

# MPEG – the story of bringing broadcast

Written by **Benedikt Schwartz**, Fast Video Security AG

FAST, as an early innovator of digital video recording systems, was evaluating various compression methods trying to optimise picture quality and bandwidth requirements. The simple task of transmitting only the differential information of a moving image versus compressing the full content of each individual picture clearly appealed to FAST's experienced engineers. MPEG's predicted frames are of significantly smaller size than pictures dealt with on an individual basis such as in Wavelet or MJPEG compression. Consequently the bandwidth requirements and, equally important, the storage requirements with its significant part of the cost of an installation, are considerably lower. In addition, FAST's intention was to work with standard compression methods to keep up with the fast evolution in the video transmission world. Finally, the availability of designated MPEG hardware fitted FAST's endeavour to deliver the highest quality at low cost. The many challenges, such as to get around playback functions, were quickly mastered so that the full range of video functionalities was offered.

This was back in the late nineties; the beginning of FAST's IP based Alpha Technology™. FAST has ever since continued to push its achievements further on all aspects of the technology: encoding, recording and data management. Recording at full frame resolution (4CIF) at 25/30 frames per second for 32 channels simultaneously with Pentaplex func-

tion remains unchallenged to this present day. The latest development, Alpha Frame Rate Reduction, allows MPEG streaming for time lapse mode. With this unique feature about 50% of storage can be saved and this is particularly suited for applications where storage costs force recording with reduced frame rate. Furthermore, our one channel encoders with simultaneous MPEG2 and MPEG4 compression allow central viewing with low bandwidth requirements and local recording at high resolution. Our new fifth generation technology yet to be announced will combine all our leading edges in one compact product reducing the cost per channel even further. From the cost effectiveness and the new easy configuration tool we expect a substantial widening of the range of applications.

With its resources focusing on high-end technical developments, FAST had to consider a particular strategy using marketing and sales channels most effectively for its innovations. Instead of dispersing all its efforts and financial resources into costly advertising and other marketing activities, FAST was looking for competent partners to complement its technology strengths with the necessary commercial approach for the various target markets. "Do what you are best at!" is the slogan we try to live by. While FAST continues to search for technological edge, we expect our partners to serve the local markets with the same ambitious quality standards. Technological competence and service

# quality to CCTV digital video recording



attitude are at the highest priority level for selection of partners to distribute FAST products. Over time, FAST has established a world-wide network of local distributors and multi-national OEM partners.

FAST's ongoing emphasis on quality has recently been awarded with the completion of ISO 9001 certification. Part of our quality procedures is the FAST Academy™ concept to transfer the required know-how all the way to the end user. Our partners are required to pass FAST's rigorous training program with subsequent certification of their personnel. Continuous follow-up seminars and a high level of communication enable our partners to keep up-to-date with our innovations.

Together with our partners we continuously adapt our strategy to best serve our tar-

get markets with competitively priced products. While our high quality standards are particularly appreciated in the casino world with its stringent security requirements, we expanded into various other applications where reliability is a must such as airports, highway control systems, homeland security, detention facilities and a wide range of other applications.

We feel that our selected approach gives us the most leverage on our innovative technology guaranteeing a short time-to-market cycle for our products. Coming up to FAST's 10<sup>th</sup> anniversary, the results seem to prove that we are on the right track, yet we will not rest on our success and continue to search for the most adapted way to serve our customers. [•]