

IEEE DySPAN-SC and IEEE 1900
Standards Working Groups:
Update for IEEE TCCN Meeting at
IEEE ICC 2014

June 12, 2014

Sydney, Australia

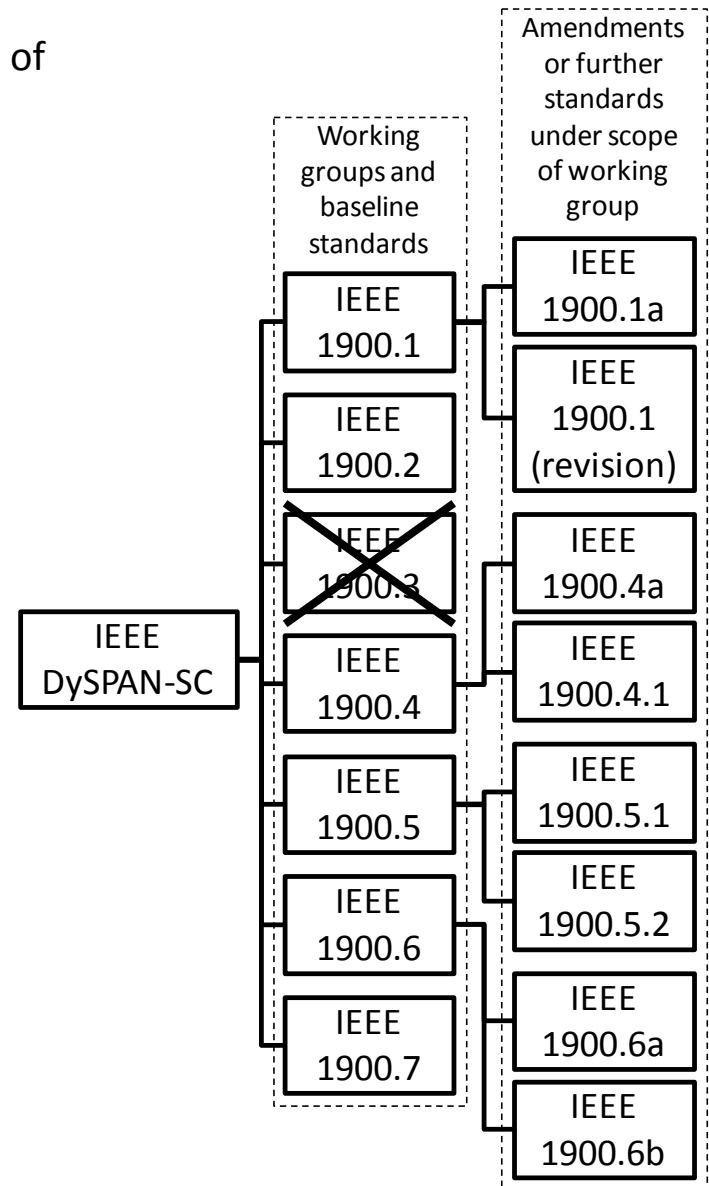
Oliver Holland, King's College London

Outline

1. Introduction to DySPAN-SC
2. Progress Since Last Report
3. Upcoming Meetings and Links to Contribute

Introduction to DySPAN-SC

- ❑ Sponsors IEEE 1900 working groups, covering the area of “Dynamic Spectrum Access Networks” and related technologies
- ❑ Committee leadership comprises
 - ❑ Chair: Hiroshi Harada, University of Kyoto and NICT
 - ❑ Vice-Chair: Open – to be balloted
 - ❑ Secretary: Open – to be balloted
 - ❑ Treasurer: Oliver Holland, King’s College London
 - ❑ IEEE 1900.1 Chair: Oliver Holland, King’s College London
 - ❑ IEEE 1900.2 Chair: Stephen Berger, TEM Consulting
 - ❑ IEEE 1900.4 Chair: Masayuki Ariyoshi, NEC
 - ❑ IEEE 1900.5 Chair: Mat Sherman, BAE Systems
 - ❑ IEEE 1900.6 Acting Chair: Oliver Holland, King’s College London
 - ❑ IEEE 1900.7 Chair: Stanislav Filin, NICT



Introduction to DySPAN-SC

- ❑ Working Groups
 - ❑ IEEE 1900.1: “Terminology Relating to Emerging Wireless Networks, System Functionality, and Spectrum Management”
 - ❑ IEEE 1900.2: “Recommended Practice for the Analysis of In-Band and Adjacent Band Interference and Coexistence Between Radio Systems” (in hibernation)
 - ❑ IEEE 1900.3: “Recommended Practice for Conformance Evaluation of Software Defined Radio (SDR) Software Modules” (disbanded)
 - ❑ IEEE 1900.4: “Architectural Building Blocks Enabling Network-Device Distributed Decision Making for Optimized Radio Resource Usage in Heterogeneous Wireless Access Networks”
 - ❑ IEEE 1900.5: “Policy Language and Policy Architectures for Managing Cognitive Radio for Dynamic Spectrum Access Applications”
 - ❑ IEEE 1900.6: “Spectrum Sensing Interfaces and Data Structures for Dynamic Spectrum Access and other Advanced Radio Communication Systems”
 - ❑ IEEE 1900.7: “Radio Interface for White Space Dynamic Spectrum Access Radio Systems Supporting Fixed and Mobile Operation”

Progress Since Last Report

- ❑ IEEE 1900.1
 - ❑ IEEE 1900.1a amendment standard has been approved by the IEEE and published in January 2013. Key purpose was the incorporation of new terms originating in other 1900 WGs since the publication of IEEE 1900.1-2008
 - ❑ Has begun work in March 2013 on a revision of the IEEE 1900.1-2008 standard, considering all aspects: Updates to terms/definitions, new terms/definitions or deletion of terms/definitions, updates to supporting materials (e.g., explanatory material on the relationship between concepts), updates to structuring, etc. PAR expiration end of 2017
- ❑ IEEE 1900.4
 - ❑ 1900.4.1, “Standard for Interfaces and Protocols Enabling Distributed Decision Making for Optimized Radio Resource Usage in Heterogeneous Wireless Networks”, approved and published in June 2013. Specifies in detail aspects of the interface/protocols between the 1900.4 network management elements
- ❑ IEEE 1900.5
 - ❑ Work on 1900.5.1 standard, “Policy Language for Dynamic Spectrum Access Systems”, started in December 2011 and continues. PAR expiration December 2015
 - ❑ Work on 1900.5.2 standard, “Standard Method for Modeling Spectrum Consumption”, started in March 2013 and continues. PAR expiration December 2015

Progress Since Last Report

- ❑ IEEE 1900.6
 - ❑ 1900.6a amendment, “Procedures, Protocols and Data Archive Enhanced Interfaces,” approved and published in June 2014
 - ❑ In final stages of developing a new amendment project on the use of spectrum sensing information to enhance spectrum databases (e.g., geolocation databases)
- ❑ IEEE 1900.7
 - ❑ Significant progress, with some important parts of the standard beginning to look quite stable although open to further contributions/suggestions
 - ❑ FBMC PHY; further complementary PHY options being considered for some use cases
 - ❑ Variant on CSMA/CA MAC with enhanced scalability; strong frame structure and other elements
 - ❑ Looking for inputs on some other areas, e.g., “Cognitive plane”, “Security sublayer”, “Message encoding”, “MIB”. Aims for the content being defined throughout 2014

	2014			2015			2016		
	1	2	3	1	2	3	1	2	3
Draft preparation									
WG letter ballot									
Sponsor ballot									
Publication									

Upcoming Meetings and Links to Contribute

- ❑ Participation is welcome to upcoming meetings!

Dates	Format	Location	Host
25-28 August, 2014	IEEE DySPAN-SC and IEEE 1900 WGs	Piscataway, NJ, USA	IEEE
November/December 2014 (exact dates TBD)	Joint IEEE DySPAN-SC and IEEE 1900 WGs	Singapore	NICT

Numerous WG telephone conferences in between these meetings.

- ❑ For further information, including detail on how to contribute, please visit: www.dyspan-sc.org, or contact:
 - ❑ Hiroshi Harada, DySPAN-SC Chair/Secretary, hiroshi.harada@i.kyoto-u.ac.jp
 - ❑ Oliver Holland, DySPAN-SC Treasurer and TCCN Liaison, oliver.holland@kcl.ac.uk
 - ❑ ...Or the associated working group Chair(s): 1900.1 – Oliver Holland, oliver.holland@kcl.ac.uk; 1900.4 – Masayuki Ariyoshi, ariyoshi@bx.jp.nec.com; 1900.5 – Mat Sherman, matthew.sherman@baesystems.com; 1900.6 – Oliver Holland, oliver.holland@kcl.ac.uk; 1900.7 – Stanislav Filin, sfilin@ieee.org

Thank you for your attention!