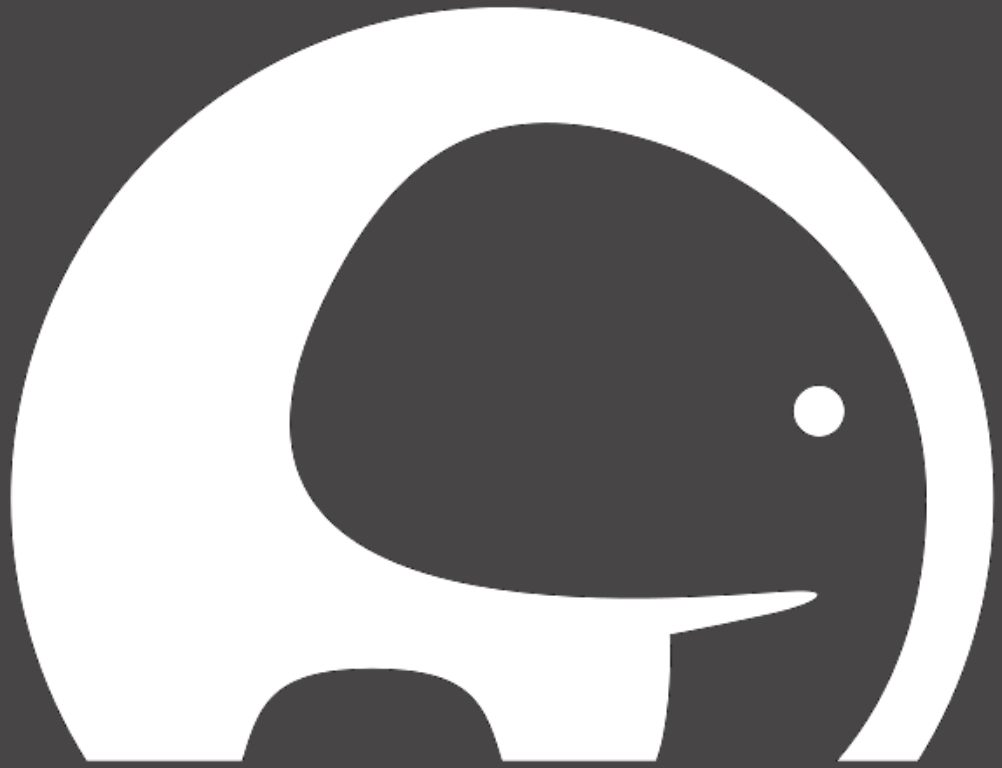

oliscience

open logic interconnects science

Andrea Borga (Digital Design Engineer / co-founder)

Oliscience

- Young and passionate startup of committed professionals
- Originating from the CERN@Nikhef BIC (Business Incubator Centre)

Nikhef

- Coached by the Amsterdam Centre for Entrepreneurship

ACE

- Based at the Startup Village (Science Park)

Oliscience team

Who am I

- In the engineering world most commonly known as a “Digital Designer” or… “the FPGA guy”

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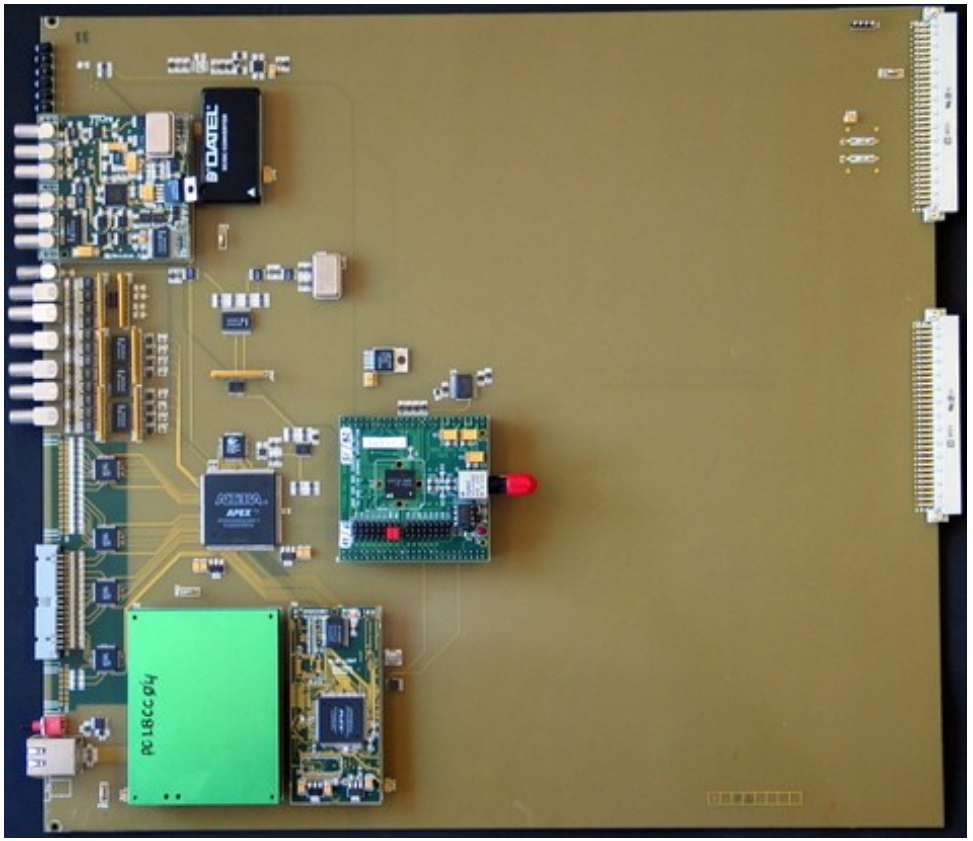

CERN – LHCb (2004)

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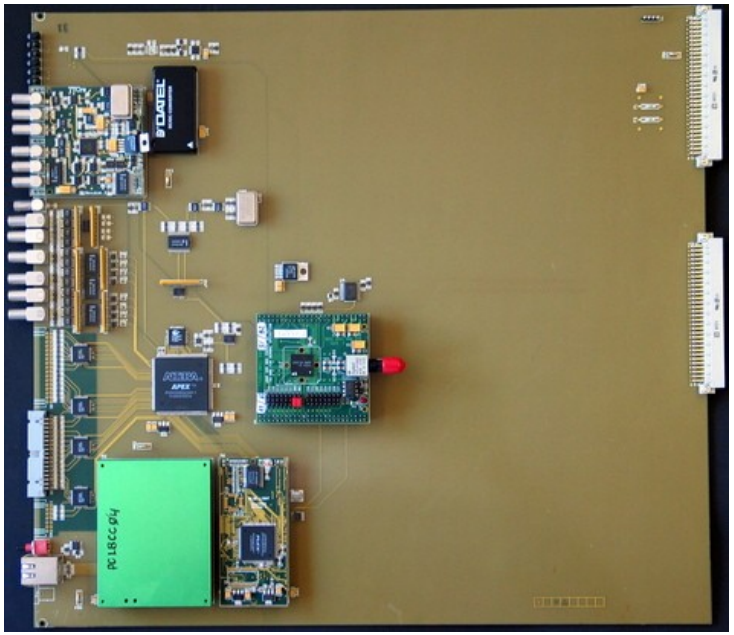

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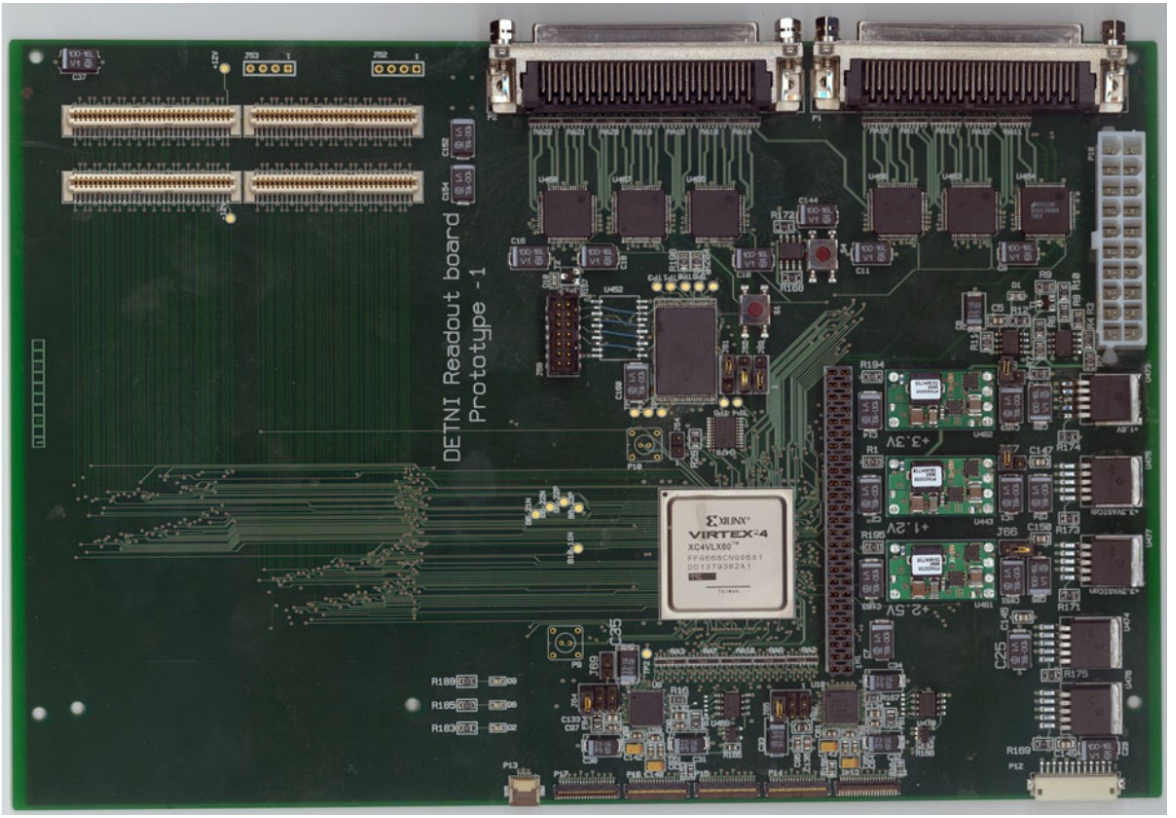

FZ-Juelich – DETNI (2007)

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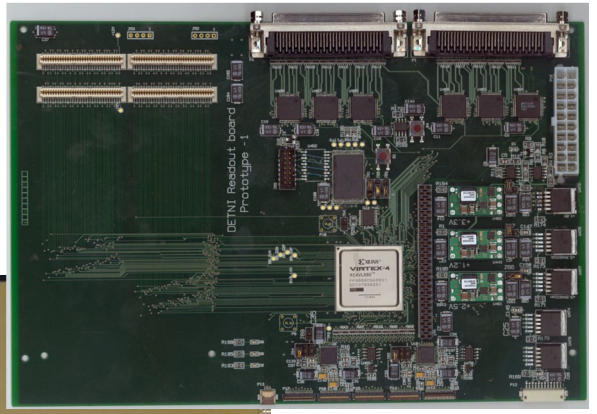

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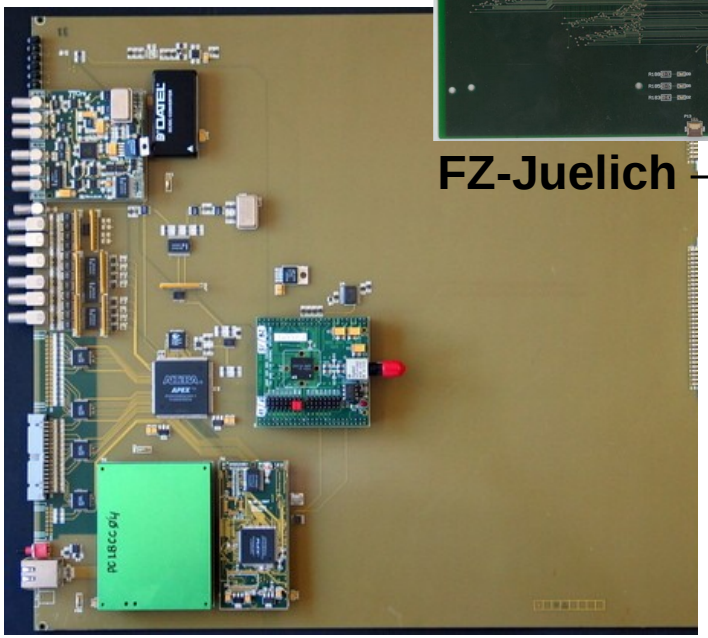

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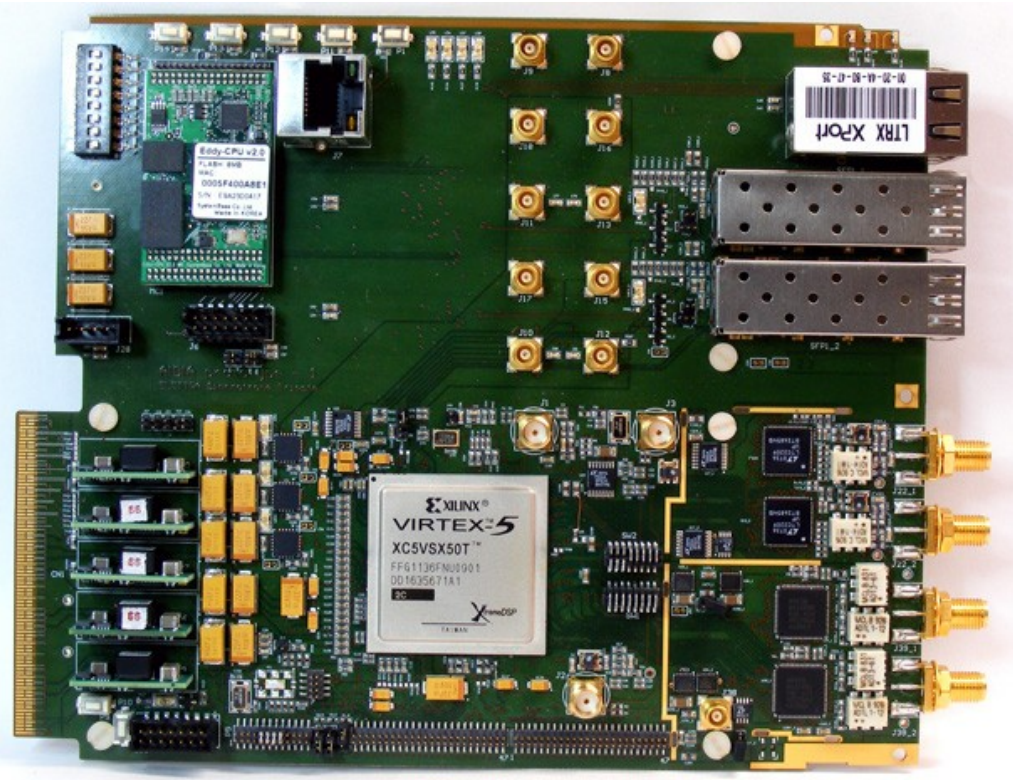

Elettra – FERMI@Elettra (2011)

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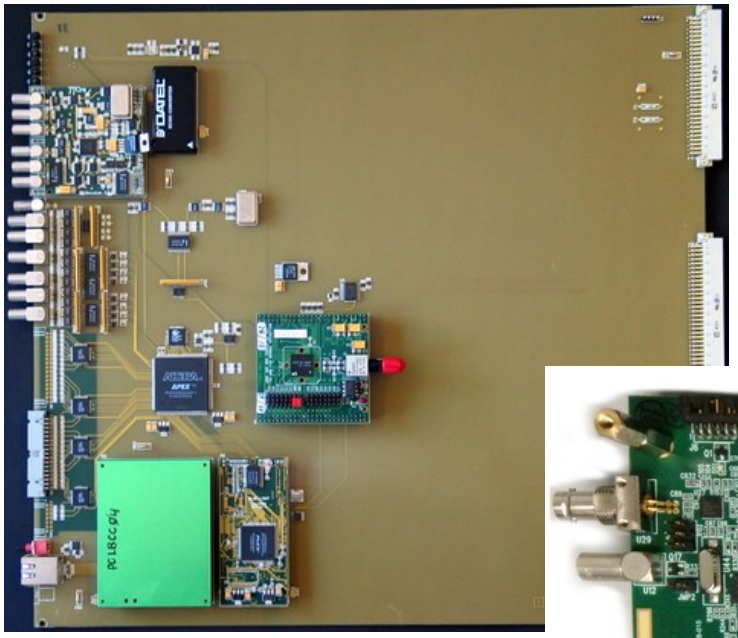

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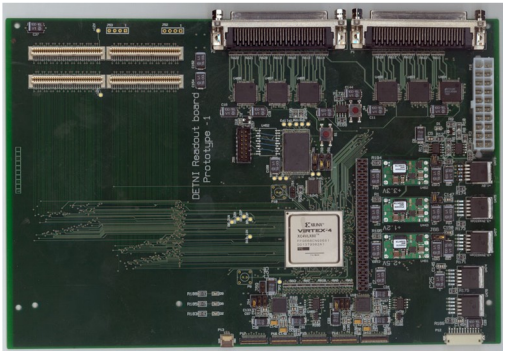

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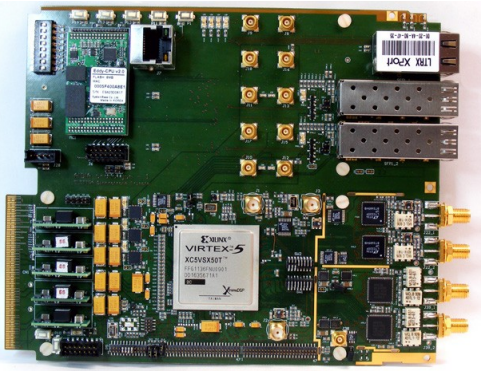

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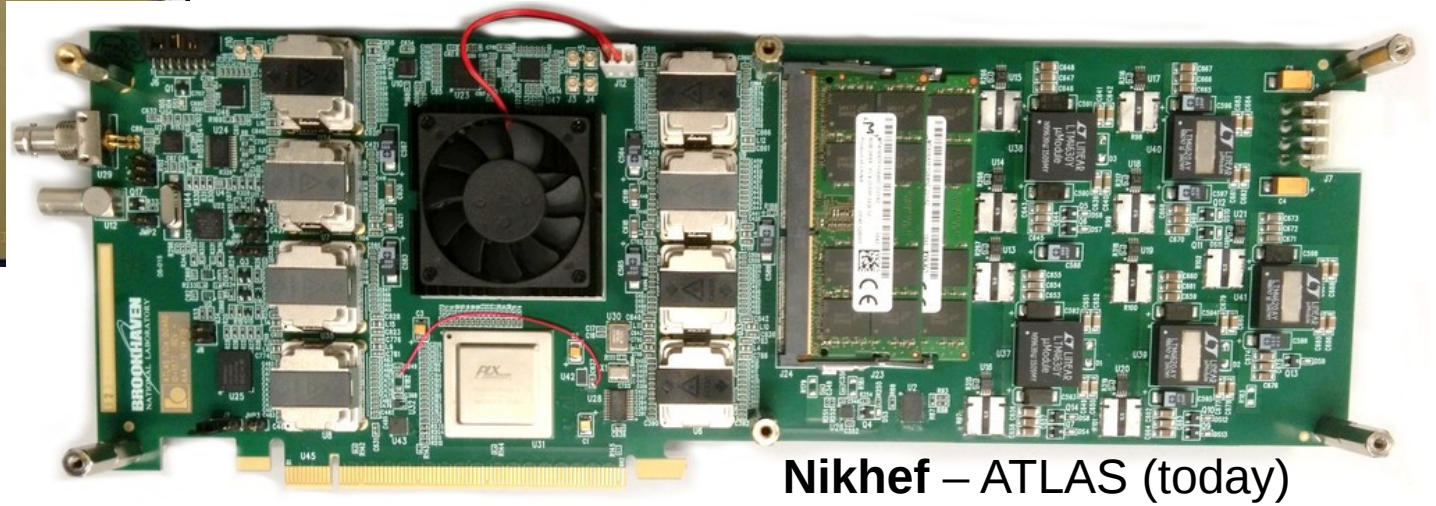
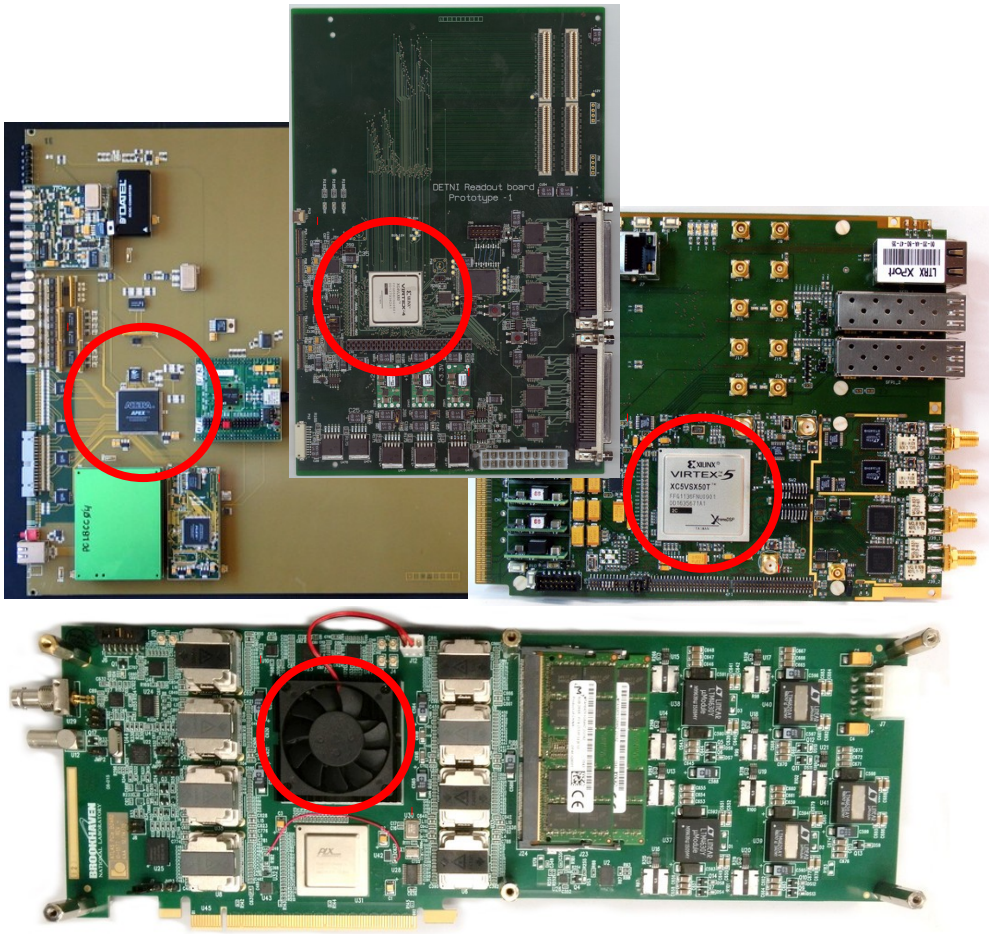
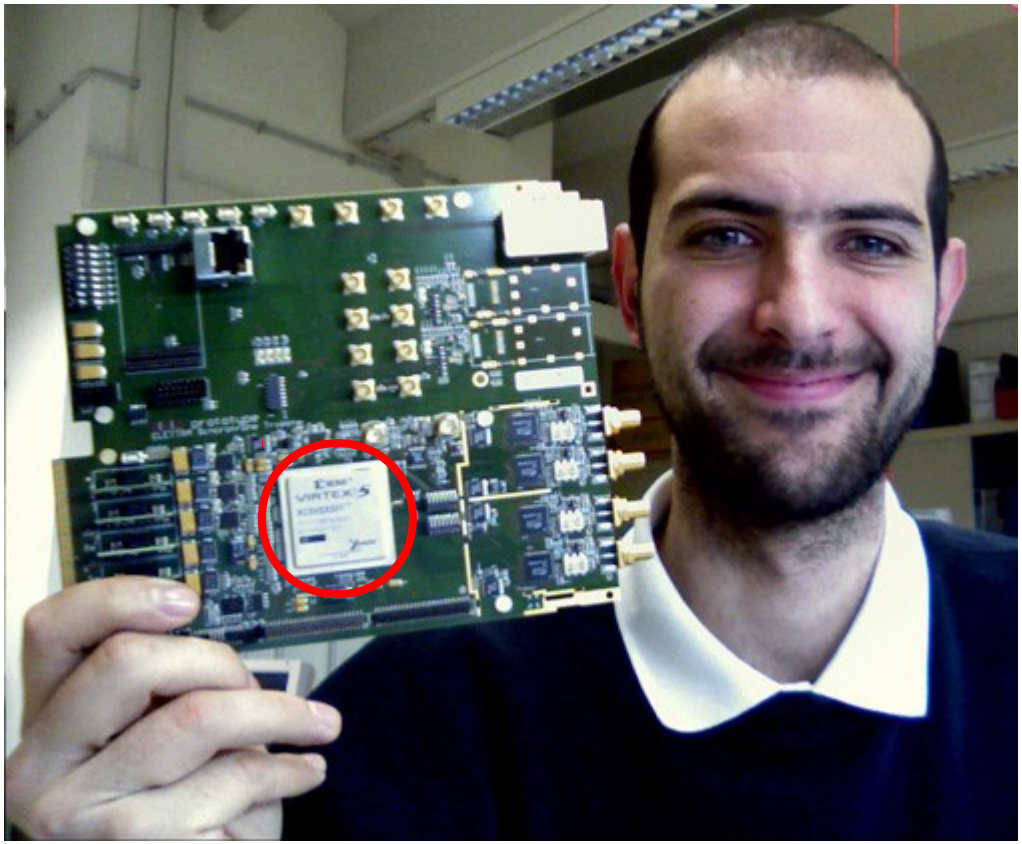


Nikhef – ATLAS (today)

FPGAs

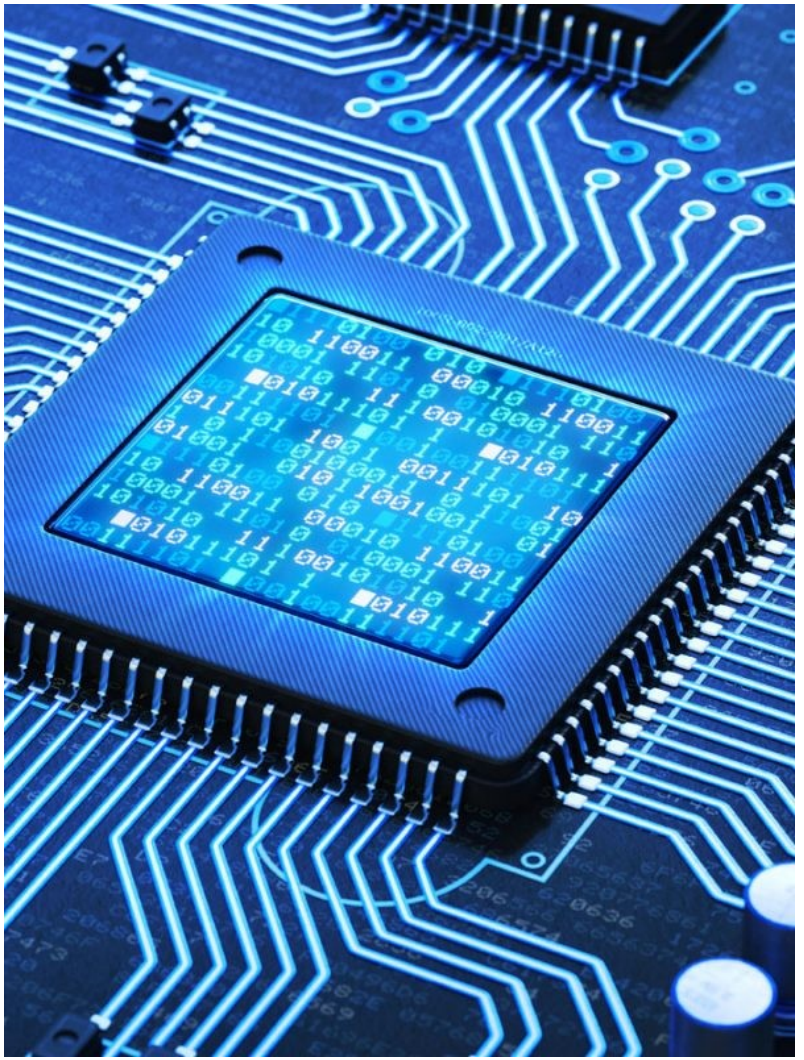
Field **P**rogrammable **G**ate **A**rrays
key components widely used in
high-end technology markets



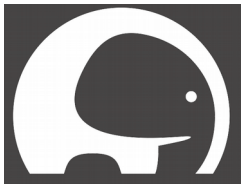


Gateware

“Intelligence” inside the FPGA



Empower experts



Join forces

we develop, drive and promote
a the large OpenCores community

- Research institutions
- Universities
- High-tech corporates

engage them on our portal
and foster common practices

Provide expert services

we want to help the next big innovators in the detector / imaging sector to make the right technological decisions

- Avail from a pool of professionals
- Access to the reference forum
- Strong partnership with Nikhef

Examples of FPGA territories

- Science (accelerators / detectors)

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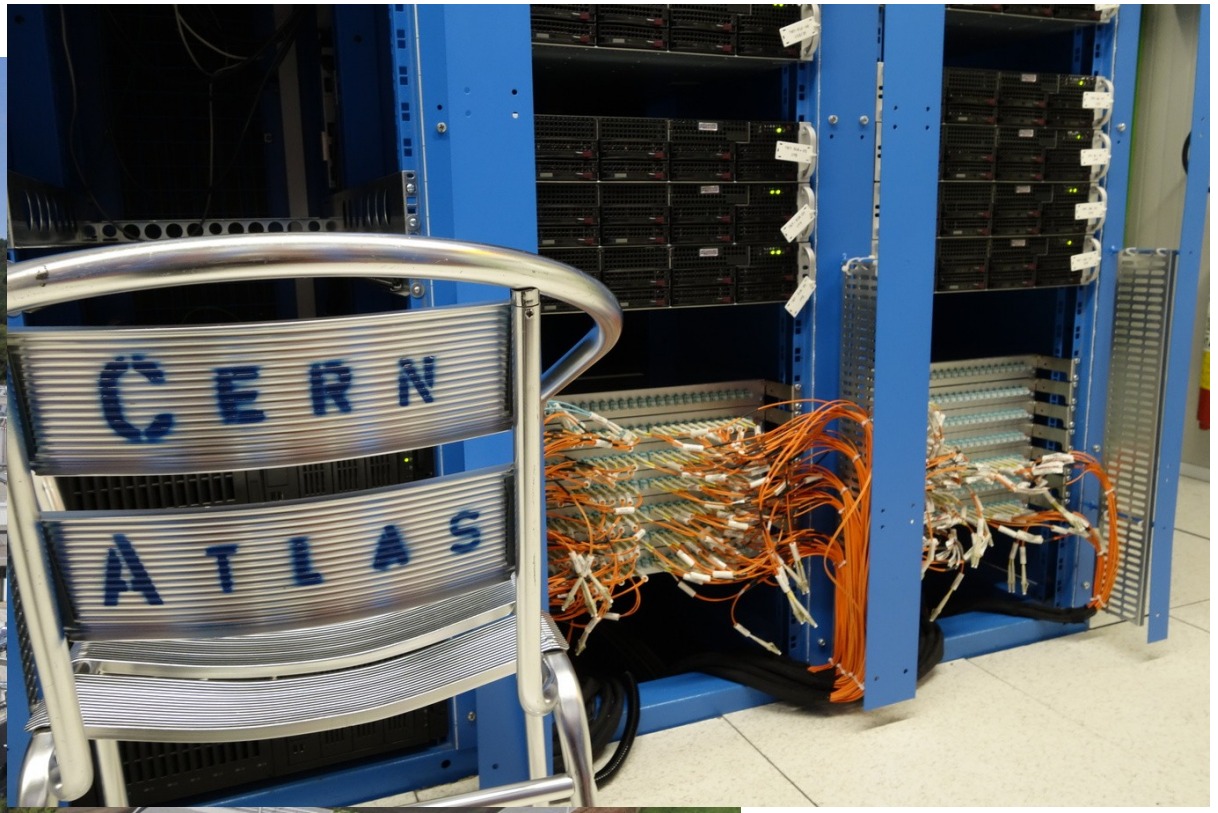
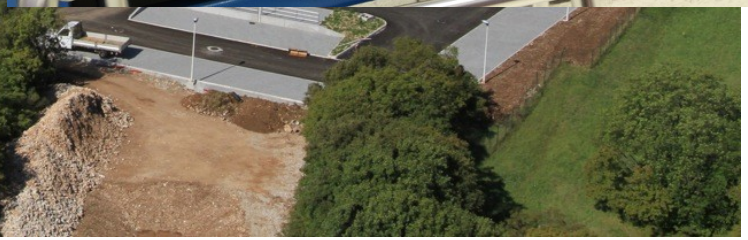
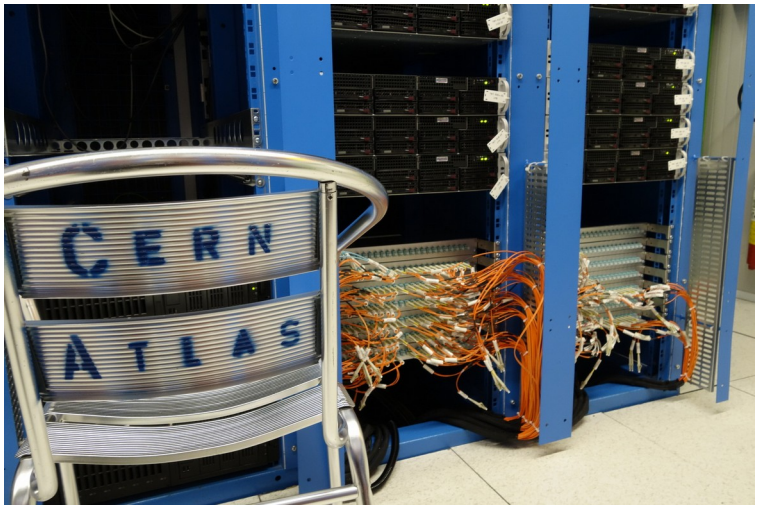




Examples of FPGA territories

- Science (accelerators / detectors)
- Big data (co-processing)

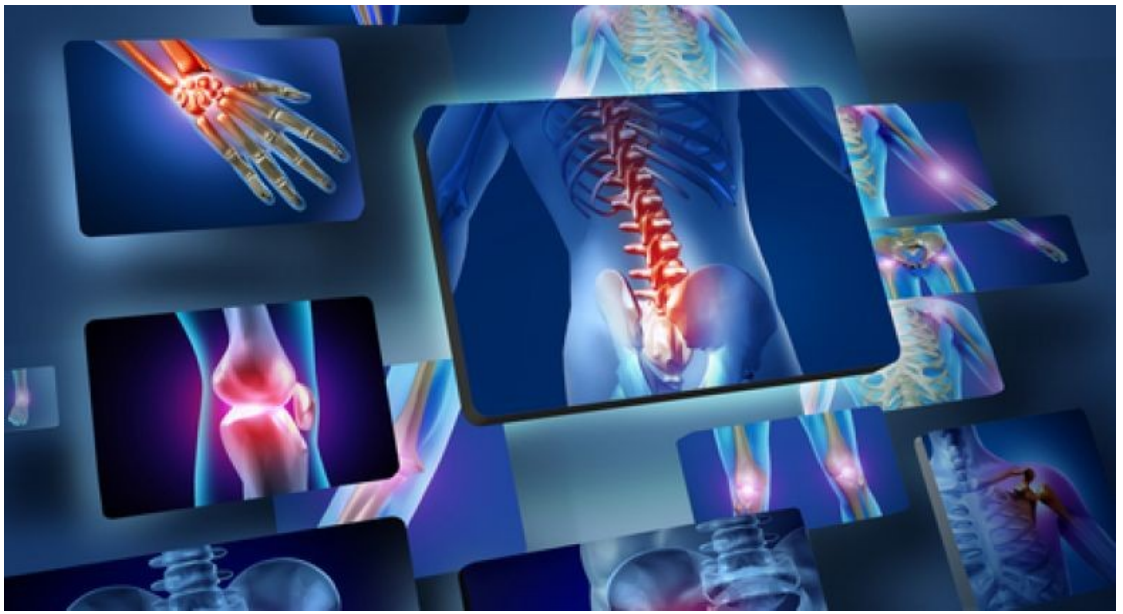


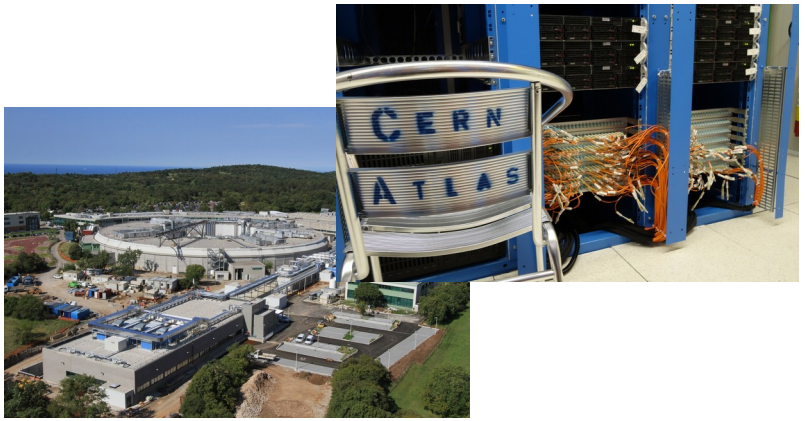
Accelize

amazon web services

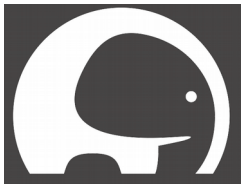
Examples of FPGA territories

- Science (detectors / accelerators)
- Big data (co-processing)
- Medical imaging (real time processing / DAQ)





Accelize | amazon web services



The big ambition

- 2018 will be an exciting year for FPGA fanatics
- FPGAs are getting everywhere (more than ever)
  → Intel bought Altera [end 2015]
  → Xilinx is in the cloud (AWS) with IBM [2017]
- Market is clearly rocketing
- There is a evident wave approaching us
  → that will also hit the frontiers of detector and imaging technologies

Oliscience is ready to catch it first

The big vision

- Already exploring partnerships
  → CERN [in the DAQ area]
  → UMC Utrecht [in the co-processing area]
  → Politecnico di Torino [for the methodology and tools]
- **with a horizon of 5+ years, focus on:**
  → explore the tools, techniques, methods to merge and cross-contaminate sectors using FPGAs
  → lead the effort to define architectures and methodologies applicable to high-end markets

early introduction of best practices for our partners may shape the way of doing FPGA development in the future.