Solution Overview

This solution focuses on ideas that are achievable today for mass audience consumption with an eye to the future on upcoming technology which enables higher fidelity experiences. This means a focus on mobile VR as opposed to PC VR or AR in general, however it would be possible to address all of these markets using mobile VR as a starting point with a shared codebase.

The solution would involve multiple smaller experiences, delivered through a single hub interface which could be iterated on over time. The reasoning for this is:

- The brief is to provide additional, companion experiences outside of the race itself, which implies short sessions.
- Mobile lends itself to snack-sized content when considering user comfort and mobile battery life.
- Iteration time on the web and mobile is fast.

These experiences would be built into the existing F1 mobile apps and website, which helps with distribution, discovery and can build on an established user base. It also means both mobile and PC fans can use their existing equipment to join in today, enhancing their experience if they add a VR Head Mounted Display (HMD.)

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The goal would be to deliver content around each of the exciting points over a weekend:

The Cars
- Explore an F1 car, have the parts labelled and explained, which can help with STEM education.
- Also explain related info such as tire difference, how weather impacts cars, etc.

The Track
- Get a tour of the track, with major moments from history and memories presented by F1 personalities.
- A digital recreation of the track with a narrated fly-through. The user could navigate this themselves and trigger each point of interest manually, with historical photos and videos overlaid.

Pit stops
- Take part in a pit stop as a member of the crew.
- Could be simple on mobile where you are the front jack man.
- Could be more interactive on PC where you can change a tire.
- Get timed or scored to how close to ideal your release was, show a leaderboard, etc.

Lap times and gaps
- Watch previous practice, qualifying and fastest race laps, available after each session.

- On-board 360 camera views would be simple to deliver or...
- Recreate using virtual cars, comparing how the different drivers performed, (e.g. see Hamilton and Vettel's best laps overlaid in order to see where each makes up their time and visualise the distance involved in a split second delta.)

Pit & Grid walks/interviews before and after the race
- Best served as 360 video.

Podium
- Get a 360 video view from up on the podium platform of the trophy presentation and interviews.

It would be possible to view some of the data from previous races as a way to learn and stay engaged, including during the off season when fans may still want to relive some of the highlights from the past year, (2016 has had some fantastic races already, so why not?)

Key Features

This solution is inclusive for the audience. They can use their existing mobile phone, tablet or PC to view and interact with much of the content. If they have a VR/AR HMD then the experiences are enhanced. It does not matter if you are at home or at the race, you can enjoy this content.

Distribution is simple, using the existing F1 mobile applications on the iOS & Android app stores, plus the existing formula1.com website.

Development is possible today, as discussed in the technology section below. This also means that cost should not be a major issue.

Expansion is possible in future, with the ability to create bespoke, enhanced implementations for specific platforms such as high-quality PC VR setups and AR HMDs once they are more accessible to the general consumer. These can be scaled versions of what is already built, reusing the existing assets.

Delivery can be iterative, where each experience can be perfected before delivering more or, even better, test lots of ideas quickly to see which work best, getting feedback from fans.

Technology

In deciding on an approach to take for AR/VR experiences today, the current choices are getting wide reach (mobile) or high fidelity (PC.) Eventually the gap between mobile and PC will diminish through technologies such as Google Daydream & Tango, but let's focus on mobile and what is widely available now.

Going mobile means we can use the existing F1 apps for distribution, simply adding support for Google VR, (iPhone & Android,) and/or Gear VR, (Samsung Galaxy owners.)

360 video content could be produced with a single 360 camera:

- Movable before the race, such as during the grid walks that Martin would typically do.
- Attached to a drone or Skycam over the pit lane to record pit crews in action during the race.
- Tripod mounted for the podium and press interviews after the race.

A stereoscopic 360 video camera would add depth to the scene. In future, lightfield cameras would allow for more movement by the viewer which helps prevent simulator sickness and improves immersion.

Google VR Views are an easy way to add 360 still and video content to apps and websites, meaning PC and mobile users can all experience 360 content without needing anything other than a web browser. However, if a user does have a VR headset then they can "step into" the content and view it in VR.

The digitally created content would generally be reusable and built before a race, in some cases requiring data from race sessions in order to function, such as the lap time comparison. It is assumed this telemetry data would be available from teams and/or the FIA to facilitate this. A-Frame or WebGL technology could be used to build these digital experiences without requiring a game engine such as Unity.

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