How Sentons Helped Asus Deliver the Best Gaming Phone of the Year

REPUBLIC OF GAMERS · ASUS® · sentons

OVERVIEW

Asus was on board to try to create the best gaming-focused smartphone in the market for Tencent Games (in China), out of its market-leading Republic of Gamers (ROG) brand. The mission was to replicate the console gaming experience on a mobile phone, complete with controller inputs and ergonomic features that were familiar to users such as multi-finger controls and trigger-style buttons.

They had high expectations and knew they needed the right technology to push the envelope for its user experience. Asus and Tencent collaborated with Sentons to create a key new feature for gaming smartphones, AirTriggers, and debuted it in the ROG Phone II.

The goal was for Asus to deliver the first gaming phone that excelled as a gaming device and as a powerful smartphone

BACKGROUND

Several companies had attempted to create gaming phones in the past, but had limited success. These previous attempts were plagued either because:
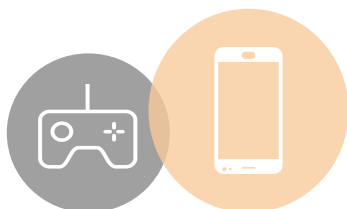
a) The phone was only a "re-skinned" version of a standard smartphone--providing no real gaming benefits and a compromised gaming experience

b) The phone was too extreme in its focus on gaming, delivering a compromised user experience for the still-important non-gaming functions

CHALLENGES

One of the main challenges Asus faced was delivering a console-style gaming experience in a mobile phone form-factor. More specifically, figuring out how they could enable familiar trigger-style button controls without compromising other functions, design aesthetics, or robustness of the phone.

Asus knew they could not simply add traditional gaming-controller-style physical switches around the outside of the phone – it would be too bulky, too prone to damage, and too disruptive for the other functions of the device.

Even smaller physical switches similar to traditional volume buttons would provide a highly compromised design aesthetic and would not be comfortable for the user's fingers

Delivering a Game Changer

SOLUTION

Asus turned to Sentons early in its design process to explore using Sentons' proprietary SDSwave technology. Asus was intrigued with how Sentons technology could sense a user's finger through almost any surface, including a metal phone housing, as well as the extremely fast sensor response time, and high-fidelity measurements of both position and force data.

The Sentons and Asus teams worked closely during the development process to fine-tune both the physical design as well as a custom sensor module

to create haptic-enabled "AirTrigger" buttons, powered by the SDSwave Processor. AirTriggers are a set of virtualized buttons on the shoulder of the phone that act like buttons found on console-based gaming controllers, while also providing extra inputs for enhanced interactivity in gameplay.

RESULTS

The end result delivered on all items in Asus' feature wish-list, easily scaled into high volume production, and delivered a truly unique feature previously unseen in the market.

- The ROG Phone II quickly rose as the top gaming phone in the market
- The AirTriggers evolved the phone into a gaming remote--providing a novel user experience while still blending-in seamlessly to the phone housing

Named Best Gaming Phone of the Year

Most Awarded Gaming Smartphone of the Year

"Sentons' technology has been one of the most effective solutions to recreate a console-like gaming experience on a smartphone. Our goal is to deliver game-changing products using the best-in-industry technologies and Sentons is helping us accomplish just that."
-Bryan Chang, General Manager, Smartphone Business Unit at ASUS

CONCLUSION

The AirTriggers delivered low-activation force, high reliability, superior design integration capability, and multi-mode context-aware input sensing, including button and gesture sensing.

Sentons' SDSwave technology was a perfect solution for the ROG device, simply because it was, and still is, the only technology on the market that could deliver touch-based gaming controls that accommodate Asus' game-centric design, power capabilities and high-quality user expectations.

With these successes, Sentons' partnership with Asus continues to grow. There is a new generation of devices in the pipeline that are leveraging new ways in which Sentons' SDSwave technology can add to the overall user experience of the device both for gaming non-gaming functions.