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Advanced media applications have added several flavors by enabling high quality of experience (QoE) to users in Real-time Holographic Applications, Immersive Virtual Training and Mixed Reality Interactive Applications which bring a revolutionary change in our lives. This technological change also must support environmental sustainability and economic viability. Horizon 2020 project CHARITY explores on how an intelligent and autonomous framework spanning across the edge/cloud continuum of the network can facilitate the deployment and orchestration needs of such services.

NEW PAPERS RELEASED

Consistent strong efforts have been made by CHARITY project partners on publishing research papers. The CHARITY website has a section where papers produced by project partners are available for download. Below we highlight some of the most recent ones. Papers & Conferences section of the CHARITY project website.

Performance Analysis of Storage Systems in Edge Computing Infrastructures

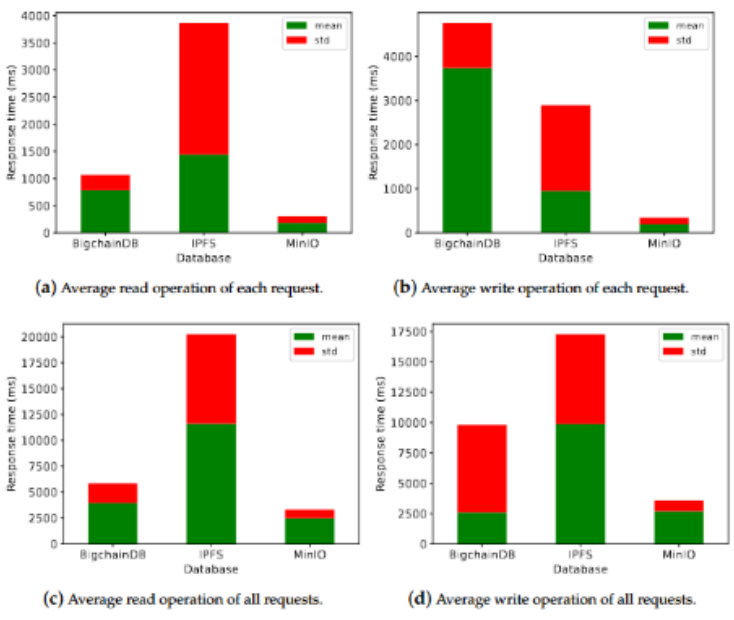
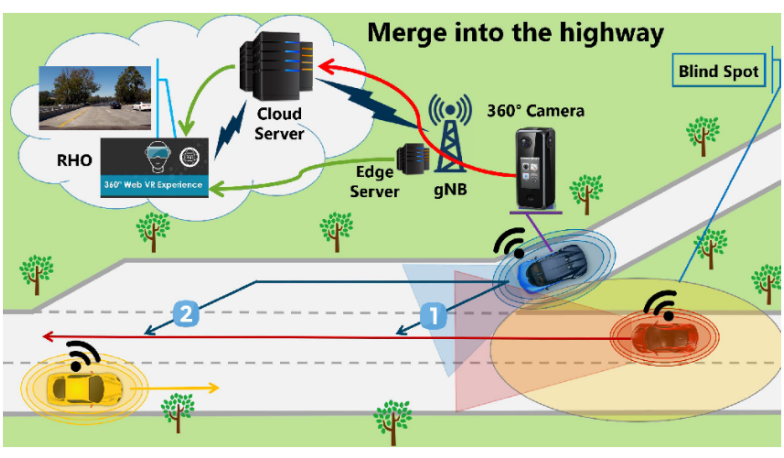


Figure 1. Performance of read/write operations of each database.

Recent publication by CHARITY partners in the context of performance of storage systems in edge computing infrastructures was published in Applied Sciences (MDPI) to the Special Issue Cloud, Fog and Edge Computing in the IoT and Industry Systems. This work presents a performance analysis of three different storage systems, namely MinIO, BigchainDB, and the IPFS. The performance evaluation is performed using a set of resource utilization and Quality of Service (QoS) metrics. Each storage system is deployed and installed on a Raspberry Pi (small single-board computers), which serves as an edge device, able to optimize the overall efficiency with minimum power and minimum cost. Overall, the experimental results demonstrated that MinIO presents the best performance for a specific class of experiments.

For more details follow the link: Performance Analysis of Storage Systems in Edge Computing Infrastructures.

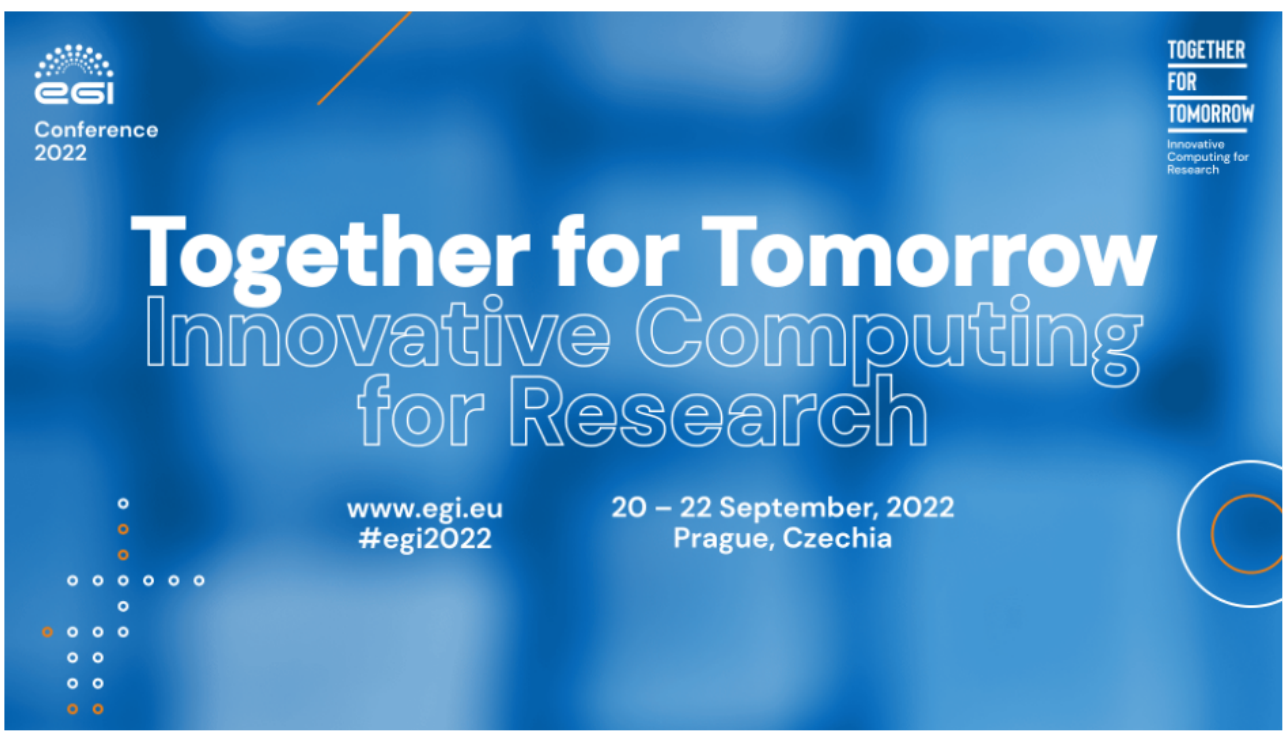
AR-based Remote Command & Control Service: Self-driving Vehicles Use Case



In this paper, authors leverage VR technology to provide remote assistance for self-driving in critical situations. Depending on the human operator's proximity to the source, the video stream can either be viewed through the cloud or the edge, which further reduces the glass-to-glass latency. Experimental results demonstrate the effectiveness of employing VR technology to remotely command and control self-driving vehicles in critical situations.

Read the full paper at: AR-based Remote Command & Control Service: Self-driving Vehicles Use Case.

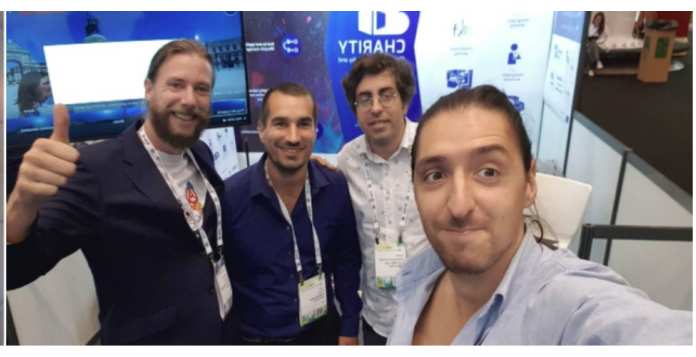
CHARITY participation at EGI Conference 2022



Antonios Makris from Harokopio University of Athens presented a lightning talk in EGI2022 Conference - Together for Tomorrow, Innovative Computing for Research. The main topic of the presentation was *"An Efficient Distributed Storage Solution for Edge Computing Environments"* and reflects the work conducted in CHARITY.

The conference took place in Prague, Czech Republic on 20 - 22 September 2022.

CHARITY Project at AWE XR 2022 event in Lisbon 20-21 OCT, 2022

Interesting exchange, keynotes, multiple exhibitors, CHARITY Project partners Yago González Rozas, Luis Rosa, Joao Melo Rodrigues and Adriaan Spronk had great interaction with visitors at the CHARITY booth, sharing insights from the CHARITY project like use cases, VR training, latency within the network, continuous integrations or technologies integrated in the continuum at the 13th annual AWE EU Event.

Webinar on "Cloud-Edge Continuum Resource Management and Application Steering"

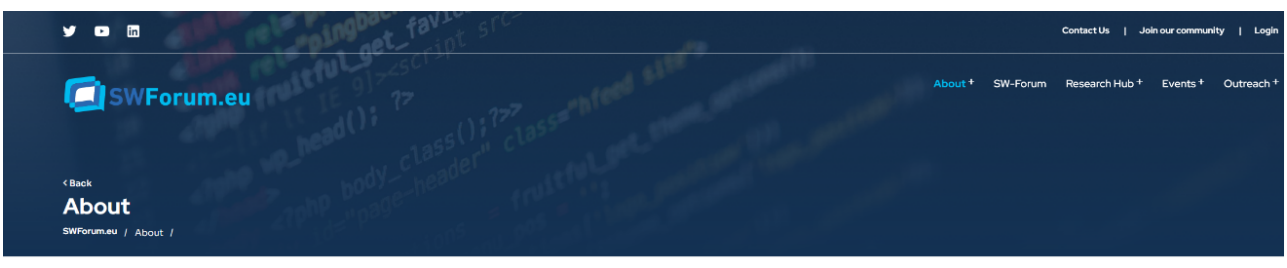
ACCORDION and CHARITY projects, funded by European Health and Digital Executive Agency (HaDEA) shared innovative insights about "Cloud-Edge Continuum Resource Management and Application Steering" which are common elements to both projects in webinar. The event witnessed more than 70 participants. This trend continued to our next webinar (see below).

Webinar on "Opening up the Cloud Edge Continuum to new generations of applications"

CHARITY and PHYSICS projects joined forces to present their state-of-the-art results on developing applications on the cloud edge continuum. The two projects elaborated on the similarities and differences of their approaches as well as on the challenges addressed by each project. Augmented Reality, Virtual Reality and other immersive technologies. The event witnessed more than 50 participants.

UPCOMING EVENT PARTICIPATION

Webinar on "Software Technologies and Standards: Enabling interoperability and Innovation" by SWForum



European forum of the software research community

SWForum.eu aims to create a **self-sustainable** online **forum** that facilitates and encourages both researchers and practitioners as well as projects in **software, digital infrastructure and cybersecurity** to create intersections of expertise and a **multidisciplinary** approach to research and innovation. This forum seeks to set in place the **European research roadmap** and offer **cross-fertilisation of competencies** to all other research and innovation areas.

SWForum.eu works to **enhance the visibility and increase the competitiveness of research and innovation** in the field of **software technologies, digital infrastructure and cybersecurity**, especially European funded **Research and Innovation Action (RIA)** projects. Moreover, the project aims to introduce best practices and **technology transfer opportunities** to cross-synergise European excellence.

SWForum.eu runs from 1 October 2020 through 31 March 2023.

CHARITY project has been invited to contribute to explain its standardization activities, in the project, by SWForum. In this webinar you will not only hear about Project CHARITY standardization activities but also other projects like FOCETA. Don't miss this! Stay tuned and check details here: https://swforum.eu/event/webinars

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CHARITY
Cloud for Holography and
Augmented RealITY

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