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Deliverable D7.7 2nd Project Video Presentation

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Revision history

Version	Issue Date	% Complete	Changes	Contributor(s)
V1.0	21/7/2023	100	Preparation of this document to report the completion of the 2 nd Project Video Presentation	John Vardakas (IQU)

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1 2nd Project Video Presentation

1.1 Video Availability and Dissemination

The video has been uploaded to MARSAL's YouTube channel: <https://youtu.be/9NaIRK32uK0>

The video upload has been disseminated through:

- Twitter: <https://twitter.com/MarsalProject>
- LinkedIn: <https://www.linkedin.com/company/marsal-project>
- Website: <https://www.marsalproject.eu/video-clips/>

1.2 Script and action on screen

The video has been prepared as a demo for EUCNC 2023 about Inter-DU communication for O-RAN Cell-Free mMIMO Network. Due to the purpose of the video, it does not contain any voice or sound, as it is meant to be presented by a member of the consortium to the general public.

The following text provides a transcription of the video:

The first frame presents the title and purpose of the presentation, with the background being MARSAL's graphic and logo. On the bottom of the screen, the European flag appears with acknowledgement of the project to the European Commission.

The first frame is followed by a second one presenting the contents of the video. During the video were presented:

- The CF mMIMO O-RAN architecture;
- The Inter-O-DU communication;
- Objectives of the integration;
- The integration setup;
- The employed mmWave link;
- Case study scenario;
- Results and conclusions.

The following two frames introduce the mMIMO O-RAN architecture, the advantages of Cell-Free mMIMO, and the Inter O-DU communication. On the bottom of the screen, references are given for related work.

At the 50-second mark, the objective of the integration is presented. IS-Wireless and INTRACOM are demonstrating the feasibility of Inter-O-DU communication based on the containers using high-data-rate and low-latency mmWave link.

The following part of the video presents the technical specifications of the O-DUs and the employed E-Band mmWave link before the actual physical set-up and its operation are presented.

Two minutes into the video, the case study scenario is presented. A video is transferred between the O-DUs, with the delay of the transmission and the throughput to be measured and used as metrics.

The final part of the video presents the case study results. Initially, the video transferred, and the live measurements were presented, where the last frame presents the delay over time as a comparison between the proposed mmWave transfer method and a cable.

A typical 5G slot duration is 500 μ s, where the O-DU-to-O-DU communication mmWave link with the containers' environment results in a delay of 131 μ s, 62 μ s additional delay than an optical cable.