CLONETS
CLOCK NETWORK SERVICES

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Strategy and Innovation for clock services over optical-fibre networks

Project Manager: **Richard Tavares**

Observatoire de Paris

61 avenue de l'Observatoire 75014 Paris, France

Email: clonets.coordination@sympa.obspm.fr

HORIZON 2020
THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

Meeting

Project partners met on Kick off meeting in Paris February 28th to March 1st 2017

Deliverables

Deliverable D4.1
Project Website (document supporting the website) was approved by the European Commission

Deliverable D3.1
Preliminary list of TF service categories and needs survey questions was submitted to EC portal

What is the CLONETS project?

A scientific and technological paradigm change is taking place, concerning the way that very high performance time and frequency reference signals are distributed, moving from radio signal broadcasting to signal transport over optical fibre networks. The latter technology demonstrates performance improvements by orders of magnitude, over distances up to continental scale. Research infrastructures are developing several related technologies, adapted to specific projects and applications.
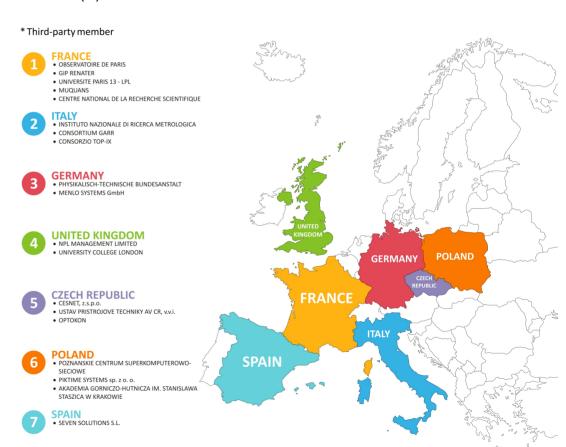
The present project aims to prepare the transfer of this new generation of technology to industry and to strengthen the coordination between research infrastructures and the research and education telecommunication networks, in order to prepare the deployment of this technology to create a sustainable, pan-European network, providing high-performance "clock" services to European research infrastructures. Further this core network will be designed to be compatible with a global European vision of time and frequency distribution over telecommunication networks, enabling it to provide support to a multitude of lower-performance time services, responding to the rapidly growing needs created by developments such as cloud computing, Internet of Things and Industry 4.0.

The project aims at partnership building and innovation for high performance time and frequency (clock) services over optical fibre networks and to prepare the implementation of such a European backbone network.

Who are we?

Project CLONETS involved 16 partners from 7 European countries. Partners represent 4 main areas:
- National Measurement Institutes: OBS PARIS (FR), NPL (UK), PTB (DE), INRIM (IT)
- National Research and Education Network: RENATER (FR), CESNET (CZ), PSNC (PL), GARR* (IT),
- Academic Laboratories: AGH (PL), UP13 (FR), UCL (UK), ISI (CZ), CNRS* (FR)
- Industrial: MUQUANS (FR), MENLO (DE), PIKTIME (PL), SEVEN SOL (SP), OPTOKON (CZ), TOP-IX* (IT)

* Third-party member

1 FRANCE
- OBSERVATOIRE DE PARIS
- GIP RENATER
- UNIVERSITE PARIS 13 - LPL
- MUQUANS
- CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

2 ITALY
- INSTITUTO NAZIONALE DI RICERCA METROLOGICA
- CONSORTIUM GARR
- CONSORZIO TOP-IX

3 GERMANY
- PHYSIKALISCH-TECHNISCHE BUNDESANSTALT
- MENLO SYSTEMS GmbH

4 UNITED KINGDOM
- NPL MANAGEMENT LIMITED
- UNIVERSITY COLLEGE LONDON

5 CZECH REPUBLIC
- CESNET, z.s.p.o.
- USTAV PRISTROJOVE TECHNIKY AV CR, v.v.i.
- OPTOKON

6 POLAND
- POZNANSKIE CENTRUM SUPERKOMPUTEROWO-SIECIOWE
- PIKTIME SYSTEMS sp. z o. o.
- AKADEMIA GORNICZO-HUTNICZA IM. STANISLAWA STASZICA W KRAKOWIE

7 SPAIN
- SEVEN SOLUTIONS S.L.

UNITED KINGDOM

GERMANY

POLAND

CZECH REPUBLIC

FRANCE

ITALY

SPAIN

Project Participants