

## **B1 – HIGH-TECH ASSESSMENT AND NOVEL LOW-COST OPPORTUNITIES IN EDUCATION**

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### **Thematic Papers**

#### **Webcam Based Analysis of Facial Expressions**

Judit Sebők, Tamás Nagy  
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#### **The Transition From Single Testing To Complex Systems of Assessments**

Gyöngyvér Molnár  
*Institute of Education, University of Szeged*

Attila Pásztor  
*Graduate School of Educational Sciences, University of Szeged*

#### **Analysis of Facial Expressions With Special Need Children: Preliminary Results**

Brigitta Miksztai-Réthey, Tímea Magyar  
*Neural Information Processing Group, Eötvös Loránd University*

#### **Multiplayer Educational Games With Intelligent Tutor: Progress Report**

András Dudás, Zoltán Tósér  
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## SYMPOSIUM ABSTRACT

Recent technological advances promise „time leap” for education in remote and underdeveloped areas through the fast spreading of multi-core mobile devices equipped with webcams, light-weight software technology components including fast image processing algorithms for CGPUs, the combination of CPU and GPU, versatile graphic software tools and high bandwidth Internet communication. Advances are also fast in machine learning, natural language processing, machine vision, data mining, and collaborative filtering, not to mention the abundance of human annotated content, databases and ontologies, like Wikipedia. These advances pave the way for inexpensive intelligent tutors „who” learn and infer from the statistical information encompassed by large databases, can mimic human tutors, optimize learning trajectories, and supervised by human experts. The goal of this symposium is to highlight the particular components needed for this „time leap”, some novel result, some preliminary ones, and the work which is in progress.

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