

**INTERNATIONAL ORGANISATION FOR STANDARDISATION  
ORGANISATION INTERNATIONALE DE NORMALISATION  
ISO/IEC JTC1/SC29/WG11  
CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC1/SC29/WG11 MPEG2012/M28230  
January 2013, Geneva**

**Source**     **Telecom ParisTech**  
**Status**    **For consideration at the 103<sup>nd</sup> MPEG meeting**  
**Title**     **Update on GPAC tools for DASH**  
**Author**    Jean Le Feuvre, Cyril Concolato

## **1 Introduction**

In contribution [m26903](#), we have presented a set of DASH-related tools in GPAC (<http://gpac.sourceforge.net>), for both content-generation and content playback. This contribution gives an update of these tools.

## **2 MP4Box DASH news**

*Live:* The DASH segmenter for live mode has been updated to allow for simple live session simulation. It has mainly been tested for ISO/BMF profiles but can also work with MPEG-2 TS profiles. It is now possible to DASH a part of a file in each call to MP4Box, and have the following call restart segmentation from the previous position. This enables simulating a live on a long lasting file with only a few seconds of segments valid at any point in time. A sample usage is:

```
MP4Box -dash-live 1000 -subdur 3000 -out test.mpd REP1.mp4 ...  
REP2.mp4
```

This command line will make MP4Box run forever, generating 3 segments of one second each and sleep until next generation time is reached.

The tool also supports time shift buffer depth to keep segments on disk; time shift depth can be set using *-time-shift* option.

*AVC3:* Support for “avc3” has been added and in-band SPS/PPS are now used by default when DASHing. Using the *-bs-switching* option can overwrite it.

*Grouping:* media grouping can now be forced by using *:role=NAME* in the representation name, thus creating a new AdaptatioSet with the given role

*Bandwidth:* media bandwidth can be specified using *:bandwidth=VALUE* in the representation name rather than computing it from the source file.

*Periods:* MP4Box can now generate MPDs with multiple periods. Periods are specified using *:period=ID* in the representation name, which sets the given representation in the given period.

Period are built in the MPD in the order they are declared in the command line. If no period is given, the representation belongs to the default first period. Usage of periods in live mode is not yet supported.

### **3 MP4Client DASH news**

GPAC players (MP4Client, Osmo4...) have been updated with support for more DASH features, with the following add-ons since previous announcement:

- onDemand profile is now supported
- DASH Live sources are now supported, using NTP for live point computation.
- By default the player now uses the maximum resolution advertised in the MPD and upscales lower resolutions when doing rate adaptation.

### **4 Conclusion**

Telecom ParisTech is glad to announce the availability of improved DASH tools within GPAC, and welcomes any feedback on their usage or on any conformance defect. We encourage companies and R&D labs, interested in the MPEG-DASH ecosystem to have a look at the software.