Subject: Re: Is SADC data always time ordered ?
Posted by Igor Konorov on Thu, 06 May 2004 14:30:43 GMT
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I agree that with the algorithm which you propose to order the hits the multiplexer should have a buffers which can store the data for a maximum time interval between hits or "heart beats". But the algorithm is enhanced by taking in to account maximum propagation time of the hits from SADC to multiplexer and then the heart bit is not needed for sorting.
The longest propagation time occurs when the hit rate is high and all buffers are full . It can be calculated for this case:

Prop.Time = BufferSize / Link Bandwidth.

For SADC the maximum propagation time is about 500us.

For low hit rate the propagation time is few useconds.

The data flow , buffer size and sorting algorithm are subject of simulation and optimization .