

Guest Blog: Course of the Force - The Developer Strikes Back

Posted By Chris Hebert

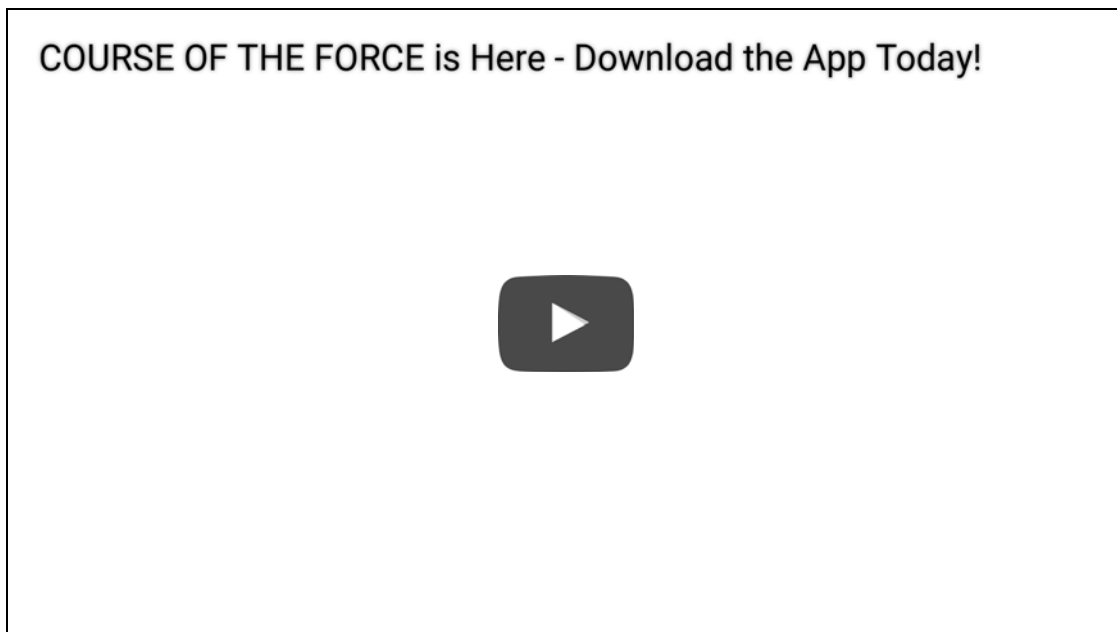
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Mark Schroeder, Producer at Signature Creative, shares his insight on creating the [Course of the Force mobile app](#).

Take a comic convention, a 500-mile relay race, Star Wars and the California coast. Now, tie them all up in a mobile app.

A developer's dream, right? Here's how the Course of the Force mobile app works and how we've pulled it together.



Course of the Force – The Relay Run

Each summer, San Diego hosts [Comic-Con® International](#), a convention attracting over 100,000 fans of comics, science fiction and popular arts. Star Wars is a prominent theme at Comic-Con, which inspired the creation of Nerdist And Lucasfilm's [Course of the Force](#) (COTF), an Olympic-style Lightsaber relay run that starts at Skywalker Ranch near San Francisco and ends in San Diego in time for Comic-Con. The run, which benefits the Make-a-Wish Foundation, includes celebrity runners, spans much of the California coastline and features "Conival" celebrations in cities along the way.

So you can imagine the buzz here at Signature Creative when we began working on the official Course of the Force mobile app. We had used technologies from Qualcomm before, and as we scoped the project we saw it would be a good use case for two of those technologies: [Vuuforia™](#), which enables mobile apps to “see” and [Gimbal™](#), a context awareness and proximity platform.

Course of the Force – The App

We designed the app to connect COTF to its fans in three ways, based on several user engagement questions:

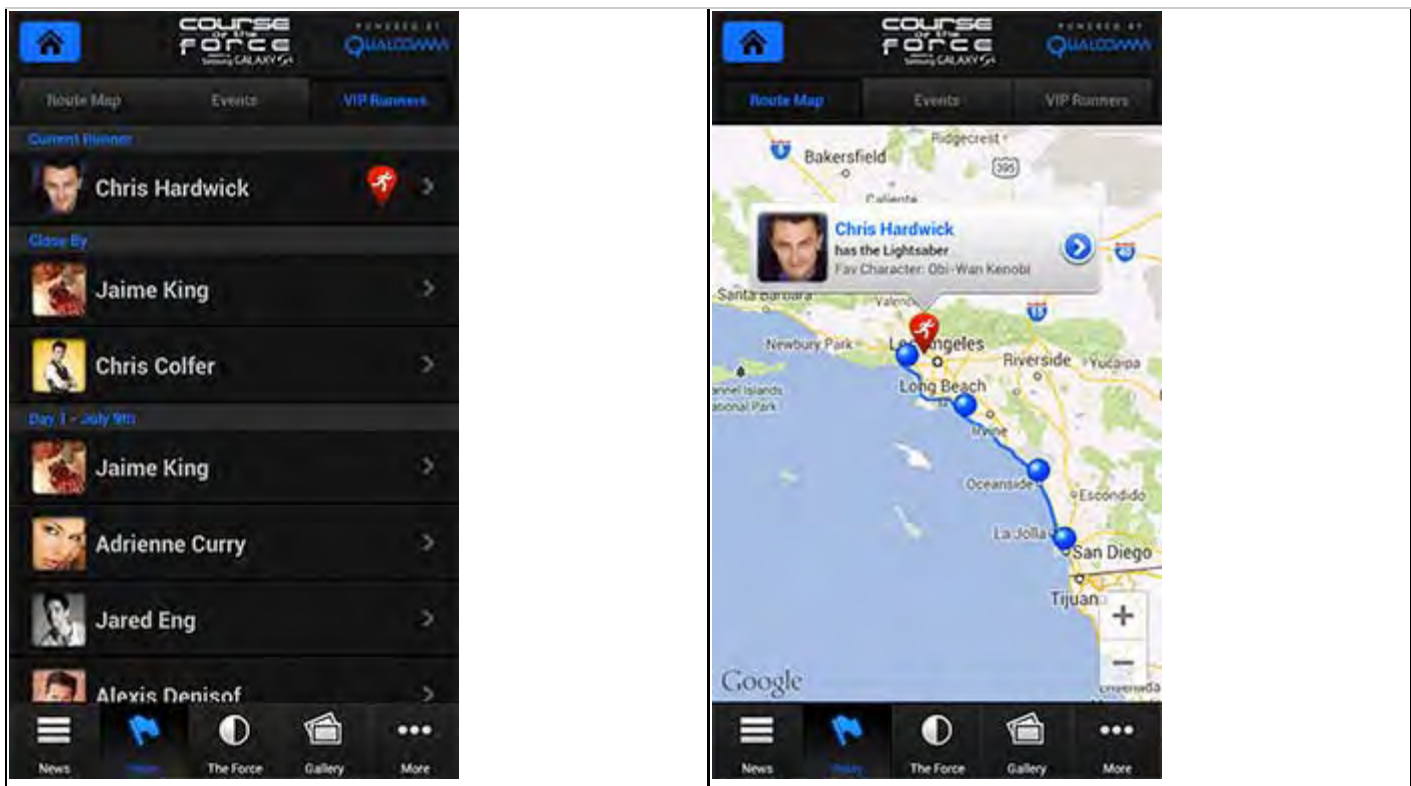
1. How can we let fans follow the relay and its celebrity runners in real time? By using Gimbal proximity triggers.

During the race, runners pass a Lightsaber to each other. A pace car drives the entire course just behind the Lightsaber. Some of the runners are celebrities, so we wanted fans to see not only the location of the Lightsaber on a map of California, but also the celebrity currently carrying it. We built our app around these components:

- An admin version of the app, running on a mobile device in the pace car.
- A Gimbal proximity beacon that is held by each celebrity runner and uses Bluetooth Low Energy (BLE).
- A cloud-based server and database receives the BLE transmissions and relays them back to the application.
- A user version of the app, which fans may download at no cost from [Google Play](#) and soon from the App Store.
- Using Gimbal, the user app detects the last known proximity of each celebrity’s unique beacon to the pace car so fans can follow along in real time on a map in the app.

Say that the pace car arrives at mile 73, where a celebrity, like comedian [Chris Hardwick](#) is scheduled to take the Lightsaber from an actor, like [Chris Colfer](#). The app in the pace car detects the beacons, so in the user version of the app, fans see that Hardwick is the current runner and Colfer is close by.

Once Hardwick has the Lightsaber, fans see “Chris Hardwick has the Lightsaber,” along with a photo and quick facts in their app.



As a result of Gimbal’s proximity detection, fans know in real time when a celebrity is carrying the Lightsaber and which celebrities are nearby.

2. How can we attract fans to each of the Conivals and engage them once they're there? By using Gimbal Geofence.

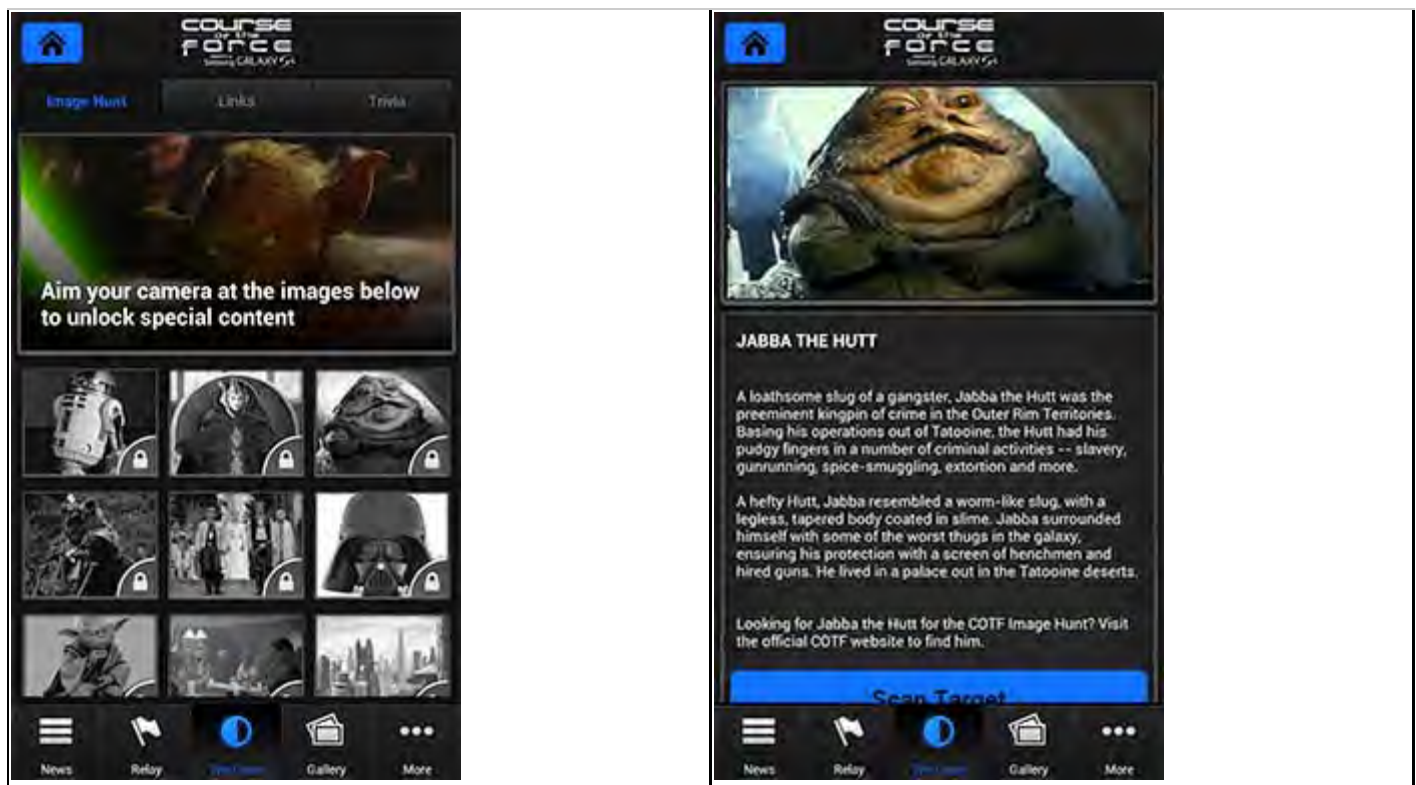
Along the California coast fans can attend several Conivals filled with live entertainment, expo booths, giveaways and fellow Star Wars enthusiasts.

We've used Gimbal to create a geofence around each Conival. When fans walk into the area, the GPS coordinates of their phone cross the geofence, and the app triggers a notification from Gimbal, such as "Welcome! You have arrived at the Course of the Force Santa Monica Conival!"

3. How can we drive fans to the COTF website and social media channels? By enabling the app to "see" with Vuforia.

Once fans are in the app and checking the progress of the relay, we offer them exclusive content so that they'll stick around. We included a play area in the app called The Force, with trivia questions and a scavenger hunt powered by Vuforia.

To unlock the exclusive content, fans use the camera in their phone to match and scan nine Star Wars-related target images with their mobile device. They can touch the image – say, a photo of Jabba the Hutt – to see a detailed description, sometimes with hints about where to find it. For some images, they scan the real-world object when they visit a Conival; for others, they must visit COTF's online resources on another device, and then scan. Vuforia recognizes whether the fan has matched the original image and, if so, unlocks the exclusive content: video, photos and URL links.



Back in the shop

As I mentioned, we had to bring our A-game to this project, especially when it came to testing

the app. We couldn't stage our own relay down the Pacific Coast Highway, so we took lots of laps around our neighborhood. To test Gimbal, we set up several geofences near our office and crossed the geofences to test accuracy and delivery of notifications. Additionally, we walked around the neighborhood with beacons to test the proximity capabilities.

Even though the COTF app is experimental in a lot of ways, the tools from Qualcomm are like a key that developers can use to unlock the door to other possibilities and bring their vision to life. If you have an idea, Qualcomm has a lot of tools to help you bring it to life.

Your turn

- Download the Course of the Force app for [Android](#) and soon for iOS , to follow the relay through July 16, 2013.
- Once you've seen how we integrated the tools, download the [Gimbal](#) and [Vuforia](#) SDKs and try them in your own apps.
- Follow the [COTF video](#) during and after the relay. If you'll be in California this week, [stop by one of the Conivals](#) or find COTF at [Comic-Con International](#).

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About the Blogger



[Chris Hebert](#)

Chris is a senior product manager at Qualcomm Retail Solutions, Inc., where he is responsible for the Gimbal Contextual Awareness Content Platform. Chris has spent the past 15 years focusing on mobile applications and content personalization.

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