

**31. Treffen der VDE/ITG-Fachgruppe 5.2.4**  
**Mobilität in IP-basierten Netzen**  
am 7. Oktober (Open Workshop) in Hamburg-Harburg

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**Call for Contributions**

Within its series of round tables, the VDE/ITG Section 5.2.4 "Mobility in IP-based Networks" will organize a one day workshop on the topic

**Cognitive Radio**  
**– Technical Challenges and Commercial Implications –**

The workshop will take place at the Technical University Hamburg-Harburg on October 7th, 2009 and immediately precede the two day SomSed 2009 event – for details please see <http://www.somsed.de>. We solicit:

- Technical overview presentations
- Presentations of results of ongoing research
- Presentations on Business Aspects
- Visionary (possibly provocative) presentations

Lack of suitable radio spectrum is seen as one of the biggest obstacles to future growth in wireless broadband and mobile communication. On the other hand, experiments indicate that there are plenty of unused frequency resources at any given place at any given time, which leads to calls for more efficient ways of managing spectrum. Today, wireless communications require a large amount of radio spectrum because spectrum is divided into small pieces, each for a specific purpose and each application uses its spectrum to a limited extent, which leads to the unwanted situation of under-utilization of this scarce resource. Thus, dynamic spectrum allocation has become a key research activity in the wireless communications field and in particular a key technology for "The Network of the Future" objective in the FP7 Information and Communication Technologies Work Programme.

For some time now, the following approach has attracted attention among researchers and politicians alike: **cognitive radio** is an emerging concept in which a network or a wireless node is able to sense its environment, and especially spectrum holes, and change its transmission and reception chains to communicate efficiently without interfering with licensed primary users. Cognitive radio thus aims to improve the way the radio spectrum is utilized. Apart from the challenges of finding such holes and the complexities of reacting to collisions with other users, this approach raises numerous regulatory and commercial questions that will also be subject of discussion at this workshop.

Topics of particular interest include but are not limited to:

- definition and delimitations of cognitive radio
- use cases and deployment scenarios for cognitive radio
- requirements from technology and technological limits
- requirements from regulation and spectrum management
- cognitive radio – is it a regulatory or technological issue?
- spectrum sensing techniques
- how to overcome the "hidden station problem"
- knowledge sharing and centralized support functions
- cognitive pilot channel
- detection of and reaction to collisions
- status and results of (European) research projects
- standardisation of cognitive radio
- business case considerations for deployment of cognitive radio

Please inform the workshop organisers about your planned contribution by September 4<sup>th</sup>, 2009. The workshop places are limited and assigned on a first come first serve basis. Participants should register by email by September 21<sup>st</sup>, 2009. More details about the ITG/VDE-meeting will be available soon via the webpage <http://www.ikr.uni-stuttgart.de/Content/itg/fg524/>.

For further questions, please do not hesitate to contact the workshop organisers:

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