MUSE

H2020-MSCA-RISE-2015 – Grant Agreement N° 690835

Prisma Electronics SA

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Head of the Scientific/Advisory Board

INFN Istituto Nazionale di Fisica Nucleare
UNIVERSITY OF LIVERPOOL
CAEN Tools for Discovery
Prisma Electronics SA
UCL
HZDR HELMHOLTZ ZENTRUM DRESDEN ROSSENDORF
AdvanSiD Advanced Silicon Detectors
Fermilab

MUSE Mid-Term Meeting
Frascati, 11 May 2017

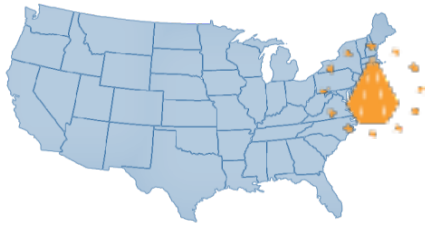
MUSE - Overview

- ✗ Prisma Electronics
- ✗ Secondments: implementation and monitoring
- ✗ Impact on individual careers
- ✗ Conclusions

MUSE – Prisma Electronics

Founded: 1991

- Electronics Manufacturing Services
- R&D projects (**> 35** since 1997)

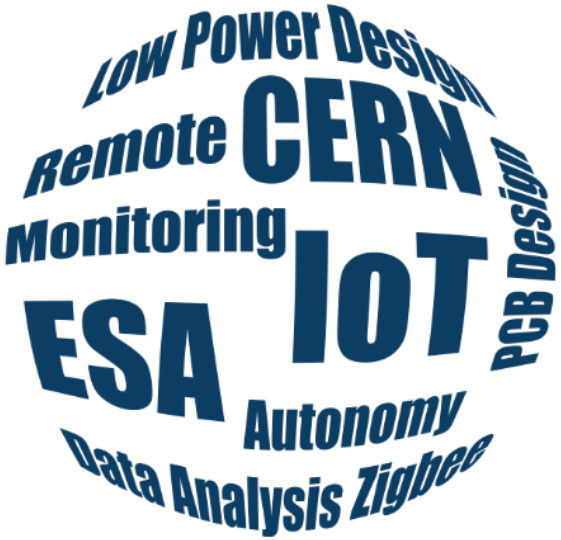


USA

GREECE

UK

≈70
employees



MUSE – Prisma's Secondments

- Number of Secondments : 20
- Secondments implemented : 5

No		Place	Date
1	Soukoulia Adamantia	INFN, Frascati	16 May 2016 – 15 June 2016
2	Kouris Paraskevas	INFN, Frascati	16 May 2016 – 15 June 2016
3	Tsourapas Konstantinos	INFN, Pisa	20 June 2016 – 19 July 2016
4	Xafi Despoina	LIVERPOOL, UK	15 February 2017 – 15 March 2017
5	Tsourapas Konstantinos	LIVERPOOL,UK	13 March 2017 – 13 April 2017

MUSE – Prisma's Secondments

Soukoulia Adamantia, INFN – Frascati, 16/5 – 15/6 2016

- Participation in Activities connected with the WP6 (Transfer of Knowledge)
- Basic procedures to ensure quality assurance for the Mu2e calorimeter project
- A quality assurance architecture was initially drawn where several procedures where proposed for evaluation
- All proposed procedures were relevant with the project's nature and requirements
- All procedures were finalized at the end of the secondment
- Need to create written instructions or relevant forms where indicated for each procedure

MUSE – Prisma's Secondments

Secondment of Soukoulia Adamantia, INFN – Frascati, 16/5 – 15/6 2016

List of Procedures		
Procurement		
PROC01	Procurement	Ensure that all procurement activities are controlled so that all procured items and services conform to requirements.
PROC02	Quality Assurance	Ensure that all materials supplied conform with the requirements. (In quantity and quality)
PROC03	Handling - Storage - Packing -	Ensure safe handling, storage, preservation of items during all phases of testing and operation. Address principles and actions to ensure that safe packaging and transportation activities
Configuration and Data management		
CDM01	Traceability	Define the method and means for controlling the traceability of all items used for the implementation of a project.
Non-Conformance		
NC01	Non-Conformance	Determine the approach to the identification and processing of non-conforming materials and products.
Production		
PROD01	Metrology & Calibration	Define the method and means for controlling the accuracy of all inspection, measuring and test equipment to ensure that measurements and product inspections have the desired accuracy and reliability.
Human Resources		
HR01	Training	Define the requirements for the training of the personnel involved.
PA Management		
PA01	PA Management	Define the management requirements to be implemented throughout the phases of the project and address the relevant actions to fulfill these requirements.

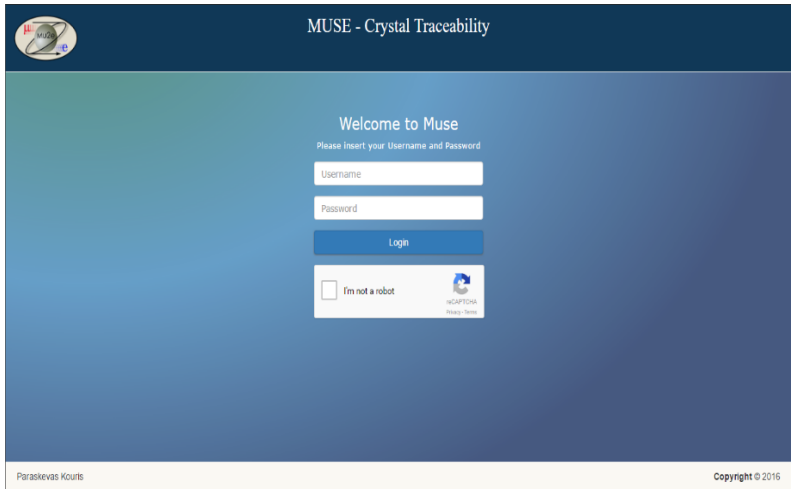
MUSE – Prisma's Secondments

Kouris Paraskevas, INFN – Frascati, 16/5 – 15/6 2016

- Participation in Activities connected with the WP2 (Mu2e detectors)
- Identifying the crystals types to be used and tested
- Issue of traceability of crystals
- A database architecture was initially drawn where all necessary info regarding the crystals will be saved
- An online database was created (Login/access, Search, Add a crystal, Edit, Delete)
- At the end of the secondment modifications applied and the database was delivered
- Technical support on DB function and maintenance

MUSE – Prisma's Secondments

Kouris Paraskevas, INFN – Frascati, 16/5 – 15/6 2016



MUSE – Prisma's Secondments

Tsourapas Konstantinos, INFN – Pisa, 20/6 – 19/7 2016

- Participation in activities connected with the WP2 (Mu2e detectors)
- Development of a prototype for testing photosensors that will operate in a vacuum chamber environment
- Design 3 boards, that will be connected to each other in order to control separately each of the 25 sensors
- The 3 boards combined and connected to each other should form to the complete electronic system for testing adequately the arrays of the photosensor.

MUSE – Prisma's Secondments

Xafi Despoina, LIVERPOOL – UK, 15/2 – 15/3 2017

- Participation in Activities connected with the WP1 (g-2 detectors)
- Getting familiar with the g-2 tracking detector
- Update on experiment's status and on the participating sites data
- Learning on the reduction in systematic uncertainties compared to the previous Brookhaven National Laboratory experiment

MUSE – Prisma's Secondments

Tsourapas Konstantinos, LIVERPOOL – UK, 13/3 – 13/4 2017

- Participation in Activities connected with the WP1 (g-2 detectors)
- Tasks carried out:
  - Test of wire tension inside the build module
  - Connect PCB's in the module
  - Test the PCB's – Result collected by a computer that analyses the data and provides a corresponding graph
- Work was take place in the 10.000 class clean room of the physics department

MUSE – Impact on Individual Careers

Soukoulia Adamantia, INFN – Frascati, 16/5 – 15/6 2016

- Familiarization with a different working environment
- New knowledge gained
- Training in new research fields
- Developed great relationship with the in-house researchers
- Foundation/base for cooperating in a future project

MUSE – Impact on Individual Careers

Kouris Paraskevas, INFN – Frascati, 16/5 – 15/6 2016

- Expansion of the field of expertise
- Improvement of engineering skills
- Receive training in new research fields
- Developed great relationship with the in-house researchers
- Familiarization with a different working environment
- Opportunity for cooperating in a future project

MUSE – Impact on Individual Careers

Tsourapas Konstantinos, INFN – Pisa, 20/6 – 19/7 2016

- Boosting the morale
- Increase motivation
- Improve teamwork
- Ability to gain knowledge

LIVERPOOL – UK, 13/3 – 13/4 2017

- Expansion of the field of expertise
- Improvement of engineering skills
- Familiarization with the British culture and a different working environment
- A significant experience that can be further developed in Prisma's relative project

MUSE – Impact on Individual Careers

Xafi Despoina, LIVERPOOL – UK, 15/2 – 15/3 2017

- Became familiar with the institution's culture and working practices
- Develop a strong relationship with the in-house researchers and the research team
- Perfect opportunity to share and consolidate different areas of expertise
- Receive training in new research fields
- A valuable learning opportunity and knowledge sharing, between research and industry

MUSE –Conclusions

- A great opportunity to researchers and industry personnel to work together in a sophisticated environment of innovative technological systems since most of the research activities are at the leading-edge of technology.

- New research collaborations and support of already existing ones, since the project provides the perfect opportunity to share and consolidate different areas of expertise in advanced technologies.

- A new generation of European scientists with a more global approach and ingenious problem-solving abilities, to enhance the European academic and industrial organizations.

MUSE – Prisma's Secondments

- Secondments to be implemented in 2017:

No		Place	Date
1.	Despoina Delidou	INFN, Frascati	TBD
2.	Paris Kouris	INFN, Frascati	TBD
3.	Panagiotis Kalaitzidis	HZDR, Dresden	TBD