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NEAR TERM PHOTONICS AND NANO OPPORTUNITIES IN 2013 ICT PROGRAMME

-The Last Of Framework 7

Objective

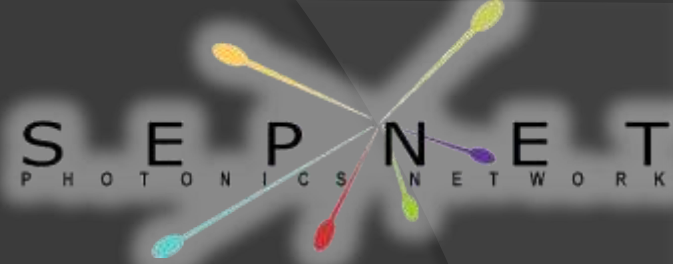


- ***Improving the competitiveness of Europeanso that the demands of its society and economy are met ...stimulate product, service and process innovation.... in Europe... ensure that ICT innovations are rapidly transformed into jobs and growth for the benefits of Europe‘.....***



Benefit to Europe critical

Framework 7 – the end game



- ◎ Calls 10 and 11 open now
 - 10 closes January 2013, 11 closes April 2013

- ◎ Core photonics call 11 ICT-2013.3.2
 - Application specific new devices, Cross cutting tech, Tech take up and support
 - €50m in Strops for photonics areas
 - But there is plenty of photonics and nano opportunities elsewhere.

- ◎ Opportunities highlighted in
 - comms,
 - solid state lighting
 - lasers
 - biophotonics

An Overview of Calls for proposals

ICT Obj. 10.1

"EU-Japan
research and
development
Cooperation"

Photonics:
1,5M€ of 9M€
One STREP
(Optical
communications)

PPP FoF Obj. 7.2

"Equipment
assessment for
sensor and laser
based
applications"

15-20 M€
of 33.5 M€

ICT Obj. 3.3
"Heterogeneous
Integration of
KETs"

Photonics +
OLAE:
20-25 M€
of 64 M€

ICT Obj. 3.4

"Advanced
computing, ...
systems"

Optical
interconnect in
target outcome
a)

Photonics:
Part of IP

ICT Obj. 3.2
"Photonics"

61M€

Call EU-Japan
DDL 29 Nov 12

Call FoF
DDL 4 Dec 12

Call 10
DDL 15 Jan 13

Call 11
DDL 16 Apr 13

Details – comms and data

- ⊙ Devices for multiple bitrates & modulation formats on the same infrastructure
- ⊙ Integrated photonics- Solutions for low cost manufacture of
 - Improved photonic integrated circuits inc. new materials, nanotech & heterogeneous integration i.e hybrid III-V silicon
 - Packaging & assembly solutions (to include fabrication tool suppliers)
- ⊙ **Next generation data-centre servers**
 - Including optical interconnect (in call 10 ICT-2013.3.4 adv computing)
 - Energy efficient systems (in ICT 2013.6.2 Data Centres ...)
- ⊙ Eu-Japan collaboration on optical comms ~ €1m (2013.10.1)
 - 100Gbit Ethernet, system level + standards contribution

Details solid state lighting



- ◎ Solid state lighting
 - OLED for general lighting
 - Intelligent low cost Luminaires for smarter lighting
 - include end-of-life recycling
 - Support actions (~€3.5m)
 - Bring supply chain together with end users+ promote and analyse health benefit + materials/ recycling issues.

Lasers



- ⊙ Laser for industrial processing in 2013.3.2 photonics
 - Sub 10ps >200W average power high rep rate lasers for micromachining inc beam shaping/delivery
 - Equipment manufacturers and end users in consortia.
- ⊙ Assessment experiments in ICT for Enterprise & Manufacturing 2013.7.2 factories of the future (€33m)
 - Innovative laser applications in manufacturing
 - assessment of quality, speed, flexibility etc i.e. applications testing
 - Support new manufacturing skills (inc laser processing)
 - Part of factories of future - closes December

Funded applications testing in manufacturing

Details – biophotonics



- ⊙ Integrated systems
 - Miniaturised smart systems combining multiple key enabling tech.
 - Cross field, cross function esp. biophotonics / micro/nano bio systems
- ⊙ Validation in real settings of bio photonics / micro nano systems addressing society challenges
 - Health – diagnostics & therapy
 - Food quality and safety
 - ⊙ **Above in call 10 2013.3.3 close January**
- ⊙ ERANET+ in Biophotonics (See Myrddin Jones)

SMEs support



- ⦿ Access services (€8million IP ring fenced in photonics)
 - Read ACTMOST +
 - Pay for SMEs to access state of art fabrication facilities and expertise.
 - Facility partners paid direct by Brussels
 - No SME contract with Brussels – minimum admin overhead
 - Need UK facility partners
 - Additional similar action in micro/nano smart systems.
- ⦿ Support actions (~€3m each)
 - For photonics clusters to help SMEs and outreach.
 - For support smart systems integration

Eu support will be relevant to SMEs

Summary



- ⦿ Always consult full ICT work programme
 - <http://cordis.europa.eu/fp7/ict/docs/ict-wp2013-10-7-2013.pdf>
- ⦿ Detail on any line item is small 4-5 lines
 - Check the preamble for info and background
- ⦿ Deadlines
 - December – factories of future – laser processing
 - January – Biophotonics & data centre/ interconnects
 - April – Most photonics