

Marie Curie - Ricerca Istituto ospitante (ICT)

01 dicembre 2017

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Richiesta di un singolo ricercatore ucraino, interessato ad individuare un'organizzazione ospitante per presentare una proposta nell'ambito dell'azione Marie Curie: "IIF - International Incoming Fellowships" (scadenza bando 14 agosto).
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----- PARTNER SEARCH MCLLL-IT-FEL7-1 -----

<Reference n.: MCLLL-IT-FEL7-1>
<Deadline: 08/08/2007>
<Programme: >

<Project Title: Security Enhancements for Low Power Short Range Wireless Sensor Networks>

<Financial Scheme: >

<Description: In the new edition of the IEEE Std. 802.15.4 from 2006 security techniques have been significantly improved. However there still are issues to be resolved. Among them: a) Lack of key distribution and management techniques for IEEE 802.15.4 - these techniques are out of scope of the standard; b) not all security modes can provide replay protection, and no security provided of the acknowledgement packets. This allows the Denial-of-Service (DoS) attacks to be successfully perpetrated. DoS attacks prevention is even important since such attacks consume power of 802.15.4 device, where power consumption is high-priority issue as the device often is battery-powered; c) Lack of security maintenance techniques on power disruption.

On the basis of what has been described above, the Project has the following goals:

1. Research and development of the key distribution and management techniques for IEEE 802.15.4 MAC sublayer.
2. Research and development of replay protection mechanisms for all IEEE 802.15.4 security modes.

3. An investigation on DoS attacks prevention mechanisms for IEEE 802.15.4.
4. Security maintenance on power disruption (power down or sleep) in terms of volatility and security material reuse in IEEE 802.15.4 device.
5. IEEE 802.15.4 security architecture investigations and hardware-software sample implementation with proposed enhancements.

PROJECT PERIOD: 24 months

<Organisation Type: Privato>

<Partner Sought: Host organization needed for R&D Project execution (eligible countries: all EU Member States / Associated Countries except Poland)>