XLVII PANDA Collaboration Meeting

Update on the CN based Event Builder

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Outline

- test of the new CN
- change from UDP to Aurora
- status of the event builder
- TRBnet data generator current and future

Test of the new CN

- 8 new CN arrived at Gießen
  - 5 for Belle II
  - 3 for Panda + 2 obtain back from Belle II

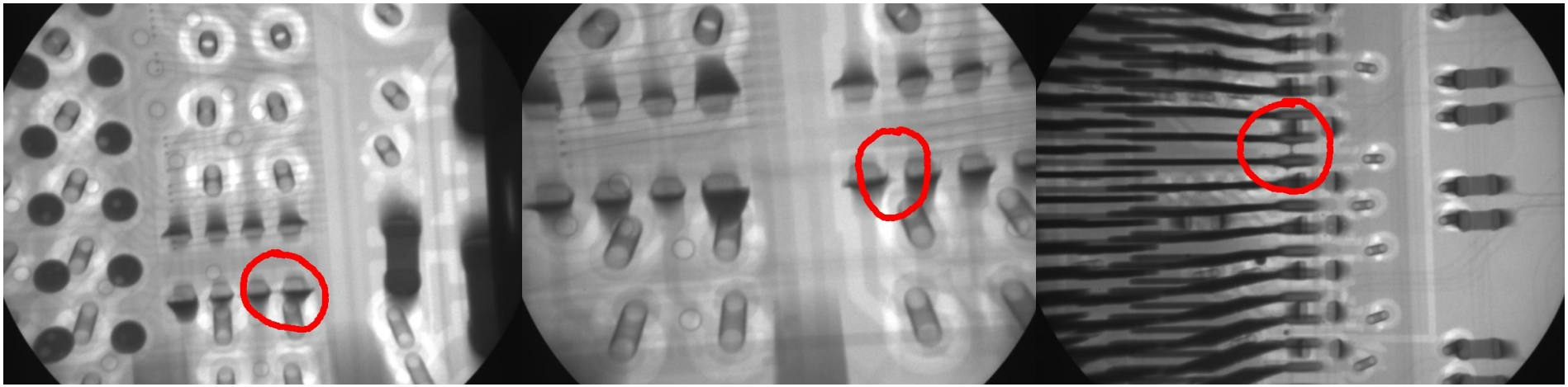
Test of the new CN

- tested following parts (mostly done by Björn Spruck)

	1	2	3	4	5	6	7	8
Seriell	✓	✓	✓	✓	✓	✓	✓	✓
RAM1	✓	X	✓	✓	✓	✓	✓	✓
RAM2	✓	X	✓	✓	✓	✓	✓	✓
PPC	✓	✓	✓	✓	✓	✓	✓	✓
FLASH	✓	✓	✓	X	X	✓	✓	✓
PROM	✓	✓	✓	✓	✓	✓	✓	✓
OPT 1 (3.125 Gb/s)	-	-	-	-	-	-	✓	✓
OPT 2 (3.125 Gb/s)	✓	✓	✓	✓	✓	✓	✓	✓
OPT 3 (3.125 Gb/s)	-	-	-	-	-	-	✓	✓
OPT 4 (3.125 Gb/s)	✓	✓	✓	✓	✓	✓	✓	✓
Ethernet	✓	✓	✓	✓	✓	✓	✓	✓
Backplane (3.125Gb/s)	✓	✓	✓	✓	✓	✓	✓	✓
Linux (on PPC)	✓	✓	✓	✓	✓	✓	✓	✓

Test of the new CN

x-rayed the defect boards:



Short a the connection of flash of board #4

Short a the connection of flash of board #5

Short a the connection of RAM of board #2

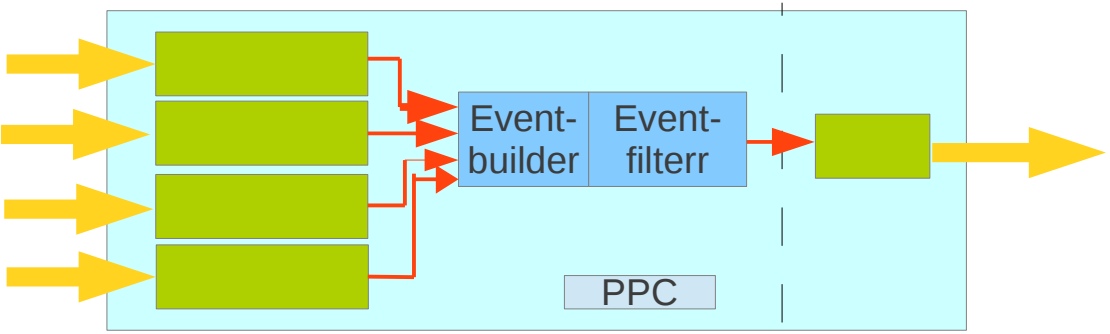
try to fix them in Gießen
If not possible, we have to send them back to IHEP

Short Reminder

µTCA

- 1 xFP v3
  - 4 Inputs 3.125Gb/s
  - 1 Output Gb-Ethernet

MicroTCA.0 System, Cube(Schroff)
Including one xFP and 1 MCH

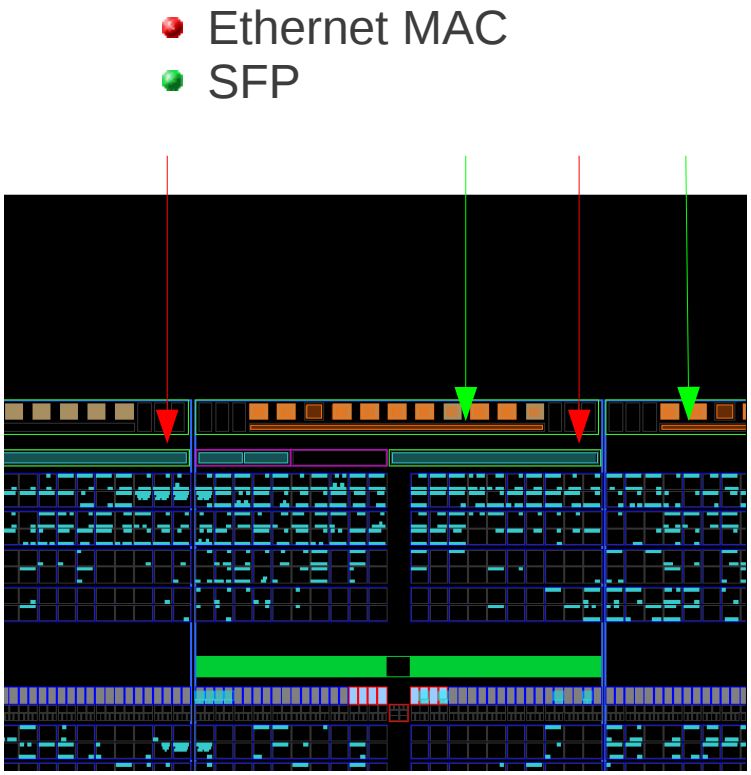


CP xFPv3

Kontron AM4901 MCH

Change from UDP to Aurora

- change from UPD → Aurora
  - Because of the Ethernet MAC
- not needed by using Aurora
  - Easier for the CN
  - Problem: not easy to implement on TRB3
- change back to UDP
  - Grzegorz Korcyl managed yesterday



Schematic of the xFPv3

Status

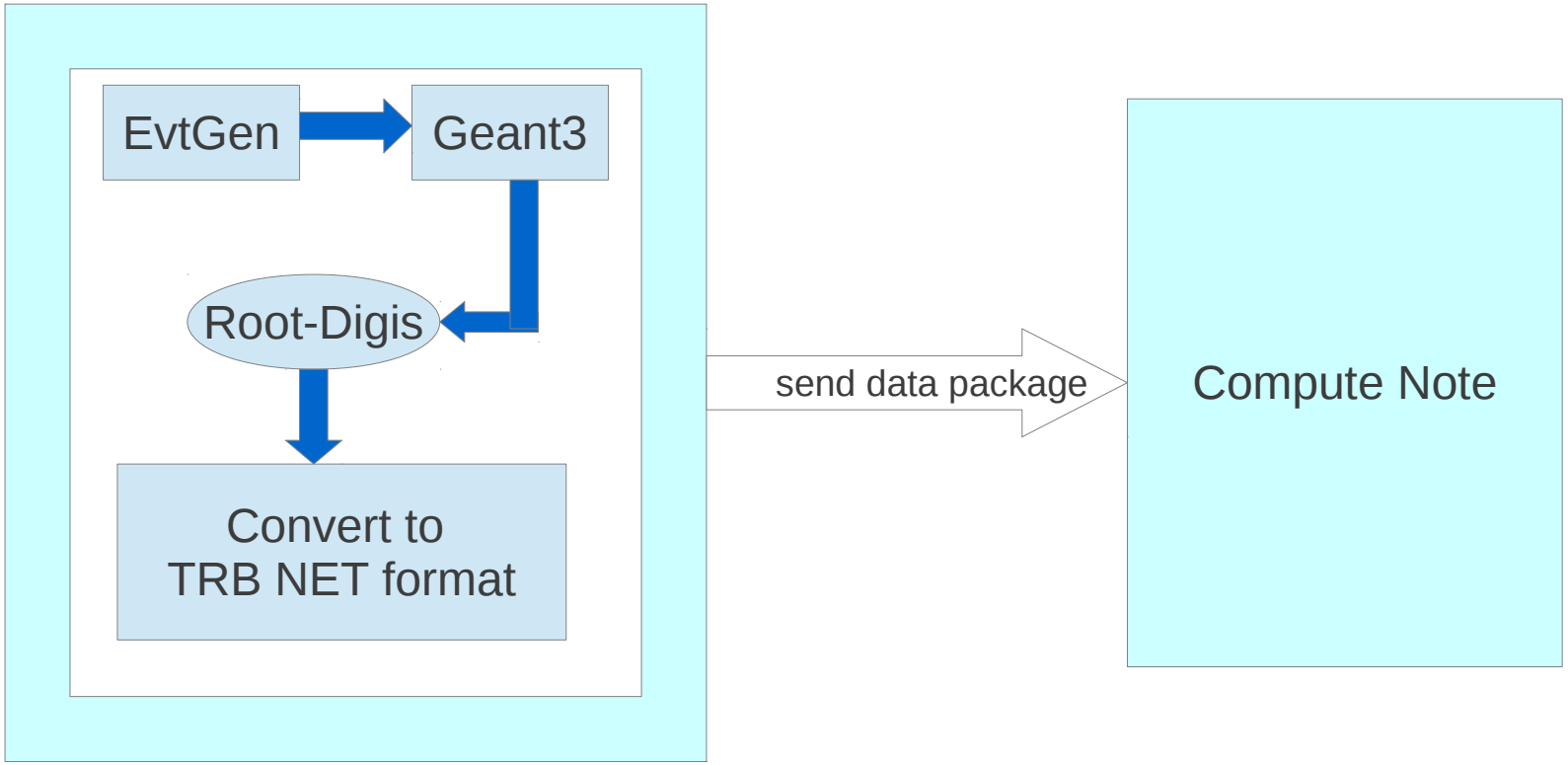
- Tested burst builder:
  - Simulation using ISIM
    - Test bench 2 inputs
      - Ok
    - Test bench 4 inputs
      - Loose sometimes last word
        - Due to a wrong assignment of the LL-interface
    - TRBnet data generator 2 inputs
      - Ok
      -
  - On hardware:
    - 2 inputs UDP
      - OK
    - 2 inputs TCP/IP
      - 3 times the data
        - work in progress

TRBnet data generator current and future

- TRBnet data generator: currently
  - x inputs
  - random data
  - sbn = counter
  - the probability which of the input is used or if more are used, is equally distributed
  - generates the input files and the output files for comparison

TRBnet data generator current and future

- TRBnet data generator: future (Bachelor theses Christopher Hahn)
  - using Panda-root



Thanks for your attention