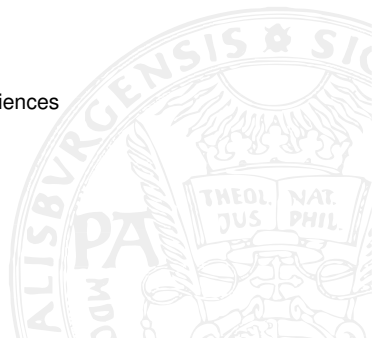# Slides Media Data Formats

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Andreas Uhl

Department of Computer Sciences
University of Salzburg

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Questions for Lecture Notes

1. In how far is temporal correlation present in video data ?
2. Describe the development over time of ITU and ISO video codec standardisation.
3. What is the JVT ?
4. Historically, different standards covered different application scenarios - pls provide example !
5. What is the advantage of MJPEG2000 over all other video coding standards ? Where is it used ?
6. What does MPEG stand for and what are the different parts of the MPEG-1 standard ?
7. Pls explain the meta-idea of inter-frame compression and the different nature of I, P, and B frames.
8. Why is the encoder not standardised in MPEG-1 ? How can standardisation work then ?

Questions for Lecture Notes Section

9. What is a GOP and a Macroblock ?
10. How are I-frames compressed in MPEG-1 ? (Intra-frame coding)
11. What is the most important difference to JPEG compression ?
12. Explain the basic idea behind motion-compensated prediction !
13. What is the motion vector ? How do we compute a motion vector ?
14. Describe the process of block maching as motion estimation technique.
15. How is the "predicted frame" generated ?

Questions for Lecture Notes Section

16 What is actually compressed (and how) and stored for P and B-frames ?

17 Do we actually compute motion ? Why is it of advantage to have a coherent motion vector field ?

18 Describe the (two) four ways, how a (P-) B-frame macro-block can be compressed.

19 Explain why the display order does not correspond to the encoding order of the frames.

20 How is the tradeoff between computational cost and compression effectiveness exhibited in video coding ?

21 Describe the MPEG-1 bitstream layers.

22 Pls describe three step search and hierarchical motion estimation.

23 What is the benefit and idea of half / quater pixel accuracy for motion vector computation ?