PRESS RELEASE:

EMBARGO November 13, 2013, 8am PST/4pm GMT

Media streaming technology specialist bitmovin releases latest version of its MPEG DASH streaming media client solution

Klagenfurt, Austria – 13th November, 2013 – bitmovin, the technology leader in adaptive media streaming solutions released its new bitdash 2.0 streaming & client optimization framework, enabling up to 100% higher streaming performance.

Video is forecasted to grow with a 75% CAGR to become over 66% of worldwide mobile IP traffic by 2017 - already today it is responsible for over 70% of fixed internet traffic[(1)]. The explosion of media traffic and huge variety in different devices, formats and protocols, has created significant issues in terms of the streaming media user experience - 60% of all media streams experienced quality degradation, resulting is reduced viewer engagement and an estimated $2.16 billion loss of revenue in 2012 alone[(2)]. At the same time (mobile) network providers need to significantly invest to deliver the capacity to accommodate this growth.

The MPEG DASH standard for adaptive bitrate HTTP streaming is designed for media delivery to a highly diverse set of target devices, platforms and screens, using existing HTTP infrastructures with the potential to be able to effectively manage varying (mobile) bandwidth. With the broad industry support from Google, Microsoft, Qualcomm, Cisco and others, MPEG-DASH is also adopted within 3GPP. Today it is the key standard for streaming media and DASH conformant solutions are appearing in the market.

bitmovin has a deep background in media streaming technology, including MPEG-DASH. The company has been actively participating in the MPEG-DASH standardization since the onset, and created the first open source MPEG-DASH conformant client implementation - libdash[(3)] - which is also the official reference software of the ISO/IEC MPEG-DASH. Additionally, the company was the first to create MPEG-DASH enabled media players, datasets, and tools. The company is recognized as a technology leader in the streaming media industry and continues to innovate around the leading edge in areas such as DASH over HTTP 2.0/SPDY, HEVC/H.265, Multipath TCP, etc.

bitmovins' performance optimized (patents pending) bitdash 2.0 MPEG-DASH client solution was created to substantially increase media streaming performance of MPEG-DASH players, rather than solely focusing on conformance to the MPEG-DASH standard. bitdash 2.0 delivers seamless multimedia streaming, at the best possible media bitrate and quality which minimizing stalls. In adverse bandwidth conditions (for example, in mobile networks with poor coverage and moving clients) the solution has been demonstrated to deliver up to 100% increase in effective media streaming throughput. This gives bitmovins' customers a strong competitive advantage in their market, enabling significant higher streaming quality on their devices compared to their competitors. bitdash is available on the widest range of platforms, including embedded platforms (TV, Set-Top Box, Consoles, automotive solutions, etc.), mobile devices (incl. Android and iOS), HTML5/JavaScript, and Flash, making it the solution of choice for service providers as well as OEMs.

"With bitdash 2.0 we're delivering a substantially improved solution that delivers the best MPEG-DASH client performance in the market today" says Stefan Lederer, CEO at bitmovin. "Additionally, this release has a broader target platform support, and includes capabilities that make the integration into existing solution and tracking and analysis of Quality of Experience (QoE) parameters much easier. We're seeing an accelerating interest from a variety of industry players in solutions that not only address MPEG-DASH *conformance*, but also deliver actual *performance* and real competitive differentiation and business impact."

For content and streaming media service providers, the bitdash 2.0 solution achieves up to 100 % higher streaming quality, especially in adverse network condition with highly fluctuating levels of bandwidth availability. Rollout of bitdash enabled media clients can help maintain streaming performance and Quality of Experience, while at the same time deliver more streams to more customers with equal network capacity. As MPEG-DASH was designed to leverage existing, scalable and cost-efficient standard HTTP-based content delivery infrastructure, no network or infrastructure upgrades are required. For providers and developers, bitdash greatly reduces integration resources required and accelerates time to market as the solution provides API access to MPEG-DASH parameters, quality metrics, and network/QoE statistics as well as availability of the solution on a wide range of platforms, including Windows, Linux, Android, iOS, HTML 5/Javascript, and Flash.

bitmovins' libdash and bitdash are currently in the top 3 ranking of the 2013 Streaming Media Readers' Choice Awards for the best MPEG-DASH product.

For a demo on the impact on Quality of Experience (QoE) of the bitdash solution please see http://www.bitmovin.net/bitdash/demo/video.html

(1) Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2012–2017, 2013 (http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.html)

(2) Viewer Experience Report 2013, Conviva , 2013 (www.conviva.com/VXR)

(3) libdash: https://github.com/bitmovin/libdash

About bitmovin GmbH

bitmovin GmbH is a privately owned technology leader led by industry experts that provides high performance media streaming client and server/cloud solutions to helps its customers and partners deliver the best-quality media experience for their end users. The company's' main expertise is technology related to cutting-edge standards and multimedia technologies, which is the basis for its cloud-based transcoding and streaming product bitcodin.com and the high-quality streaming libraries libdash and bitdash. Moreover bitmovin GmbH develops complex multimedia applications according to recent standards and technologies and participates in various standardization bodies, such as ISO/IEC MPEG and IETF.

Contacts:

Stefan Lederer
CEO, bitmovin GmbH
phone: +43 (664) 4347745
mail: stefan.lederer@bitmovin.net
skype: stefan-lederer
web: www.bitmovin.net
Lakeside B01 | 9020 Klagenfurt | AUSTRIA
@bitmovin | facebook.com/bitmovin | github.com/bitmovin | crunchbase.com/company/bitmovin

About MPEG-DASH and Background:

HTTP streaming is referred to as the delivery of continuous media such as audio or video using the Hypertext Transfer Protocol (HTTP) enabling the end user to consume the media without the need to download the entire content prior to consumption. The media distribution method has become a de-facto standard on the Internet for two reasons. First, reasonable Internet connectivity (i.e., in terms of

bandwidth for media content) is nowadays available anywhere, anytime, and almost on any device. Second, the usage of HTTP does not cause any NAT/firewall issues as it is the case with other media transport protocols like RTP/RTSP. However, this approach provides only one quality representation to the user, which results in frequent buffering periods and long startup delays of the video.

This led to the standardization of MPEG-DASH, which is an open, international standard and stands for Dynamic Adaptive Streaming over HTTP. The basic idea is to chop the media file or stream into segments which can be encoded at different bitrates or resolutions. The segments are provided on cost effective and scalable HTTP Web servers and can be downloaded through standard HTTP GET requests. The adaptation to the bitrate, resolution, etc. is done on the client side for each segment, e.g., the client can switch to a higher bitrate – if bandwidth permits – on a per segment basis. This has several advantages because the client knows its capabilities and its received throughput best. In order to describe the relationship between bitrates, segments, and the order of the segments MPEG-DASH introduces the so-called Media Presentation Description (MPD). The MPD is a XML document that represents the different bitrates and HTTP URLs of each individual segment. This structure provides the binding of the segments to the bitrate (resolution, etc.) among others (e.g., start time, duration of segments). For example, a typical client would first receive the MPD and with the information of the MPD it would then request the individual segments that fit best for its given bandwidth. If the bandwidth changes during the session the client could easily select a segment from another representation with a different bitrate that fulfills its bandwidth requirements best. This makes the progressive download method adaptive and dynamic in the same way. There are also other proprietary solutions from different companies like Microsoft's Smooth Streaming, Adobe's Dynamic HTTP Streaming and Apple's HTTP Live Streaming which more or less adopt a similar approach.

Further information on the MPEG-DASH standard:

DASH Industry Forum: http://www.dashif.org/
Overview of the Standard: http://dashif.org/mpeg-dash
DASH Tutorials: http://multimediacommunication.blogspot.co.at/2013/09/mpeg-dash-tutorials.html
MPEG-DASH Ecosystem Status: http://blog.eltrovemo.com/1218/mpeg-dash-ecosystem-status/