ClassPass Live

Leveraging Bitmovin's streaming
video capabilities for an interactive,
remote fitness experience.

>> BITMOVIN

classpass

INTRODUCTION

Founded in 2013, ClassPass is the leading membership to the world's largest fitness network. With over 12,000 partners in over 55 cities worldwide, ClassPass connects members to a variety of fitness experiences, including yoga, cycling, Pilates, barre, running, strength training, dance, sports videos and more.

In March 2018, the company launched ClassPass Live, a live-streamed, interactive fitness video offering that brings boutique-quality fitness to members wherever they are. The goal of ClassPass Live is effectively time-shifting and place-shifting exercises. And a goal with place-shifting is to reach subscribers outside of urban and selected suburban areas to offer those individuals the ability to join classes.

ClassPass Live was created recognizing the modern lifestyle of always being on the move, unpredictable and flexible schedules, as well as the affinity to digital devices and video streaming as a way to achieve an informative and immersive experience by modern consumers.

ClassPass Live consists of its own original programming, with content tailored to the various ClassPass users, based on known interests. The goal is to recreate the magic and buzz of a studio class, with streaming video and the app being a foundational part of the interactive and immersive virtual experience.

The high production value of the content and the app interactivity reinforces the boutique brand experience of ClassPass.

ABOUT CLASSPASS LIVE

" *Get Unlimited live and on-demand workouts: Join a live class Monday through Friday. Can't make it? Take class on demand when it works for you. With monthly subscriptions and no expensive equipment required, it's easy to work out wherever you are (and wherever you go).*

CHALLENGES

Live classes are produced in Brooklyn, NY, covering the continental U.S. Classes are recorded for an on-demand experience after the live class concludes.

With the main studio being located in Industry City, Brooklyn, NY, where classes are organized and captured on camera, the challenge of how to process that video and package the overall immersive experience for ClassPass Live subscribers scattered throughout the U.S. quickly rose to the forefront.

When the ClassPass development team surveyed the market for available technology, they quickly realized that many of the features around the immersive experience needed to be built from scratch. They required an online streaming video player available on multiple devices that would have the flexibility through well-defined and well-documented API's that would allow integration to subscriber-side accessories that are required for the experience.

The key subscriber-side accessory is a heart rate monitor that would be strapped on, and information integrated into the video player included:

- A competitive leaderboard showing the subscriber's performance in real-time

- Real-time heart rate, as well as target heart rate zones

- Calories burned

And very importantly, the user experience the team was targeting was a "large screen" immersive experience that was consistently applicable across mobile platforms for as widespread of a reach as possible.

> " *We wanted to create a unique experience that provides detailed information alongside a high-quality video experience. It was essential that we used the very best technology to allow us to do this across a variety of devices. Bitmovin's Player gives us the flexibility and quality we need to continue to make ClassPass Live the best way to get fit.*
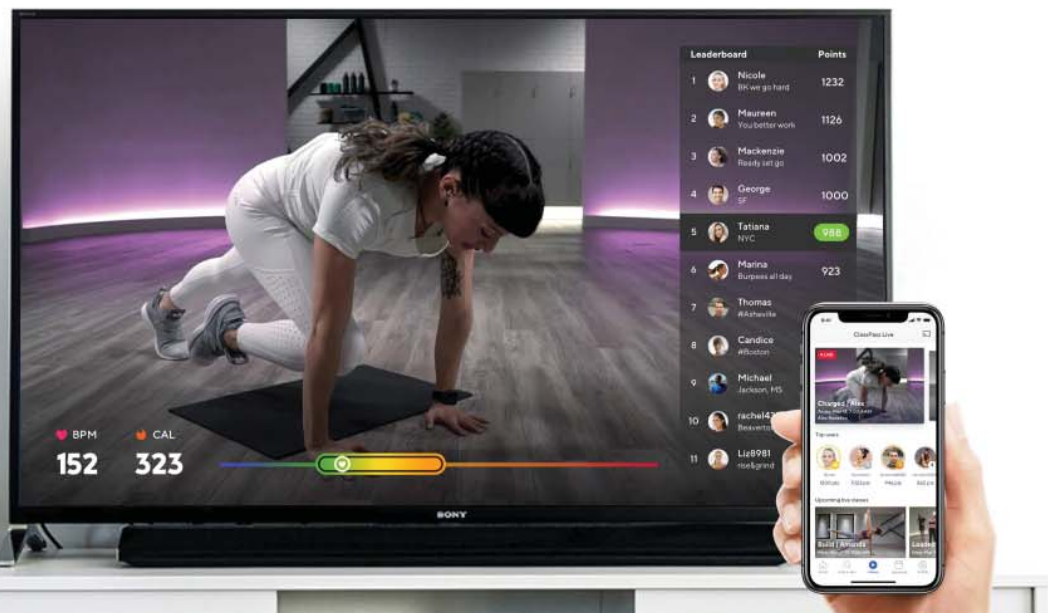
Atul Ohri
Head of Engineering
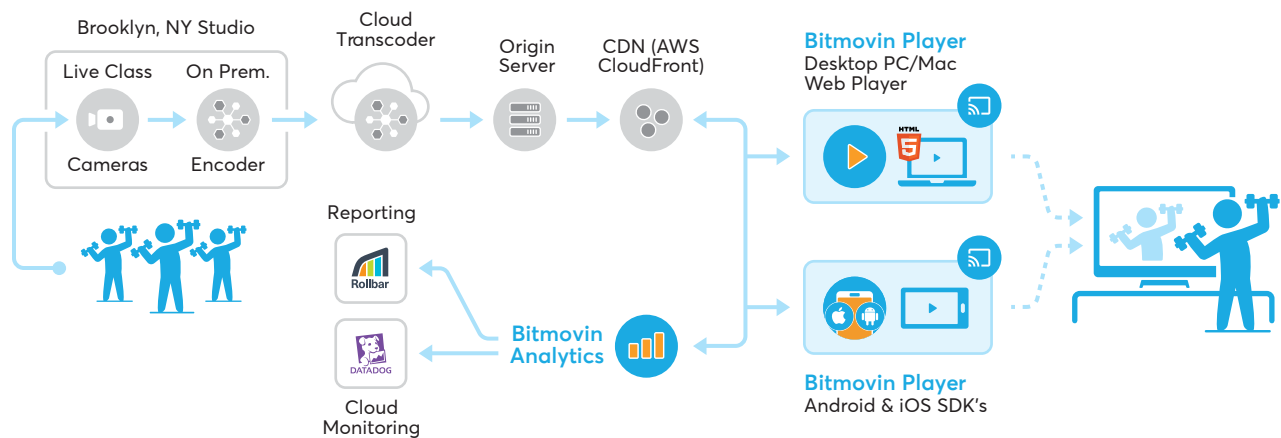@ ClassPass Live

THE SOLUTION

The "large screen" user experience requirement resulted in the subscriber's display being done on a desktop computer, or on a TV through a Chromecast device. Additional requirements included:

- HTML5 to be used for the web player

- Chromecast to be supported by Android/iOS mobile players, as well as web players.

The Bitmovin Web Player and the Bitmovin Android / iOS SDK's were chosen for their unified API approach. This unified API allowed ClassPass to streamline development by avoiding the need to specialize in disparate player stacks for the initial development and ongoing support. The customizable user interface across the platforms also offered the ability to create the interactive UI specific to ClassPass' needs.

Bitmovin Analytics was also seen to be complementary to the players to provide ClassPass insights into usage. Analytics data provided by Bitmovin technology integrates into a wider system with other tools, and includes such quality of experience data as buffering experienced on the player side.

Brooklyn, NY Studio | Cloud Transcoder | Origin Server | CDN (AWS CloudFront) | Bitmovin Player Desktop PC/Mac Web Player | Bitmovin Player Android & iOS SDK's | Reporting — Rollbar | Cloud Monitoring — DATADOG | Bitmovin Analytics

THE CLASSPASS
END-TO-END SOLUTION

The end to end system built by ClassPass starts with the live class being captured in Brooklyn, NY, and up to four cameras capturing the action at different angles. The production switcher is taking in those camera feeds and a final, single live feed is used as input to the on-premise live encoder, which performs the initial encode operation and feeds the cloud transcoder. The cloud transcoder creates the HLS adaptive bitrate content, in the right format for distribution.

AWS Cloudfront is used as the content delivery network (CDN), which then distributes the media content in HLS format to the various devices, including web browsers and Android and iOS mobile devices. The Bitmovin Players and SDKs are then utilized for the playback function on the web client, as well as to cast to Chromecast-equipped large screen TV's.

As the live and VOD class content is delivered and used for virtual exercising, the quality of the experience around buffering rates as well as other data is collected in the Bitmovin Analytics platform. The platform is used as part of an analytics system, where Rollbar is used for reporting and Datadog is used for cloud monitoring.

This innovative solution was created by the engineers on the Digital team at ClassPass. The development plan consisted of developing the player on the Web platform and iOS initially, followed by Android. As the team progressed in the development process, they were pleased to see the software events and web hooks were very transferable from Web to iOS, cutting down on the amount of ramp-up across platforms, and debugging and final delivery of the software.

BENEFITS

Since the March 2018 launch of ClassPass Live, ClassPass has been hitting its goal of expanding the reach of its service and the recognition of its brand beyond the urban and selected suburban locations where it started.

ClassPass Live has demonstrated how streaming video has become an invaluable tool for the modern lifestyle, and how streaming video can help with health, wellbeing and an active lifestyle.

As part of the innovative solution that ClassPass built up, the Bitmovin Video Player provided ClassPass with a fully customizable,

dynamic interface allowing real-time metrics, a live leaderboard, heart rate monitor and calorie tracker. The Player's multi-device capability meant an efficient development process for the ClassPass team in achieving the goal of a large screen workout experience virtually using Chromecast and large screen desktop screens.

With the initial success of ClassPass Live in the continental U.S., ClassPass Live is turning its sights to international markets, supporting the company's physical studio subscription business growth into Asia Pacific in 2018 and other regions in 2019.
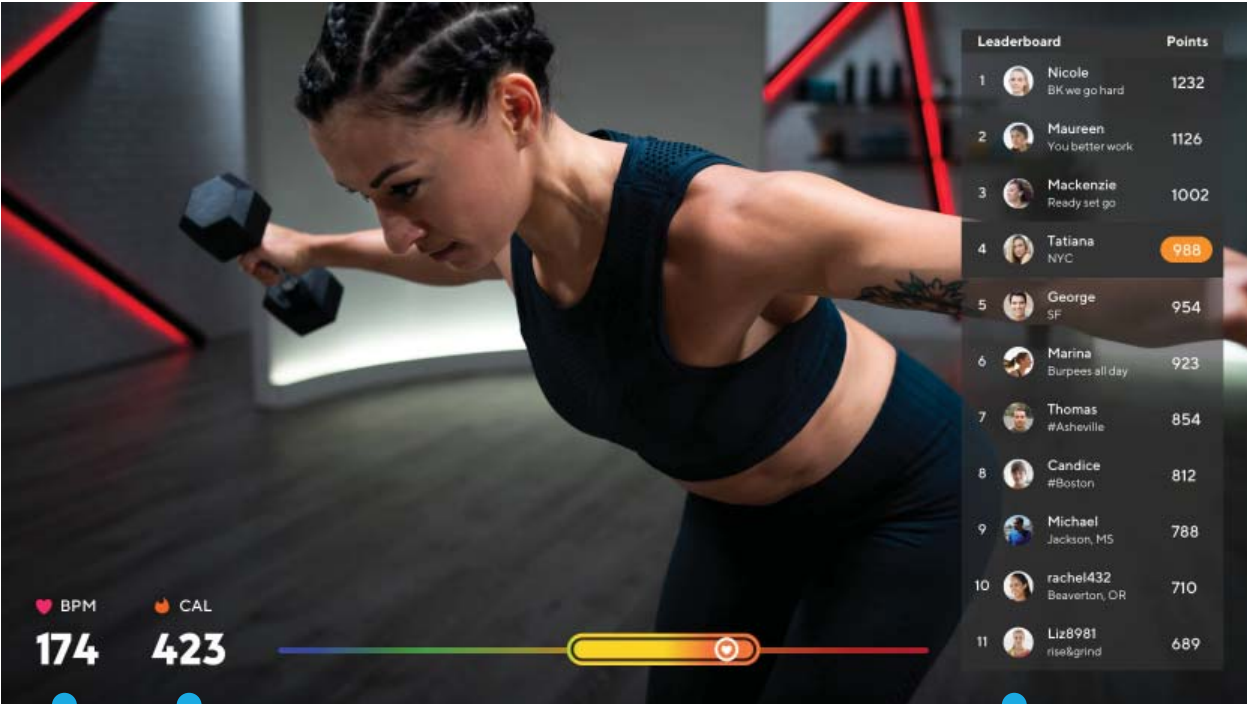
Calories burned

Real-time and target heart-rate zones

A competitive leaderboard showing the subscriber's performance in real-time

ABOUT CLASSPASS

Founded in 2013, ClassPass is the leading membership to the world's largest fitness network. With over 12,000 partners in 55 cities worldwide, ClassPass connects members to a variety of fitness experiences, including yoga, cycling, Pilates, barre, running, strength training, dance, sports, videos and more. Recognized as one of Forbes's Next Billion Dollar Startups, ClassPass leverages proprietary technology to dynamically merchandise and surface over a million fitness classes for a seamless booking experience that facilitates discovery. In March 2018, the company launched ClassPass Live, a live-streamed, interactive fitness video offering that brings boutique quality fitness to members wherever they are.

To learn more, please visit www.classpass.com/live

ABOUT BITMOVIN

Bitmovin is a leading provider of video infrastructure for online media companies around the world. The company has been at the forefront of major developments in online video - from building the world's first commercial adaptive streaming player to deploying the first software-defined encoding service that runs on any cloud provider or in a data centre. Bitmovin works with media companies across the globe to build innovative video products.

To find out more, please visit www.bitmovin.com

Bitmovin, Inc.
301 Howard Street, Suite 1800
San Francisco, CA 94105, USA
+1-833-248-6686

Schleppe Platz 7
9020 Klagenfurt, Austria
+43-463-203-014

⋙ BITMOVIN

Software to Solve Complex Video Problems

www.bitmovin.com