



Racks for LHC Timing Units

Ch. Ilgner, September 5, 2005

Clarification of the contents of the racks reserved for LHC timing (2 racks/experiment)

ex.: ALICE: under the muon platform (magnetic field!)



LHC Timing – BST and GMT

Experiments have the choice between Beam Synchronous Timing (BST) and GMT (General Machine Timing).

BST is also the time base for TTC. For this system, there is a receiver card provided by AB-CO.

ATLAS:

GMT (central trigger processor gets a UTC time stamp to tag every level-one-trigger event, but ATLAS receives BST as well)

ALICE (has not yet expressed not to need GMT):

CMS:

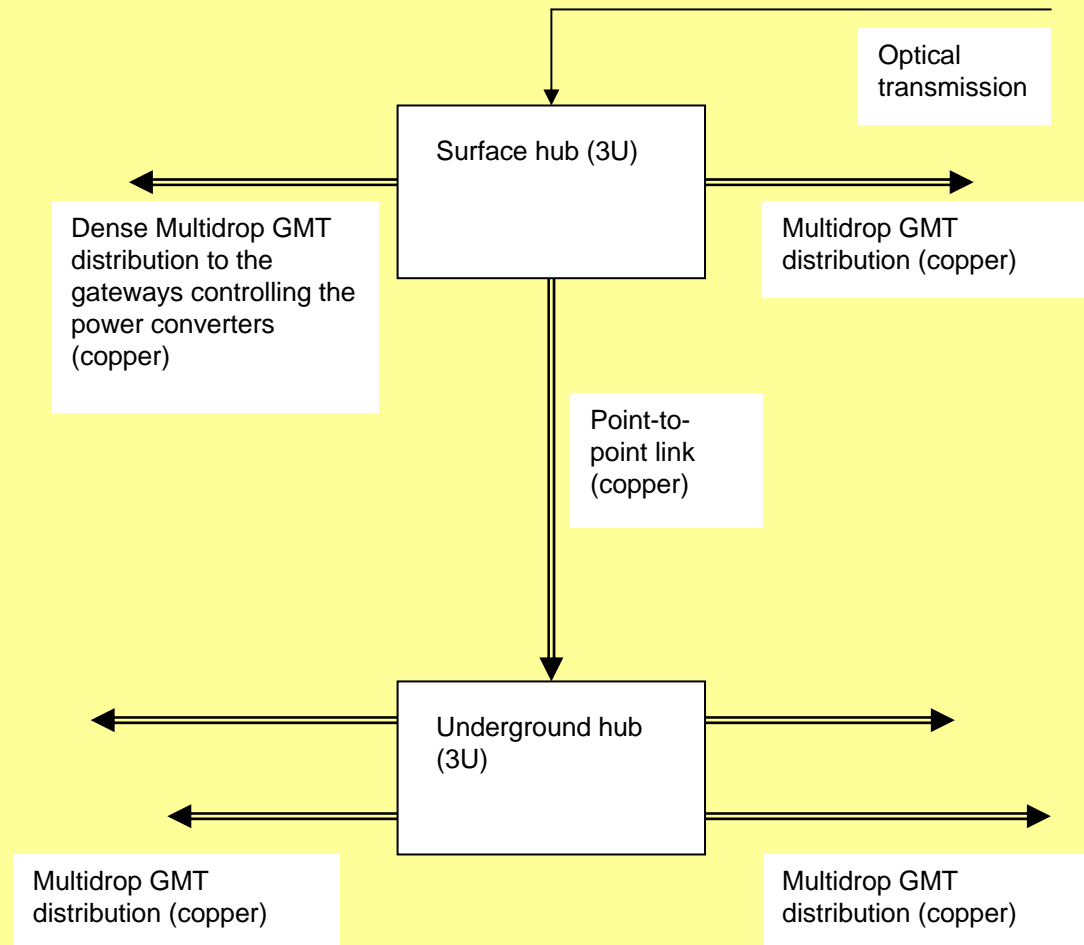
LHCb:

} BST

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BST scheme



(by W. Heinze)

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signal distribution, rack contents

Signal distribution from the MTG (Master Timing Generator) at the Common Control Center to all 8 surface buildings (SR1-SR8) by optical fibers.

Content of the timing racks: receiver card („underground hub“, 3U) **not tested for magnetic-field tolerance** → ALICE!), perhaps CTRP card (also provided by AB-CO)

Local transmission of GMT signals: copper cable (RS-422 standard), separate link for every group of racks

see also: AB/CO/Note 05-02 (Tech.)
(W. Heinze: Timing Transmission for the LHC)

