



Research Priorities and Funding Aspects in the Fields of Communication Systems and IT Security

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on behalf of the

Federal Ministry of Education and Research (BMBWF)
Unit „Communication Systems; IT Security“
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Prefix

- Funding from German side of German CELTIC-Plus project partners in the past years mainly was contributed by the ICT2020 framework programme of BMBF / focal topic of “Communication Systems ; IT Security”, which is managed by the BMBF unit 525. But mind: This is not an exclusive relationship!
- R&D funding of CELTIC-Plus projects (and generally all other EUREKA cluster projects) in Germany is not exclusively limited to one particular German ministry and funding programme and ...
- the technical scope of CELTIC-Plus is **not congruent** to the scope of the focal topic of “Communication Systems; IT Security” of ICT2020!
- Some Celtic-Plus projects fit better in other programmes of BMBF or even of other ministries. Examples: ZIM-programme or the “Convergent ICT” programme of the Ministry of Economy and Energy BMWi, and it may happen that a CELTIC-plus project proposal doesn't fit technically to any R&D funding programme in Germany.

The following presentation of research priorities and funding aspects is limited to the view from the IKT2020 framework programme/ focal topic of “Communication Systems; IT Security” of BMBF



Three Funding Priorities of the BMBF Unit „Communication Systems; IT Security“



IT Security

- **Work Program “IT Security Research”**
- **IT Security for Critical Infrastructures**
- **Secure Cloud Computing**
- Safe and Secure European Routing (SASER)
- Quantum Communication
- IT Security for Industry 4.0
- 3 Competence Centers for IT Security Research



Digital Life

- Privacy and Self-determined Living in a Digital World
- Internet Privacy
- Linking social developments with technological solutions



Communication

- **Reliable wireless communication for industrial applications**
- Cognitive Radio
- Mobile Communication
- Photonic Communication Networks
- Internet-based Services
- Future applications



Work Program “IT Security Research”

- Collaboratively initiated with Federal Ministry of Interior (BMI) in 2009
- Funding of more than 100 projects until mid of 2015
Total funding volume approx. 30 Mio. € per year
- Next phase currently under preparation

- **Four major research topics**
- Security in insecure environments
- Protection of Internet infrastructures
- Embedded security
- New challenges in IT system protection and vulnerability detection



IT-Sicherheit



Leben digital



Kommunikation

Last Calls of BMBF Unit „Communication Systems; IT Security“



- Deadline on January 31st, 2014:
**Reliable Wireless
Communication in Industry**



- Deadline on November 04th, 2013:
Critical Infrastructures



- Deadline on September 30th, 2013:
Secure Cloud-Computing



IT-Sicherheit



Kommunikation

Research Topics of the call „Reliable Wireless Communication in Industry“

Opening of new application fields in industry by innovative wireless communication systems for highly available and secure networking with real-time features

Aim: Exploration of new approaches for „better and more powerful communication“ aiming at improving the competitiveness of the German industry

- Wireless technologies in control systems with **extremely small latency** at **highest reliability** at the same time
- Wireless technologies for efficient haptic human-machine interfaces (Augmented Reality) with **extremely small latency** at **very high data rates** at the same time

Also to take into account: **Increasing demands** on the safety & security properties because the communication over air and the increasing networking are opening more and new security breaches



Research Topics of the Call „IT Security for Critical Infrastructures (KRITIS)“

- New approaches for the evaluation of IT Security
e.g.: Development of methods, principles and metrics for the determination and rating of IT Security
- New approaches for increasing IT Security
e.g.: development of cost-saving and simple, but efficient IT Security solutions (including application on non-replaceable „legacy“ systems in industry).



Systemic comprehensive package approaches were preferred
Strong interest in that call: More than 70 proposals submitted, broad covering of themes, topics and application fields

> 10 projects selected



IT-Sicherheit



Leben digital

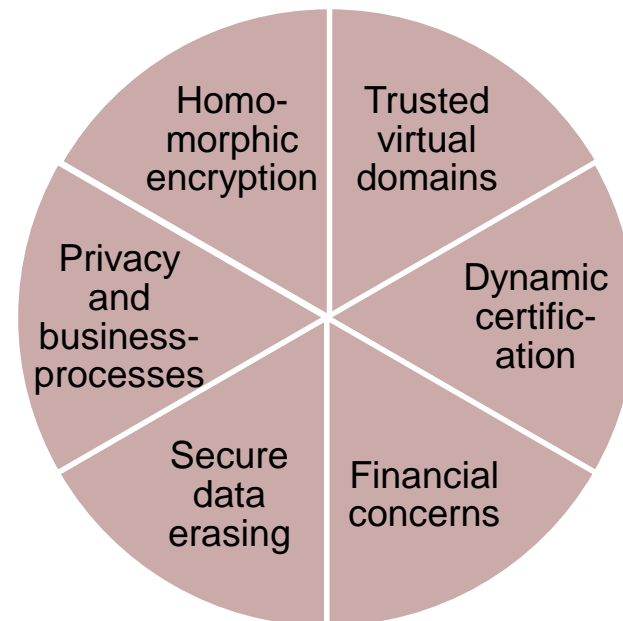
Research topics of the call „Secure Cloud Computing“

- Development of Cloud Technologies that support privacy protection and IT Security
- Metrics and methods for measuring and comparing privacy protection and IT Security in clouds

Status: Approval of project applications

Strong interest in that call:

- More than 70 proposals submitted
- 6 projects selected





Advices for Celtic Proposers

General aspects

- Topics and consortia with European relevance and impact
- Topics “complementary” to those of the R&D programs of the EC
- Developing solutions for future challenges
- Bringing research and industry together
- Incorporating interdisciplinary approaches
- Visible mutual benefits resp. added value for all partners from transnational collaboration
- Sustainable industrial exploitation and implementation of value chains by the German partners (also) in Germany foreseeable (important!)



Advices for Celtic Proposers

Technical focus

- Congruency: The project work has significantly to deal with R&D (and not merely with developing of applications!) in the fields of Communication Systems and/or IT Security
- IT Security has got a „hot topic“ nowadays: IT-Security related R&D has attained an high attention at the German Government and BMBF
- Relevant as well: Research that links Communication Systems topics and IT Security aspects
- No exclusive focus on infrastructure aspects of communication systems (such as more bandwidth, faster communication, saving of energy, lower costs ...)

Information on running and past calls and projects is available at
www.vdivde-it.de/kis

To avoid unsuccessful steps: it is strongly recommended to contact the project management agency prior to submission



Further proposal evaluation criteria

- Level of innovation
- Technical R&D risks (extraordinary R&D risks are mandatory!)
- Societal relevance of the research goals
- Economic potential of the R&D results
- Technical and scientific quality of the R&D approach
- Appropriate composition (including industrial participation and participation of SME) and qualification and of the partners
- Appropriate project management structure
- Plausible and convincing implementation- and exploitation plans

Funding scheme

Same scheme as for nat'l partners in projects from regular nat'l calls:

- Cost sharing for industrial partners
- Cost sharing or up to 100% for institutes
- 100% for academic partners



Thank you for your attention!

Further information:

www.vdivde-it.de/KIS

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