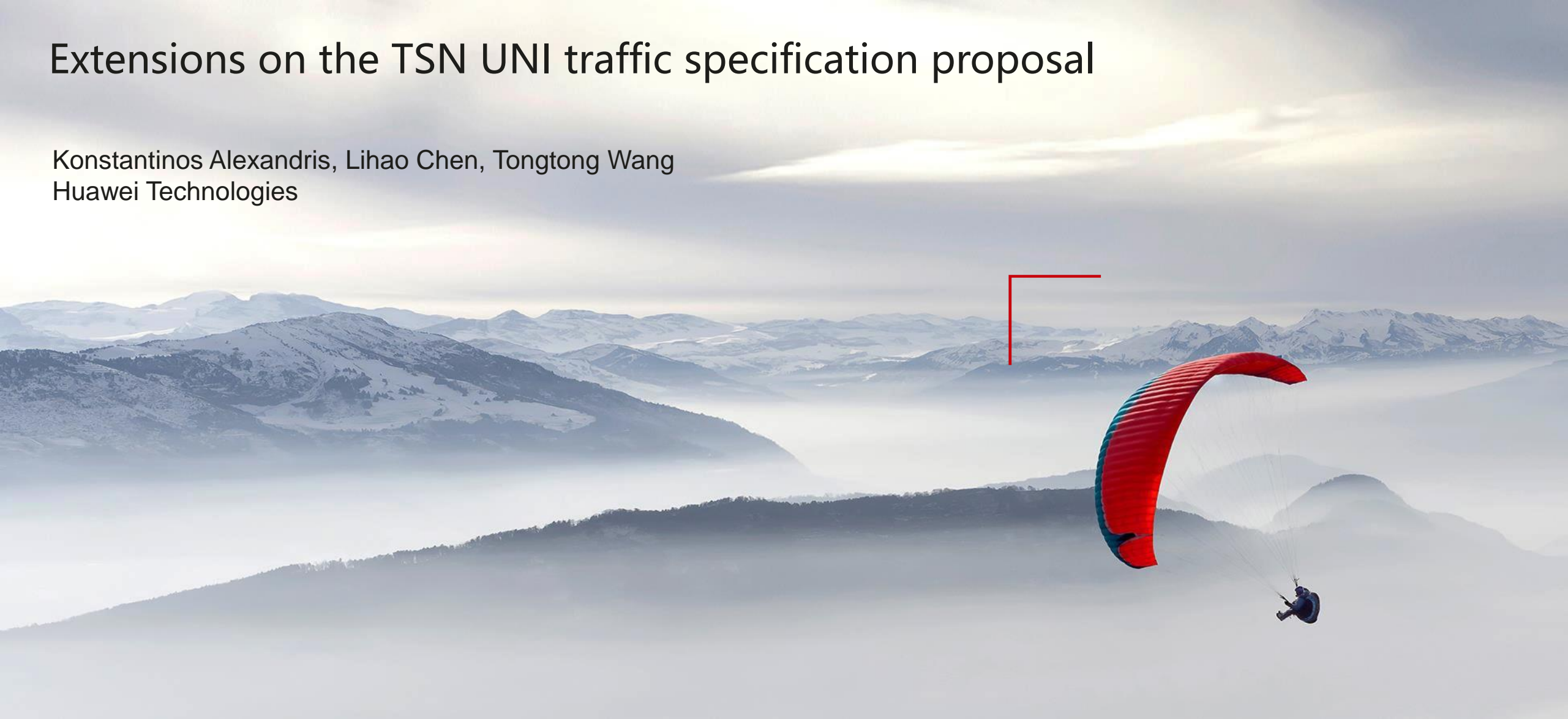


Extensions on the TSN UNI traffic specification proposal

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Objective

- TSN UNI Tspec to handle TokenBucket traffic model [1,2]
 - Need for a standard way to receive stream requirements
 - Only basic and TimeAware Tspec elements are included in 802.1Q-2022
- Enable TSN UNI to support the TokenBucket traffic model in conjunction with centralized configuration [*]
 - End-station/CUC needs to send the TokenBucket Tspec via TSN UNI
 - Current projects and standards do not define specific YANG models
 - Centralized configuration involves CNC assistance support
 - To be complementary to RAP (P802.1Qdd) that uses distributed configuration

[*] Both fully centralized and centralized network/distributed user configuration models

[1] <https://standards.ieee.org/ieee/802.1Q/10323/>

[2] <https://www.ieee802.org/1/files/public/docs2021/new-specht-onats-0921-v01.pdf>



Proposal (1/2)

Tspec definition is not **complete**: Addition of parameters for the TokenBucket model

Sub-clauses to be extended:

- **46.2.3.5**: Extension of the existing Tspec incorporating the relevant parameters (**currently missing**)

Table 46-10–TspecTokenBucket elements

Name	Data type	Reference
MaximumFrameLength	uint16	46.2.3.5.8
MinimumFrameLength	uint16	46.2.3.5.9
CommittedInformationRate	uint64	46.2.3.5.10
CommittedBurstSize	uint32	46.2.3.5.11

- **46.2.3.5.8 - 11**: Explanatory text related to Table 46-10 parameters to be added (**currently missing**)



Proposal (2/2)

Existing YANG models do not support centralized configuration including the TokenBucket Tspec

Sub-clauses to be extended:

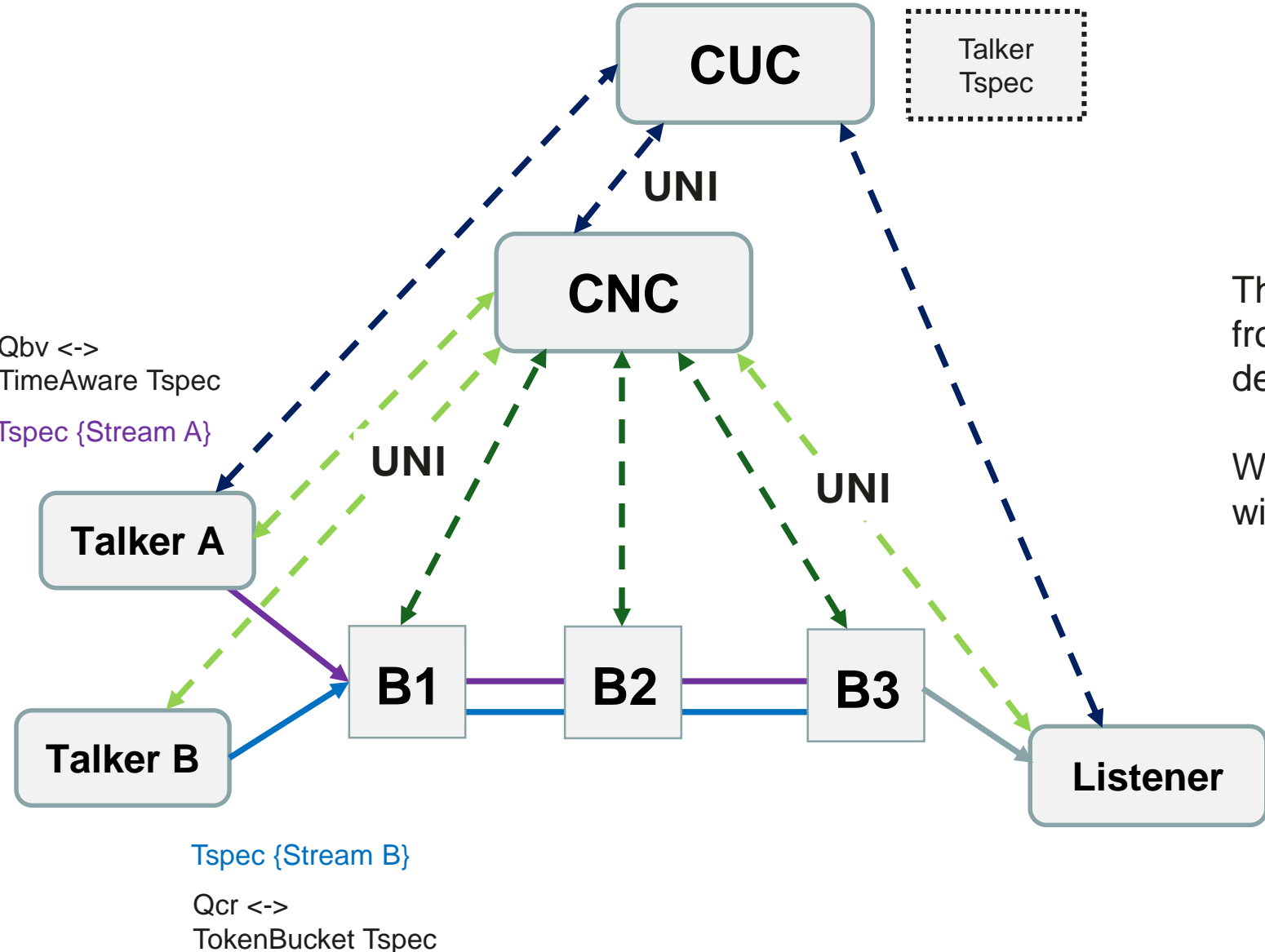
- **48.5.13:** Extension of the respective YANG schema tree related to the `ieee802-dot1q-tsn-config-uni` YANG module (**currently missing**)
 - `traffic-specification` [3]: To include TokenBucket TLV parameters [TokenBucket Tspec]
- **48.6.3:** Extension of the `ieee802-dot1q-tsn-types` YANG module (**currently missing**)
 - `container token-bucket`: To be added under `container traffic-specification` including the relevant parameters as leaf statement:

`max-frame-length, min-frame-length, committed-information-rate, committed-burst-size`

[3] <https://1.ieee802.org/tsn/802-1qdi/>



Configuration Model & Tspec



The way TimeAware Tspec is conveyed from user to CNC has already been defined.

We should follow the same methodology with TokenBucket Tspec.



Conclusion

Need to develop the TSN UNI extension

1. Motion for new PAR in 2023 July Plenary meeting.
2. Any questions ?



Thank you.

