEWS

### Professional activities

- ❖ Prof. Ioannis Tomkos was invited to Co-Chair the first symposium on Resilience in Transparent Optical Networks (RTON) 2007
- ❖ Prof. C. B. Papadias will serve as panel chair on the Technical Program Committee of the International Symposium on Wireless Pervasive Computing, to held in Santorini, 7-9 May, 2008.
- ❖ Prof. Ioannis Tomkos was invited to become a member of the International Advisory Committee of the First International Symposium on Advance Networks and Telecommunications Systems (ANTS 2007).
- ❖ Prof. C. B. Papadias as a Tutorial Co-Chair and a Special Session Organizer will participate in the organization of the 18th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC 2007) to take place 3-7 Sept, 2007, in Athens, Greece.
- ❖ Prof. Ioannis Tomkos was invited to be Co-Chair of the ECOC 2007 workshop "Networks for IT: A New Opportunity for Optical Network Technologies"
- ❖ Prof. Ioannis Tomkos was invited to become a member of the International Program Committee of the 7th IASTED International Conference on Wireless and Optical Communications WOC 2007, Montreal, Quebec, Canada
- ❖ Prof. Ioannis Tomkos joined the editorial board of the IET Optoelectronics scientific journal (<http://www.ietdl.org/IET-OPT>). IET Optoelectronics was previously published as IEE Proceedings Optoelectronics. Following the merger on 31 March 2006, between the IEE (Institution of Electrical Engineers) and the IIE (The Institution of Incorporated Engineers) to form the Institution of Engineering and Technology, the IEE Proceedings suite of journals have changed name from 2007 to reflect the fact that they are now published by the Institution of Engineering and Technology. The IET Optoelectronics scientific journal attracts high quality scientific contributions that related to new advancements in the field of optical communications.
- ❖ Prof. Ioannis Tomkos, (together with Prof. F. Neri, Prof. J. Solé-Pareta, Prof. X. Masip-Bruin, and Prof. S. Sánchez-López) will be the Editor of the Lecture Notes in Computer Science Series: Vol. 4534, Sub-library: Computer Communication Networks and Telecommunications, Optical Network Design and Modeling, 2007, XI, 460 p., ISBN: 978-3-540-72729-3



### Papers published in international scientific journals/books

- Ch. Kouloumentas, A. Tzanakaki, I. Tomkos, N. Pleros, P. Zakyntinos, D. Petrantonakis, D. Apostolopoulos, O. Zouraraki and H. Avramopoulos, "Packet Clock Recovery Using a Bismuth Oxide Fiber-Based Optical Power Limiter", will appear in "Optics Express", 2007
- N. Komninos is the main author of the accepted paper "Protecting Biometric Templates with Image Watermarking Techniques", to be published August, 2007, Lecture Notes in Computer Science (LNCS-ICB'07), Springer Press.
- N. Komninos is the co-author of the accepted paper "Integrity and Authenticity Mechanisms in Sensor Networks", to be published late 2007, International Journal on Computer Research, Nova Science Publishers Press.
- N. Komninos is the co-author of the accepted paper "Intrusion Detection & Response in Ad Hoc Networks", to be published late 2007, International Journal on Computer Research, Nova Science Publishers Press.

### Patents

- ❖ Prof. C. B. Papadias was awarded, jointly with Dr. N. Sharma, a patent entitled "Improved Quasi-Orthogonal Space-Time Codes," by the U. S. Patent Office (Patent Number #7,184,488), issued 27 February, 2007.

### Presentations at international scientific conferences/workshops

- ✓ Ioannis Tomkos was invited, by the Scientific Director (Prof. David V. Plant) of the Canadian NSERC-funded Agile All-Photonic Networks (AAPN) research network, to give a presentation at its Annual Research Review, 14-15 June, 2007, at Nortel's Carling Campus in Ottawa, Ontario.
- ✓ N. Sharma, P. R. Pinnamraju, C. B. Papadias, "Space-time codes with controllable ML decoding complexity for any number of antennas," was accepted for publication at the IEEE International Symposium on Information Theory (ISIT 2007), Nice, France, June 24-29, 2007.
- ✓ P. Tragas, A. Kalis, C. B. Papadias, F. Ellinger, T. Ussmuller, R. Mosshammer, M. Huemer, R. Eickhoff, A. Dabek, D. Doumenis, A. Kounoudes, "RESOLUTION: Reconfigurable Systems for Mobile Local Communication and Positioning," was accepted for publication at the IST Mobile Summit 2007, Budapest, Hungary, 1-5 July, 2007.
- ✓ Ioannis Tomkos, was invited to give a presentation at the BroadNets 2007 conference
- ✓ N. Komninos is the co-author of the accepted paper "Towards an Effective Intrusion Response Engine Combined with Intrusion Detection in Ad Hoc Networks", to be published June, 2007, Sixth Annual Mediterranean Ad Hoc Networking Workshop (MED-HOC-NET'07).
- ✓ N. Komninos is the co-author of the accepted paper "Intrusion Detection with Neural Networks and Watermarking Techniques for MANET", to be published July, 2007, IEEE International Conference on Pervasive Services (ICPS'07), 2007.
- ✓ Ioannis Tomkos was invited to give a presentation at the ICTON 2007 conference on "Dynamically Reconfigurable Transparent Optical Networking Based on Cross-Layer Optimization" (in the framework of a special industry-oriented session)
- ✓ Ioannis Tomkos was invited to give a presentation at the ICTON 2007 conference on "Performance Studies of Multi-Wavelength all-Optical Regeneration based on Highly Non-Linear Fibers"
- ✓ Ioannis Tomkos was invited to give a presentation at the APOC 2007 conference



**Presentations at international scientific conferences/workshops (cont)**

- ✓ G. Markidis, S. Sygletos, A. Tzanakaki and I. Tomkos, "Impairment Aware based Routing and Wavelength Assignment in Transparent Long Haul Networks", will appear in Lecture Notes in Computer Science Series: Vol. 4534, Sub-library: Computer Communication Networks and Telecommunications, Optical Network Design and Modeling, 2007.
- ✓ M. Spyropoulou, K. Yiannopoulos, S. Sygletos, K. Vlachos, and I. Tomkos, "160 Gbps Simulation of a Quantum Dot Semiconductor Optical Amplifier Based Optical Buffer", will appear in Lecture Notes in Computer Science Series: Vol. 4534, Sub-library: Computer Communication Networks and Telecommunications, Optical Network Design and Modeling, 2007.
- ✓ S. Sygletos, P. Vorreau, W. Freude, J. Leuthold, M. Spyropoulou, I. Tomkos, "All-Optical Multi-Wavelength Regeneration Based on the QD-SOA Technology in Future Ultra-High Speed Optical Networks", (Invited paper), ICTON 2007.
- ✓ Ch. Kouloumentas and I. Tomkos, "Fiber-Based In-Line Regeneration Scheme for Multi-Channel Operation at 40 Gb/s", CLEO Europe, 2007
- ✓ Ch. Kouloumentas, I. Tomkos, et. al. "Study of the Linewidth Enhancement Factor of Semiconductor Lasers", CLEO Europe 2007
- ✓ Ch. Kouloumentas, N. Pleros, P. Zakynthinos, D. Petrantonakis, D. Apostolopoulos, O. Zouraraki, A. Tzanakaki, H. Avramopoulos and I. Tomkos, "Packet Clock Recovery at 40 Gb/s and Beyond, Using a Fabry-Pérot Filter and an Optical Power Limiter Based on a Bismuth Oxide Fibre", CLEO Europe, 2007
- ✓ Ch. Kouloumentas, I. Tomkos, et. al. "Linewidth Enhancement Factor of Semiconductor Lasers: Results from Round-Robin Measurements in COST 288", CLEO 2007, USA
- ✓ Ioannis Tomkos presented a talk on "Trends in Evolution of Broadband Services" at the 4th Telecommunications Forum, Athens, Greece, March 2007.

**Other**

- ✚ Prof. I. Tomkos, "Public Private Partnerships in the ICT sector", Technology Column, Business Partners Magazine, 2007.
- ✚ Prof. I. Tomkos, "Broadband over Power-Lines", Infocom Magazine, 2007 (in Greek)
- ✚ Prof. I. Tomkos, "Trends in Evolution of Broadband Services", Technology Column, Business Partners Magazine, 2007.
- ✚ Prof. C. B. Papadias was appointed Industry Program Chair in next year's IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2008) that will be held in Las Vegas, Nevada, 30 March - 4, April 2008.
- ✚ Prof. C. B. Papadias attended the 1st formal meeting of the EU FP7 IDEAS Program Committee and participated as a speaker in an informative session on the program IDEAS that was held on 31 May at the National Hellenic Research Foundation.
- ✚ Prof. C. B. Papadias participated in the Ph.D. examination of Mr. José Lopez-Salcedo, which was held in Barcelona on 28 March, 2007, as a Member of the Examination Committee. The thesis topic was "Coherent and Non-Coherent Ultra-Wideband Communications" and the doctoral degree was awarded by the Polytechnic University of Catalunya (UPC).
- ✚ Prof. C. B. Papadias gave a professional orientation seminar on the perspectives of the field of wireless communications to students of the "Leonteios" High School in Pathsia, Athens, Greece, on 10 Feb, 2007.



### Carnegie Mellon President Jared L. Cohon Reappointed for Third Five-Year Term

Cohon Praised for Taking University to "New Heights" PITTSBURGH—Carnegie Mellon University's Board of Trustees today approved the reappointment of Carnegie Mellon President Jared L. Cohon for a third five-year term. Cohon became Carnegie Mellon's eighth president in 1997 and was reappointed in 2002.

Carnegie Mellon has progressed significantly in Cohon's 10 years as president, making advancements in many areas, including education, research and regional impact. Under Cohon's tenure, Carnegie Mellon's curriculum has been recognized for its interdisciplinary focus and attention to ethics, environmental studies, global awareness and innovation. In 2005, Cohon received an Academic Leadership Award from the Carnegie Corporation of New York for the university's "problem-solving, reflective practitioner's approach to undergraduate education."

In 2001, the Higher Education Research Institute at UCLA identified Carnegie Mellon as one of three universities nationwide to make significant improvements in its undergraduate programs.

Carnegie Mellon has also made great strides globally and is now an international degree-granting institution. In 1997, when Cohon became Carnegie Mellon's president, the university offered only one program in three counties outside the U.S. Today, it offers 12 degree programs in 10 countries: Australia, China, England, Greece, India, Japan, Korea, Mexico, Portugal and Qatar, its first international branch campus. Carnegie Mellon also has student exchange and joint-degree programs in Singapore, Taiwan, India and China.

More on President Cohon's appointment maybe found at [http://www.ait.gr/news/news\\_data.asp?news\\_id=227](http://www.ait.gr/news/news_data.asp?news_id=227)

## INTRACOM HOLDINGS NEWS

**INTRACOM IT SERVICES** has in a contract with Information Society SA, designated for the Ministry of Interior, Public Administration & Decentralization, concerning the implementation of "Raptarchis" project. Furthermore, INTRASOFT International, subsidiary of INTRACOM IT Services, has been awarded three eGovernment contracts in the Baltic countries, and is part of the consortium selected to implement the project for the provision of IT Service Support for the European Commission's DIGIT. On May 2007, INTRACOM IT Services participated in the ICT Cyprus expo 2007, held on Nicosia.

### INTRACOM DEFENSE ELECTORNIS

signed two new agreements with Northrop Grumman. Last April, the company participated in the "THORAX 2007" international conference, during which announced the signing of a Manufacturing License Agreement (MLA) with RAYTHEON. Furthermore, INTRACOM Defense Electronics undertook a new project for the production of electronic units for the NATO ground-to-air Evolved SeaSparrow Missile (ESSM).

### INTRACOM TELECOM: SITRONICS JSC

announced three new appointments in its Telecommunication Solutions business division. Igor Hulak has been appointed Head of SITRONICS Telecom Solutions business division, and Alexandros Manos and Evgeny Maximenko, Deputy Heads responsible for the EEMEA and Russia & the CIS regions respectively. INTRACOM Telecom, through its subsidiary, INTRACOM Middle East, participated in 2 very important Middle East exhibitions, ARABCOM 2007 & WIMAX MEGNA.

**INTRAKAT:** A concession contract was signed between the Greek State, "Moreas SA" and its shareholders - Elliniki Technodomiki, Pantechniki and INTRACOM Holdings - for the design, construction, financing, operation, maintenance & exploitation of the Corinth-Tripoli-Kalamata freeway as well as the Leuktro Sparta expressway branch. The companies participating in the joint-venture project are Aktor, Pantechniki and INTRAKAT.

**Hellas OnLine:** The company has finalized the acquisition of Attikes Tilepikinonies and has signed a Letter of Intent with Vodafone for the exclusive provision of broadband and fixed line telephony services in Greece. Vodafone, following its global strategy for the provision of communication services, aims through the strategic cooperation with Hellas On Line, to provide its customers innovative products, which will combine mobile telephony services with fast internet services (ADSL).

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