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The role of multimedia in the medical field – A tale of win and loss

Michael Riegler^{1, 2}¹Simula Research Laboratory, Norway²University of Oslo, Norway

Nowadays multimedia is characterized by a very complex nature due to the combination of different type of media, data sources, formats and resolutions, etc. Moreover, the performance is an important factor because of the sheer scale of the data to process. Therefore, the area of high-performance and scalable multimedia system gets more important. One of most important, complex and rapidly growing part of multimedia processing is the medical field. In most of the hospitals the potential of the large amount of collected multimedia data is ignored. This is very often because of the difficulties that processing such amount of data implies and lacking of efficient and simple-to-use analysis system. On the other hand, medical experts get more used to interact with multimedia content because of their daily live interaction and they want to use it also in their work. Most of the time this is a problem and the most common multimedia problems lay unsolved in this area. In this talk this problem is put into the spotlight and a multimedia system is presented that tackles automatic analysis of the gastrointestinal tract as a part of this problem. The focus lies on the presentation and evaluation of multimedia systems capabilities in the medical field. Therefore a novel system, that utilizes the benefits of heterogeneous architectures and can be used to automatically analyse high definition colonoscopies and large amount of capsular endoscopy devices are presented as a use case. Further it will be shown, that the improvement of multimedia systems performance via GPU-based processing which can help to reach real-time, live multimedia stream processing and low resource consumption which is important for the medical field and can help to save lives.

michael@simula.no

Typeface legibility

Sofie Beier

The Royal Danish Academy of Fine Arts, Denmark

Designers often assume that typeface legibility is defined by a simple set of parameters that works no matter the situation in which the typeface will be applied. That is not true. Different reading situations set different demands to the typeface in question. Whether we talk signage, screen or small print on low quality paper, they all have individual issues that need consideration. Based on knowledge provided by type designers, and by the scientific community this talk will discuss the different parameters that constitute a high level of legibility in a given reading context. The presentation is based on the book “Reading Letters: designing for legibility”.

sbe@kadm.dk