

SDO Engagement

IAB Liaison work



Why?

- Going in position
- Good:
 - Awareness of your Surroundings
 - Communication Opportunities
 - Cultural Sensitivity
 - Education and Continuing Education
- Bad:
 - [Uncoordinated Development](#)
 - Lack of Communication

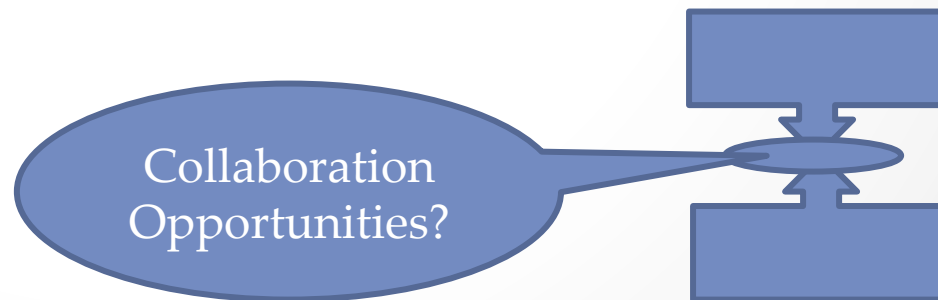
What is Important?

- Understand how the Standards Development Landscape is changing
- The Siren call of Enhancing/Strengthening Collaboration
- Way of Working affects Collaboration
- Your Feedback!



Landscape

- The IETF is all about the Internet and (mostly) a bottom-up view of what is needed for the Internet to function
- Internet protocols are used for more than just the Internet
- Example for Discussion
 - The Internet of Things doesn't necessarily mean the things are on the Internet
 - The Internet will be used as the connectivity matrix for the next gen wireless systems (5G)

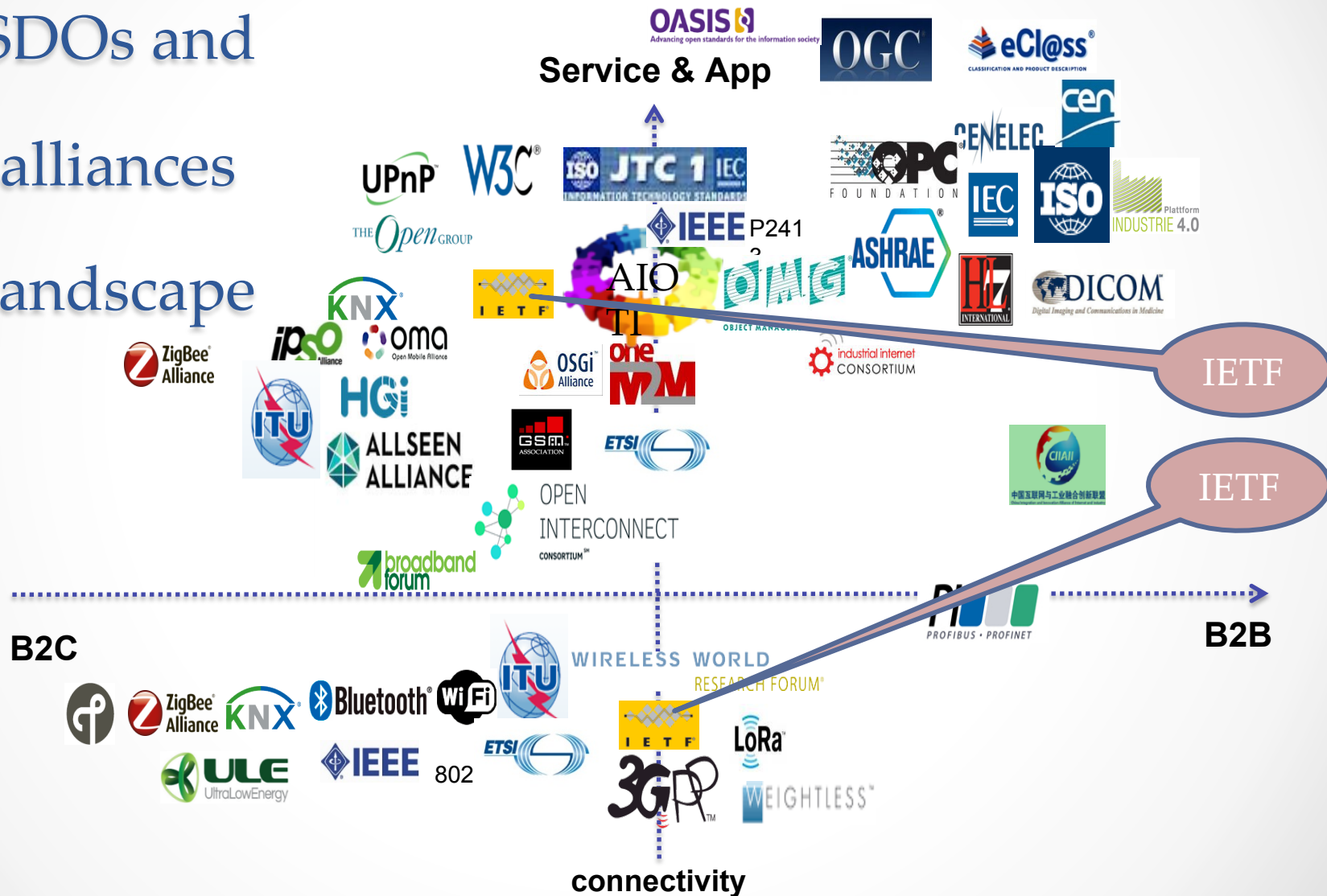


Landscape Example

- The group of standards bodies and how they relate depend on the example/use-case being discussed
- For example in the following example of IoT in 5G
 - The horizontal axis looks at the B2C – B2B spectrum
 - The vertical axis looks at connectivity focus (network plumbing) vs. Services and Apps that run over the plumbing

Mapping IoT

SDOs and
alliances
landscape



Source: Modified from an initial contribution from Huawei

End-to-End 5G Ecosystem

ISOC?

Spectrum Resiliency

REGULATORY

Lawful Intercept
Spectrum Sharing

Emerg

RADIO

Advanced Interference Management
Massive MIMO
Security
Mod

- Where should ISOC and IETF get engaged?
- Where are they already engaged?
- Do the other organizations KNOW that the ISOC and IETF are engaged?

APPLICATIONS

Security
Context Aware Networking
M2M/IoT
D2D Apps

M2M/IoT
Ubiquitous Storage & Computing

World Wide Wireless Web
Cloud

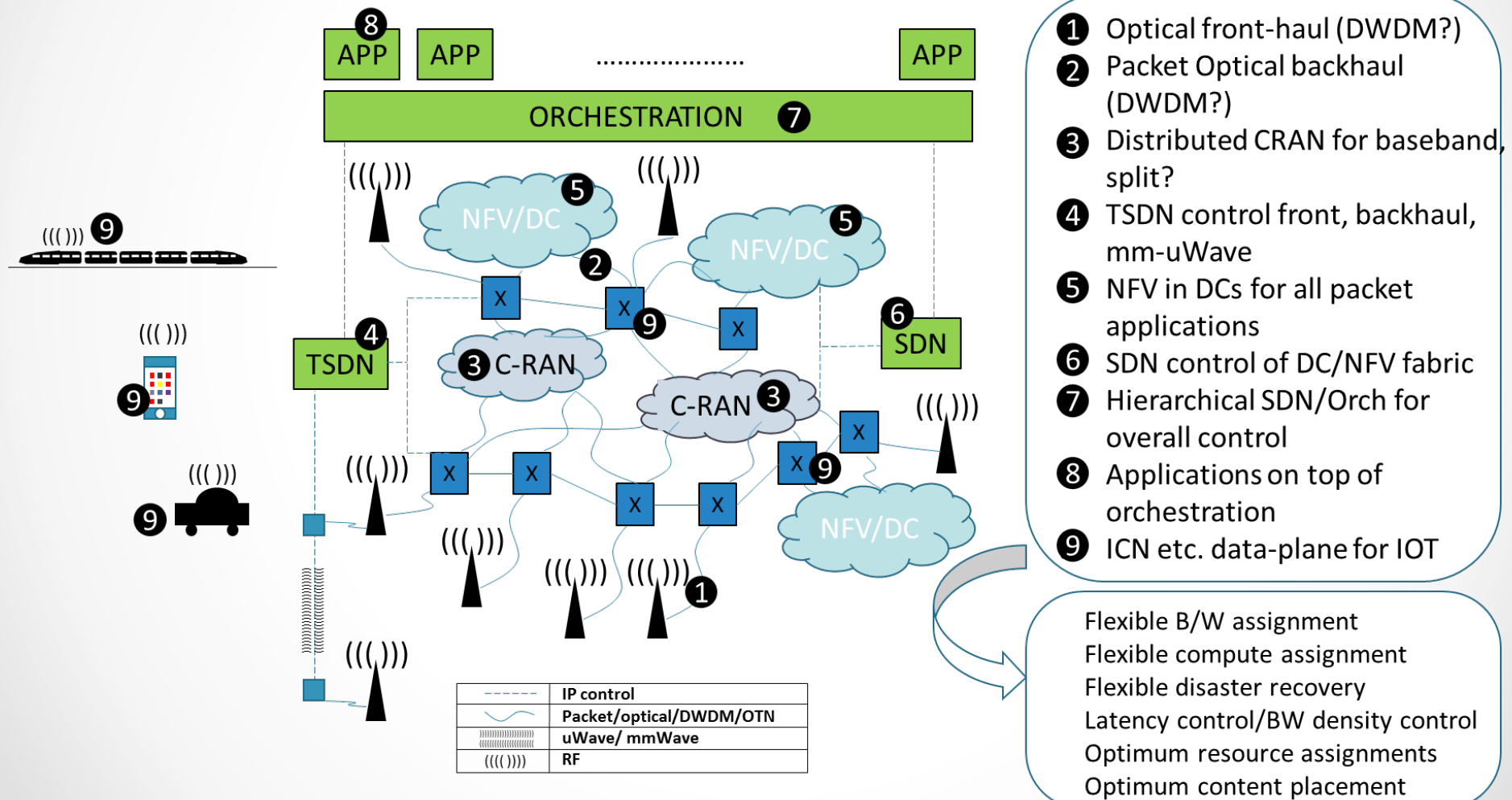
IETF?

DEVICES

Mesh Networks D2D Modulation

Context Aware Networking

Possible IMT-2020 "5G" wire-line architecture



Way of Working

- The IETF is not a membership organization
- It is difficult for the IETF to “join” other organizations
- The IETF process seems foreign to membership-based organizations and also to Government/Regulatory agencies



Top-Down vs. Bottom-Up

- Follow the money
- Business oriented top-down thinking
 - How can I make money off the Products/Services/Applications that are hyper-connected?
- Top-Down thinking as an enabler of the tools needed from the Bottom-Up
- Technology can't be created for technology sake
 - Beware of research projects
 - Competing hyper-connected networks being created



Open Source vs. Standards

- Open Source {Development Method, Licensing, Software, Tools}
- On going tussle
- How do Open Source and the Traditional Standards Making process interoperate?
- Application of the latest Software Engineering techniques to the building of Standards?
 - Agile
 - Model Driven
 - Spiral Lifecycle
- Protecting contributors when using open source tools for development and sharing of drafts

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Example

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ITU-T Way of Working



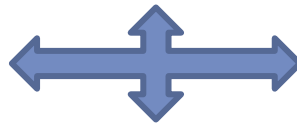
ITU-T

- ITU (International Telecommunication Union)
 - United Nations specialized agency for information and communication technologies
 - Three sectors (ITU-D, ITU-R, ITU-T)
 - Different Stakeholders
 - Member States (Countries that are members of the ITU)
 - Sector Members (Companies/Industry/Forums)
 - Academia (Universities/Labs)
 - Governed by the ITU Constitution and Convention
 - <http://handle.itu.int/11.1004/020.1000/5>
 - Plenipotentiary Meeting held every four years
 - Organizational meeting
 - Produces Decisions and Resolutions
 - <http://www.itu.int/pub/S-CONF-ACTF-2014>

ITU Structure



**ITU Plenipotentiary Conference:
Constitution and Convention**
ITU Council

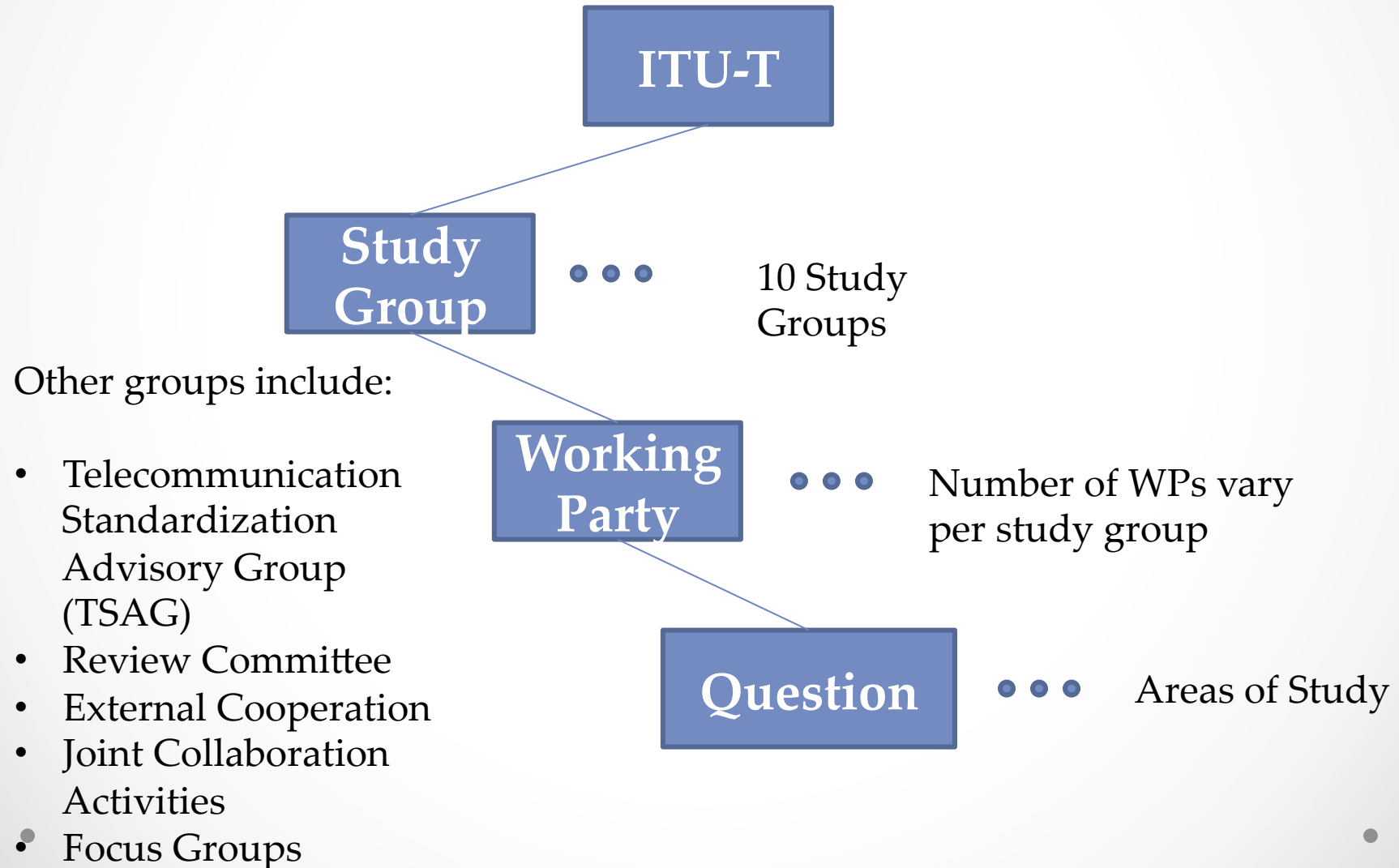


ITU-T
Telecommunication
**World Telecommunication
Standardization Assembly
(WTSA)**
**Telecommunication
Standardization Advisory
Group (TSAG)**
Study Groups

ITU-D
Development
**World Telecommunication
Development Conference
(WTDC)**
**Telecommunication
Development Advisory
Group (TDAG)**
Study Groups

ITU-R
Radio
**World Radio Conference
(WRC)**
Radio Regulations
**Radio Advisory Group
(RAG)**
Study Groups

ITU-T Structure



ITU-T Study Groups

- SG 2
 - Network Management
- SG 3
 - Naming and Numbering
- SG 5
 - Environment Change
 - Green and Low Power
- SG 9
 - Consumer Gear Protocols
- SG 11
 - Protocols
 - Conformance and Interoperability
- SG 12
 - Performance Monitoring
- SG 13
 - Cloud and Virtualization
- SG 15
 - L0, L1, L2 Transport Network
- SG 16
 - Conferencing System Protocols
- SG 17
 - Security for Cloud and IoT
- SG 20
 - Internet of Things (Smart Cities)

ITU-T Way of Working

- Membership-based Organization
 - Not All Members have the same status
- Hierarchical Management Structure
- Processes well documented and scrutinized
- Formal protocol used during plenary meetings
- Consensus Based
- Two different Document Approval Processes
- Collaboration Mechanisms (next slide(s))



ITU Ways of Collaboration

- Joint Collaboration Agreements (JCA)
 - A joint coordination activity (JCA) is a tool for management of the work programme of ITU-T when there is a need to address a broad subject covering the area of competence of more than one study group.
 - External SDOs and Forum Leaders can be included
 - A.1/Clause 2.2
- Global Standards Initiative
 - A JCA may propose, in justified cases and on an exceptional basis, the establishment of a global standards initiative (GSI) in the area of work covered by the JCA, where it is considered necessary to provide a visible focus for the work. A GSI is not a working entity but is a name for the package of work being conducted through collocated meetings of the involved study groups and rapporteur groups under the umbrella of a coordinated work plan managed by the JCA.
 - A.1/Clause 2.2.11

ITU Ways of Collaboration

- Liaisons
 - A.5
 - A.25 has been determined and will replace A.5
- Focus Groups
 - A.7
 - The objective of focus groups is to help advance the work of the ITU Telecommunication Standardization Sector (ITU-T) study groups and to encourage the participation of members of other standards organizations, including experts and individuals who may not be members of ITU.
- Important point here...
 - There is a lot of process
 - Thought has been put into engagements
 - Parties know what to expect



Collaboration

- **In practice... people working in both organizations works**
- ISOC is the member of ITU-T not the IETF
 - Sensitivity representing IETF
 - Individual contributors have to be careful not to indicate IETF consensus on any draft work
- Speed of communication
 - Liaisons are slow and tied to meetings
 - Joint development

**Internet Engineering Task Force and International
Telecommunication Union – Telecommunication
Standardization Sector Collaboration Guidelines
RFC 6756 / ITU-T A.supp3**

IAB Liaisons

- <http://ietf.org/liaison/managers.html>
- Way of working provides a point of contact that can shepherd the liaison process
- Important!
- Clarification of the Liaison role and process is underway

IETF Liaisoning
[draft-bradner-ietf-liaisoning](#)

Current Liaisons

2015-07-16	ITU-T SG 15	The IETF		LS/r on information modelling work recently approved and published (reply to ONF-LS009)
2015-07-16	ITU-T SG 15	Multiprotocol Label Switching		LS on initiation of Approval process for revised Recommendations ITU-T G.8112/Y.1371 and ITU-T G.8113.2/Y.1372.2
2015-07-16	ITU-T SG 15	Multiprotocol Label Switching	2016-01-31	LS on ITU-T SG15 OTNT standardization work plan to mpls wg
2015-07-16	ITU-T SG 15	Path Computation Element	2016-01-31	LS on ITU-T SG15 OTNT standardization work plan to pce wg
2015-07-16	ITU-T SG 15	Common Control and Measurement Plane	2016-01-31	LS on ITU-T SG15 OTNT standardization work plan to ccamp
2015-07-07	ITU-T SG 15	Routing Over Low power and Lossy networks	2015-07-24	LS on concerns on the deprecation of dispatch type in 6LoWPAN and its header compression mechanism to roll
2015-07-07	ITU-T SG 15	IPv6 over Networks of Resource-constrained Nodes	2015-07-24	LS on concerns on the deprecation of dispatch type in 6LoWPAN and its header compression mechanism to 6lo

Liaisons Continued

2015-06-10	ITU-T SG 13	The IETF		<u>LS on Establishment of new Focus Group on "IMT-2020"</u>
2015-06-10	ITU-T SG 13	The IETF	2015-06-30	<u>LS on Invitation to update the information in the cloud computing standards roadmap</u>

Liaisons Continued

2015-04-22

ITU-T SG 17

Security Area

2015-08-31

[LS/r on
Cryptographic
Message Syntax
\(reply to IETF
Security Area\)](#)

Liaisons Continued

2014-12-19	ITU-T JCA-SDN	Service Function Chaining	2015-04-15	<u>LS on SDN standardization activity roadmap to sfc</u>
2014-12-19	ITU-T JCA-SDN	Source Packet Routing in Networking	2015-04-15	<u>LS on SDN standardization activity roadmap to spring</u>
2014-12-19	ITU-T JCA-SDN	Application-Layer Traffic Optimization	2015-04-15	<u>LS on SDN standardization activity roadmap to alto</u>
2014-12-19	ITU-T JCA-SDN	Interface to the Routing System	2015-04-15	<u>LS on SDN standardization activity roadmap to i2rs</u>
2014-12-19	ITU-T JCA-SDN	Network Virtualization Overlays	2015-04-15	<u>LS on SDN standardization activity roadmap to nvo3</u>

Takeaways

- Many organizations are going through a reevaluation of their place in the world
- Understanding and awareness are key foundations to good relationships
- Guidance is available
- “Many hands make light work”



Discussion!

- Allowed
 - Feedback
 - Grousing
 - Constructive Criticism
 - Pity
 - Accolades
- Not Allowed
 - Whining
 - Ignoring the Issue