iv2splus INFONET

ways2go, 2nd Call (2009)

**FlexiCount**

Extensive and high quality data on passenger volumes provide important inputs for urban and traffic planners who aim at optimizing infrastructure usage. The project FlexiCount investigates options and tries to develop an approach relying on a modular, energy self-sufficient sensor-mat to automate the process of people counting in a reliable, flexible, and low-cost manner.

Information about the number of people, the flow rates and the densities as well as the variations over time are beneficial for a better understanding of pedestrian traffic in public areas. These facts and figures are an essential input for optimizing spatial and traffic routes in order to provide for a sustainable increase of the attractiveness of non-motorized individual traffic.

In order to obtain these figures the method of manual counting is frequently used. However, this method yields imprecise figures especially in dense situations. Furthermore, the involved efforts and costs to obtain meaningful data using this method are substantial. Hence, there is a strong market demand for automatic people counting systems. In fact a lot of different technologies and approaches exist today. However, none of these systems fulfills the necessary requirements. In fact, several public transportation service providers (ÖBB, Wiener Linien, Grazer VB, MA46) expressed their need for a flexible, robust automatic people counting system. Simply enhancing existing solutions, however, will not ameliorate the issues with existing solutions.

The project FlexiCount proposes a new, innovative approach relying on the use of mobile sensor-mats. By placing modular, fix sized sensor-mats at points of interest it should be possible to count the number, flow-rates and densities of free moving people whenever they cross the mats. The data gathered is relayed via a wireless sensor network to a remote computer. Since the sensor-mats are designed energy self-sufficient it should be possible to operate them over multiple days and/or weeks both in indoor and outdoor locations. An essential benefit of this approach is that no dedicated installation/setup is required; the sensor-mats can simply be placed on the floor and people counting can start.

The multidisciplinary consortium provides a good national and international visibility and provides good premises for a successful project and future collaborations in this regard.

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**Project coordination**

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