

**IEEE  
COMMUNICATIONS  
SOCIETY**

# **2014 RCCC DLT/DSP Coordination Report**

**Dec. 7, 2014**

**Fawzi Behmann**

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# NA COMSOC NA DLT/DSP

## Resources/Policies & Procedures

### Resources:

- 41 DL (2014)
- 100 DL (Past)
- 8 on-line recorded sessions

### Policies & Procedures

- 4.1.3 DL/SP DLT Organization (<\$3K for DL, \$1K for Chapter)
- 4.1.4 DLT Organization

### Forms/Letter

- Application Form
- Formal approval letter
- Expense report

# NA COMSOC NA DLT/DSP

## Executive Page NA DLT/DSP

### 2014 3 DL Executed (UK, Japan, Taiwan):

- Ottawa: April 30, 2014
- Central-Eastern Canada: August 17-26, 2014
- West-Central US: December 3-13, 2014

### 2014 3 Declines (Canada, Germany)

- Invite past COMSOC DL (Canada)
- Slow-No response
- Conflict of interest - GC14

### 2015 Plan Ahead

- Q1 - Canada
- Q1 - West-North US/Canada

# 2014 NA COMSOC NA DLT/DSP Activities Overview

**Executed:**

**A. Ottawa: April 30, 2014**

DL: Prof. John Thompson, London, UK

**B. Central-Eastern Canada: August 17-26, 2014**

DL: Prof. Koichi Asatani, Tokyo, Japan

**C. West-Central US: December 3-13, 2014**

DL: Prof. Ying-dar Lin, Taipei, Taiwan

# 2014 NA COMSOC NA DLT/DSP Activities Overview

## Declined:

Anader Benyamin-Seeyar (Canada)  
(Nov.) Invite past COMSOC DL (Prof. Van der Schaar)  
for DLT - Partial Fund!

Dominic Schupke (Germany)  
(Oct.) Identified a couple of locations in West Canada

Tarik Taleb (Germany)  
(Sep.) Austin, NJ around GLOBECOM (Overseas travel!)

# NA COMSOC NA DLT/DSP

## Current 2015 Planned Activities

### Anader Benyamin-Seeyar

(Q1) Host DL: Dr. Ekram Hossain, UM

Topic: "Development of robust and energy-efficient medium access control mechanism for wireless sensor networks in residential buildings"

### Titus Lo

(Mar./ Apr.) DL: Dr. Rath Vannithamby (Intel)

-Portland, OR (Pradeep Kumar, [Pradeep@ieee.org](mailto:Pradeep@ieee.org))

-Seattle, WA (Titus Lo, [titus.lo@ieee.org](mailto:titus.lo@ieee.org))

-Vancouver, BC (Vincent Wong, [vincentw@ece.ubc.ca](mailto:vincentw@ece.ubc.ca))

# 2014 NA COMSOC NA DLT/DSP

## Proposed Revised Template (Pre Plan, Execution)

### DLT/DSP Life Cycle

**ALL:** Pre-Plan Proposal -> Approval (Form & Letter to DL)

Topic Title/Abstract

Chapters covered

Dates & Sequence

Travel itinerary & cost estimate

**DL:** Travel Plan

**Chapters:** Domestic Arrangement

**Chapters:** Event (Date/Time, venue, topic) Promotion & RSVP (vTools)

**Chapters:** Expense & Report Filing

**DL:** Expense & Report Filing

**ALL:** Recommended Communications (Prior to arrival, post departure)

# 2014 NA COMSOC NA DLT/DSP I.

## I. Pre-Plan for Approval

IEEE 2014 ComSoc-NA Distinguished Lecturer Tour/ Distinguished Speaker Program (DLT/DSP)				
Project Plan and Financing Request				
1. Project Title		2014 IEEE COMSOC - NA DLT West-Central US Dec 3-13, 2014 (Prof. Ying-Dar Lin)		
2. Sponsoring Section/Council/Area/Chapter				Region
COMSOC Chapters: Santa Clara Chapter (Naval Post graduate School, San Jose State Univ.), Tulsa Chapter (University of Oklahoma)				7
3. DL/DS		4. Local Coordinator US)		
Name	Prof. Ying-Dar Lin	Name		
Affiliation	IEEE Fellow, National Chiao Tung University, TAIWAN	Address		
Tel	+886-933793666	Tel		
E-Mail	<a href="mailto:ydlin@cs.nctu.edu.tw">ydlin@cs.nctu.edu.tw</a>	E-Mail		
5. Plan (Date, Time, Location, Local Contact)				
	Date	Location	Chapter/University Local Contact	E-Mail
1)	Wed Dec 3, 2014	Travel Taipei - San Francisco		
2)	Thur Dec 4, 2014	Presentation, Monterey, CA	Santa Clara Chapter/ Naval Post Grad School, Prof. Preetha Thulasiraman	<a href="mailto:pthulas1@nps.edu">pthulas1@nps.edu</a>
8)	Sat Dec 13, 2014	Austin to San Francisco to Taipei		
6. Statement of Objectives				
<p>Prof. Ying-Dar Lin, IEEE Fellow and a Distinguished Lecturer was invited to visit western and central US covering 3 universities and 2 chapters during the period of Dec 3-13. The 4 locations include Monterey, CA, San Jose, CA, Norman, OK, and Austin, TX. The DLT is scheduled to start Dec. 3 and completed Dec. 13. Prof. Lin Flight plan starts from Taipei to San Francisco-Oklohomoa City-Austin- San Francisco-Taipei.</p> <p>IEEE COMSOC will be responsible for part of the flight fare (in this case would be \$1,000 for domestic flights). Universities &amp; Local chapters are financially responsible for the DL living expenses, such as lodging (1-3 nights), meals and transportation from airport to hotel and back as well as local transportation to venue for presentation. Each chapter/University is to select from one of the FIVE topics offered by Prof. Lin, secure venue, register the event in vtools and promote the event to secure healthy attendance. The FIVE topics available to chapter chairs are: 1. Research Roadmap Driven by Network Benchmarking Lab: Deep Packet Inspection, Traffic Forensics, Embedded , 2. Traffic Forensics: Capture, Replay, Classification, Detection, and Analysis, 3. Benchmarking Smartphones: Methodologies, Tools, and Results, 4. Open Source Resources for Networking, 5. Software Defined Networking: Why, Where, When, and How</p>				

# 2014 NA COMSOC NA DLT/DSP I.

## I. Pre-Plan for Approval Cont'd

7. Estimated Expenses for DLT or DSP. For DLT, NA ComSoc will approve DLT's Flight & Transportation not associated with local conference. Local chapter covers accomodation and meals, Typical DL project is to cover 3-5 locations. For DSP, NA ComSoc will approve only DS local expenses up to \$500.

	TYPE OF EXPENSE	AMOUNT	
DLT	1) DLT Flight Airfare *	\$ \$1,000.00	
	2) S.F./San Jose Local Meals, Accomodation	\$ Local Chapter/Univ	
	3) Oklahoma local Meals, Accomodation	\$ Local Chapter/Univ	
	4) Austin GLOBECOM	\$	
	5)	\$	
	6)	\$	
	Total Estimated Expenses	\$ \$1,000.00	US

\* \*\* Price of \$1,000 is part of a total Airline ticket price of \$1775. Of which Dr. Lin project will cover \$775 and ComSoc will cover up to \$1,000 for domestic travel.

OR			
DSP	1)	\$	
	2)	\$	
	Total Estimated Expenses	\$	

8. Project Funding Sources			
ComSoc	\$ \$1,000.00	Airfare	
Local Chapter(s)	\$	Refreshment/Meals/Token	
Project Income	\$	Open to attract new memb	
Other	\$		
TOTAL	\$ \$1,000.00		

9. References			
	Date		
1)	Oct, 16, 2014	Travel Plan	

10. Project Approval (Signatures)			
Fawzi Behmann		Date:	Oct. 19, 2014
NA DL/DS Coordinator		Date:	
Merrily Hartmann		Date:	
COMSOC NAR Director		Date:	
Asatani Koichi		Date:	
IEEE COMSOC Director, Membership Program Development			

# A) 2014 Central-Eastern Canada – Distinguished Lecturer Tour

## DL: Prof. Koichi Asatani (Aug. 17-27, 2014)

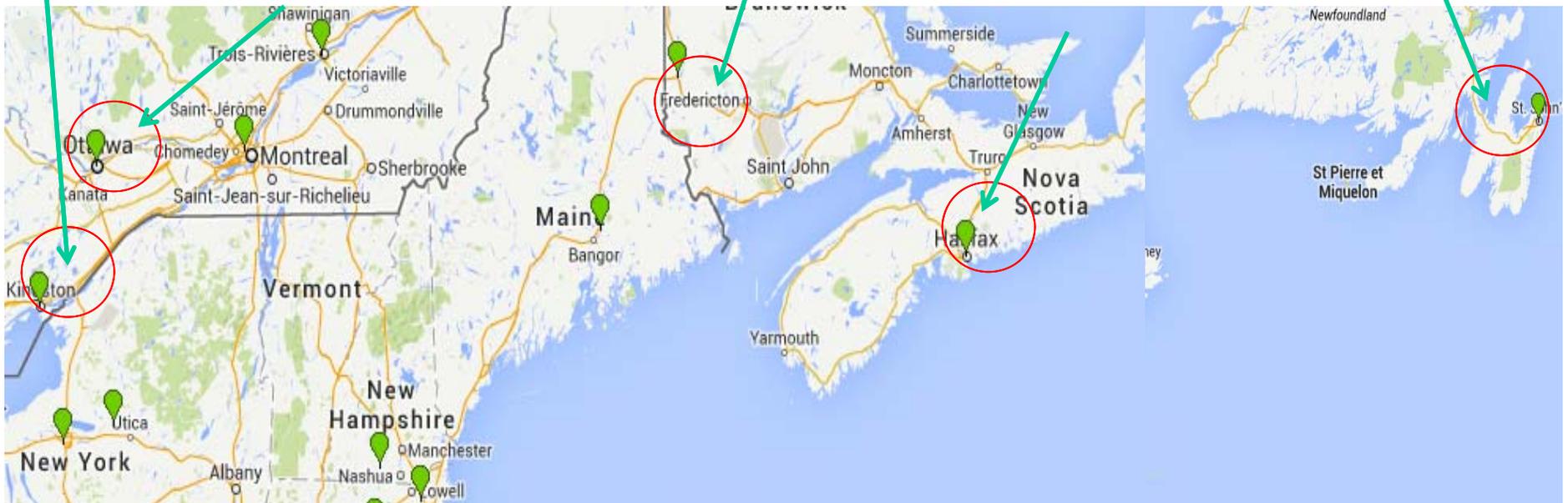
Kingston  
Francois Chan

Ottawa  
Wahab Almuhtadi

New Brunswick  
Janet Light Thompson

Canadian Atlantic  
Scott Melvin

Newfoundland-Labrador  
Lihong Zhang



## II. Execution

### Examples 1: COMSOC NA DLT Central-Eastern Canada August 17-August 26, 2014 DL: Prof. Koichi Asatani



2014 IEEE COMSOC - NA DLT Eastern-Central Canada Aug 17-26, 2014 (Prof. Koichi Asatani, DL)									
I) Travel Plan						II) Domestic Accommodation, Local Contacts			
No	Description	Date	Time	ORG Loc	DST	Hotel	COMSOC Contract	email	Tel
1)	Travel Tokyo-Toronto-Ottawa	Sun Aug 17, 2014	17:40	Tokyo, Haneda (HND), Term 1	Toronto, Pearson (YYZ), Term 1				
2)	Travel Toronto - Ottawa	Sun Aug 17, 2014	18:10	Toronto Pearson (YYZ), Term 1	Ottawa (YOW)	Ottawa: xxxxxx	Wahab Almuhtadi	<a href="mailto:almuhtadi@ieee.org">almuhtadi@ieee.org</a>	
3)	<b>OTTAWA PRESENTATION</b>	Mon Aug 18, 2014				Ottawa: xxxxxx	Wahab Almuhtadi	<a href="mailto:almuhtadi@ieee.org">almuhtadi@ieee.org</a>	
4)	Travel Ottawa to Kingston	Tue Aug 19, 2014					Francois Chan	<a href="mailto:chan-f@rmc.ca">chan-f@rmc.ca</a>	
5)	<b>KINGSTON PRESENTATION</b>	Tue Aug 19, 2014					Francois Chan	<a href="mailto:chan-f@rmc.ca">chan-f@rmc.ca</a>	
6)	Travel Kingston - Ottawa	Tue Aug 19, 2014				Ottawa: xxxxxx	Wahab Almuhtadi	<a href="mailto:almuhtadi@ieee.org">almuhtadi@ieee.org</a>	
7)	Travel Ottawa-Toronto-Frederic	Wed Aug 20, 2014	8:00	Ottawa (YOW)	Toronto Pearson (YYZ), Term 1		Wahab Almuhtadi	<a href="mailto:almuhtadi@ieee.org">almuhtadi@ieee.org</a>	
8)	Travel Toronto - Fredericton	Wed Aug 20, 2014	10:40	Toronto Pearson (YYZ)	Fredericton (YFC)	Fredericton: xxxxxx	Tom Sisk	<a href="mailto:sisk@apegnb.com">sisk@apegnb.com</a>	
9)	<b>FREDERICTON PRESENTATION</b>	Wed Aug 20, 2014				" "	Tom Sisk	<a href="mailto:sisk@apegnb.com">sisk@apegnb.com</a>	
10)	Travel Fredericton to Halifax	Thu Aug 21, 2014	11:20	Fredericton (YFC)	Halifax (YHZ)	Halifax: xxxxxx	Scott Melvin	<a href="mailto:Scott.melvin@ieee.org">Scott.melvin@ieee.org</a>	
11)	<b>HALIFAX PRESENTATION</b>	Thu Aug 21, 2014				" "	Scott Melvin	<a href="mailto:Scott.melvin@ieee.org">Scott.melvin@ieee.org</a>	
12)	Travel Halifax-St. John NFL	Fri Aug 22, 2014	11:20	Halifax (YHZ)	St. John (YYT)	St. John: xxxxxx	Lihong Zhang	<a href="mailto:lzhang@mun.ca">lzhang@mun.ca</a>	
13)	<b>ST. JOHN PRESENTATION</b>	Fri Aug 22, 2014				" "	Lihong Zhang	<a href="mailto:lzhang@mun.ca">lzhang@mun.ca</a>	
14)	St John - Weekend	Sat Aug 23, 2014				St. John: xxxxxx	Lihong Zhang	<a href="mailto:lzhang@mun.ca">lzhang@mun.ca</a>	
15)	St. John - Weekend	Sun Aug 24, 2014				St. John: xxxxxx	Lihong Zhang	<a href="mailto:lzhang@mun.ca">lzhang@mun.ca</a>	
16)	<b>VISIT Faculty of Engineering</b>	Mon Aug 25, 2014				St. John: xxxxxx	Lihong Zhang	<a href="mailto:lzhang@mun.ca">lzhang@mun.ca</a>	
17)	Travel St. John-Toronto-Tokyo	Tue Aug 26, 2014	7:00	St. John (YYT)	Toronto, Pearson (YYZ)		Lihong Zhang	<a href="mailto:lzhang@mun.ca">lzhang@mun.ca</a>	
18)	TRAVEL Toronto - Tokyo	Tue Aug 26, 2014	13:00	Toronto, Pearson (YYZ)	Tokyo, Haneda (HND)			-	

# Example 1: Promotion



IEEE Communications Society Distinguished Lecturer Tour (DLT) Program announces the upcoming 2014 North America DLT program to Central/Eastern Canada August 18-24, 2014.

#### FIVE CANADIAN LOCATIONS

- |                        |                            |
|------------------------|----------------------------|
| (1) August 18, 2014    | Ottawa, Ontario            |
| (2) August 19, 2014    | Kingston, Ontario          |
| (3) August 20, 2014    | Fredericton, New Brunswick |
| (4) August 21, 2014    | Halifax, Nova Scotia       |
| (5) August 22-24, 2014 | St. John, Newfoundland     |

**Lecturer: Prof. Koichi Asatani,**  
IEEE Distinguished Lecturer, IEEE Fellow, IEICE Fellow  
Ph D, Professor, Nankai University, Tianjin, China  
Professor Emeritus, Kogakui University, Tokyo, Japan



Prof. Asatani is prepared to speak on one of the following two topics:

#### Title 1: Trends and Issues of FTTH and G-PON

##### Abstract:

Thanks to the penetration of broadband access technologies for Internet, real-time applications like VoIP, streaming applications like IPTV and many other delay-sensitive applications are growing very fast.

FTTH is the key broadband technology and is replacing ADSL. It provides stable high throughput, reaching over Gbps class. It also plays a very important role in Next Generation Networks (NGN). The NGN is Carrier-grade network for the future and a converged solution after the legacy telecom networks by enabling QoS management and controls in IP network like in legacy telecom networks and by supporting economical, versatile multi-media applications like those on the Internet with easier manners.

In making FTTH, G-PON is widely adopted. International Standards on FTTH, G-PON in particular has been established and is being further developed.

This lecture consist of the following contents: Introduction to Access Networks, Fundamentals of FTTH, Requirements to FTTH, Regulatory Aspect of FTTH, Global Standards on FTTH and G-PON, Market Trends and Further Issues.

#### Title 2: Carrier-Grade Networks toward the Future - NGN and Its Issues

##### Abstract:

Carrier-grade networks for the future are being developed as Next Generation Networks (NGN). The NGN is a converged solution after the legacy telecom networks by enabling QoS management and controls in IP network like in legacy telecom networks and by supporting economical, versatile multi-media applications like those on the Internet. NGN supports voice, Internet services and further services which are being and will be developed in the future with flexible and cost-effective manners and with high dependability and high security. It also supports third-party applications through the open interface. NGN also provides more flexible access arrangements such as fixed-mobile convergence (FMC) with generalized mobility, and horizontal and vertical roaming as well as improved security.

The concepts and architecture of NGN are described. The current status of NGN implementation in a commercial offer in Japan is touched upon. Issues for the global evolution of NGN are also described, such as IPv6 related issues, impacts of smartphones, cloud computing, global standards and regulations.

##### Speaker Bio:

Koichi Asatani received his B.E.E.E., M.E.E.E. and Ph. D. degrees from Kyoto University in 1960, 1971 and 1974, respectively. From 1974 to 1997, Dr. Asatani was engaged in R&D on optical fiber communication systems, in-definition video transmission systems, FTTH, SDN, S-SDN, ATM networks, IP Networks and their strategic planning in NTT. In 1997 he joined Kogakui University as a professor, and in 1999 he joined Graduate School of Global Information and Telecommunications, Mie University as a visiting professor, both in Tokyo, Japan. He is currently a Professor, Nankai University, Tianjin, China and a Professor Emeritus, Kogakui University. He is a Fellow of IEEE and a fellow of IEICE. He was appointed as a distinguished lecturer of IEEE Communications Society for 2006-2009 and 2011-2012, 2014-2016.

He is a founder of Communications QoS, Reliability and Performance Modeling series symposium at ICC and Globecom. He served as co-chair for this symposium at ICC and Globecom for 2002-2008. He is the Chair and Advisory Board Member of IEEE Technical Committee on Communication Quality and Reliability (CQR-TC), Feature Editor on Standards (1999-1999), Senior Technical Editor (1999-2003) of IEEE Communications Magazine. He also served as Executive Chair, ICC2001 in Kyoto. From 1986 through 2000, he served as Vice-Chairman of ITU-T SG 15 (formerly CCITT SG XVIII), responsible for digital networks including GPRS, IP networks, NGN and Future Networks. He serves as Chair for National Committee on Next Generation Networks in Japan. He is also serving as Chair, R&D and Standardization Working Group, Next Generation IP Network Promotion Forum. He is serving as IEEE Communications Society Director, Member Programs Development for 2014-2020 term. He was also elected as Board of Governor, IEEE and Chair, IEEE Standardization Committee for 2014-2016.

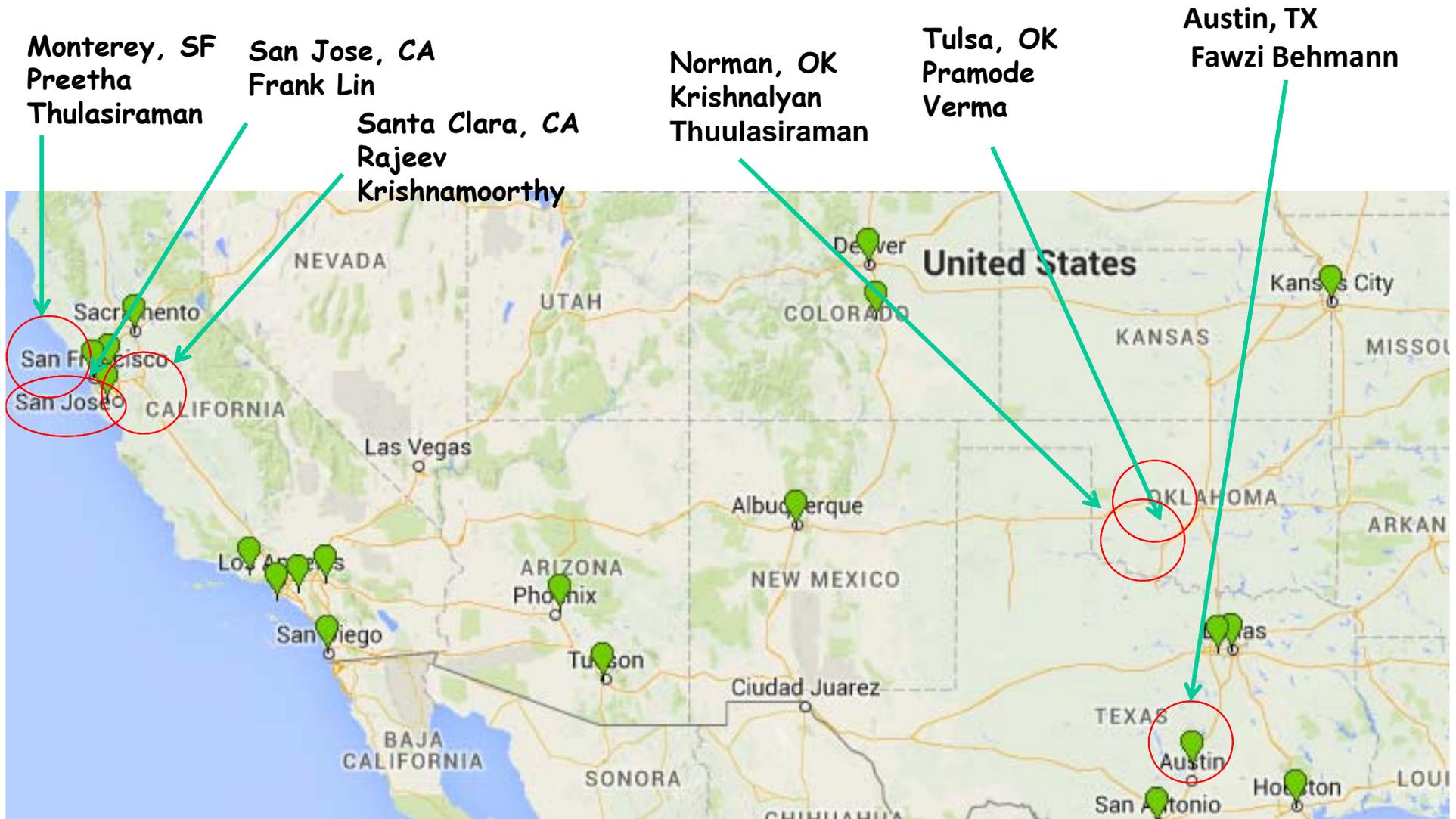
He has published more than 800 papers, and gave more than 120 talks including keynotes and invited talks at international conferences. He is author or co-author of several books including "Design of Telecommunication Networks" (IEEE, 1992, in Japanese), "Introduction to ATM Networks and B-ISDN" (John Wiley and Sons, 1997), "Multimedia Communications" (Academic Press, 2001), "Introduction to Information Networks Fundamentals of Telecom & Internet Convergence, QoS, VoIP and NGN" (Cameron Publishing, in Japanese, 2007).

His current interests include Information Networks including Broadband networking, Internet Interworking, IP telephony, NGN, Future Networks and their QoS aspects.



## II. Execution

### Example 1: Central-Eastern Canada – Distinguished Lecturer Tour DL: Prof. Ying-dar Lin (Dec. 3-13, 2014)



# Example 2: West-Central US

## December 3-13, 2013

### DL: Prof. Ying-dar Lin



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2014 IEEE COMSOC - NA DLT Western-Central US Dec 3-13, 2014 (Prof. Ying-Dar Lin, DL)											
I) Travel Plan					II) Domestic Accomodation, Local Contacts				III) DL Meeting & Presentation		
No	Date	Time	ORG Loc	DST	Hotel	COMSOC/Univ. Contract	email	Tel	Topic Selected (1-5)	Presentation Time (From:To)	Location
1)	Wed Dec 3, 2014	13:00	Taipei, (TPE) Term 2	San Francisco (SFO , Term 3	Monterey: Guest House in NPS	Prof. Preetha Thulasir	<a href="mailto:pthulas1@nps.edu">pthulas1@nps.edu</a>	831-656-3456			
2)	Thu Dec 4, 2014				Monterey: Guest House in NPS	Prof. Preetha Thulasiraman, Naval Postgraduate School	<a href="mailto:pthulas1@nps.edu">pthulas1@nps.edu</a>	831-656-3456	2. Traffic Forensics	1:00-3:00PM	Naval Postgraduate School, Spanagel Hall 421
3a)	Fri Dec 5, 2014				San Jose: to be reserved	Prof. Frank Lin, San Jose State Univ.	<a href="mailto:frank.lin@sjsu.edu">frank.lin@sjsu.edu</a>		2. Traffic Forensics	10:00 AM -12:00PM	San Jose State University, ENGR 337
3b)	Fri Dec 5, 2014				Same as the above	Rajeev Krishnamoorthy, Santa Clara Chapter	<a href="mailto:rajeev@krishnamoorthy">rajeev@krishnamoorthy</a>	408-372-7072	Promote event for	San Jose State Univ.	
4)	Sat Dec 6, 2014	10:45am	SFO, Terminal 3	OKC,	Norman: to be reserved	Prof. Krishnaiyan Thulasiraman, Univ of Oklahoma	<a href="mailto:thulasi@ou.edu">thulasi@ou.edu</a>	405-325 0566			
5)	Sun Dec 7, 2014				Norman: to be reserved	Same as the above	<a href="mailto:thulasi@ou.edu">thulasi@ou.edu</a>	405-325 0566			
6a)	Mon Dec 8, 2013				Norman: to be reserved	Pramode Verma, Tulsa Chapter	<a href="mailto:pverma@ou.edu">pverma@ou.edu</a>	918-660-3236	5. Software Define	3:00-4:30PM	Video Conference to UO
6b)	Mon Dec 8, 2014				Same as the above	Prof. Krishnaiyan Thulasiraman, Univ of Oklahoma	<a href="mailto:thulasi@ou.edu">thulasi@ou.edu</a>	405-325 0566	5. Software Define	3:00-4:30PM	Univ of Okalahoma, Norman, Devon Energy Hall DEH 220
7)	Tue Dec 9, 2014	1:25pm	OKC	IAH, Terminal B							
8)	Tue Dec 9, 2014	3:39pm	IAH, Terminal B	AUS,	Austin: Hilton Garden Inn	GLOBECOM					
9)	Wed Dec 10, 2014				Austin: Hilton Garden Inn	GLOBECOM					
10)	Thu Dec 11, 2014				Austin: Hilton Garden Inn	GLOBECOM					
11a)	Fri Dec 12, 2014				ALOFT Austin at The Domain	Fawzi Behmann, COMSOC/SP Austin	<a href="mailto:f.behmann@ieee.org">f.behmann@ieee.org</a>	512 733 2418	2. Traffic Forensics	10:00 AM - 11:30 AM	IBM, 11501 Burnet Rd., BLG #904, Austin, Texas, 78758
11b)	Fri Dec 12, 2014				Same as the above	Fawzi Behmann, COMSOC/SP Austin	<a href="mailto:f.behmann@ieee.org">f.behmann@ieee.org</a>	512 733 2418	2. Traffic Forensics	2:30 pm - 4:30 PM	AT&T Labs, 9505 Arboretum, #220, Austin, TX 78729
11c)	Fri Dec 12, 2013				Same as the above	Fawzi Behmann, COMSOC/SP Austin	<a href="mailto:f.behmann@ieee.org">f.behmann@ieee.org</a>	513 733 2418	5. Software Define	6:00 pm - 8:00 PM	AT&T Labs, 9505 Arboretum, #220, Austin, TX 78730
12)	Sat Dec 13, 2014	8:00 am	AUS	SFO, Terminal 3							
13)	Sat Dec 13, 2014	12:10pm	SFO, Terminal 3	TPE, Terminal 2							

# Example 2: Promotion



! *Distinguished Lecturer Tour - Prof. Ying-Dar Lin, is a Distinguished Professor of National Chiao Tung University  
Director of Network Benchmarking Lab (NBL), Taipei, Taiwan!*

**Dec. 4 Monterey, SF**

**Dec. 5, San Jose, CA**

**Dec. 8, Norman, OK, Dec. 12, Austin, TX**

**Distinguished Lecture Series Topics**

**Topic: "Traffic Forensics: Capture, Replay, Classification, Detection, and Analysis"**

**Abstract:**

If computer forensics is to identify, preserve, recover, and analyze who did what on a computer, network forensics is to do the same on a network. Compared to network forensics, which has wider forensics targets on devices (e.g., switches, routers, access points, firewalls, gateways) and packets between them, traffic forensics focuses on packets alone. When these devices are black boxes and do not have storage to record what happened, which are often true, traffic forensics then approximates network forensics. In this talk, we present a series of technologies and tools we developed to capture, replay, classify, detect, and analyze traffic. From the architectures of a beta site embedded into an operational campus network with live traffic, to replay captured traffic with stateless or stateful replayers in wired or wireless environments, we build the basic infrastructure and tools to play with real traffic. A case study is reported to see how effective the accumulated packet traces are in triggering bugs in products under development.

Then we present another class of techniques leveraging the domain knowledge of existing products to classify traffic into various applications or malicious intrusions and malware. A classified PCAP library, associated techniques, and their evaluation are illustrated. With these integrated, a case study is reported to redefine security criteria with functionality, robustness, performance, and stability testing, in order to complement existing criteria such as Common Criteria, ICSA, and NSS. As sources of intrusions are often malware carried in application payloads, collect, analyze, and detect malware are the essential ways to build the defense lines. Thus, we present the mechanisms to collect and analyze active and passive malware through honeypot and P2P, respectively. At the end, we present detection mechanisms for traditional malware, Android malware, and Advanced Persistent Threat (APT).

**Topic: "Software Defined Networking: Why, When, Where, and How"**

**Abstract:**

The first wave of cloud computing was to centralize and virtualize servers into the clouds, with a phenomenal result. The emerging second wave, named Software Defined Networking (SDN), is to centralize and virtualize networking, especially its control, into the clouds. SDN deployment started from data centers and now expands to the model of "networking as a service" (NaaS) offered by the operators to enterprise and residential subscribers. By centralizing the control-plane software of routers and switches to the controller, and its applications, and controlling the data-plane of these devices remotely, SDN reduces the capital expenditure (CAPEX) and operational expenditure (OPEX) because the devices become simpler and hence cheaper and number of administrators could be reduced. SDN also enables fast service orchestration because the data plane is highly programmable from the remote control plane at controllers and applications. However, as we detach control plane from where data plane resides, new protocols shall be introduced between control plane and data plane, as the southbound API between controllers and devices and the northbound API between controllers and applications. As we further extend the control plane from controllers to applications such as Service Chaining (SC) and data plane from devices to Network Function Virtualization (NFV), newer mechanisms and APIs need to be added to these APIs. We argue why, when, and where SDN would prevail, and then illustrate how to make it happen. We shall introduce the key technology components, including OpenFlow, SC, NFV, and Network Service Header (NSH) and then review the issues on standardization, development, deployment, and research. At the end, the development and deployment experiences of a campus SDN solution for Wi-Fi/switch control and management are shared.

**Speaker Bio:**

YING-DAR LIN is a Distinguished Professor of Computer Science at National Chiao Tung University (NCTU) in Taiwan. He received his Ph.D. in Computer Science from UCLA in 1993. He served as the CEO of Telecom Technology Center during 2010-2011 and a visiting scholar at Cisco Systems in San Jose during 2007-2008. Since 2002, he has been the founder and director of Network Benchmarking Lab (NBL, [www.nbl.org.tw](http://www.nbl.org.tw)), which reviews network products with real traffic. NBL recently became an approved test lab of the Open Networking Foundation (ONF). He also cofounded L7 Networks Inc. in 2002, which was later acquired by D-Link Corp. His research interests include design, analysis, implementation, and benchmarking of network protocols and algorithms, quality of services, network security, deep packet inspection, wireless communications, embedded hardware/software co-design, and recently software defined networking.

*For additional information, contact IEEE COMSC/SP Austin Chapter chair – Fawzi Behmann [fbehmann@ieee.org](mailto:fbehmann@ieee.org)*



# Example 2: West-Central US Austin (Dec. 12)



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*Distinguished Lecturer Tour - Prof. Ying-Dar Lin, is a Distinguished Professor of National Chiao Tung University  
Director of Network Benchmarking Lab (NBL), Taipei, Taiwan*



Location: IBM, Host: Dr. John Carter, IBM Research  
12-December-2014 10:00AM to 11:30AM (Limited Seats)

**“Traffic Forensics: Capture, Replay, Classification, Detection, and Analysis ”**

**Lunch/Group Discussion, Host: IBM**  
**12-December-2014, noon - 1:30**

Location: AT&T, Host: Dr. Bob Dailey, Member of Technical Staff  
12-December-2014 2:30PM to 4:30PM

**“Traffic Forensics: Capture, Replay, Classification, Detection, and Analysis ”**

COMSOC/SP (AT&T Loc.): General Session  
12-December-2014 6:00PM to 8:00PM

**“Software Defined Networking: Why, When, Where, and How ”**

# NA COMSOC NA DLT/DSP Key Key Success Factors

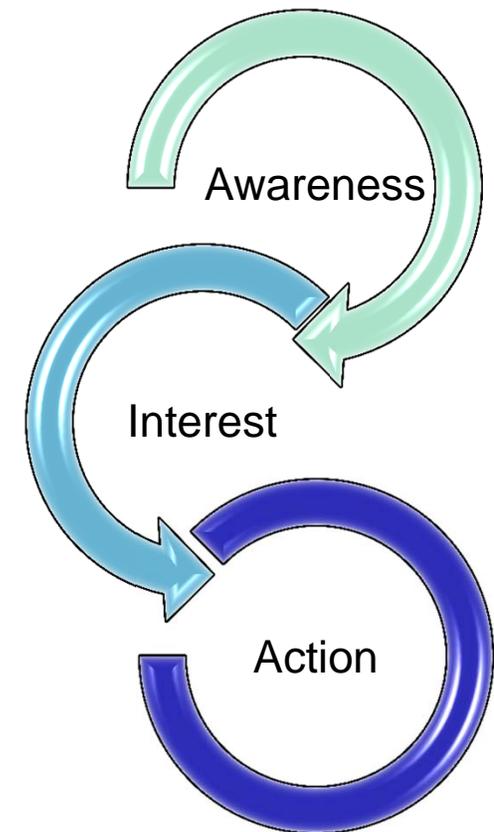
- **Simplified Policy/Procedure**
  - Do we need Q&A?
- **DL- Repository DB**
  - Contact Info: Email, photo, phone no, location, photo
  - Topics, Titles & Abstracts
- **Chapter Contact information/validity**
  - Name, tel, email, location, photo
  - Connect with Chapter chair/Section (Contact Info)
- **Plan/Implementation (by example)**
  - For travel pre-plan (2 week)
  - For promoting the event (3 week)
  - Execution (2 week)
- **Reporting**
  - Expenses
  - Trip report (Survey!)
  - Recording!

# 2014 NA COMSOC NA DLT/DSP Challenges/Discussions

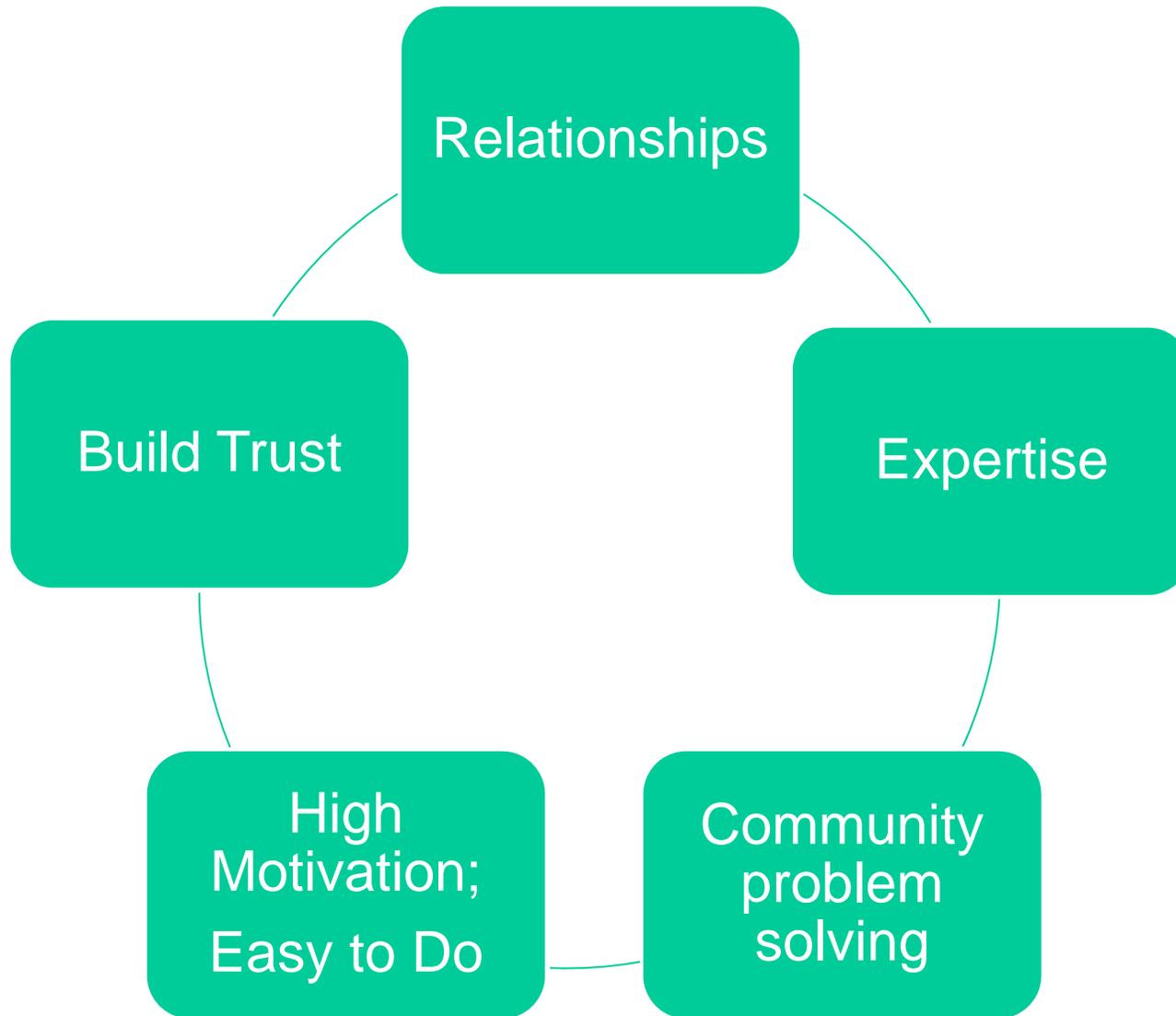
- Increase participation by DL & Chapters
- Leverage presence of DL near your area
- Integrate On-line program
- Virtual Meeting - Explore other means such as WebEx
- Community Approach (IEEE Collaboratec Initiative)
- Plan ahead for 2015

# IEEE Collabratec Pilot Communities

- Variety of communities representing different interests, audiences, and participation requirements
- **Technical-oriented communities**
  - Cloud Computing, Big Data, Biomedical, 'All-Society Tech Lounge' concept, TAB Volunteer-oriented, possibly SSIT; Phased roll-out during Pilot
- **Geo-based communities**
  - Organized around municipalities, with Sections serving as administrator; Open to all users of IEEE Collabratec™
- **Event-oriented communities**



# IEEE Collabratec

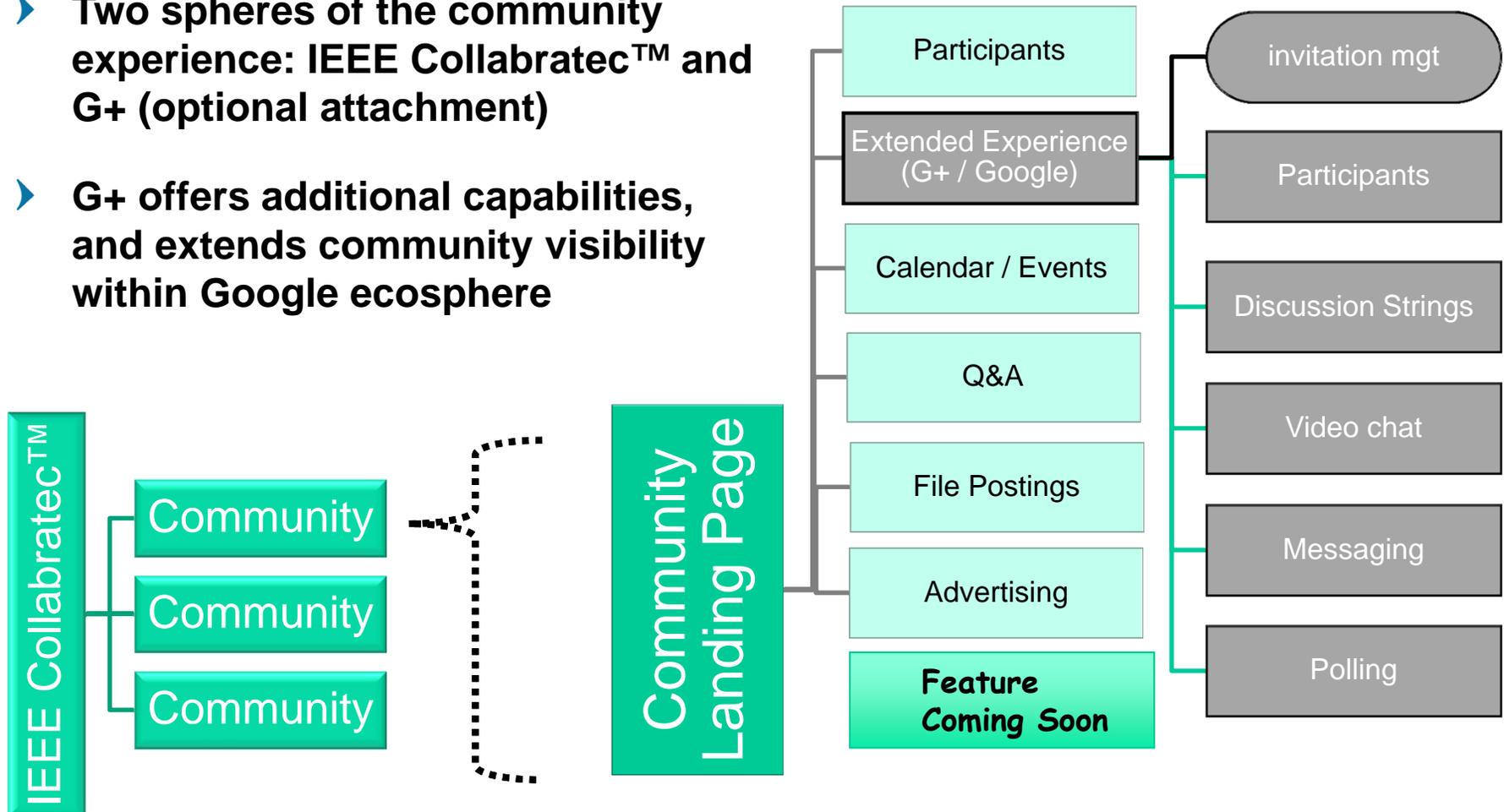


# Features at a Glance (March 2015)

functions	All	Members	Volunteers
<div style="background-color: #cccccc; padding: 5px; display: inline-block; transform: rotate(-15deg); font-weight: bold;">Today's focus</div> <b>Networking</b>	<ul style="list-style-type: none"> <li>Professional Profiles</li> <li>Privacy settings</li> <li>Peer-to-peer connecting</li> <li>Activity stream</li> <li>Communities</li> <li>Notifications</li> <li>Integration w/ 3<sup>rd</sup>-party networks</li> </ul>	<ul style="list-style-type: none"> <li>Member grade badges</li> <li>Enhanced privacy settings</li> <li>Exclusive communities</li> </ul>	<ul style="list-style-type: none"> <li>Volunteer badging</li> <li>Vtools integration</li> </ul>
<b>Career Development</b>	<ul style="list-style-type: none"> <li>Profile management / career history</li> <li>Communities</li> </ul>	<ul style="list-style-type: none"> <li>Preferential placement in recruiter search results</li> <li>Exclusive communities</li> </ul>	n/a
<b>Research</b>	<ul style="list-style-type: none"> <li>Content discovery, library management; importing citations and documents from multiple services</li> <li>Private collaboration groups</li> <li>Cloud-storage</li> </ul>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <ul style="list-style-type: none"> <li>IEEE Xplore</li> <li>Google Scholar</li> <li>Microsoft Academic</li> </ul> </div>	
<b>Authoring</b>	<ul style="list-style-type: none"> <li>Collaborative document development</li> <li>Profile management / published works</li> <li>Bibliography generation</li> <li>Communities</li> <li>Cloud-storage</li> </ul>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><i>For example...</i> Requirements or design specifications, Application notes, Consulting proposals</p> </div>	

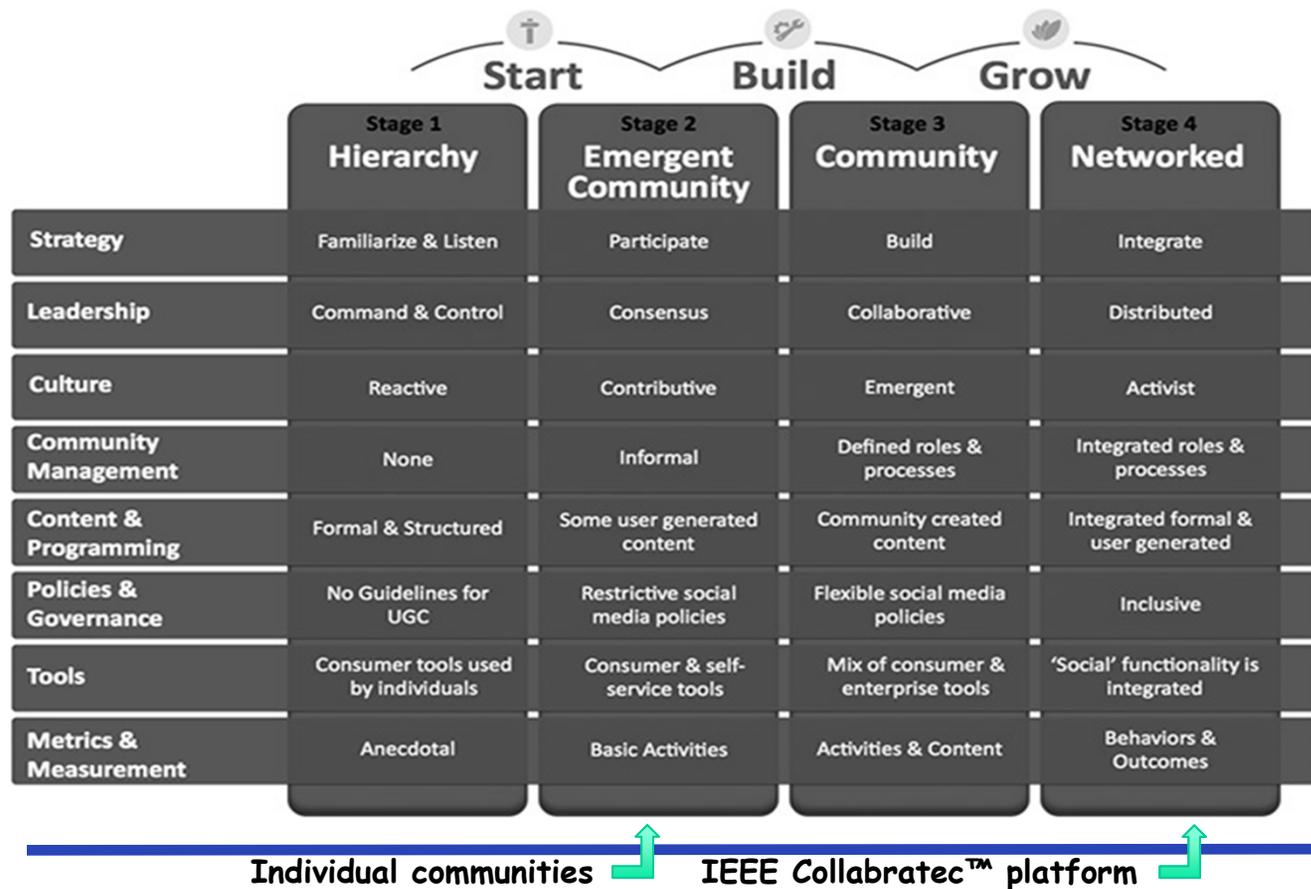
# Sponsored Communities (functional view)

- **Two spheres of the community experience: IEEE Collabratec™ and G+ (optional attachment)**
- **G+ offers additional capabilities, and extends community visibility within Google ecosphere**



# Strategic Framework

- **Community Maturity Model®** by The Community Roundtable
  - Consortium of industry practitioners; Methodology based on competencies and maturity levels



- Sets expectations for community managers and stakeholders across the organization
- Helps execute an enterprise performance gap analysis
- Articulates community management's cross-functional nature
- Roadmap for organizational planning
- Way to organize training

# Community Maturity Model ® Roadmap

	Emergent Community Stage 2 Pilot	Community Stage 3 Q1 - 2015	Network Stage 4 2015-2016
<b>Strategy</b>	Defined community strategy	Implementation	Full tactic integration
<b>Leadership</b>	MGA identified	MGA expansion	Participant - generated
<b>Culture</b>	Participant consumption and G+ participation	Participant consumption and G+ participation	Regular participation for most members
<b>Community Management</b>	Admin and moderator	Moderator	Moderator and advocates
<b>Content &amp; Programming</b>	IEEE feeds and admin generated	IEEE/Moderator Editorial calendar	IEEE/ Calendar/ Participant generated
<b>Policies &amp; Governance</b>	Terms of Use	Terms of Use /Admin and moderator	Terms of Use/ Moderator / advocates
<b>Tools</b>	IEEE feeds, G +	IEEE feeds, G +, file posting	IEEE, G +, file posting, commenting, Q &A
<b>Metrics &amp; Measurements</b>	Analytics and user feedback	Analytics and surveillance	Analytics and surveillance

# Community Management Snapshot

## Volunteer Moderator

### Collabratec Community

- Create and maintain IEEE Collabratec™ Profile
- Moderate Q & A

### G+ Community

- Link G+ profile to your IEEE Collabratec profile
- Welcome participants
- Post content
- Invite participants to generate content (subject matter experts)
- Promote community best practices
- Ensure compliance with terms of use



## Community Specialist

- Configure environments
- Training on features and best practices
- Assist with initial moderation and content creation
- Usage reports
- Help moderate IEEE Collabratec™ users- group community for Volunteers



Austin, TX



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COMMUNICATIONS  
SOCIETY**

*THANKS*