ITU-T SG15 plenary meeting June 19th-26th summary

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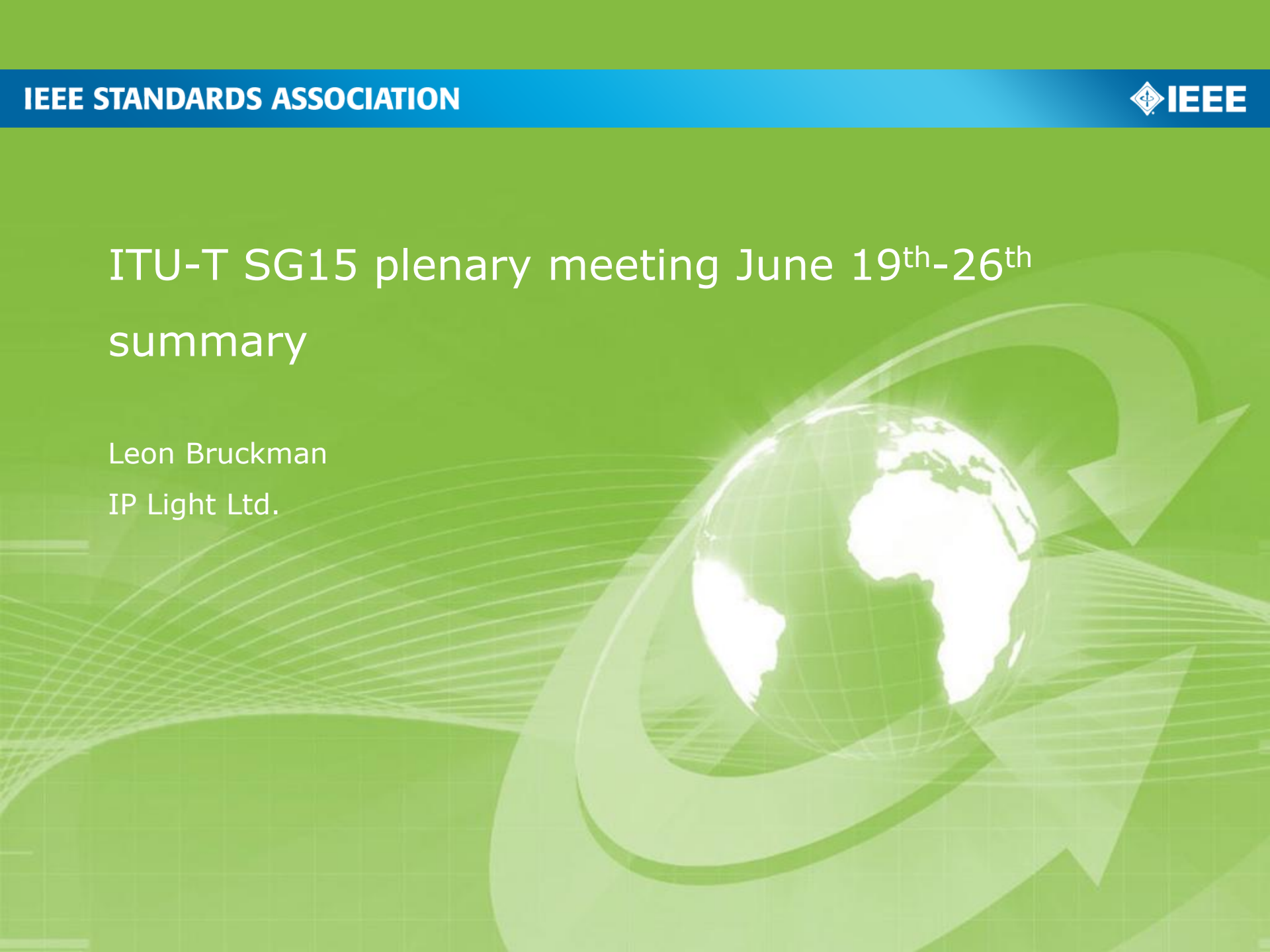

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IEEE 1914.1
Next Generation Fronthaul Interface
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NGFI node reference model			
Date: 2017-06-26			
Author(s):			
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Introduction

- ITU-T SG15 met in Geneva June 19th to 30th
  - I stayed only until June 26th to attend the IEEE 1914 f2f
- The main questions involved at this stage in 5G are:
  - Q11 - Signal structures and interfaces
  - Q12 - Transport network architectures
  - Q13 - Network synchronization and time distribution performance
- Q11 is the main driving force of 5G.
  - Out of ~60 contributions half of them were 5G related.
  - Half of the meeting discussions were also 5G related.
- 5G was also the main issue discussed during the joint meeting of Q11 and Q12.

Liaisons

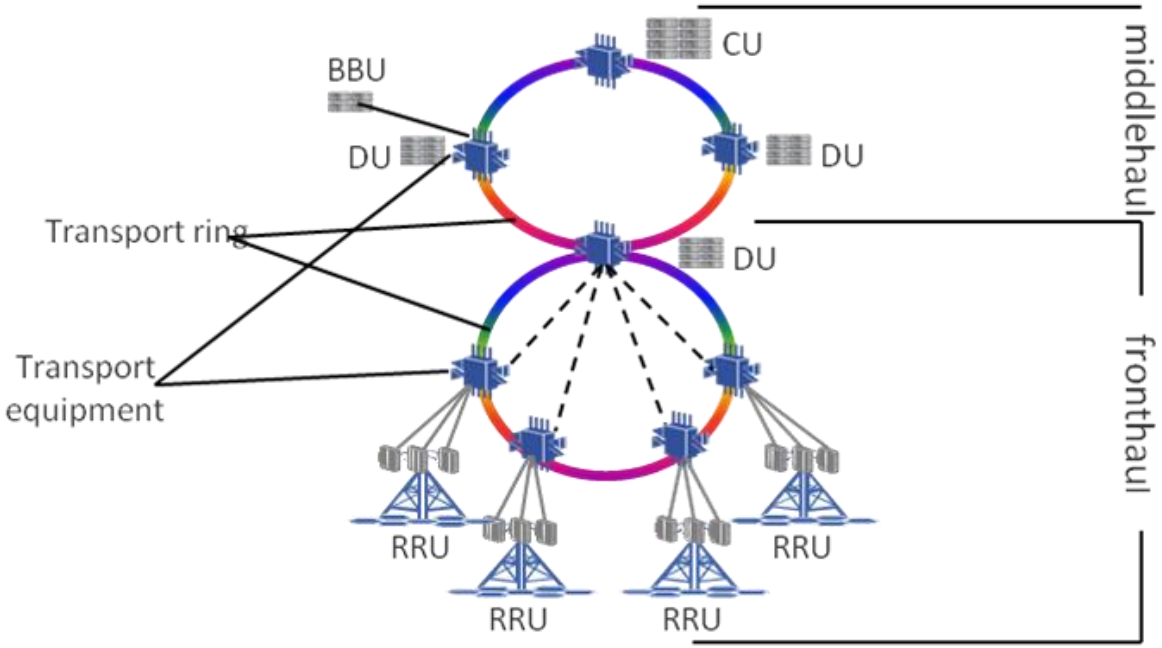
- The 2 liaisons sent by IEEE 1914 to SG15 were very well accepted.
  - SG15 is certainly interested in cooperating with IEEE 1914 and will liaise back.
- Regarding the first liaison (the one describing our activities) people in SG15 indicated that there is a procedure to forward drafts between SG15 and IEEE.
  - My opinion: It is also our interest to forward them drafts so that they take our inputs into consideration
  - Note that the CPRI and 3GPP groups are not very cooperative with SG15
- Regarding the asymmetry measuring liaison I forwarded a contribution with the line swapping method.
  - Q11 will add a study point for this requirement and SG15 will liaise to IEEE 1914 regarding this specific issue.

Contributions

- Most of the contributions were focused on 3 issues:
  - 5G architecture
  - 5G requirements
  - How to make OTN application specific for 5G
- 5G architecture as viewed by SG15:
  - Mobile Fronthaul between the RRU and the DU
  - Middlehaul between the DU and the CU
  - Backhaul from the CU towards the network
  - From CMCC:
    - Each DU is connected to a single CU
    - No direct DU to DU communication
      - This principle is not shared by other operators at this stage

5G Architecture as viewed by SG15

- Q12 will define the 5G architecture based on the following scheme:



- A temporary document will be issued this meeting

5G requirements

- The requirements presented are in line with the ones IEEE 1914.1 considers
- They are aware of the problem that no SDO is defining specific requirements for transport
  - For example: How much of the end to end latency is assigned to the transport network ?
- The focus of Q11 will be MFH first
  - Line rates are assumed to be 25G with 50G coming next
  - CPRI and eCPRI signals
- Network slicing:
  - Not only per operator but per service type due to the different performance requirements of each service.
- Protection:
  - New protection schemes to be proposed since the standard APS method can not provide the required performance.

OTN Lite for 5G

- Some OTN functions are not required for 5G
  - For example TCMs
- Some OTN functions do not provide the required performance for 5G networks
  - For example APS and Delay Measurements
- OTN is lacking some functions for 5G
  - For example 25G interfaces and asymmetry compensation
- A specific proposal was presented to reduce the number of OTN layers for this application. To be discussed.
- More contributions on these issues are expected for the next interim meetings.

Conclusion and proposal

- As many SDOs, ITU-T SG15 is working on 5G.
- They want to make OTN lite a viable solution for 5G signals transport
  - They are of course aware that Ethernet based networks are another appealing option, but OTN has several advantages mainly related with mature OAM and strong FECs
- They are very interested in cooperation with IEEE 1914.1
  - I recommend to send them the last drafts of IEEE 1914.3 and 1914.1 using the established method.

Motion #__

- Forward to ITU-T SG15 the IEEE 1914.3 draft

- Mover: Leon Bruckman
- Seconder:

- Yes: ___ No: ___ Abstain: ___ (Technical motion needs >= 2/3)

Motion #__

- Forward to ITU-T SG15 the IEEE 1914.1 draft

- Mover: Leon Bruckman
- Seconder:

- Yes: ___ No: ___ Abstain: ___ (Technical motion needs >= 2/3)