Participation in Hypervisor Project

This is an attempt to clarify the resource requirements for assigning a new resource to participate in the GENIVI Hypervisor Project.

Let's first introduce the project, then try to address that question.

Purpose and Rationale
(taken from the main project page, which should be up to date)

The Hypervisor Project investigates the wide scope of open-source and commercial hypervisor technologies, and addresses challenges in their use. Through collaboration between all vendors, experts and adopters of virtualization technology we can lower the barriers to successful product development. The project drives requirements, standardization for Hypervisor APIs, and other types of investigations to facilitate ECU consolidation, price reduction, and management of mixed-criticality in systems for improved security and functional safety.

There are three identified work streams / sub-projects currently:

1. Virtual Device API standardization, leading to the definition of the Automotive standard Virtual Platform (this naturally builds on existing standards like VIRTIO)

2. Whitepaper on Multi-OS design on modern multi-core SoCs (using Hypervisors and other means)

3. Investigate and recommend electrical/software architecture for automotive use-cases, when deployed using virtual-machine technologies.

Subproject 1. and 2. is the most active currently and is one we would like to have every Hypervisor Vendor participating to affect and support the resulting specification (and/or provide clarification of which parts might be expected to be supported).

Effort estimation

The amount of expected work is to participate in all (most) of the weekly meetings, typically 10.00-11.00 AM, CE(S)T. So that's **1 hour per week.**

Second, each participant typically takes responsibility for some area of the virtual platform API specification, i.e. chooses one device type and writes a draft text for the chapter of the specification covering this device type.

It depends on the area but writing that chapter I might estimate to **between 4 to 30 hours,** in total, in my expectation, and that is **spread over many weeks of course**.

The reason it depends a lot is that in some areas there are already existing specifications (like VIRTIO) and the work then boils down to only reviewing those and identifying if they are adequate and writing that down. I.e. we may refer to an already existing specification, where that is adequate. In other areas, there is a basis but it may need some additional details or modification to fulfil automotive needs. And finally, in some areas a new text needs to be written to specify this aspect because there is no documented consensus today.

Identifying the current situation is however the first step.

As noted, I would also expect the participant to synchronize with their company peers to be able to communicate the applicability of thespecification on your hypervisor implementation, since the purpose of the work is to find as wide standards as possible.

Third, some offline reviews between meetings are to be expected of course. I would expect on average, that preparing input material to the group or reviewing other input material, or draft proposals of the produced content/specification from the group, should be possible to do in **about 1 hour per week** (in addition to the meeting participation).

Please, let me know if there is anything I can clarify. –> Gunnar Andersson