

Frame Mix options (1914.1)

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IEEE 1914
Next Generation Fronthaul Interfaces
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Frame Mix

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Frame Mix

Background

- Discussed on conference calls if the current Annex E RMIX profile is appropriate or should be adjusted
 - Comments should we have something in the core document and the appendix
 - Mentions of it appearing overly complicated
 - Currently this sections status isn't in a final or complete state

Frame Mix

Suggest we use Y.1564 and reference this existing standard

- Y.1564 has a section called EMIX which is a way of mixing multiple frame sizes into a single Ethernet stream.
- Y.1564 has the ability of multiple streams
 - Combining the above covers the core areas of the existing Annex E (RMIX)
- Y.1564 doesn't define the OSI layer

Benefit of using Y.1564

- Well established standard (release in 2011)
- Implemented by all large Test and Measurement companies and some Network Element manufactures (into their elements)

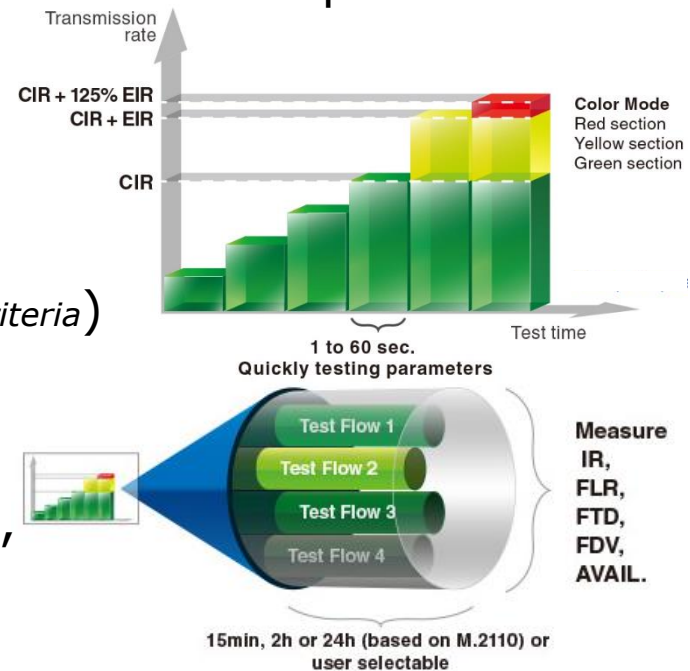
Frame Mix

AVAIL: Availability
 CIR: Committed Information Rate
 EIR: Excess Information Rate
 FLR: Frame Loss Ratio

FTD: Frame Transfer Delay
 CBS: Committed Burst Size
 EBS: Excess Burst Size

How Y.1564 works

- Generates traffic and compares it to Received traffic (end to end or reflected far end, both possible)
- Over Ethernet or higher layer and completes in a two part test
- Service Configuration Test
 - For a short duration generates each **stream**, checks network at CIR and EIR (can step up to), CBS, EBS, FLR, FTD, FDV and FLR_{SAC} (*Service Acceptance Criteria*)
- Service Performance Test
 - For a longer time (configured) simultaneously generates **all streams**, measuring all the above plus AVAIL



Frame Mix

Create profiles using Y.1564 EMIX the same as currently defined RMIX details and add the two not currently defined

- Current RMIX has two profiles defined
 - User Traffic at: 90% load
 - eMBB = 1*256, 1*384, 1*512, 1*1024
 - mMTC = {not defined}
 - URLLC = {not defined}
 - Control and Sync Traffic at: 10% load
 - ContSync = 7*64, 4*570, 1*1518
- Create a matrix to define the frame sequence which repeats

a	b	c	d	e	f	g
64	256	384	512	570	1024	1518

- eMBB = {bfcd}
- ContSync = {aeaaeageaaea}

Frame Mix

Add a sentence at the end of section “8.4 Data-plane throughput and scalability”

1. *Confirming throughput across the NGFI-I and NGFI-II network segments can be completed utilizing the EMIX method defined in section 8.1.1 of Y.1564 [B42]. Annex E describes different frame size combinations to emulate services such as URLLC, mMTC and eMBB using the EMIX method.*

Replace current Annex E

- Describes different Frame Mix options in more detail
 - Full text can be accessed at the Sep 2018 meeting material [site](#) or directly here [Frame-Mix-section-for-1914-1.pdf](#)

Thank you, questions

Motion #_

- Add the sentence at point 1 on Slide 8 to the end of section 8.4 Data-plane throughput and scalability, with editor discretion to adjust as required.
- Mover: Stuart Whitehead
- Seconder:
- Yes: No: Abstain: (technical motion needs $\geq 2/3$)

Motion , chair did not vote

Motion #_

- Add the Annex E as per slide 8, with editor discretion to adjust as required.
- Mover: Stuart Whitehead
- Seconder:
- Yes: No: Abstain: (technical motion needs $\geq 2/3$)

Motion , chair did not vote