

# Speed of the various data exchanges on a 10/100 mixed network with serial device servers

What you must retain :

COMETH & MI-ETH serial device servers have an Ethernet 10 Base T interface, which is compatible with all 10/100 Base TX equipments.

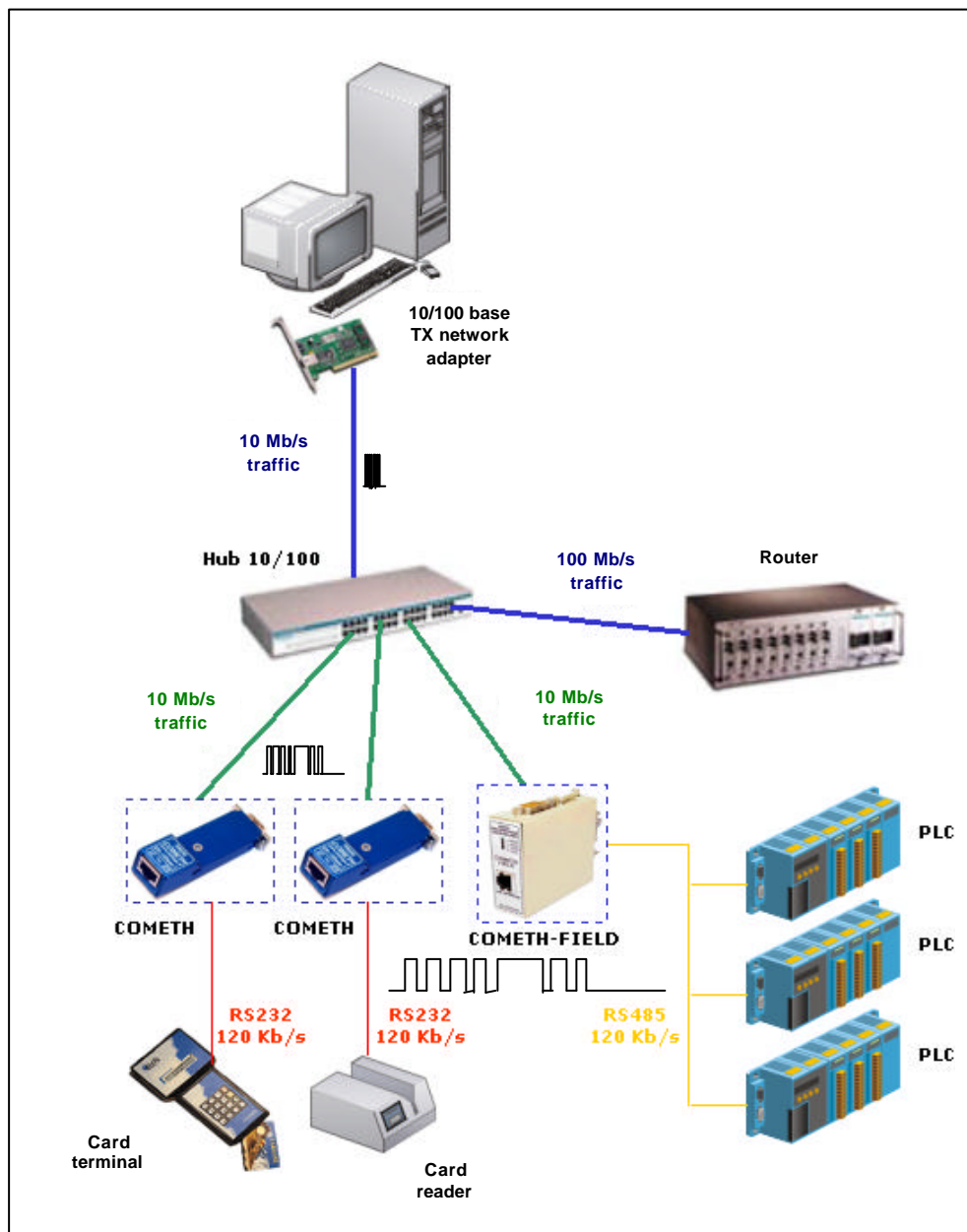
Today "SWITCHES" feature the self 10/100 commutation function which enables them to be integrated in mixed 10/100 Mbp/s networks.

Thus, if your computer network controller is 10/100 Base Tx compatible, the exchange of data between your computer and the "SWITCH" will be carried out all the time at the maximum speed of the network (100 Mbp/s).

Speed on the different sections of the network will depend on the speed of the peripherals which are connected.

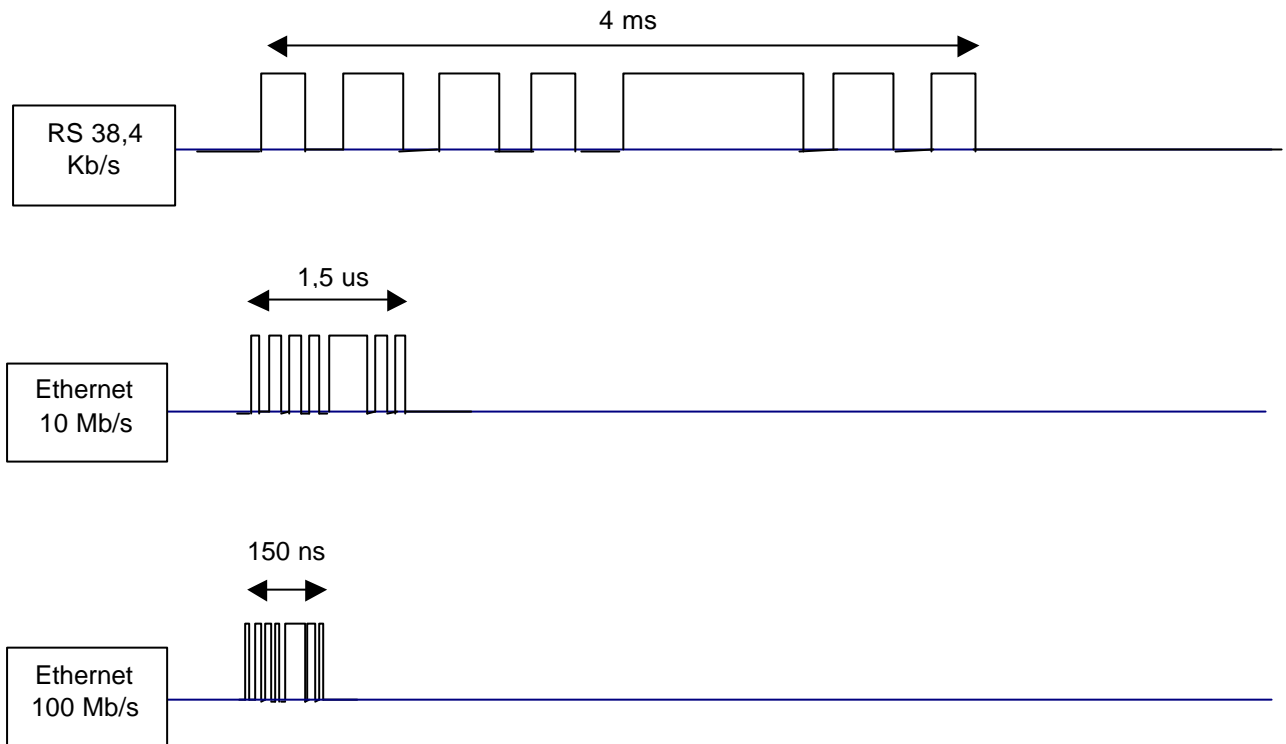
In the diagram below, it appears that within the same "SWITCH", some sections will communicate at 10 Mb/s and others at 100 Mb/s.

As the speed of the serial equipment is 100 times slower than the speed of a 10 Mb/s section, the performances of the network and its load will never be affected by the cohabitation of 10 Mb/s and 100 Mb/s interfaces.



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Thus, the time of occupation of the Ethernet section for a packet of data will be indicated in the diagrams below :



Data takes 4 ms on the serial connection, it will take 1,5 us on the COMETH network section (except TCP/IP headers), finally, it will take only 150 ns on the "SWITCH" 100 Mb/s network section.