

# Mean Time To False Packet Acceptance (MTTPA)

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# Mean Time To False Packet Acceptance

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- Also known as Undetected Error Rate (UER)
- Basic requirement of IEEE 802.3 standard
  - Errored packet being accepted as valid is bad
  - Measured in absolute time
    - Normally a very large number of years – as in billion years
      - 1 Gb/s (8B10B) and 10Gb/s (64B66B) > age of universe
  - Impacts of coding schemes on CRC
    - Byte re-ordering can change burst to two bursts
    - Self-synchronising scramblers cause error multiplication
    - Errors on framing information
    - Coding can also help

# Some examples

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- IEEE P802.3z 1 Gb/s Ethernet
  - [http://www.ieee802.org/3/10G\\_study/email/msg00155.html](http://www.ieee802.org/3/10G_study/email/msg00155.html)
- IEEE P802.3ae 10Gb/s Ethernet (64B66B)
  - [http://www.ieee802.org/3/10G\\_study/public/jan00/walker\\_1\\_0100.pdf](http://www.ieee802.org/3/10G_study/public/jan00/walker_1_0100.pdf)
  - [http://www.ieee802.org/3/ae/public/mar00/walker\\_1\\_0300.pdf](http://www.ieee802.org/3/ae/public/mar00/walker_1_0300.pdf)
- IEEE 802.3ah Ethernet in the First Mile
- EPON
  - [http://www.ieee802.org/3/efm/public/may02/maislos\\_3\\_0502.pdf](http://www.ieee802.org/3/efm/public/may02/maislos_3_0502.pdf)
- Copper
  - [http://www.ieee802.org/3/efm/baseline/omahony\\_1\\_0103.pdf](http://www.ieee802.org/3/efm/baseline/omahony_1_0103.pdf)
- IEEE P802.3ap Backplane Ethernet
  - [http://www.ieee802.org/3/ap/public/nov05/liu\\_01\\_1105.pdf](http://www.ieee802.org/3/ap/public/nov05/liu_01_1105.pdf)
  - [http://www.ieee802.org/3/ap/public/nov05/szczepanek\\_01\\_1105.pdf](http://www.ieee802.org/3/ap/public/nov05/szczepanek_01_1105.pdf)
  - [http://www.ieee802.org/3/ap/public/nov05/szczepanek\\_02\\_1105.xls](http://www.ieee802.org/3/ap/public/nov05/szczepanek_02_1105.xls)