

# Power consumption issues for wireless video transmission

**Ann Ukhanova**

DTU Fotonik

Denmark

Email: annuk@fotonik.dtu.dk

## Abstract

During the last years of video codec development more and more attention has been paid to the low-complexity codecs, as they are considered now to be used in networks and systems, where it is necessary to decrease encoding power consumption so that they can achieve longer working time. Energy consumption is a critical aspect, since video cameras collect a huge amount of data that must be transmitted over the wireless link. Therefore, power consumption on the encoder side became one of the most important issues along with compression efficiency. We would like to take into account also the power needed for transmission of the data from the encoder. In principle, video compression can reduce the amount of data to be transmitted by a considerable factor. On the other hand, it is well-known that most video coders exhibit a very high computational burden. This is not a matter of concern in desktop multimedia applications, in which one can afford a 2 GHz processor to encode and decode video at 30 frames per second in real-time. However, the use of such a powerful encoder in a wireless video networks application may be objectionable, in that it is possible that the energy saved by transmitting less data does not compensate for the energy required to compress the video data. Therefore, the trade-off between communication and computation is a crucial aspect that need to be investigated.

## REFERENCES

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