

# **Securitatea datelor în LTE: Autentificarea și cifrarea terminalului mobil UE pe interfața radio cu E-UTRAN**

## **LTE Data Security: UE Mobile Terminal Authentication and Encryption on Radio Interface with E-UTRAN**

**Mirel VOICU**

Vodafone, Bucharest, Romania  
mirel.voicu@vodafone.com

### **Abstract**

*Security in mobile communications has always represented a factor of interest for the different standardization bodies like 3GPP. Mobility offers flexibility through voice and data over wireless. However, the transfer of information in such a medium is subject to interception by unauthorized individuals which could capture and use it for their own purposes. The scope of this paper is to show how wireless security can be assured in the new generation of mobile communications, 4G/LTE.*

**Index terms:** authentication, data security, encryption, radio interface

### **References**

- [1] 3GPP TS 33.102v2.0.0 (1999-04).
- [2] 3GPP TS 33.401v8.0.0 (2008-06).
- [3] LTE Security presentation, 2012 EventHelix.com Inc.
- [4] ETSI TS 136 331 v10.6.0 (2012-01).
- [5] Pierre Lescuyer, Thierry Lucidarme, "Evolved Packet System (EPS)", 2008.
- [6] Masoumeh Purkhiabani, Ahmad Salahi, "Enhanced Authentication and Key Agreement Procedure of next Generation 3GPP Mobile Networks", International Journal of Information and Electronics Engineering, Vol. 2, No. 1, January 2012.
- [7] I.C. Mihai, C. Ciuchi, "Metode de implementare a securității pe sistemele informatice", Studii de securitate publică, vol. 1, 2012, pp. 60-72.
- [8] I.C. Mihai, Luminița Păunescu, "Protocoale și mecanisme de securitate", International Scientific Session, Academia de Poliție "Alexandru Ioan Cuza", București, 13-14 mai, 2010, pp. 212-217.
- [9] <http://www.horizon-project.co.uk/>, accessed on 12.02.2012.
- [10] <http://ltesignaling.blogspot.ro/2011/12/lte-security-standards-protocols-and.html>, accessed on 2.03.2012.