



Contribution ID: 74

Type: **not specified**

Wireless Allowing Data and Power Transmission (WADAPT)

Wireless techniques have developed extremely fast over the last decade and using them for data and power transmission in particle physics detectors is not science fiction any more. During the last years several research groups have independently thought of making it a reality. Wireless techniques became a mature field for research and new developments might have impact on future particle physics experiments.

The Instrumentation Frontier was set up as a part of the SnowMass 2013 Community Summer Study 1 to examine the instrumentation R&D for the particle physics research over the coming decades: « To succeed we need to make technical and scientific innovation a priority in the field ».

Wireless data transmission was identified as one of the innovations that could revolutionize the transmission of data out of the detector. Power delivery was another challenge mentioned in the same report.

We propose a collaboration to identify the specific needs of different projects that might benefit from wireless techniques. The objective is to provide a common platform for research and development in order to optimize effectiveness and cost, with the aim of designing and testing wireless demonstrators for large instrumentation systems.

R. Brennera, S. Ceuterickxb, C. Dehosc, P. De Lurgiod, Z. Djurcicd, G. Draked, J.L. Gonzalez Gimenezc, L. Gustafsson, D.W. Kime, E. Loccif, D. Röhrichg, A. Schöningh, A. Siligarisc, H.K. Soltveith, K. Ullalandg, P. Vincentc, D. Wiednerth, S. Yangg
enter link description here

a Uppsala University, Sweden

b CERN, European Organisation for Nuclear Research, Genève, Switzerland

c CEA/LETI/DRT/DACLE/LAIR, Grenoble, France

d Argonne National Laboratory, Argonne, IL 60439, USA

e Gangneung National University, Korea

f CEA/DSM/IRFU/SPP, Gif-sur-Yvette, France

gUniversity of Bergen, Norway

hUniversity of Heidelberg, Germany

Primary author: Dr SOLTVEIT, Hans Kristian (University of Heidelberg)

Presenter: Dr SOLTVEIT, Hans Kristian (University of Heidelberg)