

# Proposal on several issues discussed by China EPOC Interest Group

Yong Yao - Technical committee of  
China Radio & TV Association

# Supporter

- Xiaojun Gao – Jiangsu cable network
- Wei Chen – Henan cable network
- Jiangming Shi – Beijing Gehua cable network
- Xueming Li – Neimenggu cable network
- Zhao Nie – Shaanxi cable network
- Xiaoping Hu – Xiangyang cable network
- Shusheng Dai – Hair IC
- Guangsheng Wu – Huawei
- Ling Cao – Raisecom
- Baomin Hu – YOTC
- Lei Xu – LOOTOM

# RF channel bandwidth for TDD

- Two options: 64MHz and 192Mhz
- FCU should support both 64M and 192M channel bandwidth
- CNU can support 64M or 192M

# Why 64M channel for TDD?

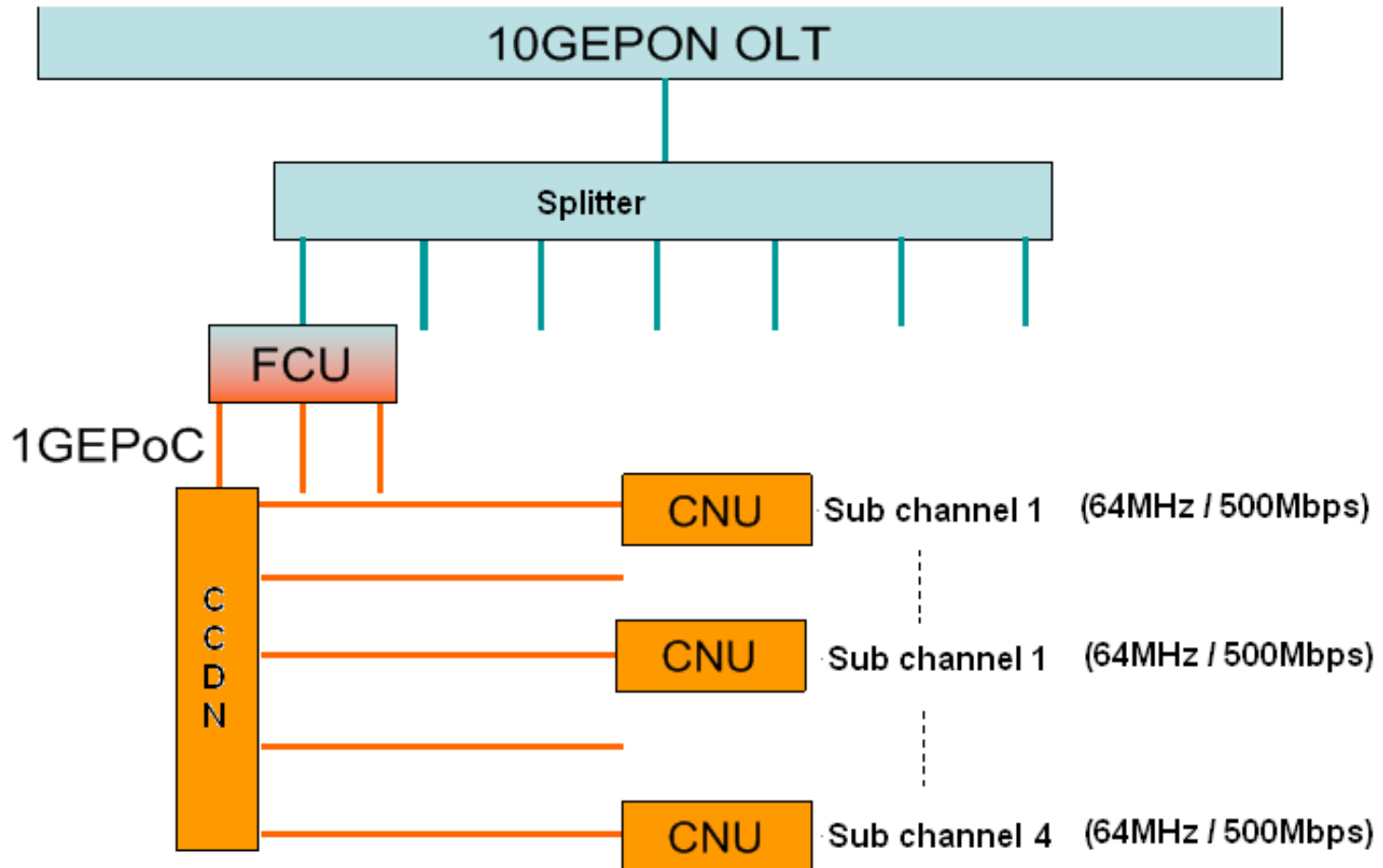
- According to our investigation of China MSOs, all operators think that CNU bandwidth should be less than or equal to FCU bandwidth. And most operators' requirement on CNU data rate (DS and US total) is less than 500Mbps.
- For CNU, 64Mhz channel for 500Mbps data rate can meet Chinese MSOs' requirement, it's not necessary to be with higher RF channel bandwidth.

- 64MHz CNU can have lower cost and power consumption (e.g. AD / DA, RF transmit power), and can thus lower the threshold of CNU chipsets and components design and manufacture (especially for China cable industry), and will be helpful for EPOC marketing promotion.
- FCU should support both 192MHz and 64MHz basic channel, and shall support the ability for higher capacity by channel bonding (or using OFDMA large channel which is divided into several sub-channels).

# About spectrum planning

- EPOC TDD / FDD can occupy 960M - 1200MHz band, and can be extended to both upper and lower band. The main consideration for 960MHz low bound is because almost all spectrums under 860MHz have been occupied in China.
- FDD upstream can occupy 5 - 200MHz, and can scale up in the future.
- The final split point between upstream and downstream is not considered yet and T.B.D. according future service requirement.

# Architecture consideration (not a technical proposal)



# Architecture consideration (not a technical proposal)

- FCU is not only an optical-electronic converter, but also a 10G-1G bridge. The advantage is that FCU can have multi ports with same RF channel spectrum, no need of wide spectrum requirements.
- Several 64MHz sub channels either with channel bonding or with wide band sampling can get 1G to multi-Gbps EPOC system.
- CNU data rate is determined by sub channel bandwidth.
- We suggest EPOC standard consider this architecture.



# Thanks!