

# **PhoxTroT**

Photonics for High-Performance, Low-Cost & Low-Energy Data Centers, High Performance Computing Systems: Terabit/s Optical Interconnect Technologies for On-Board, Board-to-Board, Rack-to-Rack Data Links

Collaborative Project
Grant Agreement Number: 318240

# Project Website Development D13.1

**Deliverable number:** D13.1 **Work package number:** 13

Due date of deliverable:30.11.2012 (M02)Actual submission date:28.11.2012Start date of the project:01.10.2012Duration:48 months

Nature: Report Dissemination level: PU

Lead beneficiary: Fraunhofer
Contact person: Dr. Tolga Tekin

Address: Fraunhofer IZM, Gustav-Meyer-Allee 25, 13355 Berlin, Germany

**Phone:** +49 30 464 03639

**Email:** tolga.tekin@izm.fraunhofer.de

**Author(s):** Kathrin Erhard

Contributing All

beneficiaries:

## Abstract:

The PhoxTroT Project Website has been developed and established by the coordinator Fraunhofer and since then kept up to date by means of the contribution regarding the project development, results and publications of all partners. url: www.phoxtrot.eu

**Keywords:** project website

PU = Public; PP = Restricted to other program participants (including the Commission Services); RE = Restricted to a group specified by the consortium (including the Commission Services); CO = Confidential, only for members of the consortium (including the Commission Services)

# **Project Information**

**PROJECT** 

**Project name:** Photonics for High-Performance, Low-Cost & Low-Energy

Data Centers, High Performance Computing Systems: Terabit/s Optical Interconnect Technologies for On-Board,

Board-to-Board, Rack-to-Rack Data Links

Project acronym: PhoxTroT
Project start date: 01.10.2012
Project duration: 48 months
Contract number: 318240

**Project coordinator:** Dr. Tolga Tekin - Fraunhofer

**Instrument**: Large-scale integrating project - CP-IP

**Activity:** ICT-8-3.5 - Core and disruptive photonic technologies

**DOCUMENT** 

**Document title:** Project Website development

**Document nature**: Report **Deliverable number**: D13.1

Due date of delivery:30.11.2012 (M02)Calendar date of delivery:28.11.2012 (M02)Editor:Dr. Tolga TekinAuthor(s):Kathrin ErhardLead beneficiary:Fraunhofer

Contributing beneficiaries: All Dissemination level: PU Work package number: 13

Work package title: Dissemination and Training

**Date created:** 05.12.2012 **Updated:** 26.06.2013

Version: 2
Total number of pages: 12
Document status: final

PU = Public; PP = Restricted to other programme participants (including the Commission Services); RE = Restricted to a group specified by the consortium (including the Commission Services); CO = Confidential, only for members of the consortium (including the Commission Services)

# **Table of Contents**

1	Executive Summary	4
2	Executive SummaryIntroduction	4
2.1	Purpose of this document	4
2.2	Document structure	4
2.3	Audience	
3	PhoxTroT Project Website	5
3.1	'Home' page	6
3.2	'Objectives' page	7
3.3	'Partners' page	8
3.4	'News' page	9
3.5	'Downloads' page	10
3.6	'Contact' page	11
3.7	PhoxTroT at social media	12
3.8	PhoxTroT most recent news	12
3.9	PhoxTroT Newsletter subscription	12

# 1 Executive Summary

The PhoxTroT Project website was designed and created by "mcc – Agentur für Kommunikation" in accordance with the input of the Fraunhofer coordinator.

PhoxTroT website 'www.phoxtrot.eu' became online on the 28.11.2012, according to schedule.

The website consists of six main pages, home, objectives, partners, news, downloads, contact, respectively.

# 2 Introduction

# 2.1 Purpose of this document

The objective of this deliverable D13.1 is to report on the PhoxTroT Project website development.

## 2.2 Document structure

The present deliverable D13.1 is split into three major chapters:

- Executive summary
- Introduction
- PhoxTroT Project website detailed description

## 2.3 Audience

This document is public.

# 3 PhoxTroT Project Website

url: www.phoxtrot.eu

PhoxTroT Project website was developed in order to provide a continuous update about the project progress and the results obtained. The website is targeting users external to the consortium. The website offers information about the project objectives, latest achievements, public deliverables, white papers and vision papers as well as information on the consortium beneficiaries, their background and contribution inside PhoxTroT. The website aims to raise the image of the project and improve dissemination to specialists, potential users of the PhoxTroT technology, politicians and public authorities, as well as the general public. The website is being maintained and updated regularly by Fraunhofer, and will be active for at least three years after the end of the project.

PhoxTroT website 'www.phoxtrot.eu' became online on the 28.11.2012, according to schedule.

The website consists of six main pages, home, objectives, partners, news, downloads, contact, respectively.

The first three pages of PhoxTroT website are virtually constant.

The first page "Home" gives an overview over the project, describing its content, its plans and goals.

The second page "Objectives" presents PhoxTroT specific scientific and technical objectives.

On the third page "Partners" the PhoxTroT consortium partners are listed including links to their organization websites.

The fourth page "News" provides the latest news on the project with links to the specific news.

The fifth page "Downloads" enables access to the public PhoxTroT documents such as 'Project Presentation' and 'PhoxTroT Newsletter'.

Those two pages are updated regularly with new content.

The sixth page "Contact" provides the project coordinator details, including postal address, phone number and project specific email address.

Further, the PhoxTroT website pages consist links to PhoxTroT social media presents, PhoxTroT most recent news, and PhoxTroT Newsletter subscription option.

In the following sections screenshots of each page are provided.

# 3.1 'Home' page

http://www.phoxtrot.eu/











Home | Objectives | Partners | News | Downloads | Contact

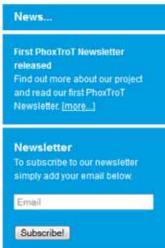


# Welcome to the PhoxTroT project page

PhoxTroT is a large-scale research effort focusing on high-performance, low-energy and cost and small-size optical interconnects across the different hierarchy levels in data center and high-performance computing systems; on-board, board-to-board and rack-to-rack. PhoxTroT will ackle optical interconnects in a holistic way, synergizing the different fabrication platforms in order to deploy the optimal "mix&match" technology and tailor this to each interconnect layer. PhoxTroT will 'ollow a layered approach from near-term exploitable to more forward looking but of high expected gain activities.

#### The objective of PhoxTroT is the deployment of

- . Generic building block that can be used for a broad range of applications, extending performance beyond Tb/s and reducing energy by more than 50%.
- · A unified integration/packaging methodology as a cost/energy-reduction factor for boardadaptable 3D SiP transceiver and router optochip fabrication.
- . The whole "food-chain" of low-cost and low-energy interconnect technologies concluding to 3 fully functional prototype systems: an >1Tb/s throughput optical PCB and >50% reduced energy requirements, a high-end >2Tb/s throughput optical backplane for board-to-board



# 3.2 'Objectives' page

http://www.phoxtrot.eu/objectives/











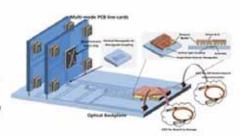
Home | Objectives | Partners | News | Downloads | Contact

# **Objectives**

PhoxTroT's specific S&T objectives are:

#### OBJECTIVE 1:

Create the optimal synergies between different technology platforms streamlining their deployment towards Tb/s-scale, high-performance, low-cost and low-energy optical interconnect components and sub-systems.



#### **OBJECTIVE 2:**

Address optical interconnects in a holistic way and deploy the necessary design- and process-level framework for translating individual interconnect component- and subsystem technology advances into true system-level performance, cost and energy benefits.

#### **OBJECTIVE 3:**

Develop high performance, low-cost and low-energy generic building blocks that can be used for a broad range of applications along all relevant optical interconnect hierarchy layers.

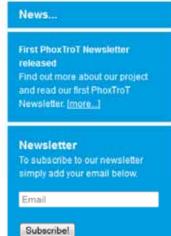
Deploy a whole new class of high-performance intra-chip optical/electrical TSVs and chip-to-board / board-to-board interfaces.

Deploy a unified integration/packaging methodology for board-adaptable 3D System-in-Package (SiP) transceiver and router optochip fabrication.

Establish Optical Packet Switch Transport (OPST) and Advanced Modulation Format concepts as performance-enhancing and energy-reducing principles in the domain of datacom device technologies.

#### **OBJECTIVE 7:**

Demonstrate the "power" of its technology "food chain" by deploying and experimentally demonstrating three major prototype units with breakthrough performance and energy metrics for on-board, board-to-board and rack-to-rack interconnects





# 3.3 'Partners' page

http://www.phoxtrot.eu/partners/









Home | Objectives | Partners | News | Downloads | Contact

### **Partners**

#### Fraunhofer IZM

Fraunhofer Institute for Reliability and Microintegartion | www.izm.fraunhofer.de

#### Fraunhofer HHI

Fraunhofer Insitute for Telecommunications Heinrich-Hertz-Institut | www.hhi fraunhofer.de

Vertilas GmbH | www.vertilas.com

Xyratex Technology Ltd. | www.xyratex.com

ams AG | www.ams.com

Meadville Aspocomp International Limited | www.timtech.com

#### AMO GMBH

Gesellschaft für Angewandte Mikro und Optoelektronik mit beschrankter Haftung mbH | www.amo.de

#### National Technical University of Athens

Institute of Communications & Computer Systems | www.iccs.gr/eng

DAS Photonics SL | www.dasphotonics.com

Phoenix B.V. | www.phoenixbv.com

Centre for Research and Technology Helias | www.certh.gr/root en aspx

Compass Electro Optical Systems Ltd. | www.compass-eos.com

Bright Photonics BV | www.brightphotonics.eu

Computer Technology Institute and Press - "Diophantus" | www.cti.gr/en

#### Centre National de la Recherche Scientifique

Laboratoire Interdisciplinaire Carnot de Bourgogne | http://icb.u-bourgogne.fr

Laboratoire de photonique et de nanostructures | www.lpn.cnrs.fr

Karlsruhe Institute of Technology | www.kit.edu



# 3.4 'News' page

http://www.phoxtrot.eu/news/









Home | Objectives | Partners | News | Downloads | Contact

#### News

#### Third consortium meeting coming up in June

The third PhoxTroT consortium meeting will take place on the 20th and 21st of June 2013. Our partners from ICCS/NTUA (Institute of Communication and Computer Systems/ National Technical University of Athens) are organising the conference in Greece.

### First PhoxTroT Newsletter released

PhoxTroT\_Newsletter\_No1\_April2013

#### Second General PhoxTroT Meeting in Berlin

The second project consortium meeting took place on the 21st and 22nd of February, in Berlin. The 18 partners came together to present and evaluate their work progress and to define their next action steps.

#### Optical communications make data centres more efficient

Major data centres and supercomputers will soon be more cost and energy efficient, and at the same time will be even more powerful. Fraunhofer scientists and 17 partners from business and research in the European Union have set themselves this ambitious goal in the "PhoxTroT" project. The key is optical data transmission. Over the next [...]

### PhoxTroT Kick-off Meeting in Berlin

The project PhoxTroT "Photonics for High-Performance, Low-Cost & Low-Energy Data Centers, High Performance Computing Systems: Terabit/s Optical Interconnect Technologies for On-Board, Boardto-Board, Rack-to-Rack Data Links' started on October 1, 2012. The kick-off meeting was held on October 8-9, 2012 at Fraunhofer IZM in Berlin. The meeting started with an introduction of the 18 Partners and the announcement of the [...]

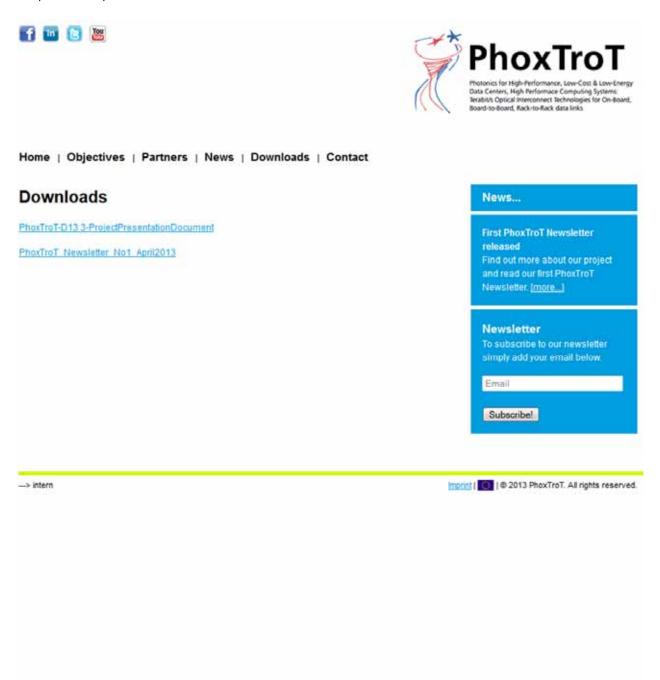


---> intern

morint | | 2013 PhoxTroT. All rights reserved.

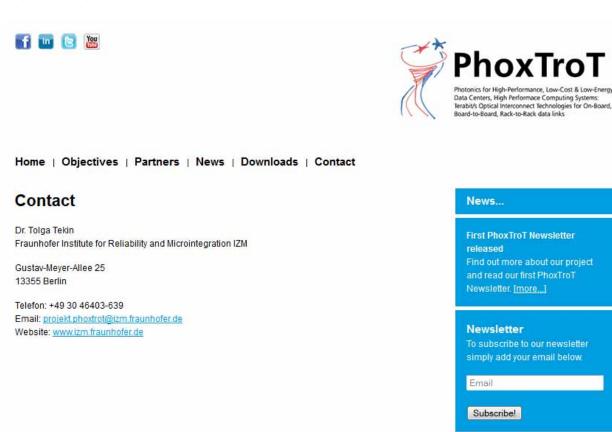
# 3.5 'Downloads' page

http://www.phoxtrot.eu/downloads/



# 3.6 'Contact' page

http://www.phoxtrot.eu/contact/



Imprint | © 2013 PhoxTroT. All rights reserved.

# 3.7 PhoxTroT at social media



https://www.facebook.com/PhoxTroT.eu http://www.linkedin.com/groups/PhoxTroT-Photonic-Interconnects-Data-Centers-4677428?trk=myg\_ugrp\_ovr https://twitter.com/PhoxTroT\_EU youtube will be activated for D13.5 'Project short presentation video'

# 3.8 PhoxTroT most recent news



# 3.9 PhoxTroT Newsletter subscription

