

Curriculum Vitae

Personal information

First name / Surname

Address

Telephone / Skype

E-mail / Web-site

Nationality

Date of birth

Gender

Dimitrios P. BOURAS

22 - 7733 Turnill St., Richmond BC, V6Y 4H9 Canada

+1 (604) 721-5160 / dimitrios.bouras

dbouras@ieee.org / <http://www.dbouras.net>

Greek

3 January 1966

Male

Occupational field

Overview of skills and competences

Professional organizational / management skills and competences

Other successful organizational engagements

Work experience

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

ICT, IoT Systems & Networks

- Experience in management of engineering groups designing and implementing hardware and software for telecom, networking, telemetry and distributed computing systems. System engineering and project management for microwave RFICs, with particular emphasis in broadband wireless (MIMO) and microwave back-haul (SISO) systems. Acting as customer interface, managing interaction and chairing face-to-face meetings. Current and past positions include: Software Development Manager, acting VP Engineering, Chief Architect, Manager Systems & Applications, Principal System Engineer, Electrical Supervisor. *See section Work experience for details.*
- Experience in technical, organizational and financial evaluation, as well as in monitoring successful execution of R&D projects funded under the EU 6th, 7th Framework (FP6 & FP7) and the Horizon 2020 Programs, within the Information, Communication and IoT Technologies research area. European Commission external expert for nearly twelve years.
- Highest level working knowledge and experience in Information / Communication / Networking Technologies and Operating Systems through involvement with computers and TCP/IP networks reaching back to mid 1990 and the infancy of the Internet and the World Wide Web.
- Commercial maritime sector experience in developing and leading engineering group responsible for all things related to electronic automation, on-board ICT, telecommunications, radio navigation and telemetry for energy optimization. Supporting land-based and seafaring operators of managed fleet of tanker, bulk carrier and container vessels, as well as new-buildings teams. *See section Work experience for details*
- During my tenure as President of the Amateur Radio Society at the University of British Columbia, Vancouver, Canada, student membership was greatly increased, ambitious infrastructure projects were successfully completed, and two text-books (of which I am a co-author) were published for generating proceeds to fund society activities. *See section Personal skills and competences for details.*

June 2017 – today

Software Development Manager

RESPONSIBILITIES

Defining the strategy and delivering software for embedded firmware, intelligent system controllers and IoT components for industrial power solutions. Working with customers, product managers and sales for developing product road-maps. Reporting to the VP of Product Management and Development and advising the executive team on “build, buy, partner and avoid decisions”. Collaborating with program managers, engineers, technologists, finance, supply chain, manufacturing, technical support and documentation.

Alpha Technologies. Vancouver, B.C., CANADA (www.alpha.ca)

Type of business or sector	Electrical / Electronic Manufacturing
Dates	November 2003 – today
Occupation or position held	ICT Consultant
Main activities and responsibilities	<p>RESPONSIBILITIES</p> <p>Independent expert in the Information, Communication and IoT Technologies research area, for evaluating proposals submitted for funding under the EU 6th, 7th Framework (FP6, FP7) and Horizon 2020 (H2020) Programs. Took part in week-long evaluation sessions, held on-site at the European Commission headquarters in Brussels, Belgium, for the following calls for proposals: FP6.IST-2.SO-2.3.2.6, FP6.IST-5, FP7.ICT-10 (objectives 1.3 and 1.4), FP7.ICT-2, FP7.ICT-4, FP7.ICT-PSP-4, ICT30-2015. Also monitored successful execution of funded projects as member of the review teams for the following funded projects: FP6: LIAISON, OpenNet, POPEYE, SHARE, SNOW, WORKPAD; FP7: BeyWatch, Outsmart, RelyonIT, Tibucon; H2020: iCore, Almanac, Dareed, Sunrise.</p>
Name and address of employer	European Commission, DG Connect, Brussels, BELGIUM (ec.europa.eu/dgs/connect)
Type of business or sector	Information and Communication Technologies
Dates	May 2015 – April 2017
Occupation or position held	Chief Architect / acting VP Engineering
Main activities and responsibilities	<p>RESPONSIBILITIES</p> <p>Responsible for leading an agile engineering team in a pre-revenue startup environment, providing architectural direction and coordinating implementation plans for an edge-computing micro-service based cloud platform. Since joining I was instrumental in revamping software development life-cycle management tools and processes, contributing to the transformation of an R&D culture into a product and market driven one. As a senior member of the management team, I regularly communicated company technology strategy to employees, partners, customers and investors.</p>
Name and address of employer	mimik Technology Inc. Vancouver, B.C., CANADA (www.mimik.com)
Type of business or sector	Information and Communication Technologies
Dates	December 2010 – March 2015
Occupation or position held	Electrical Eng. Supervisor, Technical Department
Main activities and responsibilities	<p>RESPONSIBILITIES</p> <p>Leading and developing the electrical engineering group within the Technical Department. The group supports superintendent engineers, fleet electricians (in the order of one hundred individuals) and the new-buildings team, in all things related to electronic automation, on-board ICT, telecommunications, radio navigation and telemetry for energy optimization. Responsible for overseeing maintenance, as well as planning, management and tracking of related development and infrastructure projects with average annual budgets of 1-2M USD. Reporting to the Technical Department Manager and the CTO.</p>
Name and address of employer	THENAMARIS Ships Management Inc. Athens, GREECE (www.thenamaris.com)
Type of business or sector	Maritime – Ships Management
Dates	September 2006 – July 2010
Occupation or position held	Manager, Systems & Applications
Main activities and responsibilities	<p>RESPONSIBILITIES</p> <p>Planning, management and tracking of development projects; reporting to the CTO and the company board of directors. Leading the Systems & Applications Group, serving as interface between customer technical requirements or specifications, established or emerging standards, and internal R&D / implementation effort, guiding design decisions based on capabilities and trade-offs. Successfully executed projects: RFICs for broadband wireless (MIMO) distribution of HDTV signals in the home; fully integrated RFIC transceivers for microwave back-haul networks. During these years I also served as the company interface to our customers, managing interaction and chairing face-to-face meetings.</p>

Name and address of employer
Type of business or sector
Dates
Occupation or position held
Main activities and responsibilities

THETA Microelectronics S.A. Athens, GREECE (subsidiary, THETA Microelectronics Inc. www.thetamicro.com)

Advanced RFIC IP & Design Services for Mobile and Fixed Broadband Wireless Applications.

November 1998 – August 2006

Principal System Engineer, Data Transmission / IT Manager

RESPONSIBILITIES

- Supporting wireless LAN / VoIP (voice-over-IP) products manufactured by ATMEL by developing enhancements to existing designs for improving system performance, and assisting system and hardware designers in matching interfaces to products offered by potential partners. In this capacity I have been exposed to all system layers between physical medium interface as delivered by a radio frequency transceiver, and OS / DSP firmware running on embedded CPUs.
- Supervising engineering group responsible for designing and implementing digital signal processing (DSP) algorithms for wireless communication systems used in system-on-a-chip (SoC) ASIC designs (major project standards: Bluetooth/IEEE-802.15, IEEE-802.11a/b/g); preparation of weekly progress reports to project/division managers. Gained of hands-on experience, understanding and appreciation of the complexity, power and integration trade-offs involved in SoC systems by being exposed to all phases of the design, as well as the simulation/verification cycles.
- Research, development and modeling of DSP algorithms for digital wireless communication systems; generation of test-benches for validation of hardware implementation; languages used include C and Matlab, but also Verilog and VHDL for later stages in the design cycle; preparation of internal reports analyzing algorithmic theory as well as implementation specifics.
- Management of all networking and computing infrastructure (a LAN of heterogeneous work-station / server computing facilities) at ATMEL's design center in Athens, Greece, as well as administration of e-mail and intranet web services, and coordination of intranet operations with system administrators at other ATMEL locations worldwide.

Name and address of employer
Type of business or sector
Dates
Occupation or position held
Main activities and responsibilities

ATMEL Hellas S.A. Athens, GREECE (subsidiary, Atmel Corp. www.atmel.com)

Design & Manufacturing of ICs for Telecommunication & Multimedia Systems

January 1997 – December 1999

Senior Engineer

RESPONSIBILITIES

- Research and development of algorithms for processing channel sounder data in the 2.4, 5 and 60 GHz bands under European Union funded research project METAMORP (Measurements Testing and Calibration of Advanced Mobile Radio-Channel Test Equipment).
- Technical management of the company involvement in the project, in addition to my purely scientific contribution. Preparation and submission of monthly progress reports to consortium partners, as well as final project deliverables submitted to the European Commission.

METAMORP, budgeted at 2 M€ for a time span of 3 years, aimed a) to facilitate comparison of existing radio-channel measurements by providing a new common data file format, b) to propose calibration procedures and further detailed comparative measurements for different mobile radio-channel sounder equipment which use the 2.4, 5 and 60 GHz bands, and c) to produce models for the classification of the various mobile propagation environments. It also provided appropriate test parameters for the accurate characterization of the various mobile radio-channels, including non-stationary and directional channels, and produced specifications for the performance of channel sounder equipment, together with guidelines for their accurate calibration.

Name and address of employer
Type of business or sector
Dates
Occupation or position held
Main activities and responsibilities

ERICSSON Hellas S.A. Athens, Greece (subsidiary, Ericsson Radio Syst. AB www.ericsson.se)

Telecommunications equipment manufacturing

March 1996 onwards

ICT Consultant

COMPUTER SKILLS

- Programming languages & IDEs: C / C++, Pascal, Android Studio, Xcode
Collaboration and CI tools: Confluence, Jira, Bamboo, BitBucket, Mercurial
- Processors (assembly programming): Intel ix86, Ceva DSP cores, Texas Instruments TMS320x, Motorola 68k, Sperry / Univac 1100
 - Operating systems: Android / GNU Linux, OS-X / iOS, QNX, UN*X [Solaris (SysV), SunOS (BSD) , HP-UX, IRIX], Exec 8, Microsoft Windows
 - Scripting languages: perl, sh (and variants), csh (and variants), awk, php
 - CMS environments: Plone, Microsoft SharePoint
 - Simulation environments: Matlab, Ptolemy, BloSim, SPW, NC-Verilog, Modelsim
- Hardware description languages: Verilog, VHDL
 - Windowing environments: X-Windows [X11R5-X11R6.x, HP-UX & Solaris CDE, IRIX DE, OpenWindows], Microsoft Windows
 - Networking environments: TCP/IP (development/administration of client/server applications, Internet e-mail and web services, Intranets, VPN firewalls / gateways, dial-in terminal servers, routers), SMB/ CIFS (MS Windows network), NetWare

Even though my formal engagement as consultant in this area begins in 1996, my accumulated experience in Unix systems and TCP/IP based networks stretches further into the past, to the end of 1990 and the birth of the Internet and the World Wide Web. From 1991 to mid 1995 I was responsible for system administration of the Communications Laboratory computing and networking facilities, at the UBC Department of Electrical & Computer Engineering. During that same period I also served as volunteer system operator providing trouble-shooting and recovery for the Departmental networking and file-server facilities, during weekends and week-day after-hours.

I have been active in the Open Source movement since end of 1990, contributing to GNU/ Linux – its flag-ship operating system – and to core components such as the X-Windows system pioneered by MIT, as well as writing stand-alone applications and utilities.

PAST ICT-RELATED ASSIGNMENTS

Trimble Navigation Ltd. / Geotech S.A.: HEPOS (Hellenic POSitioning Service) IT network analysis (application throughput / security requirements) and design (net backbone / access / IT infrastructure).

Self employed

Telecom and ICT Consulting

July 1994 – December 1999

Telecom Consultant, Subcontractor

AREAS

- Communication system impairment modeling and design of digital simulations for a wide variety of channel environments, including EHF mobile satellite, cellular land mobile radio, indoor PCS and aeronautical systems. Authoring of an extensive C-language source library, implementing communication system blocks to be used parametrically for recreating virtually any type of communication environment.
- Development of modulation / demodulation and coding / detection schemes for wireless digital communications in the aforementioned channel environments, yielding novel transceiver structures which incorporate channel impairment mitigation techniques, improving the digital link quality and robustness.
- Prototype hardware design, implementation and testing of novel transceiver structures for interference environments, employing techniques developed for land-mobile VHF / UHF and mobile-satellite EHF fading channels. Activities included discrete component prototype implementation, custom LSI ASIC design and testing of fabricated samples, and DSP algorithm development and evaluation, all in a laboratory hardware simulation testbed.
- Coding / compression and decoding / synchronization algorithms for audio, data and images (still picture and video) over wireless channels, including terrestrial and satellite based systems, in conjunction with HDTV signal transmission / reception.

Name and address of employer

Type of business or sector

Dates

Occupation or position held

Main activities and responsibilities

- Developing techniques supporting steerable antenna systems for satellite tracking, and system analysis for mobile terminals using EHF satellite systems.

PAST SUB-CONTRACTING ASSIGNMENTS

- **CAL (Canadian Astronautics Ltd.), Canada:** Application of novel receiving techniques in subsystem design for an aircraft-satellite communication terminal in the Ka (20/30 GHz) band. My contribution covered part of the theoretical analysis, the computer-aided system simulation and the hardware/ software implementation of optimal and asymptotically optimal receiving techniques, for mitigating the effects of system phase noise as well as received signal fading.
- **MPR (Microtel Pacific Research), Vancouver, Canada:** Feasibility analysis, design and evaluation of satellite tracking antenna pointing algorithms for terrestrial personal communication systems (PCS) terminals. Terminal types included portable briefcase sized units, as well as systems installed in automobiles. Communication system impairment modeling and design of digital simulations for a wide variety of channel environments, including EHF mobile satellite, cellular land mobile radio, indoor PCS

Name and address of employer

Type of business or sector

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

Type of business or sector

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

Type of business or sector

Education and training

Dates

Title of qualification awarded

Principal subjects/Occupational skills covered

Name and type of organization providing education and training

Dates

Title of qualification awarded

Principal subjects/Occupational skills covered

Name and type of organization providing education and training

Dates

Title of qualification awarded

Principal subjects/Occupational skills covered

Self employed

Design & Evaluation of Advanced Communication Systems

September 1989 – July 1993

Research Assistant

Responsible for building and testing simulation testbeds for digital wireless communication links and evaluating the performance of novel transceiver structures.

Communications Laboratory, Department of Electrical & Computer Engineering, The University of British Columbia Vancouver, B.C, Canada

University

1985 – 1987

Consultant

Member of software-house technical staff responsible for the development and maintenance of accounting/ inventory software. Computer languages used: Pascal, C.

Self employed

Software programming

August 1991 – August 1995

Ph.D. in Telecommunications

Thesis Title: "Advanced Noncoherent Receivers for Mobile Fading Channels"
(2 years Research Assistantship, 2 years University Graduate Fellowship)

The University of British Columbia, Vancouver B.C., Canada, Faculty of Applied Science, Department of Electrical & Computing Engineering

August 1989 – July 1991

M.A.Sc. in Telecommunications

Thesis Title: "Optimal Decoding of PSK and QAM Signals in Frequency Nonselective Fading Channels"
(1.5 years Research Assistantship)

The University of British Columbia, Vancouver B.C., Canada, Faculty of Applied Science, Department of Electrical & Computer Engineering

September 1983 – July 1989

Diploma in Electrical Engineering

5-year study including thesis, specialization field: telecommunications

Name and type of organization providing education and training

University of Patras, Patras, Greece

Dates

September 1977 – June 1983

Title of qualification awarded

Apolitirio (high school graduation diploma)

Principal subjects/Occupational skills covered

French-Greek high school, 6-year study

Name and type of organization providing education and training

Lycée Léonin Franco-Hellénique, Néa Smyrni, Athens, Greece

Personal skills and competences

Mother tongue(s)

Other language(s)

Self-assessment

European level ^(*)

English

French

Organizational skills and competences

Artistic skills and competences

Driving license(s)

Additional information

Greek

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user
B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

^(*) Common European Framework of Reference (CEF) level

Between 1991 and mid 1994 I served as President of the Amateur Radio Society (ARS) at the University of British Columbia. The UBC ARS is a non-profit, student organization governed by UBC's Alma Mater Society, with a mission to divulge Amateur Radio as a hobby to students, faculty, staff and the community.

During these four years we greatly increased student membership, successfully completed ambitious infrastructure projects (radio repeaters in the 144/440 MHz bands, auto-tracking 144/440 MHz satellite station, experimental high-speed wireless digital links in the 220/440 MHz bands), and published two preparatory course books on obtaining an Amateur Radio Operator certificate, while augmenting the already very successful weekend courses offered for those planning to take certification exams. Exam tests are administered by ARS members who are certified Industry Canada examiners. The two textbooks (*Amateur Radio Basic Qualification Manual* & *Amateur Radio Advanced Qualification Manual* – of which I am a co-author) together with the weekend courses have since been the major source of income for the society.

I have been awarded Advanced Theory and Morse Code certificates in Canada, where I am a licensed amateur radio operator and hold the call-sign VE7HDB. Since October 2010 I have also been assigned the Greek reciprocal call-sign SV0XCB.

I started learning guitar at age 6 and continued classical music lessons until age 10. During high-school and throughout my University years, the guitar proved to be an invaluable companion in joyful as well as trying times, and the shared interest that sparked lasting friendships.

Land vehicles: EU type A (motorcycle), Canadian (BC) class 5, EU type B (passenger car)
Sea vessels: Greek Motor boats & cruisers (up to 30m) operator's license.

PROFESSIONAL ACTIVITIES

Membership in Scientific / Professional Societies (Past and Present)

- The Institute of Electrical and Electronics Engineers (IEEE), Grade: Member, Communication Society, Vehicular Technology Society
- Technical Chamber of Greece (Professional Engineers' Licensing Authority)

Membership in Scientific / Expert Panels (Past and Present)

- Expert Evaluator & Project Review Team Member, 6th, 7th Framework (FP6, FP7) & Horizon 2020 Programmes, Commission of the European Communities.

- Technical Program Committee Member, IEEE Wireless Rural & Emergency Communications Conference (WRECOM) 2007, IEEE Vehicular Technology Conference (VTC) 2008 - Fall, IEEE Vehicular Technology Conference (VTC) 2009 - Spring.

SCIENTIFIC INTERESTS

- Internet of Things (IoT) & related Internet technologies
- Distributed ad-hoc micro-service-driven networking
- "System on a Chip" (SoC) ASICs for telecommunications
- Wireless telecommunication systems / modeling and simulation
- Mobile radio channel propagation and impairment modeling

TEACHING INTERESTS

- Telecommunications and networking
- Electronics (analog / digital / RF)
- Micro-controller and computer programming

DISTINCTIONS

1993 – 1995

University Graduate Fellowship (UGF Fellow), Department of Electrical & Computer Engineering, The University of British Columbia (UBC), Vancouver, B.C. Canada.

1995

University-wide "Best *Ph.D.* Thesis" nomination for the Natural Sciences and Engineering Research Council of Canada (NSERC) award for 1995.

2005

Publication [R-2] which I coauthored during the course of my *Ph.D.*, is referenced by the editors of the September 2005 issue of the *IEEE Journal on Selected Areas on Communications* [B-1] as one of the four most important – among several hundred other – scientific publications of the last two decades, that consist "... a real breakthrough ..." and are regarded as "... seminal contributions ..." spawning "... a plethora of technical papers ..." in the field of Differential and Noncoherent Digital Communications.

PUBLICATIONS / REPORTS

Refereed Journal Papers

- [R-6] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Neural-Net Based Receiver Structures for Single- and Multi-Amplitude Signals in CCI and ACI Channels," *IEEE Transactions on Vehicular Technology*, vol. VT-46, pp. 791-798, August 1997.
- [R-5] D. Makrakis, P. T. Mathiopoulos and D. P. Bouras, "Comment on Maximum Likelihood Decoding of Uncoded and Coded PSK Signal Sequences Transmitted over Rayleigh Flat-Fading Channels," *IEEE Transactions on Communications*, p. 269, March 1997.
- [R-4] P. Nasiopoulos, R. Ward, D. P. Bouras and P. T. Mathiopoulos, "HDTV Picture Quality Performance in the Presence of Random Errors: Analysis and measures of improvement," *Journal of Signal Processing: Image Communications*, pp. 79-98, June 1996.
- [R-3] D. Makrakis, D. P. Bouras and P. T. Mathiopoulos, "Performance Analysis of Asymptotically Optimal Noncoherent Detection of Trellis-Coded Multi-Amplitude/Phase Modulation Signals in Gaussian Noise and ISI Channels," *IEEE Journal on Selected Areas on Communications*, vol. SAC-13, pp. 354-370, February 1995
- [R-2] D. Makrakis, P. T. Mathiopoulos and D. P. Bouras, "Optimal Decoding of Coded PSK and QAM Signals in Correlated Fast Fading Channels: A Combined Envelope, Multiple Differential and Coherent Detection Approach," *IEEE Transactions on Communications*, vol. COM-42, pp. 63-75, January 1994
- [R-1] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Optimal Detection of Coded Differentially Encoded QAM and PSK Signals with Diversity Reception in Correlated Fast Rician Fading Channels," *IEEE Transactions on Vehicular Technology*, vol. VT-42, pp. 245-258, August 1993

Refereed Conference Papers

- [C-8] P. T. Mathiopoulos (Editor), M. Grigat, I. Gaspard, U. Martin, D. P. Bouras, E. Dimopoulos, J.-C. Bic, P. Pajusco, E. Bonek, M. Steinbauer, G. Pospischil, P. Lehne, F. Aanvik, "METAMORP: Measurements, Testing and Calibration of Advanced mobile radio-channel test equipment," in the *Proceedings of COST 250 TD(97)*, Lisbon, September 1997.
- [C-7] D. Makrakis, D. P. Bouras and P. T. Mathiopoulos, "Non-Coherent Diversity Receivers for Mobile and Personal Satellite Communications," in the *Proceedings of the 1996 Workshop on Multiaccess, Mobility and Teletraffic for PCS*, Paris, France, May 1996.
- [C-6] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Maximum Likelihood Receivers for Coded Wideband Personal Communication Systems," in the *Proceedings of the IEEE International Conference on Electronics, Circuits and Systems*, Cairo, Egypt, December 1994.
- [C-5] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Neural-Net Based Receiver Structures for Single- and Multi-Amplitude Signals in Interference Channels," in the *Proceedings of the 4th IEEE Workshop on Neural Networks for Signal Processing*, Ermioni, Greece, pp. 535-544, September 1994
- [C-4] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Maximum Likelihood Decoding of Coded Digital Signals in Frequency Selective Fast Fading Channels," in the *Proceedings of the 1993 Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, B.C., Canada, pp. 565-568, May 1993
- [C-3] D. Makrakis, P. T. Mathiopoulos and D. P. Bouras, "A New Limiter/Discriminator Receiver for Mobile and Cellular Telecommunication Systems Employing MSK-type Signals", in the *Proceedings of SUPERCOMM/ICC '92*, Chicago, USA, pp. 855-859, June 1992
- [C-2] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Noncoherent Trellis Coded $\pi/4$ -shift DQAM With Diversity Reception for Future Digital Mobile/Cellular Communication Systems," in the *Proceedings of the 1991 IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, B.C, Canada, pp. 425-428, May 1991
- [C-1] P. T. Mathiopoulos, D. P. Bouras and D. Makrakis, "Near Optimal Noncoherent Detection of Multi-Amplitude $\pi/4$ -QPSK Schemes," in the *Proceedings of the 4th Nordic Seminar on Digital Mobile Radio Communications (DMR IV)*, Oslo, Norway, Paper 1.1, June 1990

Technical Reports (representative sample)

- [T-11] D. P. Bouras, "Processing Gain Measurement Procedure for an 802.11b Baseband Processor," ATMEL Hellas S.A., 2002 (includes analytical bounds of BER performance for all 802.11b transmission rates).
- [T-10] D. P. Bouras, "Effects of Amplitude and Phase Imbalance in Quadrature Modulators," ATMEL Hellas S.A., 2001 (includes calculation of nomograph for balanced modulator phase & amplitude imbalance versus allowed constellation error for an 802.11a transmitter).
- [T-9] D. P. Bouras and F. Karoubalis, "Parametric Reed-Solomon Forward Error Correction Module for a DOCSIS-1.1 compliant Uplink Burst Modulator: Design & HDL Implementation," ATMEL Hellas S.A., 2000.
- [T-8] D. P. Bouras and F. Karoubalis, "CORDIC-based Numerically Controlled Oscillator for a DOCSIS-1.1 compliant Uplink Burst Modulator: Design & HDL Implementation," ATMEL Hellas S.A., 2000.
- [T-7] D. P. Bouras, "PLL Clock Jitter Requirements for a DOCSIS Burst Modulator Employing Direct Digital Synthesis (DDS)," ATMEL Hellas S.A., 2000.
- [T-6] D. P. Bouras and F. Karoubalis, "All-Digital Zero IF Quadrature Receiver for CPFSK Signals with Emphasis on GMSK / GFSK: Design & HDL Implementation", ATMEL Hellas S.A., 1999.
- [T-5] D. P. Bouras, "All-Digital Baseband Quadrature Modulator for CPFSK Signals with Emphasis on GMSK / GFSK: Design & HDL Implementation", ATMEL Hellas S.A., 1999.
- [T-4] D. P. Bouras, "FM Discriminator DC-Offset Estimator/Canceler for a BlueTooth Baseband Controller: Design & HDL Implementation", ATMEL Hellas S.A., 1999.
- [T-3] D. P. Bouras, "Hangup-free Non Data Aided (NDA) Clock and Data Recovery for a BlueTooth Baseband Controller: Design & HDL Implementation", ATMEL Hellas S.A., 1999.

Additional information (cont.)

- [T-2] D. P. Bouras and P. T. Mathiopoulos, "Processing of Measured Channel Impulse Response Data: Noise Reduction", deliverable no. META/EH/B-3/a1, METAMORP (SMT4-CT96-20093), ERICSSON Hellas S.A., 1998.
- [T-1] D. P. Bouras and P. T. Mathiopoulos, "Channel Impulse Response Data Reduction via Averaging", Data Processing Algorithms, deliverable no. META/TUW/B-2/1/b1, METAMORP (SMT4-CT96-20093), ERICSSON Hellas S.A., 1998.

Bibliography

- [B-1] R. Raheli, R. Schober and H. Leib, "Guest Editorial: Differential and Noncoherent Wireless Communications," *IEEE Journal on Selected Areas on Communications*, vol. SAC-23, pp. 1693-1695, September 2005.