



EUROPEAN
COMMISSION

Community Research



PHYLAWS

PHYSical LAYer Wireless Security Advisory Board - Year 1 Meeting - Parts H-J

**Telecom Paris Tech, room B603, 46 rue Barrault,
75013 Paris, 2 october 2013**

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AB year 1 Meeting TPT, Paris, 2-October-2013

PHYLAWS FP7 ICT call 8 - Id 317562



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H/ Submission of dissemination initiatives (TPT + partners)

Task T1.2: Dissemination (M1 – M32)

Task leader: TPT Task contributors: all

- This task includes the dissemination actions by the partners during the project. It includes the elaboration of a dissemination plan, the participation in redaction of papers for specialized journals (IEEE, etc...), presentations to forum and meeting such as Winncom/SDR, etc. A workshop will be organized at the most suitable moment of the project life in order to disseminate the results towards a wide audience of potential stakeholders and end-users of the technology.

Deliverable Number ⁶¹	Deliverable Title	WP number ⁵³	Lead beneficiary number	Estimated indicative person-months	Nature ⁶²	Dissemination level ⁶³	Delivery date ⁶⁴
D1.6	Dissemination planning report	1	2	2.00	R	PU	3
D1.7	Dissemination intermediate report	1	2	2.00	R	PU	18
D1.8	Dissemination final report	1	2	2.00	R	PU	36

Milestone number ⁵⁹	Milestone name	WP number ⁵³	Lead beneficiary number	Delivery date from Annex I ⁶⁰	Comments
MS12	Dissemination and Standardization	WP1	1	3	part of WP1 to MS 2

Task T1.2: Dissemination (following)

Task leader: TPT Task contributors: all

- Web site
- Articles in recognised journals, mainly IEEE journals, not neglecting other journals in the area of signal processing such as JASP
- Exhibitions, Workshops and Symposiums, such as the Wireless Innovation Forum (SDR Forum Version 2.0), workshops organized by the EC like the ICT Future Network & Mobile Summit, press releases will be considered for the dissemination of the final results of the project to the general public
- Dedicated open workshop at the end of the project
- Teaching, given by university partners
- Concertation meetings among projects in the same area or cluster, organised by the EC

Objective	Indicator	Nature
Scientific dissemination	Number of refereed international communications or publications (IEEE or similar): ≥ 17	QUANT
Scientific/technology users dissemination	Number of workshops: ≥ 3	QUANT

Task T1.2 : Dissemination (M1 – M32)

Task leader: TPT Task contributors: all

- **Proposal for publications/communications**

- 2 international communications / academic partner / year (→ 12 in total)
- 1 international communication / other partner (→ 3 in total)
- 1 journal paper / academic partner (→ 2 in total)

(Total 17)

- **Proposal for workshops**

- 1 joint international workshop / special session on PHYSEC at the end of Y1
- 1 joint international workshop / special session on PHYSEC at the end of Y2
- 1 dedicated PHYLAWS workshop at the end of Y2

(Total 3)

These are *minimal* figures

First year's achievements

Radio Conference presentations and associated papers

- **SDR'13 Winncomm, session 6B, München, 11 June 2013**
 - “Physec Concepts For Wireless Public Networks – Introduction, State Of The Art And Perspectives”, Cong Ling, François Delaveau, Eric Garrido, Jean Claude Belfiore, Alain Sibille
 - “Active And Passive Eavesdropper Threats Within Public And Private Civilian Wireless Networks - Existing And Potential Future Countermeasures – An Overview”, François Delaveau, Antti Evesti, Jani Suomalainen, Reijo Savola, Nir Shapira



First year's achievements

• Journal publications

- IEEE Trans. on Communications

- J.-C. Belfiore and F. Oggier, "An Error Probability Approach to MIMO Wiretap Channels," August 2013, pp. 3396 – 3403

• Scientific Conference presentations

- European Cooperation Action COST IC1004, Ghent, Sept. 26-27, 2013

- “A Disc of Scatterers Based Radio Channel Model for Secure Key Generation”, Taghrid Mazloun and Alain Sibille

- IEEE International Symposium on Information Theory, Istanbul, July 2013

- "Achieving the AWGN channel capacity with lattice Gaussian distribution”, Cong Ling and Jean-Claude Belfiore,

• EC RAS Cluster meeting, Brussels, Feb. 27, 2013

- WG1 session “High Capacity PHY for future radio access”

- Presentation of PHYLAWS

- contribution to a White Paper « High capacity PHY for future radio access and 5G” (still pending)

First year's achievements

- **Organization of scientific sessions**

- PIMRC 2013, London, Sept. 8, 2013
 - “Special session on Physical Layer security”
 - Organizers: Jean-Claude Belfiore, Cong Ling, Alain Sibille



Physical Layer Security for Wireless Sensor Networks

Multi-Objective Beamforming for Secure Communication in Systems with Wireless Information and Power Transfer

Detection of Pilot Contamination Attack Using Random Training and Massive MIMO

Semantically Secure Lattice Codes for the Gaussian Wiretap Channel

Physical Layer Security of MISO TAS Wiretap Channels with Interference-Limited Eavesdropper

Secrecy Outage in Random Wireless Networks subjected to Fading

Hybrid Relaying and Jamming for Secure Two-Way Relay Networks with Passive Eavesdroppers

Enhancing the Secrecy Performance in MIMO Wiretap Channels: A Novel Transmit Antenna Selection Scheme

Secure Opportunistic Scheduling with Transmit Antenna Selection

Statistical Modelling of Chaos-based Non-coherent Double-Dither Code Tracking

Wireless device authentication through transmitter imperfections - measurement and classification

Self-Jamming: Who Wins? An Implementation Study

Physical Layer Security via Secret Trellis Pruning

Throughput Enhancement of Secondary Transmitter under Target Physical Layer Security Rate

Physical Layer Security Enhancement With Generalized Selection Diversity Combining



First year's achievements

- **Other initiative for end year 2013**

Participation in of the Forum's Spectrum Innovation Committee Steering Group,

Initiative is "Spectrum Occupancy Report"

Contribution of phylaws especially regarding aspects such as

- Embedded processing for sensing applications
- Security
- Physec-driven secure solutions applied to SDRs and CRs, in relation with future Phylaws developments on these items.



Wireless Innovation Forum Advocacy
 Agenda
 Document WINNF-B-12-0007
 Version V1.0.0
 13 March 2013

Publication in IEEE ComSoc, Computer Society,

Contribute/present into meetings and special groups

Interactive discussion of partners with Advisory Board members

See deliverable D.1.12
“Advisory Board Year 1 Meeting Report”

// Submission of standardization plan (TCS + partners)

Open questions

Which selection to be done, among these initial tracks, for standardization effort ?

Which priority for Phylaws standardization effort?

Acronym	organization	Event Date	Event Place	involved Partners	Remarks
IEEE 802.11	Institute of Electrical and Electronics Engineers WLAN Working groups	TBD 2013 2014 2015	http://www.ieee802.org/11/ Geneva (July), Dallas (Nov) Los Angeles (January)	CEL, + aid of TCS	CEL is well implanted in IEEE std groups for WiFi
WNG SC	Wireless Next Gen Standing Committee	etc.	Included in 802.11 sessions 4 times a year.		Suited for initializing proposals to standardization Need preparation, suited for presentation of results.
	Plenary sessions		Twice a year, limited slots		
ISO/IEC	International Organization for Standardization/ Information Security Standard	TBD 2014 2015	http://www.iso.org/iso/fr/home/standards_development/resources-for-technical-work/iso_iec_directives_and_is_o_supplement.htm	VTT, aid of TCS	VTT will initiate contacts with security community Potential links with computers networks security thanks to Dr Mueller (member of AB)
EDA	European Defense Agency	TBD 2014 2015	Brussels http://www.eda.europa.eu/	TCS	TCS in implied in EDA project Corasma relevant to cognitive radios
ETSI Security cluster	European Telecommunications Standards Institute	TBD 2014 2015	http://www.etsi.org/ http://www.etsi.org/index.php/technologies-clusters/clusters/security	TCS, VTT Aid of CEL	Dr Cadzow is a key member of ETSI for security standardization

Open questions

Which selection to be done, among these initial tracks, for standardization effort ?
Which priority for Phylaws standardization effort?

Acronym	organization	Event Date	Event Place see also http://www.itu.int/en/events/Pages/Calendar-Events.aspx http://www.itu.int/en/ITU-T/focusgroups/Pages/default.aspx http://www.cept.org/ecc/groups-list	involved Partners	Remarks
ITU-T	International Telecommunication Union-Telecommunication Standardization Bureau	TBD 2013 2014 2015	Geneva, yearly or twice a year. FG: Focus Groups SG: Standardization Groups WP13 (Future network) WP17 (security) WP3 (Economic and policy issues)	TCS	Existing FG M2M could be addressed To be explored: proposal of a new FG dedicated to Physec. Related to WP 17.
ITU-R	International Telecommunication Union-Radiocommunications	TBD 2013 2014 2015	Geneva, yearly or twice a year WP 1A (Spectrum engineering techniques) WP 1B (Spectrum management methodologies and economic strategies) WP 1C (Spectrum Monitoring) WP 5A (RLAN/wireless access) WP 5D (IMT systems) SG4/WP4B (Satellite) SG6/WP6A (Broadcasting)	TCS	TCS is regular actor of ITU-R working parties (especially WP 1C) and working groups Ph Aubineau is Counsellor, of ITU-R Study Group 1, CPM and SC.
CEPT	European Conference of Postal and Telecommunications Administrations World Radio Conference	TBD 2015	http://www.cept.org/ecc/groups-list FM 22 : Monitoring and Enforcement CPG : Conference Preparatory Groups. During WRC 2015 subject proposal for WRC 2018	TCS	TCS is usually implied in the French preparation of WRCs WRC 2015 subject list is closed WRC 2015 propose subject for WRC 2018.

Open questions

Which selection to be done, among these initial tracks, for standardization effort ?
Which priority for Phylaws standardization effort?

Acronym	organization	Event Date	Event Place	involved Partners	Remarks
3GPP	3rd Generation Partnership Project	TBD 2014 2015	http://www.3gpp.org	All	GSM ugrapdes for M2M UMTS/UTRA LTE and LTE-A
WFA	WiFi Alliance	TBD 2014 2015	http://www.wi-fi.org/	CEL and other	Celena point of contact in WFA
NGMN LSTI	New Generation of Mobile Network LTE/SAE trial initiative	TBD 2014 2015	http://www.ngmn.org/news/partner-news/newssingle0/article/lte-sae-trial-initiative-lsti-186.html http://www.3gpp.org/That-s-a-Wrap-LSTI-job-complete	All	Standardization dedicated to LTE and LTE-A
GCF	Global certification Forum	TBD 2014 2015	http://www.globalcertificationforum.org/WebSite/public/home.aspx	All	
OMG	Object Management Group	TBD 2014 2015	http://www.omg.org/	All	Dedicated to SDR, CR, Cloud Computing

Interactive discussion of partners with Advisory Board members

See deliverable D.1.12
“Advisory Board Year 1 Meeting Report”

**J/
Conclusion – Thanks
(TCS + all).**