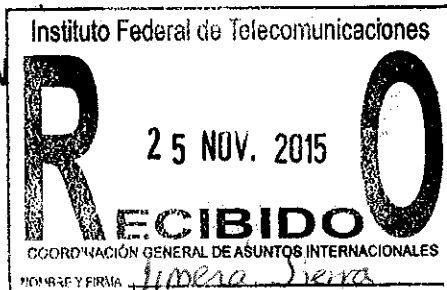


INFORME DE COMISIÓN



OFICINA COMISIONADA

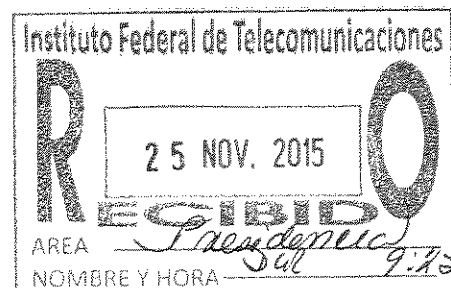
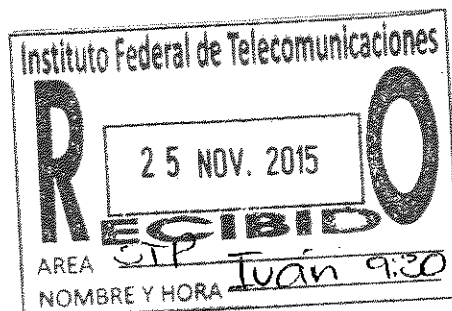
IFT/100/PLENO/OC-ASLI/057/2015

México D.F. a 20 de noviembre de 2015

MTRO. GABRIEL OSWALDO CONTRERAS SALDÍVAR
COMISIONADO PRESIDENTE
INSTITUTO FEDERAL DE TELECOMUNICACIONES
PRESENTE

En cumplimiento de lo dispuesto por el artículo 23, fracción II de la Ley Federal de Telecomunicaciones y Radiodifusión ("LFTR") y del artículo 15 fracción I del Estatuto Orgánico del Instituto Federal de Telecomunicaciones ("IFT"), por este conducto remito a usted y para el correspondiente conocimiento del Pleno de este H. Instituto, el informe de comisión como se indica a continuación:

LUGAR DE COMISIÓN: Guadalajara, México
FECHA: 25 al 26 de octubre de 2015.
CONGRESO: Primera Conferencia Internacional del Institute of Electrical and Electronics Engineers (IEEE) sobre *Ciudades Inteligentes* (ISC2-2015)
ACTIVIDADES EFECTUADAS: Participación como ponente en el Panel: "*Smart Cities Government Best Practices*".
VINCULACIÓN CON EL PROGRAMA ANUAL DE TRABAJO 2015: Objetivo 6. Ser un regulador eficaz, imparcial, transparente y con mejores prácticas de gestión.
COSTO TOTAL DE VIÁTICOS:
Costo del transporte: \$3,797.01 MXN
Costo de viáticos: \$3,781.23 MXN
Costo total de la comisión: \$7,578.24 MXN



INTRODUCCIÓN

La primera Conferencia Internacional del IEEE sobre *Smart Cities* 2015 (ISC2-2015) es un evento organizado por el Instituto de Ingenieros Eléctricos y Electrónicos (IEEE por sus siglas en inglés), particularmente patrocinado por el *IEEE Smart Cities Steering Committee*, cuyo tema central para este año 2015 fue la Sustentabilidad.

Tomando como contexto los diversos retos que actualmente enfrentan las ciudades del mundo, relacionados con los cambios poblacionales, el clima, la congestión en el transporte, la seguridad pública, entre otros, el IEEE eligió estratégicamente a la ciudad de Guadalajara como sede de esta conferencia internacional para presentar, analizar, discutir y compartir los avances que a nivel global se están realizando para enfrentar todos estos factores cambiantes en las grandes urbes, y con ello tratar de impulsar el desarrollo económico sostenible que la ciudad de Guadalajara ha demostrado tener por ser una de las principales ciudades de México impulsadas por la industria.

El comité de la conferencia está integrada por expertos de alrededor de diez diferentes países de todo el mundo, lo que permitió contar con diversas perspectivas y conocer la experiencia internacional sobre la creación de ciudades inteligentes, a fin de compartir y crear conocimiento entre los participantes de la conferencia.

Para más información sobre el objetivo de la conferencia y su desarrollo se sugiere consultar el siguiente sitio de internet:

<http://sites.ieee.org/isc2/>

PARTICIPACIÓN COMO PONENTE EN EL PANEL “SMART CITIES GOVERNMENT BEST PRACTICES”

En este panel también participaron las siguientes personas:

- Víctor Lagunes, Jefe de la Unidad de Innovación y Estrategia Tecnológica, Presidencia de la República.
- Pamela Miranda, Directora de Modernización del Comercio y los Servicios, Secretaría de Economía.
- Jaime Reyes, Secretario de Innovación, Ciencia y Tecnología, Gobierno de Jalisco.
- Alfonso Fonseca, Director de Innovación Gubernamental, Gobierno de Jalisco.

- Mario Arauz, Director de Innovación Gubernamental, Ayuntamiento de Guadalajara.

Mi participación consistió en mencionar varias de las actividades que el Instituto Federal de Telecomunicaciones ha estado realizando para favorecer el desarrollo de las Telecomunicaciones en México, así como su relación para la creación de ciudades inteligentes. Los temas que mencioné son los siguientes:

- I. El primer dividendo digital y la banda de 700 MHz
- II. La transición a la televisión digital
- III. La licitación de nuevas bandas de frecuencias para comunicaciones móviles (banda AWS)
- IV. La posibilidad de utilizar la banda de 2.5 GHz para los servicios de banda ancha móvil
- V. La regulación sobre la compartición de infraestructura pasiva
- VI. La adaptabilidad tecnológica, la importancia de contar con puntos de intercambio de tráfico de Internet en México, y sobre la necesidad de migrar a la versión 6 de IP (IPv6).
- VII. El segundo dividendo digital y el despeje de la banda de 600 MHz

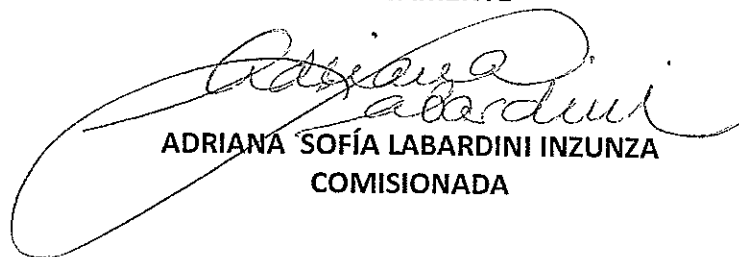
Con el fin de presentar a mayor detalle el contenido de mi participación, integro como Anexo 1 de este informe los temas que aborde, misma que realicé en idioma inglés debido a la naturaleza de esta conferencia internacional.

Otros temas abordados por otros conferencistas fueron:

- El Presidente de IEEE Roberto de Marca hizo una presentación sobre la prospectiva y requerimientos de ciudades inteligentes y los proyectos en 3 ciudades: Guadalajara, México; Trento, Italia; y Wuxi, China.
- Se enfatizó sobre la gran importancia que tienen las colaboraciones conjuntas entre las universidades, gobierno e industria para impulsar proyectos tan importantes como lo son las ciudades inteligentes.
- Se mencionaron las principales actividades que cada dependencia ha realizado en materia de tecnología, innovación y conectividad.
- Al respecto del punto anterior, el Jefe de la Unidad de Innovación y Estrategia Tecnológica de la Presidencia de la República, Víctor Lagunes, mencionó los principales retos públicos que ellos han enfrentado durante el desarrollo del proyecto México Conectado, particularmente el concerniente a la coordinación entre dependencias del gobierno.
- El Secretario de Innovación, Ciencia y Tecnología del Gobierno de Jalisco, Jaime Reyes, mencionó algunas de las estrategias que han estado realizando: i) el impulso a la

- excelencia académica, ii) convenios de colaboración academia-industria, iii) movilidad, educación y casas inteligentes, iv) exportación de proyectos mexicanos en el mercado mundial.
- El Director de Innovación Gubernamental del Ayuntamiento de Guadalajara, Mario Arauz, comentó las principales actividades que el ayuntamiento ha impulsado para lograr un gobierno innovador: proyectos focalizados para contar con ciudades creativas, energía inteligente y mercados con presencia global. También mencionó la importancia de impulsar mayormente la transparencia y el acceso a la información por parte de la población.

ATENTAMENTE



ADRIANA SOFÍA LABARDINI INZUNZA
COMISIONADA

C.c.p. Juan José Crispín Borbolla, Secretario Técnico del Pleno.- Para su inclusión en la próxima sesión ordinaria del Pleno como asunto general.

C.c.p. Juan Carlos Hernández Wocker, Coordinador de Asuntos Internacionales – Para su conocimiento.

C.c.p. Dr. Pascual García de Alba, Director del Centro de Estudios- Para su conocimiento

ANEXOS

Anexo 1: Temas abordados por la Comisionada Adriana Labardini Inzunza

Smart Cities

Smart cities initiatives around the world come in all shapes and sizes, depending on the problems they are intended to solve. This includes tackling new global challenges for making smart cities a reality:

- a) New and innovative policy and regulatory approaches,
- b) Technology adaptability,
- c) Sustainable energy.

As part of my participation in this panel, I would like to begin by pinpointing the key enablers that will allow smart cities to succeed, as well as exploring the novel policies and regulatory approaches that may be needed to reach this outcome. I would also like to share with you the initiatives that the Federal Institute of Telecommunications has been promoting for the foreseeable future of mobile broadband services.

Key enablers:

1. Smart devices

Smart cities need thousands of sensors in order to feed information into smart city solutions, as well as for enabling mobile devices used by smart city residents to connect and share information with backhaul networks.

The Federal Institute of Telecommunications has released various conformity assessments with updated technical standards, in order to homologate and certificate smart devices for broadband access. It has also adopted rules for the establishment of Telecommunications Certification Bodies and the recognition of foreign testing laboratories as part of the Mutual Recognition Agreements that Mexico has celebrated with other countries.

2. Ubiquitous connectivity – spectrum

Connectivity solutions in a smart city have to be expansive and multi-dimensional. Traditional fixed and mobile connectivity will need to evolve and increase its capacity, but it will also be necessary to explore other technologies such as Wi-Fi, Near Field Communication (NFC),

Bluetooth, Radio Frequency Identification (RFID), to name but a few that rely on both licensed and unlicensed spectrum. This is very important to the success of M2M and IoT technologies. There will also be a need to explore other connectivity solutions like TV white spaces.

TV white spaces are gaps in the radio spectrum of TV-frequency bands, which can be used to offer new wireless applications for the benefit of local consumers and small businesses. This is appealing for Telcos and industry because these frequencies can travel longer distances and more easily through walls than the bands mainly used by other wireless technologies.

The challenge for regulators is to place the foundations to use TV white spaces. The key challenge is to set the rules for sharing and managing these frequencies. This includes the technical constraints, such as power level limits, with which devices must operate in order to avoid interferences.

The Federal Institute of Telecommunications has diverse strategic plans for the foreseeable future of mobile broadband services and the efficient use of spectrum. Some of them include the clearing of TV frequency bands with the following:

A. Transition to Digital Terrestrial Television

Mexico is currently in the midst of a transition from Analogue to Digital Terrestrial Television. This will help to:

a) Clear the 700MHz band – First digital dividend

This band has been committed for a national shared wholesale network in the frequency range 698 – 806MHz identified as IMT band. This band has an effective 90MHz of bandwidth and its segmentation scheme is well accepted worldwide. Also, it follows the 3GPP band 28 for LTE services. This band provides good coverage with outdoor and indoor penetration capabilities. It also allows multicarrier configurations. Therefore, this band is crucial for the success of smart cities

b) Start the clearing of the 600MHz band – Second digital dividend

Taking into account the technological advances and the rising of mobile broadband services, the strategic plan also considers the use of the 600MHz band for IMT services. The main steps involved in the clearance of the band are: i) the allocation of new TV channels below 608MHz; ii) optimization of the spectrum allocated in the band 470 – 608MHz; and iii) development

strategies to promote the relocations of digital terrestrial television channels in the VHF band. This band will also be a key element for smart cities.

B. The use of the 2.5GHz band

The 2.5GHz band has been identified as IMT by the ITU and Mexico has adopted the C1 band plan that has 190MHz of bandwidth. This segmentation scheme is also well accepted worldwide and it follows the 3GPP class 7 band for LTE services. The purpose of the Federal Institute of Telecommunications for this band is to:

- a) Define effective mechanisms for sharing the spectrum and the operation of the mobile services, and
- b) (to) Oversee the bidding process of the available segments for the provision of the mobile broadband services.

This band might be of great use for addressing the capability challenges of Telcos in mega cities, particularly for indoor coverage.

3. Infrastructure sharing and access:

For ubiquitous connectivity in smart cities it is fundamental to ensure that high-speed services can be deployed efficiently and that unnecessary duplication is avoided. To achieve this outcome, it may be necessary to facilitate access to, and sharing of, facilities and infrastructure. The aim is to allow sensors and other smart components to be efficiently installed and collocated in towers, buildings and key structures.

In order to achieve this, regulation may be necessary to ensure developers and landowners to provide access to key structures, which would allow operators to efficiently install telecoms infrastructure thus facilitating the proliferation of smart city solutions. The lack of such access might be a significant hindrance for smart cities.

The Federal Institute of Telecommunications, as part of the regulations imposed to the incumbent in telecommunications, has determined that passive infrastructure of the incumbent must be available to other concessionaries of public telecommunications networks on a non-discriminatory basis. This means that the incumbent must allow concessionaries to access and share its passive infrastructure. The aim of these regulations is to allow market balance and fast deployment of infrastructure for broadband services.

4. Data sharing and access:

Smart cities will require the input of multiple IT, technological, and governmental stakeholders order to collect, share, communicate, and process and secure data from different systems and services such as smart grids, intelligent transport, smart buildings, telecommunication service providers, just to name a few, in order to work together in an unified way. With this in mind, and considering the high degree of personalization required for smart city solutions, regulators and users need to become more skilled about data protection and security requirements. Ineffective solutions in this matter might derail smart city initiatives.

An effective data protection compliance framework requires simple and effective claims procedures that kick in when harm has been caused to an individual, with flexible principles such as openness, transparency, legality, consent, responsibility and proportionality.

Some of the challenges that we have here in Mexico are:

- Ensuring security in the shipping and receiving of data
- Guaranteeing a proper and lawful use of the data
- Informing users about the usage of their data
- Respecting the ARCO rights
- Respecting the Protection of Personal Data Law
- A proactive INAI and other state data prot. agencies

Security management is also critical for developing user trust and for protecting data flow over smart city networks. Smart cities must develop protocols for securing access between the smart city technology stack and other governmental or private systems, which require new authentication processes, secure storage, access controls and privileges, data separation rules for distinguishing operational data from personal or sensitive data and security products for smart city solutions.

5. Financing:

Governments, investors, Telcos and technology vendors need to partner on a deeper level than for traditional projects to ensure the successful delivery of the smart city vision. Government has a potentially significant role to play in the financing of smart cities, including through public-private partnerships (PPP). These PPP projects may require to ensure that smart cities can generate reasonable returns for private investors and become financially self-sustaining over time.

The national shared wholesale network will be financed and deployed through a public-private partnership deal between the Secretary of Transport and Communications (SCT) and the private investor.

6. Conclusions:

Government, It industry and citizenship will be critical partners and will need to play a prominent role for the outcome of smart cities. Regulations need to be revisited to address innovative use of spectrum, effective means of data protection and security risk management, to promote user trust in smartcities.

IEEE IEEE MEETINGS, CONFERENCES & EVENTS

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Monday, October 26th, 2015							
Time	Location	Topic	Chair	Topic	Chair	Topic	Chair
08:00-08:15							
08:15-08:30							
08:30-08:45							
08:45-09:00							
09:00-09:15							
09:15-09:30							
09:30-09:45							
09:45-10:00							
10:00-10:20	Coffee Break						
	Smart Transport Track (STR) Session Chair: Ryosuke Ando	Smart Integrated Grids Track (SIG) Session Chair: Amor Farid	Smart Environment Track (SEV) Session Chair: Hassan Ali				
10:20-10:40	STR Talk 1	SIG Talk 1	SEV Opening Remarks + Talk 1				
	"An IoT based scholar bus monitoring system" Juan Zambada et Al, Technological Institute of Culiacan, Mexico	"Power Outage Reporting Tool with Mobile App" Gavidia Horta et Al, The University of the West Indies, Trinidad and Tobago	"Node Localization in Wireless Sensor Networks Based on Context Awareness" Alejandro De Gante et Al, CRMVESTAV, Mexico				
10:40-11:00	STR Talk 2	SIG Talk 2	SEV Talk 2				
	"Effect of Car Driving on Quality of Life for Aged People" Yasuhide Nishihori et Al, TTRI (Toyota Transportation Research Institute), Japan	"Optimal Planning and Operation of Distributed Energy Resources Considering Uncertainty on EVs" Francisco Martin et Al, Institute for Research in Technology (IRT), ICA School of Engineering, Comillas Pontifical University, Spain	"Design of Sensor Network for Urban Micro-Climate Monitoring" Mukesh Isha et Al, Masdar Institute, United Arab Emirates				
				Smart Cities Hackathon	Special Sessions (SPS) Session Chair: Aris Gkoulas-Divanis		
					Special Session SPS1 Cyber Security in the Internet of Things and Smart Cities: Opening Remarks + Talk 1		
					"Efficient Algorithms for Identifying Privacy Vulnerabilities", Aris Gkoulas-Divanis et Al, Smarter Cities Technology Centre 19M Research - Ireland, Dublin, Ireland		
					SPS 1 Talk 2		
					"Automatic Motion Tracking of a Human in a Surveillance Video", et Al, Department of Computer Science Umm Al-Qura University, Saudi Arabia		
						B2B Meetings with Governments	
						Smart Cities Exhibition Area	Smart Cities Demonstrative Exhibition Area

11:00-11:20	STR Talk 3	SIG Talk 3	SEV Talk 3	Smart Cities Hackathon	SPS Special Session SPS2 Content Aware and Ubiquitous Computing: Opening Remarks + Talk 1	820 Meetings with Governments	Smart Cities Exhibition Area	Smart Cities Demonstrative Exhibition Area			
	Triggered, Directional Vehicular Communication, John Lindsay, Patent Attorney, United States of America	"Privacy-friendly Secure Bidding Scheme for Demand Response in Smart Grid" Mohammad Rahman et Al, KDDI R&D Laboratories Inc, Japan	"Modeling, Simulation and Control of Water Supply System" Eduardo Cunha et Al, UFPA, Brazil		"A Personalized Load Forecasting Enhanced by Activity Information", Yong Ding et Al, Institute of Telematics Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany						
11:20-11:40	STR Talk 4	SIG Talk 4	SEV Talk 4		SPS 2 Talk 2						
	"Identifying the Urban Transportation corridor Based on Mobile Phone Data" Yaoxue Wang et Al, Tsinghua University, China	"Maximizing Renewable Energy Use with Decentralized Residential Demand Response" Ivana Dunjovic et Al, Trinity College Dublin, Ireland	"A Real-time Ambient Air Quality Monitoring Wireless Sensor Network for Schools in Smart Cities" Hassan Ali et Al, University of Newcastle, Australia		"Using Augmented Reality in Urban Context: Georeferenced System for Business Localization Using Google Glass", Leonardo Ferrer et Al., ITAM Mexico	Panels & Selected presentations					
11:40-12:00	STR Talk 5	SIG Talk 5	SEV Talk 5		SPS 2 Talk 3						
	"A Smart Airspace Sectorization Approach Based on Spectral Clustering and NSGA-II" Bang An et Al, Tsinghua University, China	"A Smart Grid electricity market with Multiagents, smart appliances and Combinatorial Auctions" Ramon Felipe Brena Pintero et Al, Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico	"Using Google Street View to map the greenness of neighborhoods in Hartford, CT" Xiaojing Li et Al, University of Connecticut, United States of America		"Sequential Pattern Mining - a Study to Understand Daily Activity Patterns for Load Forecasting Enhancement", Yong Ding et Al, Institute of Telematics Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany						
12:00-12:00	Lunch				Lunch						
	Session Chair: David Gomez Gutierrez	Session Chair: Martin J. Lopez	Session Chair: Eduardo Soloman-Azor		Session Chair: Mark Fox	Special Session SPS3 Towards Standard Ontologies for City Knowledge: Opening remarks + Talk 1			Industry Solutions: Talk 1 Huawei		
13:00-13:20	STR Talk 6	SIG Talk 6	SEV Talk 6		Talk 1	"On the Completeness of Open City Data for Measuring City Indicators" Mark Fox et Al, University of Toronto, Canada				"Safe Cities Based in IT Models" Pedro Gomez, CTO Huawei Enterprise Group Latin America	
13:20-13:40	STR Talk 7	SIG Talk 7	SEV Talk 7		Smart Cities Hackathon	SPS 3 Talk 2			820 Meetings with Governments	Smart Cities Exhibition Area	Smart Cities Demonstrative Exhibition Area
	"Reducing Emergency Services Response Time in Smart Cities: An Advanced Adaptive and Fuzzy Approach" Soufiane Djahel et Al, University College Dublin, Ireland	"Smart Solar Street Light with an Efficient Control Algorithm" Abhishata Jain et Al, Manipal Institute of Technology, India	"An embedded system application to monitoring micro-climates oriented to Smart Cities." Eduardo Soloman-Azor et Al, CIDETEC - IPN, Mexico	"Models for sustainability" Maria-Cristina Marinescu et Al, Barcelona Supercomputing Center, Spain							
13:40-14:00	STR Talk 8	SIG Talk 8	SEV Talk 8	SPS 3 Talk 3							
	"Application Platforms for Smart Cities" Alberto Leon-Garcia et Al, University of Toronto, Canada	"Power Flow Steady-State Model Analysis of Grid-Connected Plug-In Electric Vehicle Charging Stations" Diana Paola Montoya Escobar et Al, Cinvestav Guadalajara Women in Engineering Student Affinity Group, Mexico	"Breathing Smarter: A Critical Look at Representations of Air Quality Sending Data Across Platforms and Public" Uly Bul, Massachusetts Institute of Technology, USA	"An Ontological Framework to support Evidence-based Policy Making using Global City Indicators" Jane Hunter et Al, University of Queensland, Australia							
14:00-14:20	STR Talk 9	SIG Talk 9	SEV Talk 9	SPS 3 Talk 4							
	"Visual Registration and Tracking for Traffic Monitoring" Sabrina Utzheim Vega Maldonado et Al, Universidad de Guadalajara, Mexico	"Distributed Energy Procurement and Management in Smart Environments" Jonathan Serrano et Al, Instituto Nacional de Astrofísica Óptica y Electrónica, Mexico	"Urban Smart Shading Devices based on Traditional Gulf Design. Case study located in a district of a Hot Arid Climate City (Abu Dhabi)." Lindita Bonde et Al, Politecnico di Milano, Italy	"An Ontological approach to spatio-temporal information modeling with applications in transportation" Alexey Seberiev et Al, Faculdade de Engenharia da Universidade do Porto, Portugal	Panels & Selected presentations						
14:20-14:40	STR Talk 10	SIG Talk 10	SEV Talk 10	SPS 3 Talk 5							
	"Applying Semi-Supervised Learning Method for Cellphone-based Travel Mode Classification" Wenhao Zhu et Al, University of Washington, USA	"The Smart Grid Consumer Collaborative's Consumer Pulse Study - Citizen engagement and smart governance" Patsy Durand, USA	"Intelligent stormwater Infrastructure using a RESTful cyber-physical systems architecture" Amir Genti, University of Washington, Department of Electrical Engineering, Seattle, WA, United States of America	"Toward Domain Knowledge Model for Smart City: the Core Conceptual Model", Jiefeng Zhao and Yezha Wang, Key Laboratory of High Confidence Software Technologies, Ministry of Education, Beijing, China							
14:40-15:00	Coffee Break				Coffee Break						
	Session Chair: Rafael Perez-Benitez	Session Chair: Amor Farid	Session Chair: Yichang James Tsai	IEEE Smart Cities New Core Cities Kick Off Workshop Organization (IEEE Private Meeting)	Workshop Chair: Natalia Vilanova	Smart Cities Exhibition Area	Smart Cities Demonstrative Exhibition Area				
15:00-15:20	STR Talk 11	SIG Talk 11	SEV Talk 11								
	"A Route Travel Time Distribution Prediction Method Based on Markov Chain" Daxin Tian et Al, Beihang University, China	"Tracing the Generation Source of Municipal Energy Loads: Towards Transparency in Emission Production/Reduction", Carol Miller et Al, Wayne State University, United States of America	"Information-Centric Green Infrastructure Planning to Reduce Climate Change Impacts: The Climate Impacts Vulnerability Index as Smart-Growth Urbanism", Samuel Molnar, Michigan Sea Grant, Great Lakes Commission, USA								
15:20-15:40	STR Talk 12	SIG Talk 12	SEV Talk 12								
	"A model based method of pedestrian abnormal behavior detection in traffic scene" Qianyin Jiang et Al, School of Engineering, Sun Yat-sen University, China	"Building the Most Interconnected and Smartest Grid" Oscar Miranda, CTO Electric grid Huawei Latin America	"Non-Invasive Radiation Evaluation Emitted by FM Radio and TV Broadcasting Systems in El Cruceiro, Managua" Julio Cruz Icaballero et Al, Facultad de Electrónica y Computación, Universidad Nacional de Ingeniería, Managua, Nicaragua								

	Session Chair: Jing Pang	Session Chair: Oscar Hernandez	Smart Health Track (SHA) Session Chair: Agnès Salinas		Session Chair: Kirián Klocck			
13:00-13:30	STR Talk 20 "Enabling Participatory Routing Using A Smart Routing Platform", Nicolás Cordoba et Al, Future Cities, DSO, Trinity College Dublin, Ireland	SHB Talk 6 "A Context-Awareness Architecture for Managing Thermal Energy in a nZEB, Integrating Semantic Sensor Nodes as Enabler of Smart Environments" Oscar Hernandez et Al, CIATEQ, A.C., Mexico	SHA Talk 1 "Hearing Aid devices for Smart Cities: A Survey" Eduardo Garcia-Espinosa et Al, Intel, Mexico		ODA Talk 6 "Twitterism: Identification of mobility patterns in urban centers based on Tweets" Francisco Rebelo et Al, FEUP, University of Porto, Portugal			
13:30-13:40	STR Talk 21 "Review of Fuzzy Logic in Intelligent Traffic Light Control" Jing Pang, Department of Electrical and Electronic Engineering, Computer Engineering Program, California State University, Sacramento, CA, U.S.A	SHB Talk 7 "Home Personalization Through Raspberry Pi" Sankha Karja et Al, M.S. Ramaiah Institute of Technology, India	SHA Talk 2 "Mobile Applications Utilized for the Prevention of Potential Epidemics in Smart Cities" Rutil Batra et Al, Universidad de Guadalajara, Mexico	Smart Cities Hackathon	ODA Talk 7 "Tool theory and the urban data medium: Data driven visual tools for urban energy" Kristian Klocck, Northeastern University, United States of America	WORKSHOP 5 High Performance Computing for Smart Cities	Smart Cities Exhibition Area	Smart Cities Demonstrative Exhibition Area
13:40-14:00	STR Talk 22 "Usability Evaluation of Standing-type Personal Mobility Devices for Elderly People", Naoki Sato, Department of Creative Engineering National Institute of Technology, Tsukuba College, Japan	SHB Talk 8 "INDOOR PROPAGATION ANALYSIS APPLIED IN ZIGBEE NETWORKS" Diego Paul Chacón Traya et Al, Universidad Politécnica Salesiana, Ecuador	SHA Talk 3 "Ubiquitous Monitoring of Human Sunlight Exposure in Cities" Ahmad Al Shemli et Al, Warwick Institute for the Science of Cities, The University of Warwick, United Kingdom of Great Britain and Northern Ireland		ODA Talk 8 "Language Design for Developing Smart Adaptive Services" Nicolás Cardozo and Slobhan Clarke, Future Cities, DSO, Trinity College Dublin, Ireland			
14:00-14:20	STR Talk 23 "Epidemic Routing in Vehicular Delay-Tolerant Networks: the Use of Heterogeneous Conditions to Increase Packet Delivery Ratio" Roberto Hernández et Al, Tecnológico de Monterrey - Campus Querétaro, Mexico	SHB Talk 9 "Towards a Fully Automated Monitoring System for Malaria Cases" Hesham Aly et Al, Staffordshire University, United Kingdom of Great Britain and Northern Ireland	SHA Talk 4 "Wandering Detection Methods in Smart Cities: Current and New Approaches" Edgar Barista et Al, Smart Health Research Group, Department of Computer Engineering and Mathematics, Universitat Rovira i Virgili, Catalonia, Spain		ODA Talk 9 "Towards an Ontology-based Context Model for Smart City Operations" Adnan Ghannem et Al, Information Systems Department, Ahmed Bin Mohammed Military College, Doha, Qatar			
14:20-14:40	STR Talk 24 "Towards Better Driver Gaze Estimation in Smarter Vehicles", Shi Mohd Zul, Faculty of Computing, Engineering and Science, Staffordshire University, Stoke-On-Trent, United Kingdom	SHB Talk 10 "DEVA's Smart Solution to Mitigate the Substation Fire Incident in Dubai Substation" Hani Abuhamad et Al, Dubai Electricity and Water Authority (DEWA), United Arab Emirates	SHA Talk 5 "Context-Aware Recommendation for Smart Health", Fran Casuso et Al, Smart Health Research Group, Department of Computer Engineering and Mathematics, Universitat Rovira i Virgili, Catalonia, Spain		ODA Talk 10 "Frame standardization for Smart Cities monitoring applications", Miguel Sánchez Meraz et Al, Telecommunications Department, National Polytechnic Institute, Mexico City			
14:40-15:00	Coffee Break				Coffee Break			
	Session Chair: Hui Fal	Session Chair: Uming Bai	Session Chair: Chun Wang		Session Chair: Meng Li			
15:00-15:20	Special Session SPSS Smart and Connected Vehicles: Opening Remarks + Talk 1	SHB Talk 11	SHA Talk 6		ODA Talk 11 "Deep Learning for Big Data: Challenges and Opportunities", Xiaojun Wu, Jiangnan University, China			
	"Prediction of the shortest travel time based on intersection delay", Xin Cheng et Al, School of Information Engineering, Chong'an University, Xi'an, China	"System-oriented Approach to Smart Cities" Ondrej Pribyl et Al, Czech Technical University in Prague, Faculty of Transportation Sciences, Czech Republic	"A Combinatorial Auction for Cost Reduction in City Home Health Care", Zhijie Xie and Chun Wang, Concordia Institute for Information Systems Engineering, Concordia University, Montreal, Canada					
15:20-15:40	SPSS Talk 2 "Visual Odometry for On-Road Vehicles Based on Trifocal Tensor", Hai-Gen Min et Al, Department of Traffic Information Engineering and Control, Chong'an university, Xi'an, China	SHB Talk 12 "IoT Framework for Smart Buildings with Cloud Computing" Jesus Pacheco et Al, The University of Aulana, United States of America	SHA Talk 7 "DEVELOPING SUSTAINABLE HEALTH FRAMEWORKS IN SMART CITIES", Ines Knapel, The Dartmouth Institute of Health Policy & Clinical Practice, Geisel School of Medicine, Dartmouth College, USA	Smart Cities Hackathon	STR Talk 25 "THE LPR SYSTEMS TESTS", Zhi Yu et Al, School of Engineering, Sun Yat-sen University, China		Smart Cities Exhibition Area	
15:40-16:00	SPSS Talk 3 "A License Plate Recognition Algorithm Under Low Illumination Environment", Jiale Zhao et Al, Department of Traffic Information Engineering, Chong'an University, Xi'an, China	SHB Talk 13 "Indoor CO2 level control using wearables", Syam Siddharthan, Samsung Research Institute, Bangalore, India	SHA Talk 8 "A Smart Health hybrid cloud solution for "Breast Cancer" treatment by using Big Data visualization use case, implementing an efficient image processing with the use of leading edge technologies", Manuel Avalos et Al, IBM, Mexico		STR Talk 26 "Bottleneck Pattern Study for Urban Expressway Using Big Traffic Data", Han Jiang et Al, Tsinghua University, China	WORKSHOP 6 Curricular Design for Smart Cities		Smart Cities Demonstrative Exhibition Area
16:00-16:20	STR Talk 27 "Smart Streets - A Multifunction Management Infrastructure to Smart Cities" Context, Romildo Bezerra et Al, IFBA, Brazil	SHB Talk 14 "SHINESenior: Personalized Services for Active Aging in Place", Uming Bai et Al, SMU-ICS ICity Lab, Singapore Management University, Singapore	Smart Manufacturing and Logistics Track SHA Talk 9 "On Computational Infrastructure Requirements to Smart and Autonomous Cities Framework" Romildo Bezerra et Al, IFBA, Brazil		STR Talk 28 "Open data for intelligent transportation systems studies: opportunity and challenge", Yangchang Deng and Renshi Zhang, Sun Yat-Sen University, China /			
16:20-16:40	STR Talk 30 "Cluster & Zone Based Speed Control System", Sunny Sharan and Syam Siddharthan, Samsung R&D Institute, Bangalore, India	SHB Talk 15 "District of Future - DoF, open framework for the generation and optimization of energy consumption in district environments" Rubén Cárdenas May et Al, EVERIS, Barcelona Spain	SML Talk 2 "Auction Model for Mass Customization of Logistics", Wei-Yan and Chun Wang, Concordia Institute for Information Systems Engineering, Concordia University, Montreal, Canada		STR Talk 29 "Using Gamification to Increase Sustainable Urban Mobility" Ramona Koshnolkin et Al, Fondazione Bruno Kessler, Italy			
16:40-17:00	Coffee Break				Coffee Break			
17:00-17:15								
17:15-17:30								
17:30-17:45				IEEE Core Smart Cities Prospective Plenary Panel				
17:45-18:00								
18:00-18:15								
18:15-18:30								
18:30-18:45								
18:45-19:00				Free Time				

19:00-19:15	Gala Dinner in Mexico II Hackathon finalist presentations and winners selection 1st Awarded Paper announcement New Smart Cities Students Awarded Presentation from Sunfor Light CTO	
19:15-19:30		
19:30-19:45		
19:45-20:00		
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21:45-22:00		

Wednesday, October 28th 2015									
08:00-08:15									
08:15-08:30									
08:30-08:45									
08:45-09:00									
09:00-09:15									
09:15-09:30									
09:30-09:45									
09:45-10:00									
10:00-10:20	Coffee Break								
	Smart Citizens Track I (SC21) Session Chair: Marcus Wigam	Session Chair: Alex Buckman	Smart Citizens Track II (SC22) Chair: Manuel Avalos						
10:20-10:40	SC21 Talk 6 "Smart Cities Platforms and Applications", Dr. John Jiang, VESS, LLC, United States of America	SHB Talk 16 "Dwelling characterization and thermal disaggregation of residential smart meter data: A state-space system identification approach", Gord Stephen et al, Department of Environment and Resource Studies, University of Waterloo, Canada	SC22 Talk 1 "Social Networks in Smart Cities: Comparing evaluation models", Leonidas Anthopoulos et al, Business School, Tüf of Thessaly, Greece						
10:40-11:00	SC21 Talk 1 "Society: An Innovative Way to Explore Cities", Catalin-Mihai Barbu et al, German Research Center for Artificial Intelligence (DFKI), Germany /	SHB Talk 17 "Optimizing building design for smart grid efficiency", Steve Jobb et al, Department of Civil and Structural Engineering, University of Sheffield, Sheffield, U.K.	SC22 Talk 2 "The role of hackathons in Smart Cities", Manuel Avalos Vega and Mayo Albo, IBM, Mexico	Smart Cities Hackathon	WORKSHOP 7 Smart Food UDD - MIT Media Lab City Farm	WORKSHOP 8 Postgraduate Students Workshop for Smart Cities			
11:00-11:20	SC21 Talk 2 "Smart Community for the Smart Governance of the Urban Environment", Carmelo Gargiulo et al, University of Naples "Federico II", Italy	SHB Talk 18 "SmartHopper", Nicolas Condou et al, Future Cities, DfG, Trinity College Dublin, Ireland	SC22 Talk 3 "Territorial smartness and the relevance of the learning ecosystems", Carlo Giovannella et al, University of Rome Tor Vergata, Italy				Smart Cities Exhibition Area	Smart Cities Demonstrative Exhibition Area	
11:20-11:40	SC21 Talk 3 "A Collaborative, Interdisciplinary Initiative for a Smart Cities Innovation Network", Natalia Villaseca-Rosales et al, Smart Cities Innovation Center, CUCEA University of Guadalajara Zapopan, Mexico	SHB Talk 19 "From Old Grid to Smart Grid: The Economic Impact on the Electricity Customer", Alfredo Castellanos, SSC Electric Company	SC22 Talk 4 "Teutist app for Smart TVs Envisioning a Smart City", Luis Leonardo Camargo et al, College of Engineering, University of Magdalena, Santa Marta, Colombia				Smart Cities Exhibition Area	Smart Cities Demonstrative Exhibition Area	
11:40-12:00	SC21 Talk 4 "A Smart City model based on urban sensors", Jesús Cano et al, UNED University & IEEE eGovernment, Spain		SC22 Talk 5 "Research of new planning layout model which can be described as low investment high security Northwest District of Beihai in Leqong town Foshan city Guangdong province as a case", Wu Wenyan and Liu Xinyan, Shenzhen APECLAND DESIGN CO., LTD, Shenzhen, China Shenzhen, China						
12:00-13:00	Lunch								
13:00-14:30			IEEE Smart Cities MOOC Strategy Plenary Panel Session						
14:30-15:00	Closing Ceremony + IEEE GDG Toast - Celebrating 25 Years								

*This is a preliminary program and its content may change without notice.

