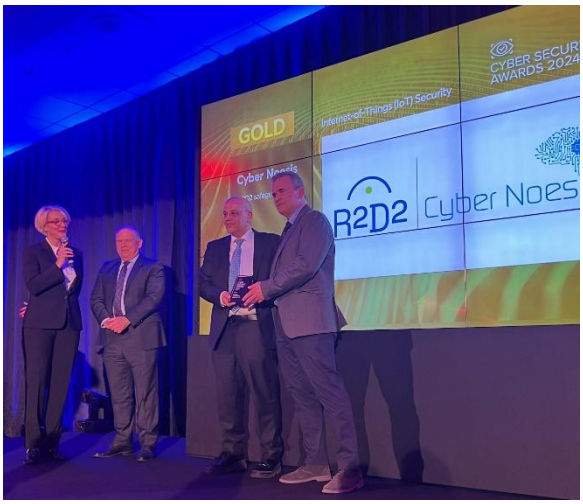
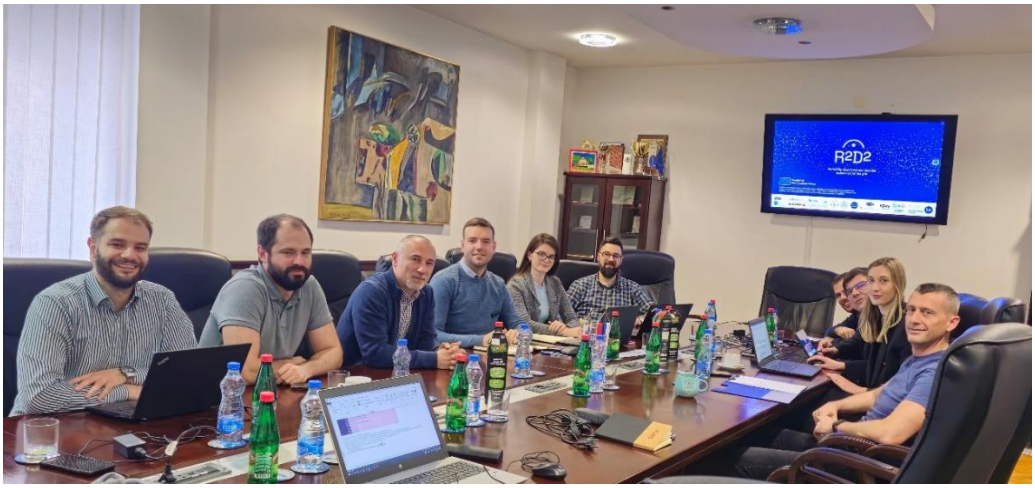
Cyber Noesis honoured with the Gold Cyber Security Award 2024



We are delighted to announce that Cyber Noesis has been honoured with the Gold Prize at the Cybersecurity Awards 2024 in the category of Cyber Security Projects &Services / IoT Security, for its involvement in the R^2D^2 project.

On Thursday, February 8, 2024, the Cyber Security Awards 2024 Winners Ceremony took place at the Sofitel Athens Airport, attended by the Greek Minister of Digital Governance, Dimitris Papastergiou. The awards focus on cybersecurity and digital security management including the fields of Critical Infrastructure and Public Infrastructure.

Internal meetings to make important decisions regarding UCs



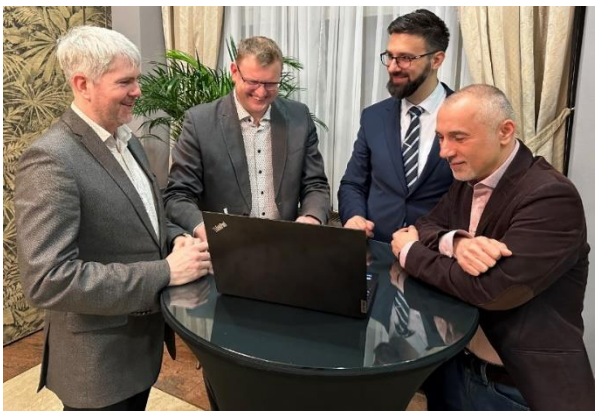
Partners from IMP, EMSS and SCC gathered together for an internal meeting in order to discuss about further implementations and development regarding UC12 “Emergency & Restoration -Over-Frequency Protection module” and UC19 “Emergency & Restoration -System Split module”.

The goal of UC12 is to replace individual controllers on generators, mimicking the response of the entire power system to over-frequency conditions and to ensure effective over-frequency protection, while the goal of UC19 is automatic detection and faster coordination during disturbances, ensuring faster and more efficient crisis response.

The main topic for UC12 was planning the future activities and dynamic of work. Also, some details were agreed about testing. Regarding the UC19, discussion was about needed inputs (frequency from PMU and topology) for detection of system split and improvements of coordination platform for a better signalization of smart notifications. Furthermore, it was agreed that the structure of notifications in some steps of coordination should be modified in order to be aligned with the business process.

Outcomes of this meeting will be reflected in future R²D² development.

Impact assessment regarding UC "Validation of network model integrity"



During the R²D² plenary meeting in Ljubljana, representatives of GUARD (Priit Anton and Mihkel Väljaots), EMSS (SrđanSubotić) and SCC (Dušan Prešić) took the opportunity to organise a side meeting to discuss future demonstration activities and impact assessment regarding UC "Validation of network model integrity".

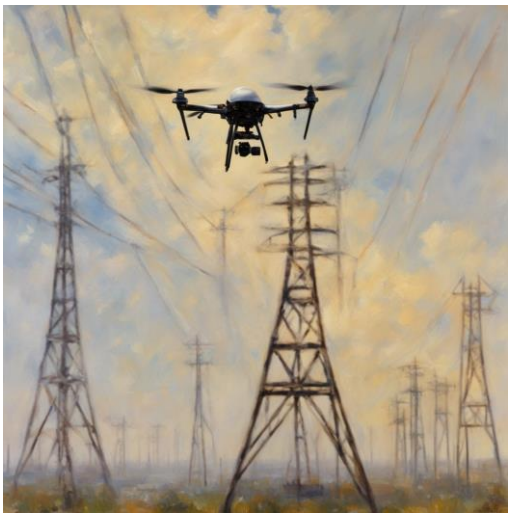
The goal of this UC is to increase cyber security and maintain network model integrity by using KSI Blockchain technology to create a signature file – a unique cryptographic proof that protects the integrity, signing time and signing identity of the network model so that TSOs and RCCs could be sure that some third actor (or error) did not change metadata of the network model during its transfer of storage.

The meeting was very fruitful since two demonstration scenarios (green and red) are sketched. Also, several attack points are detected based on the current business process that is implemented on the TSO and RCC side regarding the processing of network models.

Finally, some potential financial impacts were discussed during the meeting, including reputational impact for TSOs or RCCs in case of network model integrity issues.

The outcomes of this meeting will be reflected in future R²D² deliverables.

R²D² tools update, by HEDNO



HEDNO recently participated in an insightful workshop held in Ljubljana, focusing on the critical issue of grid resilience against extreme weather events. This event marked a significant collaboration between HEDNO and its partners, ETRA, ICCS and UCY.

ETRA is leading the development of the EMMA - GIMAN tool, an innovative solution that contributes to the reliability of the physical assets and to expedite a faster grid recovery. Meanwhile, ICCS and UCY play a key role in developing the C3POtool, which is crucial for simulating the cascading effects of extreme weather events on the grid infrastructure.

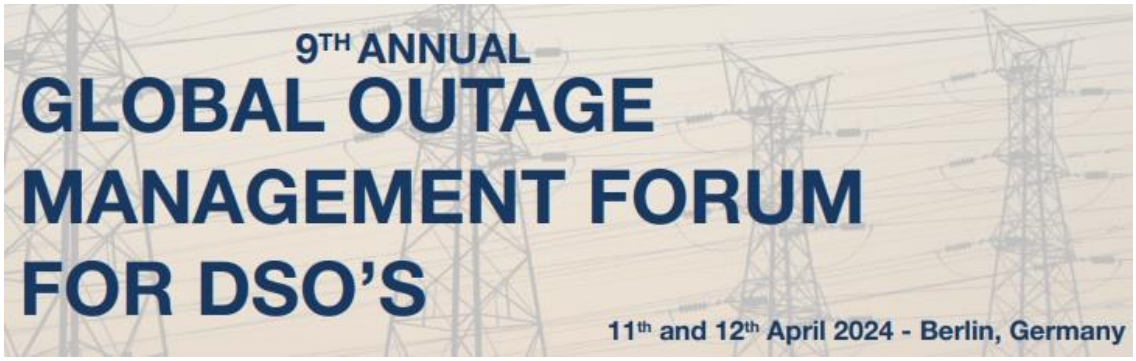
The workshop focused on the synergistic communication between these two innovative tools, showcasing their potential in mitigating the impacts of weather-induced disruptions. HEDNO's role was crucial, as the organization provided vital insights into the data requirements necessary for the effective operation of both EMMA - GIMAN and C3PO tools.

HEDNO also participated in another critical workshop with S2 partner regarding the potential deployment of CARMEN tool in HEDNO's premises. CARMEN is a threat hunting tool specialised in analysing traffic, detection of anomalies, fighting Advanced

Persistent Threats (APT) and zero-day vulnerabilities by using machine learning.

While the discussion was in its early stages, the outcome was very fruitful, mostly involving potential VM requirements for the host of the CARMEN tool, server and hypervisor specs, the established communication protocols specialised in traffic analysis , the data volume and frequency that will be made available for analysis, the use of syslog for information displayed, as well as potential challenges to be aware of for the effective use of the tools.

FUTURE EVENTS...



Mathaios Panteli from UCY has been invited to be a speaker and panellist at the 9th Annual Global Outage Management Forum for DSO's | TBM Group in Berlin in April.

You will find that this is an event that is well attended by DSO's and industry from across Europe - so it will be a good venue to disseminate and promote our R^2D^2 project.

EMSS will present UC 15 at the CIRED 2024 conference in Crna Gora (Montenegro) within the scope of the article 'Cooperation between transmission and distribution system operators in the creation of IGM models'. Authors: Ivana Stamenić. Srđan Mladenović, Srđan Subotić, Marija Đorđević (all from EMSS).

EMSS participates in the paper 'Implementation of ENTSO-E emergency &restoration procedure in a real-time environment' presenting UC 19 in the IcETRAN 2024 (Serbia) conference. Authors: Igor Bundalo (IMP), Goran Jakupović(IMP), Marija Popović (IMP), Srđan Subotić (EMSS), Dušan Prešić (SCC).

IN CASE YOU MISSED IT...

HEDNO´s activities

HEDNO has already proceeded with equipment installation on the pilot site infrastructure for the scope of the R^2D^2 Project. Technologies, which have already been installed on the pilot, are the following ones:

Surveillance cameras at HV/MV substation for protection against physical attack

HEDNO has already successfully proceeded with the procurement and installation of 4 CCTV cameras, which have been installed on Magiko HV/MV substation. All CCTVs have been presented to partners during the 2nd R^2D^2 plenary meeting, which was held in Xanthi in June 2023. CCTVs are expected to contribute to physical substation security, by providing real time images to EMMA product, which will conduct image analysis, followed by possible alerts to the DSO.

Thermal camera at HV/MV substation

A thermal camera has already been procured by the local department of HEDNO, which will be used for both infrastructure inspection in parts of the aerial distribution network, as well as for inspection in certain parts of Magiko HV/MV infrastructure.

Re-usability of past EU Projects equipment

9 SLAM metering devices installed on HEDNO Xanthi premises during X-FLEX Project, will also be part of R^2D^2 Project, as data from those high-frequency metering devices are expected to contribute to C3PO algorithms and energy data tokenization on the edge.

5 AMI devices installed on certain MV/LV substations in the pilot site during X-FLEX Project, are expected to share data to C3PO algorithms during the R^2D^2 Project.

HEDNO successfully organized the 2nd R^2D^2 Project plenary meeting, which was held in Xanthi city during 07-08 June 2023. The purpose of the meeting was twofold:

The first day was dedicated to partners' presentations around the Project progress, where all pending issues were successfully discussed.

Another day was dedicated to the Xanthi pilot visit, so as all participants could be informed about the technologies and infrastructure utilized from HEDNO, for the scope of the Project.

Firstly, a visit to the local department of HEDNO took place, where the basic HW infrastructure, such as SCADA system was presented, followed by an on-site demonstration of assets that were installed in the pilot, such as SLAM metering devices and AMI in secondary underground substation.

Furthermore, an on-site visit to Magiko HV/MV substation was scheduled, where the basic infrastructure of the primary substation of the pilot was shown, followed by a demonstration of the 4 CCTVs installed in the perimeter of the substation building.

See you next month, stay tuned…

R2D2

Reliability, Resilience and Defense technology for the grid

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