

# Visual Twittering Using Mobile Phones in Pervasive Environments

Michael Wittke, Sven Tomforde,  
Yaser Chaaban, and Jürgen Brehm

Leibniz Universität Hannover, Institut für Systems Engineering, SRA  
{wittke,tomforde,chaaban,brehm}@sra.uni-hannover.de

Research in the field of academic teaching and life focuses on the integration of recent technologies. Additionally, new trends within the current usage of e.g. the Internet can be observed which show interesting approaches. These approaches might be reasonable and beneficial to further improve lectures and interaction with students by enabling these processes themselves to be community-oriented and based on Web X.0 principles. This paper shows how to integrate new recent trends from Internet technologies into the campus. We propose a system where students are able to use their mobile devices to do some kind of visual twittering (e.g. capture short video sequences and enhance these with additional data like GPS position, time, etc.). A campus-wide community will be developed, which provides access to these files, allows for following fellow students and friends and automatically generates an overview of the most important distinct events during the course of day for a given subcommunity (e.g. students from the department of Computer Science). Based upon the introduction of the general scenario, the paper presents basic algorithms and technology needed for the realisation and a first evaluation.

Twitter is a free social networking and micro-blogging service that enables its users to send and read other users' updates known as *tweets*. Tweets are text-based messages of up to 140 characters in length which are displayed on the user's profile page and delivered to other users who have subscribed to them due to interest in their activities (known as *followers*), e.g. friends. We introduce a new kind of tweets that are automatically fed by sensor input of the user's mobile phone. Based upon this sensor input, *visual tweets* are defined as consisting of visual data from the mobile phone's built-in camera and the user's position delivered by GPS sensors (and possible further metadata).