



Nano Scale Disruptive Silicon-Plasmonic Platform for Chip-to-Chip Interconnection

NAVOLCHI WEB-Site

Deliverable no.: D1.1
Due date: 11/30/2011
Actual Submission date: 07/31/2012
Authors: KIT
Work package(s): WP1
Distribution level: PU¹
Nature: WEB-page

List of Partners concerned

Partner number	Partner name	Partner short name	Country	Date enter project	Date exit project
1	Karlsruher Institut für Technologie	KIT	Germany	M1	M36
2	INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM VZW	IMEC	Belgium	M1	M36
3	TECHNISCHE UNIVERSITEIT EINDHOVEN	TU/e	Netherlands	M1	M36
4	RESEARCH AND EDUCATION LABORATORY IN INFORMATION TECHNOLOGIES	AIT	Greece	M1	M36
5	UNIVERSITAT DE VALENCIA	UVEG	Spain	M1	M36
6	STMICROELECTRONICS SRL	ST	Italy	M1	M36
7	UNIVERSITEIT GENT	UGent	Belgium	M1	M36

¹ **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)

Deliverable Responsible

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Executive Summary

This document shall incorporate (all) rules procedures concerning the technical and administrative management of the project and is therefore to be updated on a regular basis. Please look at www.navalchi.eu regularly for the latest version.

Change Records

Version	Date	Changes	Author
0.1 (draft)	2011-11-30	Start	Martin Sommer
1 (submission)	2011-11-30	First final version	Martin Sommer
2 (submission)	2012-07-26	S. Mühlbrandt added as web- master	Martin Sommer

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NAVOLCHI-WEB-Site

CommonInformation

KIT was engaged to implement a projects WEB-site on which the ideas of the project are published as well as to establish a common platform for the partners where useful information is gathered and shared. This WEB-site can be found on www.navolchi.eu. It was started immediately at the beginning of the project and is updated continuously.

WEB-Masters, and therefore responsible for the site content are:

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Physically, the server for the site is located at the Steinbuch Center for Computing (SCC) at the KIT:

Steinbuch Center for Computing
D-76128 Karlsruhe
Tel. +49 721 608-25601
E-Mail: contact@scs.kit.edu

Public Area

The WEB-site is separated into a public part containing the following pages:

- [Introduction](#): Basic project information (see Figure 1),
- [Partners](#): An introduction into the project partners,
- [Publications](#): A list of publications and
- [Positions](#): the offer of employment within the project.



IMT - Karlsruhe Institute of Technology (KIT)

NAVOLCHI

Introduction Partners Publications Positions Restricted

- NAVOLCHI -

**Nano Scale Disruptive Silicon-Plasmonic Platform
for Chip-to-Chip Interconnection**

Main Objectives

The NAVOLCHI project explores, develops and demonstrates a novel nano-scale plasmonic chip-to-chip and system-in-package interconnection platform to overcome the bandwidth, foot-print and power consumption limitations of today's electrical and optical interconnect solutions.

The technology exploits the ultra-compact dimensions and fast electronic interaction times offered by surface plasmon polaritons to build plasmonic transceivers with a few square-micron footprints and speeds only limited by the RC constants. Key elements developed in this project are monolithically integrated plasmonic lasers, modulators, amplifiers and detectors on a CMOS platform.

The transceivers will be interconnected by free space and fiber connect schemes. The plasmonic transceiver concept aims at overcoming the challenges posed by the need for massive parallel interchip communications. Yet, it is more fundamental as the availability of cheap miniaturized transmitters and detectors on a single chip will enable new applications in sensing, biomedical testing and many other fields where masses of lasers and detectors are needed to e.g. analyze samples.

Economically, the suggested technology is a viable approach for a massive monolithic integration of optoelectronic functions on Si substrates as it relies to the most part on the standardized processes offered by the silicon industry. In addition, the design and production cost of plasmonic devices are extremely low and with the dimension 100 times smaller over conventional devices they will require much lower energy to transfer data over short ranges of multi-processor cluster systems.

At a Glance

Project Coordinator:	Prof. Dr. Juerg Leuthold Karlsruhe Institute of Technology Tel: +49 721 608 42480 +49 721 608 22740 Fax: +49 721 608 942480
Project number:	288869
Duration:	11/2011 - 10/2014
Total Cost:	3.4M €
EC Contribution:	2.4M €

SEVENTH FRAMEWORK PROGRAMME



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Figure 1: The NAVOLCHI home page.

Restricted Area

Additionally to the public part, a part with restricted access was established for project partners only. The latter covers the following subtopics (see Figure 2):

- **TelCos and Meetings**: A collection of presentations given from the partners in meetings and phone conferences. Beneath archiving purposes, this collection is helpful during the phone conferences for distributing the presentations to all partners.
- **Deliverables** and **Milestones**: Two lists containing deliverables and milestones including their actual state. Both lists can be ordered by deliverable/milestone respectively or by date.
- **Contact and Communication**: A page with a full contact list, e-mail lists and useful information how to join phone conferences.
- **Project Documents**: A page with documents important for internal use, mainly the ‘Project Reference Manual’ and the ‘Quality Assurance Manual’. Templates for internal documents are also available on this site.
- **EC-related Documents**: A further site holds the documents for the Grant Agreement and the Consortium Agreement. Additionally, templates for progress reports can be found here.
- **Announcements**: Finally, a page announces next meetings or other important target dates.

To obtain user account and password for the restricted area, please contact the WEB-masters.

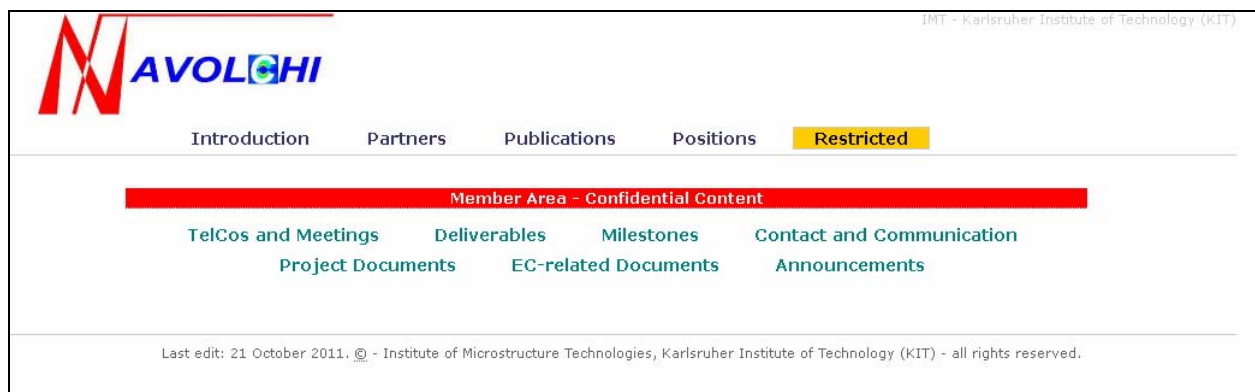


Figure 2: NAVOLCHI restricted area main menu.

Due to the clear and simple design of the pages, a redundant printout of the sub-pages is omitted here. Please follow the links in the text and visit www.navolchi.eu for further experiences!