
Subject: Re: The Time distribution system
Posted by [Igor Konorov](#) on Fri, 04 Mar 2005 18:07:29 GMT
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Dear Walter,
it is very good that you replied and I hope we can discuss some parts of the functionality. I do not insist on this extra function but we are still 5 years away from the real experiment and it is too early to exclude some functions of the system. I know your personal opinion about that but I prefer to look at the arguments without adjectives just with open mind.

Arguments against:

1. the limited bandwidth

Expected TDS bandwidth is 2GBaud downlink and 1-10 MBaud/destination uplink. Many transactions can be done in broadcast mode and allow to use the link more efficient. Loading of firmware is a very good example.

One TDS subsystem will serve from few hundred up to one thousand destinations. The splitting of the TDS to subsystems is done detector wise which means number of different types of FE electronics is limited to even smaller number.

What are the functions of DCS ?

- loading firmware
- setting parameters(pedestals, thresholds, coefficients)
- collecting slow parameters T,V,I,P
- monitoring , alarm , switching OFF power
- testing FEE

The TDS provides only data link between FEs and a host computer. And from my point view it has enough bandwidth for all DCS data transfer mentioned here. If you have examples we can calculate latencies and speed.

2. no CPU and no OS

It is correct, local monitoring is out of TDS functionality and in this case this function has to be included in the FEs or data concentrators with all required resources . As I said the TDS provides the optical data link only.

The Alice DCS card includes the TTC receiver and I believe if the TTC provided bidirectional interface it would be used instead of Ethernet.

Arguments in favour:

1. existing optical network
2. electrical decoupling
3. expected to be cheap with a possibility to include spare transmitters/fibers without additional cost

Igor.
