EMMON project successfully demonstrates a +400 nodes Wireless Sensor Network at SANJOTEC, Portugal

On the 25th May 2012 the EMMON project, successfully delivered the second project demonstrator (codenamed DEMMON2). This demonstration was showcased for the Project Officer (Mr. Georgi Kuzmanov) and the assembled project partners. The main aim of EMMON is to produce the technologies to enable effective and reliable Large Scale Wireless Sensor Network (LSWSN).

The initial demonstrator (DEMMON1) presented the technology developed to achieve the project goal and it showed over +300 wireless nodes communicating within a test bed environment at ISEP facilities, Porto, Portugal. At the time of DEMMON1, Dec 2010, the demonstration became one of the largest WSN set ups anywhere in Europe.

For DEMMON2 the technology was showcased within a real end user site ("SANJOTEC – Centro Empresarial e Tecnológico" in S. João da Madeira (http://www.sanjotec.com)) and became the largest WSN set up in Europe for R&D purposes (the working network consisted of 410 working nodes and the emulation showed a working number of 2610 motes). This showcased how the technology developed by the project could be utilized in any real world scenario.

The scalability of the system was showcased using two methods;

1. A theoretical approach with the usage of simulation and analytical methods where the following figures for scalability were found:
    a. Network level (up to 501 nodes per Patch)
    b. Middleware level (up 11659 nodes)
    c. Gateway <-> CC level (up 144 Patches)

2. An experimental approach which combined the information from the +400 real nodes deployed and the information from 2600 emulated nodes. To verify the values obtained from simulation and emulation methods.

As part of the demonstration the technology developed was explained using posters to showcase the data:


Below are some photos of the team behind the development.

The EMMON Project team consisted of the following:

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- Critical Software Technologies (UK) – Alex Hill, Brett Bicknell,
- InteSys Ltd – Lubo Jankovic
- SESM S.c.a.r.l. – Gabriella Carrozza, Vincenzo Ciriello
- Akting Ingeniaritza S.L. – Paul Minguez, Alex Iraola
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- Trinity College Dublin - Mélanie Bouroche, Farrukh Mirza
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plan avanza2

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