

Study Project (equiv. "Studienarbeit (SA)")



Title	Study Project in Multimedia Database Systems
Subject	A real-time implementation of a QoS-aware decoder for the LLV1 format
Background	<p>In order to provide end-to-end real-time communication for RETAVIC project, which stores and handles large MOs and conversion of them in real-time, the idea of controlled compression by the server side as well as the client side is suggested. In order to provide data independence between stored format and client-side desired format the conversion process has to be done in the real-time with the quality-of-service taken into consideration. Especially this control may be influenced by the client actual quality i.e. the perceived quality required by the end user.</p> <p>One of the possibilities to support real-time operations and QoS is making of use a Layered Lossless Video format defined in the previous project (done by Michael Militzer).</p> <p>This work supports the RETAVIC project (http://www6.informatik.uni-erlangen.de/retavic/).</p>
Task	<p>At first someone should analyse and understand the LLV1 format - the most important is the decompression algorithm (image processing methods, motion compensation techniques, inverse BinDCT, layering structure, quantization method, etc.), so it must be studied really deeply. Then according to specification and recognized interface of the Dresden Real-Time Operating system the LLV1 decoder should be adopted and reimplemented with the respect to correct functional execution.</p> <p>The current implementation of LLV1 provided by M.Militzer should be used as our base source code. It is the open source implementation in "C".</p>
Requirements	<p>good knowledge of English interest in multimedia area, especially in audio-video conversion understanding of operating system issues is welcome good knowledge of "C" programming language</p>
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