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**Telecomunicazioni** 

# Ricerca partner PMI7-EU-BSGSME-5

01 dicembre 2017

PARTNER SEARCH PML7-FU-BSGSME-5

Richiesta di una PMI irlandese alla ricerca di partner italiani da includere in un loro progetto da presentare nel programma CAPACITIES tematica RICERCA PER LE PMI. Di seguito, una breve descrizione del progetto e le caratteristiche del partner richiesto.

Chi fosse interessato al progetto può contattare: Valentina Tegas - Apre (Agenzia per la promozione della ricerca europea)

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facendo riferimento al codice PARTNER SEARCH PMI7-EU-BSGSME-5

------ PARTNER SEARCH PMI7-EU-BSGSME-5 ------

<Reference n.: PMI7-EU-BSGSME-5>

<Deadline: 04/09/2007>
<Programme: CAPACITIES>

<Project Title: Measurement and Modelling of the Spatial Characteristics of Wireless Channels for use with Indoor Positioning Systems>

<Financial Scheme: >

<Description: We are a wireless systems company specializing in the design of physical layer, data-link layer and networking solutions for radio applications.</p>

We are currently focussed on the research and development of advanced wireless positioning systems.

Barriers to the ubiquitous adoption of existing positioning systems include: o short range and low accuracy

o size, power and cost of tracked tags

o labour intensive deployment of tags and readers

We are developing low-cost, plug and play positioning systems which will overcome these market barriers.

## Benefits:

The impact of this project will be the rapid development of next-generation positioning systems. This technology will be of benefit:

o Assisted Living: allowing elderly people to lead independent and better quality lives.1

- o Airport Security: RFID tickets and luggage tags introduce a greater level of security and efficiency.2
- o Inventory Control: supply chains are maintained in a more efficient and reliable way.3
- o Emergency Services: better co-ordination between emergency personnel in hazardous environments helps to save lives.4
- o Human-computer interfaces: next-generation gaming and physical rehabilitation systems will be improved through the use of positional information.1>

# <Organisation Type: PMI>

< Partner Sought: Partner Profile:

We are currently seeking SME partners and research and technical development (RTD) providers to collaborate on this project:

- 1. RTD providers with expertise which includes the measurement and parametric modelling of MIMO wireless channels.
- 2. SME partners involved in the development of RFID readers and tags, with particular interest in antenna and passive tag design.
- 3. SME partners who seek to exploit broadband MIMO wireless channels to achieve very high speed indoor wireless communications, e.g. streaming HDTV high resolution content.

Initial contact will lead to a conference call and an in-person meeting within a two week period.

### Aim and Deliverables:

We are seeking research partners with the aim of measuring and modelling the spatial characteristics of the indoor wireless environment, specifically to facilitate the rapid development of autonomously configured positioning systems. These new models will differ from those traditionally used in that they will parameterize the directional and spatial

characteristics of indoor radio channels.

SME partners will benefit from the deliverables:

1. Spatio-temporal radio channel measurements taken in a diverse range of indoor environments.

These measurements will be used to validate wireless positioning systems.

2. A set of parametric wireless channel models which are explicitly expressed in terms of spatial coordinates.

These models will be used to further develop and test wireless positioning methods in simulated indoor environments.

These new data sets will also be of benefit to SMEs currently developing indoor broadband wireless technologies:

wireless sensor networks, MIMO communications, IEEE 802.11/Wi-Fi, IEEE 802.15.4/Zigbee and in general any communications system which seeks to exploit the spatial diversity of wireless channels.>