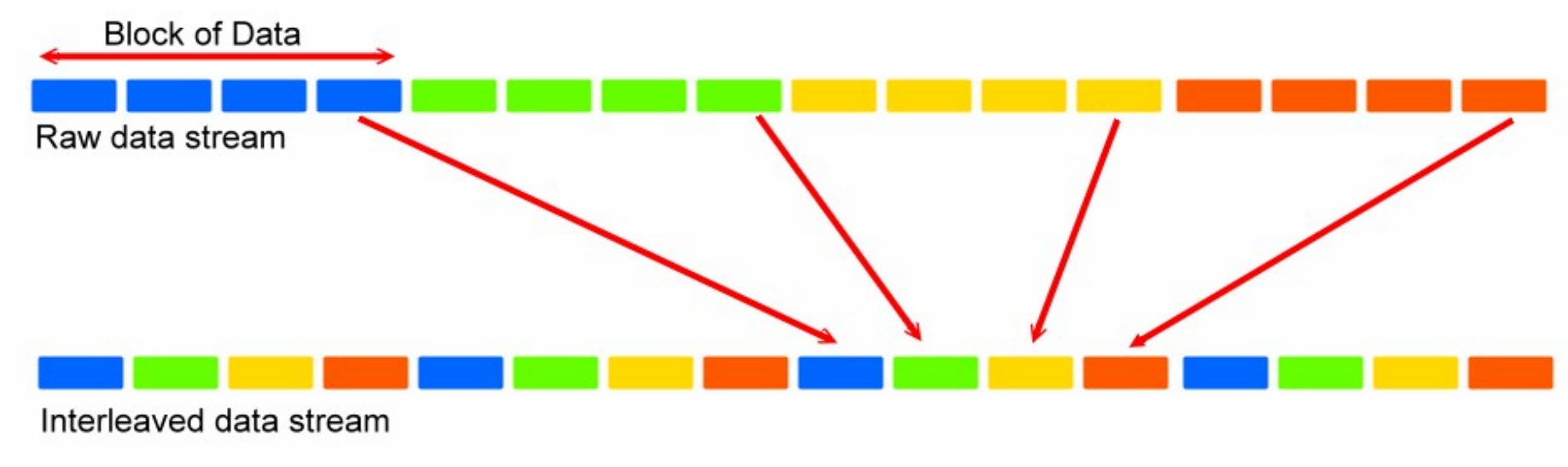
Interleave

This function is used in digital data transmission technology to protect the transmission against crosstalk issues.

If during transit more than a certain amount of data has been lost then the data cannot be correctly decoded. Short bursts of noise on the line can cause these data packets to become corrupt and the modem has to re-request data which in turn can slow down the overall rate at which data is transmitted.

Interleaving is a method of taking data packets, chopping them up into smaller bits and then rearranging them so that once contiguous data is now spaced further apart into a non continuous stream. Data packets are re-assembled by your modem.

The diagram below is an example of how interleaved traffic is transmitted.



If your line is particularly susceptible to bursts of noise then interleaving should improve your VDSL experience simply because if you lose a whole batch of data then this could cause your modem to loose sync with the exchange.

Using Interleaving, the modem is able to re-assemble the data or if necessary just re-request the part of the data that it is unable to recover. By increasing the interleave depth of each ports that are susceptible to noise, this will improve error performance and stability of marginal lines.

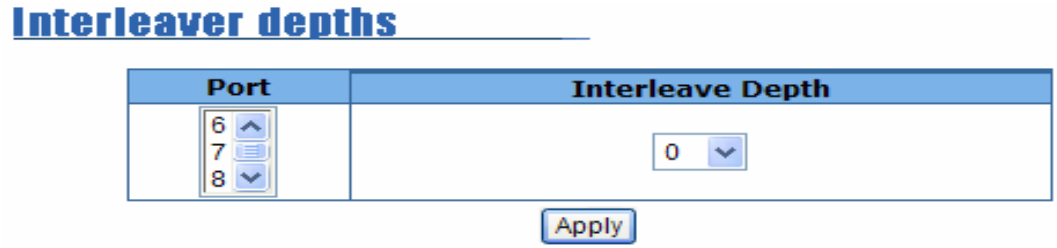
Interleave Depth is defines as the number of bits (or bytes) in each block of data.
VDSL supports a various levels of interleaving, the depth of which can range from 0 (no interleaving) to 64.

Interleave Delay is defines as the mapping (relative spacing) between subsequent input bytes at the interleave input and their placement in the bit stream at the interleave output.

Maximum Interleave Delay is the configurable attribute on some DSLAMs/routers as the maximum time for the Interleave Delay. The higher the Interleave Delay the greater the Interleaving Depth.

Note: Interleaving Depth & Interleaving Delay do not appear to be the same thing as the additional amount of latency you will see when interleaving is switched on nor is latency affected by speed (e.g. it does not decrease when you go from 1Mb to 5Mb).

The following ports can modify the desired interleave depth.



The current information provides a view of the current status of the unit.

Port	Interleave Depth	
	Down	Up
1	4	4
2	4	4
3	4	4
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0