



LEXNET

Low EMF Exposure Future Networks

Deliverable D7.2 – Workshop 1

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Editor	Joe Wiat (ORANGE)		
Other authors	Francois Bourdel (Alma)		
Abstract	Forty people, representatives of organizations such as ANFR, ANSES, OFCOM, BAKOM, GSMA, MMF and FMK, CENELEC, 3GPP as well as NGO gathered in Berlin on September 18 to discuss the objectives of the LEXNET project and in particular the new metric proposed by LEXNET to assess exposure of a population generated by a wireless telecommunications network. This document provide the minutes of the workshop.		

Project Information

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Document approval

Name	Position in project	Organisation	Date	Visa
Joe Wiat	Coordinator	France Telecom	11/10/2013	OK

Document history

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LEXNET BERLIN STAKEHOLDERS' WORKSHOP

1.1 Summary of discussions

Date: 18th September 2013

Location: Berlin, Germany

Meeting organised by :	KIT	Meeting category :	Stakeholders' workshop (D7.2)
Participants :	List available on https://www.myndsphere.com to registered users.		
Comments :	Slide and abstracts on http://www.lexnet-project.eu		

Forty people, representatives of organizations such as ANFR, ANSES, OFCOM, BAKOM, GSMA, MMF and FMK, CENELEC, 3GPP as well as NGO gathered in Berlin on September 18 to discuss the objectives of the LEXNET project and in particular the new metric proposed by LEXNET to assess exposure of a population generated by a wireless telecommunications network. At the end of the workshop, the participants explained that LEXNET is handling an important question in Europe since wireless communications are increasing. The participants supported the LEXNET objectives and the new index but they also pointed out that index acceptance is fundamental. Risk perception is complex and risk communication is therefore very important. The participants asked to be informed of the LEXNET progress. During the meeting, the importance of standardization has also been discussed and presentation of LEXNET has been planned in CENELEC TC106x and in 3GPP.

1.2 Minutes

The meeting started with the views from the European Commission. P. Ciudin (DG Connect) explained the number of wireless devices and traffic is increasing. As an example, the mobile data traffic should go by 66% annually. Because of the existing questions about EMF, he concluded it is necessary to have technologies able to minimize exposure.

The first discussion, introduced by J Wiart (Orange Labs), was dedicated to the LEXNET rationale. As reported in the Eurobarometer 2010, about 70% of the European citizens think that EMF induced by mobile phone masts or mobile phones have at least some effects on health. As a consequence there is a strong concern in Europe on masts since perceived as the permanent and strongest sources of EMF. On the other hand, studies have shown that exposure induced by handsets and systems close to the body induced an exposure that can be much higher than the exposure induced by base stations. Today, some segments of the population, such as the 18-25 years old in France, are 100% using mobile phone. As a consequence, the real exposure must take into account both up and down links. The existing

measurement methods developed to check the compliance to limits are using overestimation so they are not suitable to assess day-to-day exposure. Estimate the global exposure (induced by the up and down links) induced by a network during the day-to-day activities of a population is needed to manage the exposure and assess if a technology or a network architecture is able to reduce the human exposure.

The discussion pointed out that the index acceptance is fundamental and EMF exposure minimization has to be achieved with a high QoS. The index method has been discussed in particular the method allowing going from individual exposure to population exposure and on the measurements. Since the first approach of the index estimation is using average, a question (P Chadwick CENELEC) was on the statistical distribution management. One of the questions from M. Abramson (NGO) was: why not minimizing the maximum of the individual exposure? The LEXNET partners explained that on the one hand, the maximum exposure is handled by compliance limits and on the other hand, putting constraints on maximum of the individual exposure does not guaranty that the averaged population exposure decreases. An important question of the participants was on the inclusion in the index of people that are not using phones. LEXNET partners explained that the index will take into account various usages and of the “passive” exposure induced by access point as well as the surrounding phones use. Dealing with EMF exposure minimization, the participants asked if LEXNET will have a look to technologies able to reduce mobile communications at home. Since a large part of the wireless use is performed indoor, LEXNET will address this question. During the discussion P. Ravazzani from EFHRAN project explained that an Italian project has worked on an exposure’s metric considering base stations and access points: interesting experiences can be useful.

A second discussion, presented by Peter Wiedemann (KIT), was dedicated to the exposure perception. P Wiedemann presented the results of a LEXNET survey on this question. The discussion showed that risk perception is complex and risk communication is important. The study provides good advices for risk communication. But the discussion shows that professionals on communication will be needed during the project to communicate.

After that, Luc Martens (iMinds) and Nadège Varsier (Orange Labs) presented respectively the existing metrics and their limits in view of a population exposure assessment and the new index of a population exposure, how to assess it and how it can be used to compare network technologies, in particular during network design.

This session induced lot of pertinent questions: “Will you compute one value per area?”, “How do you know the WiFi access locations?”, “How do you address mobility, commuting people?”. The discussion also pointed out the dynamic patterns of use those need to be handled by the project (D. Flore, 3GPP). As in the first session, participants pointed out the question of the uncertainties and distribution of the index around the average.

The participants from ANFR, BAKOM and OFCOM also highlighted the risk of misunderstanding of the index and the need of well-managed explanation.

The last technical discussion presented by Yann Toutain (Satimo), Yohann Corre (Siradel), Serge Bories (CEA) and Milos Tesanovic (FLE) addressed the questions “How to reduce the exposure with new technologies and new architectures?” and “How to use measurements and simulations to assess the index of exposure?”. As pointed out by G Sami (GSMA) the time framework of communication technologies is

fraction of second while the exposure is minutes or hours. So one challenge of LEXNET is to simplify the complexity of the network (from the exposure point of view) to link a simplified model to the index. During the discussion, offloading and small cells have been identified as best first candidate to reduce exposure.

Finally, to sum up:

- It is relevant to revisit the exposure paradigm in our society that is more and more digital.
- The parameters (averages, uncertainties, population occupation, way to handle commuting, etc.) involved in the index of population exposure should be clearly justified.
- The different uses of the index should be described (network design, public information, etc.).
- The index of exposure is interesting if it is correctly understood. A clear communication is necessary. Results from the risk perception study can help a lot for that.
- The project should send regular information on its progress to the EMF stakeholders.