



Euro-Par 2006

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European Conference on Parallel Computing

Topic 11: Distributed and High-Performance Multimedia

Description

This is the time in which information - be it scientific, industrial, or otherwise - is more and more commonly composed of multimedia items, i.e. a combination of pictorial, linguistic, and auditory data. As digital video may produce over 100 Mbytes of data per second, and image sets routinely require Terabytes of storage space, traditional resource utilization is rapidly becoming a persistent bottleneck. Moreover, in emerging multimedia applications, generation, processing, storage, indexing, querying, retrieval, delivery, shielding, and visualization of multimedia content are integrated issues, all taking place at the same time and – potentially - at different administrative domains. As a result of these trends, a number of novel and hard research questions arise, which can be answered only by applying techniques of parallel, distributed, and Grid computing.

The scope of this topic embraces issues from high-performance processing, coding, indexing, and retrieval of multimedia data over parallel architectures for multimedia servers, databases and information systems, up to highly distributed architectures in heterogeneous, wired and wireless networks. "Proof of concept" implementations, case studies, and performance evaluations are particularly solicited.

Focus

- Mapping multimedia applications to high-performance architectures
- Architectures and algorithms for multimedia servers, databases and information systems
- Parallel and distributed algorithms for fast coding, indexing and retrieval of multimedia data and metadata
- System interfaces and programming tools to support multimedia applications on parallel processing systems
- Multimedia content creation, processing, and management using parallel architectures
- Multimedia agent technology and parallel processing
- Resource management for high-performance multimedia
- Architectures and algorithms for QoS- and context-awareness in heterogeneous (wired and wireless) networks.
- Distributed Architectures related to MPEG, including novel ideas regarding MPEG-21 "Universal Media Access".
- Multimedia Grid computing
- "proof of concept" implementations and case studies

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