TECHNIKON

M3TERA

ANNOUNCEMENT LETTER

M3TERA, a European cooperative research project, has officially started on 1st February 2015 with a set duration of 36 months. It receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 644039.

EU PROJECT M3TERA:

MICROMACHINED TERAHERTZ SYSTEMS – A NEW HETEROGENEOUS INTEGRATION PLATFORM ENABLING THE COMMERCIALIZATION OF THE THZ FREQUENCY SPECTRUM

This project envisions the **wide-spread use of low-cost THz technology in our society, enabled by the proposed micromachined heterogeneous integration platform**, which provides an unprecedented way to

- highly-integrated,
- volume-manufactuable,
- reliable,
- reconfigurable,
- cost- and energy-efficient

submillimeter-wave and terahertz (THz) systems.

The proposed THz integration platform is envisioned to **initiate an important transition in industrial microwave-systems manufacturing** and is expected to finally **enable the large-scale commercialization of the heavily sought-after frequency space between 100 GHz and 1 THz**. In line with technology convergence of advancing microwave semiconductor technology according to internal and external roadmaps, the proposed THz microsystem platform is envisioned to **accommodate multiple generations of future THz products** in different application fields.

The concrete business and lead application case is THz microsystems enabling compact, **low-cost point-to-point high-speed communication links** in the frequency space between 100 GHz and 500 GHz, to be deployed in a scenario of a **high-density small-cell base-station network** providing ubiquitous **high-speed internet access to mobile communication devices** in urban environment.

The key technology end-user driving the **primary prototype** development and demonstration of a complete THz communication link is Ericsson. A **secondary prototype** developed in M3TERA is on a multi-function adaptive THz sensor platform for different millimeter-wave sensing applications in society including:

- food quality control,
- food safety monitoring,
- medical diagnosis, and
- industrial sensing.

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The key manufacturing partner in this industry-driven proposal is the high-volume semiconductor and Microsystems manufacturer IFAT, who also provides system packaging concepts. Project management of this 3-years project with 7 participants in different 4 EU countries is done by a professional company with an exceptional career track in EU project management.

This means the M3TERA consortium is well-positioned to achieve its objectives with the following partners:

- Technikon Forschungs- und Planungsgesellschaft mbH, Austria
- Kungliga Tekniska Hoegskolan, Sweden
- Infineon Technologies Austria AG, Austria
- Ericsson AB, Sweden
- Anteral SL, Spain
- Chalmers Tekniska Hoegskola AB, Sweden
- CSEM Centre Suisse D'Electronique et de microtechnique SA – recherche et developpment, Switzerland

For more information visit http://www.m3tera.eu

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