

Making Infotainment Systems Become Intelligent

Hypervisor approach to incorporate Android or AliOS in a current IVI

Berlin/Ningbo, China, March 17, 2021 - JOYNEXT and OpenSynergy announce their joint mass production project: a new generation of in-vehicle infotainment bringing this domain to the next level without adding more complexity to the electronic system of the cars. The systems contain a well-known reliable full-featured infotainment system and another smartphone-like open platform, which offers the flexibility to download apps from the app store. Both subsystems are running on one single high-performance system on chip side-by-side with the help of JOYNEXT's integration about OpenSynergy's COQOS Hypervisor SDK.

Based on JOYNEXT's design, COQOS Hypervisor SDK enables the convergence of the infotainment systems and the platform for individual app downloads on a single System-on-Chip (SoC). While additional resources (e.g. RAM, CPU, Flash) for the new OS need to be taken into account, COQOS Hypervisor does not require significant overhead, especially because of the minimalistic architectural approach of the hypervisor. The existing infotainment system maintains its performance, as it continues to use native drivers (pass-through) after adding the virtual machine.

With JOYNEXT's innovative concept and strict requirements, this hypervisor approach integrates perfectly COQOS Hypervisor SDK and CE-grade operating systems on top of the existing custom IVI, which leverages both of JOYNEXT and OpenSynergy's investment made during many years of intense customer-driven development. JOYNEXT's unique solution concept actually helps both quickly provide up-to-date features to customers (e.g. online services, access to App stores) by using the current IVI already in production product.

JOYNEXT is a direct supplier (Tier1) for the automotive industry and has been a development partner and system supplier of well-known automotive manufacturers for over 20 years. Their connected infotainment and smart connectivity gateway technologies can be found in well over ten million vehicles worldwide. JOYNEXT's 5G-V2X product also will boost the development of autonomous driving related technologies.

Realizing this kind of innovative system, JOYNEXT reduces the cost of material and weight of the car, while offering a new experience to its customer. Moreover, the intercommunication between the systems is much more performant since they run on the same ECU.

Regis Adjamah, CEO of OpenSynergy, emphasizes "With JOYNEXT, we bring the best of two worlds together: reliable full-featured OEM infotainment systems and smartphone-like open platforms. The integration is quick and the performance is close to native."

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JOYNEXT Board Chairman & CEO, Mr. Yuan Liu, recognizes OpenSynergy's cooperation and efforts on this IVI project and adds: "It is always the rapidly changing market needs that drive JOYNEXT to create scalable and adaptable solutions. I believe that by working more closely with our excellent partners, such as OpenSynergy, JOYNEXT is better prepared to meet the diverse expectations of end users around the world."

About JOYNEXT

Intelligent solutions for networked vehicles – that is JOYNEXT. We are working on future technologies that are becoming increasingly important for automobile manufacturers and their customers. Because on the way to autonomous driving, vehicle data communication with mobile devices such as smartphones, with other vehicles (V2V) or with infrastructure systems (V2X) is becoming increasingly important. JOYNEXT also deals with the new and further development of cloud based services. We always strive to strike a balance between innovation and sustainability. When developing our products, the focus is on the end user, his needs and usage.

With more than 1,300 employees worldwide, JOYNEXT takes connected cars technology to a new level. We are present at seven locations; our development and innovation centers are located in Dresden (Germany) and in Ningbo (China).

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About OpenSynergy

OpenSynergy provides embedded software products for the next generation of vehicles. Its hypervisor and communication products pave the way for an integrated driving experience.

The automotive virtual platform COQOS Hypervisor SDK integrates a mix of real-time applications and open source solutions on powerful domain controllers. It supports a large bundle of features corresponding to the virtualization standard VIRTIO, creating maximum flexibility: guest operating systems can be used and reused on different Systems on Chips. OpenSynergy cooperates with the primary Operating System (OS) providers to ensure that Android, AGL, AliOS, and other OS are entirely supported.

The automotive leading Bluetooth® stack Blue SDK is one of OpenSynergy's communications platforms. It is the reference Bluetooth® implementation for many OEMs around the world. The variant Blue SDK Fusion offers a reliable Automotive-Grade Bluetooth stack for Android™ Automotive OS.

OpenSynergy further provides complimentary Automotive-Grade software components tailored for the Android Open Source Project (AOSP) to boost Android's adoption in the automotive domain. OpenSynergy also provides engineering services to support the customization of its products.

Read more on www.opensynergy.com

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