DAVVI: a prototype for the next generation multimedia entertainment platform

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DAVVI is a prototype of the next generation multimedia entertainment platform. It delivers multi-quality video content over HTTP in a torrent-like way like known systems from Move Networks, Microsoft and Apple do. However, it also provides a brand new, personalized user experience. Through applied search, personalization and recommendation technologies, end-users can efficiently search and retrieve highlights and combine arbitrary events in a customized manner using drag and drop resulting in a personalized video composition and layout.

Architecture:

- Based on experiments, we use 2-second segments (one soccer game ➔ 2700 segments, indexed videos)
- FFmpeg encoded:
  - H.264 (GOP = 16 frames)
  - MP3
  - Custom made container
- To support adaptability to available resources, each segment is coded in many quality levels
- Tracker manages information about segment locations
- The user contacts the tracker for segment locations
- User sends HTTP GET requests to download video segments

Video segmentation:

- Many online TV-stations and newspapers provide live text commentaries
- DAVVI uses a semi-automatic live-text crawler and parser to improve the automatic annotations and add a lot of extra searchable metadata

Video delivery:

- Downloads segments
- Personalized video playout
- Arbitrary clip ordering
- Faster response times compared to Move and SmoothHD

Results