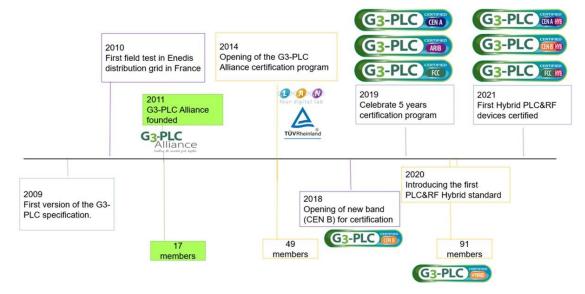


### **G3-PLC Alliance Infoletter Q2 2021**

Dear G3-PLC Alliance members,

2021 is a special year for the G3-PLC Alliance as we celebrate our 10th anniversary. The Alliance was formed in 2011 following successful field tests in France. And now we are with nearly 100 members and implementations in more than 30 countries!



A major achievement in the first quarter of 2021 was the opening of the certification for the G3-PLC Hybrid PLC&RF solution. In May 2021 we already had the first certified hybrid platforms and now we also have the first certified hybrid product and other platforms and products are currently in the process of certification. We want to thank again all member companies who contributed to this important milestone!

In 2021, we already welcomed 7 more new members. This brings the total number of members today to nearly 100 from more than 30 countries worldwide.

Currently, we have over 50 million G3-PLC products in operation in more than 30 countries worldwide. Current implementations include: Netz Burgerland in Austria, Netz Niederösterreich in Austria, Electrica in Romania launched a tender for G3-PLC, Egyptian Canal Distribution Company, Four regional utilities in

Slovenia, Tatu Connect Power in Nairobi Kenya, Switzerland, TNB in Malaysia, ST in Latvia, and many other implementations and multiple pilots with hybrid PLC&RF technology.

Triggered by the pandemic we organised multiple online webinars. These were well appreciated and we plan to continue with that. Webinars include G3-PLC communication for smart metering in Africa, PLC Technologies for Smart Metering and other Distribution Automation Applications in India, Setting up and managing G3-PLC networks, Learn how to get your G3-PLC Hybrid PLC&RF device certified, G3-PLC Communication for smart metering in Colombia, DSO experience sharing clean-up after roll-out of G3-PLC smart meters and How does the G3-PLC Hybrid PLC&RF solution work? Presentations and most recordings are available on www.g3-plc.com.

We are also very excited to announce the launch of our newly designed website. After several months of hard work and dedication, we are delighted to officially announce the launch so please take a look at www.g3-plc.com. Our new website is updated with the latest information on G3-PLC, is easier to navigate and has an up-to-date design.

Read all developments below!

## G3-PLC Alliance announced First Certified Platforms for Hybrid PLC&RF Communication Standard!



The G3-PLC Alliance announced on May 27th the industry's first Hybrid PLC&RF certified platforms. These certificates will give both manufacturers and customers assurance that their devices have the correct implementation of the

G3-PLC standard, that they are interoperable with other certified devices and meet the specified performance levels. To date, the first certified platforms are from the member companies Microchip and STMicroelectronics. Interoperability was also demonstrated in a plugfest last year with solutions from Renesas, Semitech Semiconductor and Vertexcom Technologies. Further platforms are currently under certification and will follow soon.

The hybrid protocol stack is built using open standards IEEE 802.15.4–2015 in addition to the existing G3–PLC protocol. Each device in the mesh network can use PLC as well as RF for the communication. Depending on the actual conditions in the field, messages between two devices are sent over the 'best' available channel. The channel selection for each link in the network is done automatically and adjusted dynamically. This way, the hybrid profile provides an efficient and cost–effective solution for many applications and opens up new use cases as it extends the connectivity of G3–PLC to RF–only devices. The G3–PLC Hybrid profile is fully compatible and interoperable with existing G3–PLC implementations, so it is possible to mix hybrid and non–hybrid nodes.

The certification process is open for all current and future members of the G3-PLC Alliance. Certification covers chipsets and a wide range of G3-PLC manufactured by the members of the G3-PLC Alliance. The G3-PLC Certification Program covers conformance, interoperability and performance testing. Products that have been awarded with the G3-PLC Certificate are conform to the G3-PLC specifications, are interoperable with other G3-PLC certified devices and fulfill defined performance requirements. An overview of all certified platforms and products can be found on the G3-PLC website: <a href="https://www.g3-plc.com/g3-plc-...">https://www.g3-plc.com/g3-plc-...</a>

Further information about the hybrid solution

http://www.g3-plc.com/what-is-g3-plc/g3-plc-hybrid-plcrf/

For members of the G3-PLC Alliance, the information on the certification programme is available on the following website after logging in:

https://www.g3-plc.com/g3-plc-certification/g3-plc-certification-program/

## **Update Technical Working Group**

The latest published reference version of the G3-PLC Specification is available on the ITU website. This new version embeds the following main features: Enhanced data frame multicast service, Enhanced LOADng (« clusterhead » forwarding scheme and RREQ jittering) and Hybrid profile as annexe H.

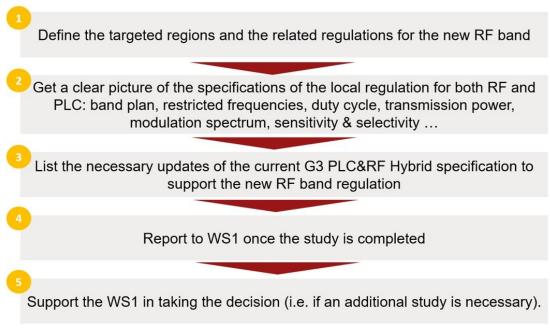
These documents are also available on our website:

### New working group: Regulatory Advisory Group

Triggered by the discussions about additional RF operating frequencies, a new working group was installed called 'Regulatory Advisory Group'. This Regulatory Advisory Group needs to assure the hybrid protocol complies with local regulatory requirements but can also address PLC related topics. The main tasks are summarised below.

Regulatory Advisory Group	
Tasks	<ol> <li>Map and monitor the local regulatory requirements for the relevant RF bands/regions (e.g. frequency hopping, transmission power, etc.) and local certification requirements</li> <li>Advice SSC and WG's so that the hybrid protocol can provide all necessary features to be compliant to local requirements</li> <li>Discuss and advise on relevant other regulatory topics relevant for G3-PLC in general</li> <li>Coordinate (lobbying) activities of alliance members and provide support regarding regulatory developments</li> </ol>
Organization	<ul> <li>New Working Group which has periodic meeting and ad hoc if needed</li> <li>May need to hire local expertise sometimes</li> </ul>
Participants	Preferably local <u>experts</u> from active/executive members which have a link or interest in a specific region
Out-of-Scope	<ul> <li>Local promotion and comparison with other RF/PLC technologies. That is task of the marketing working group (WS2).</li> <li>Direct discussion with local regulators. That should be done by local manufactures/utilities who want to work with G3-PLC.</li> </ul>

The process and activities of this working group to add new RF bands will be as follows:



### The request will be sent to SSC for final agreement if needed.

The new working group is co-headed by Klaus Hueske from Renesas and Raphael Kerbrat from STMicroelectronics and all members are encouraged to join! Participants should be local experts (so normally not the same people as are currently in the other WG's).

Member companies requesting an additional RF frequency/region to be included in the specification need to delegate someone in this Working Group for the new frequency/region to be considered.

Active/executive members who want to join, please contact <u>klaus.hueske@renesas.com</u> or <u>raphael.kerbrat@st.com</u>.

Regular members who want to join, please contact <u>generalsecretary@g3-</u> <u>plc.com</u> so you can be invited as a guest for a limited period, for example for the rest of 2021.

### **New members**

Membership numbers continue to grow and we are happy to announce 7 new members joined to G3-PLC Alliance in 2021. Beside two new members, El Sewedy Electrometer Group and IES ZT which are already announced in the newsletter from Q1-2021. the further five members

WIENER 🌮 NETZE

New Alliance member from Austria: Wiener Netze has recently joined the G3-PLC Alliance. As Austria's biggest distribution system operator, Wiener Netze is targeting the exchange of 1.6 million old analog electricity meters with the new smart meters which is one of the largest smart meter rollout in the Central European DACH (D - Germany, A – Austria, CH – Switzerland) region. The company contracted out the implementation of a smart meter infrastructure to a consortium of vendors in the smart energy business. Since the placing, Wiener Netze and his lead partner installed more than 220k G3-PLC electricity meters.

The G3-PLC Alliance extends a warm welcome to Wiener Netze. We look forward to working with them more closely and intensively in the near future.

Company website: <u>https://www.wienernetze.at/de/startseite</u>



Our new member from Romania: AEM SA is a commercial company with a tradition of 51 years of activity in designing and manufacturing measuring

and control devices for measuring utilities - water, gas, electricity, heat, providing products and solutions related in over 40 countries. Company webpage: <u>http://www.aem.ro/en/</u> The G3-PLC Alliance extends a warm welcome to AEM S.A. We look forward to working with them more closely and intensively in the near future.

# CHNT

Our new member from China: Chint Meter is one of the core subsidiaries of the CHINT Group, which was founded in 1998, and is located in the IOT industrial park, Binjiang District, Hangzhou. The company also has a manufacturing base in Wenzhou.

Chint Meter is a state-level high-tech enterprise, focusing on energy measurement equipment and system solutions, forming the synergic development of multi-industries pattern which includes energy meter, gas meter, water meter, heat meter, industrial instrument, analog instrument and vehicle charging equipment.

Company webpage: <u>http://www.chintmeter.com/</u> The G3-PLC Alliance extends a warm welcome to Chint Meter. We look forward to working with them more closely and intensively in the near future.

Our new member from China: Anhui Nari Zenith Electricity & Electronic Co. Ltd. develops and manufactures electricity software and hardware products. The Company develops power information collection system, remote meter reading system, and smart meter products.

The G3-PLC Alliance extends a warm welcome to Anhui Nari Zenith. We look forward to working with them more closely and intensively in the near future.



Our new member from Lithuania: "ELGAMA-ELEKTRONIKA" Ltd. is the leading manufacturer of static electricity meters in the Baltic region.

The company develops and produces the whole range of devices for electricity measurement, control and management applied in residential, commercial and industrial sectors. It together with





partners as well presents smart metering solutions applied for utility needs at metering data management level.

Company webpage: <u>www.elgama.eu/</u> The G3-PLC Alliance extends a warm welcome to Elgama. We look forward to working with them more closely and intensively in the near future.

Furthermore, in March 2021 Globaltronics was upgraded to active member. That means they now can join the working groups in the Alliance: the technical workshop (WS1) dealing with the specification, the marketing workshop (WS2) and workshop 3 dealing with interoperability and testing.

This brings the total number of members today to nearly 100 from more than 30 countries worldwide.

An overview of all members and contacts (after logging in) can be found on our website. <u>Click here for all members</u>.



## **Event Highlights**

Dates: 28-30 September 2021 Location: Jakarta, Indonesia

Enlit Asia, the unifying brand for Asian Utility Week and POWERGEN Asia, is part of the Enlit series of energy events. Enlit is a community that for 365days a year will collaborate and innovate to solve the most pressing energy-related issues.

At the Asian edition, the Enlit community will come together for three days in Jakarta in September to meet and inspire each other and to develop their discussions and actions into a plan for the coming year. And so the Enlit circle begins: a constantly growing, inclusive and end-to-end forum that addresses every aspect of Southeast Asia's energy transition.

https://www.enlit-asia.com/



Dates: 26-27 October 2021 Location: Aachen, Germany The 25th IEEE International Symposium on Power Line Communications and its Applications (ISPLC2021) is dedicated to scientific and technical advances in the field of communications over power lines. This conference will be held on 26-27 October 2021 at Eurogress in Aachen, Germany, colocated with IEEE SmartGridComm 2021.

As part of its Platinum sponsorship, G3-PLC will host a keynote speech and provide oppurtunities for the participants to speak to G3-PLC representatives and learn more about the latest challenges and developments in the industry.

ISPLC will focus on key aspects The of communications theory, algorithms, standards, implementations, measurements, evaluation of field trials and network operation pertaining to communications via lines. power The traditional strength of ISPLC is a high industry participation, and bringing together researchers, practitioners and users of line power communication technology.

For more information, please visit <u>https://isplc2021.ieee-isplc.o...</u>



Dates: 30 Nov.-02 Dec. 2021 Location: Milan, Italy

Enlit Europe, originally scheduled to take place on 27-29 October 2020, is now rescheduled to 30 November through to 2 December 2021 at the Fiera Milano di Rho, in Milan, Italy.

Enlit Europe, the unifying brand for European Utility Week and POWERGEN Europe, is part of the Enlit series of energy events.

At the European edition, the Enlit community will come together for three days in Milan in October to meet and inspire each other and to develop their discussions and actions into a plan for the coming year.

https://www.enlit-europe.com/

### **Member News**



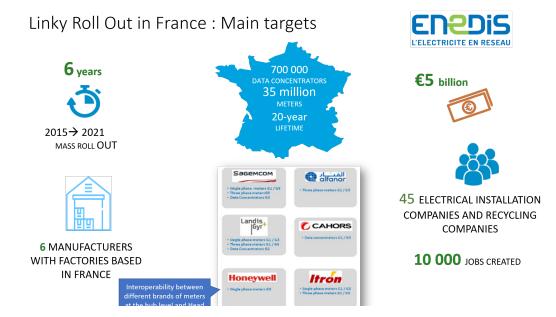
Currently, the G3-PLC Alliance has over 50 million G3-PLC products in operation in more then 30 countries worldwide.

Current implementations include:

- -Netz Burgerland in Austria
- -Netz Niederösterreich in Austria
- -Electrica in Romania launched a tender for G3-PLC
- -Egyptian Canal Distribution Company
- -Four regional utilities in Slovenia
- -Tatu Connect Power in Nairobi Kenya
- -Switzerland
- -TNB in Malaysia
- -ST in Latvia
- -Multiple pilots with hybrid PLC&RF technology
- -And many other implementations and pilots.



G3-PLC for the Smart Metering Rollout in France: In the Linky program now over 32 million meters have been installed. Seven million people follow their consumption online and the program has been very successful. The roll-out is planned to be finalized in 2021.





G3-PLC for the Smart Metering Rollout in Austria: The roll-out at NÖ Netz in Austria started in September 2020. On balance, 800.000 meters have to be replaced in Lower Austria. 95 percent of all meters are legally required to be smart by 2022 in Austria. The rollout plans of the company Netz Niederösterreich are oriented to this. The company is now installing 10 thousand meters per week and have installed a total of 300 thousand meters which is almost 37% of their total meters.

Netz NÖ also uses the power quality data of the smart meter and they read all the data daily from all 300 thousand meters.

Please see their presentation for more details on the website:: <u>http://www.g3-plc.com/what-is-...</u> (bottom of the page).

G3-PLC alliance member company Neuron introduces nBox-Tool RF extension for G3-PLC Hybrid PLC&RF eco-system, making it the first Hybrid PLC&RF protocol analysis tool. The nBox-Tool both controls and powers the RF protocol analyzer over a USB interface. This modularity makes it possible for existing G3-PLC nBox-Tool devices to be upgraded to support G3-PLC Hybrid PLC&RF protocols concurrently.

For further information please follow the link:



Click here for more details https://neuron.swiss/nboxtool....



Working with Landis+Gyr, Energie Wasser Bern (EWB) in Switzerland, successfully completed a pilot project for broadband utility to the last mile. Starting with 4,500 measuring points, EWB and Landis + Gyr jointly implemented a G3-PLC based smart metering solution via the Bern fiber-optic network. With Landis+Gyr's FttH reference architecture, a combination of the intelligent electricity meter E450 and the new data concentrator DC250, EWB was able to use the range of G3-PLC to get last mile broadband connectivity and take advantage of the high-performance fiber optic network such as high data rates and high reliability.

For further information please click here.



Renesas is pleased to announce that CPX3 (CoolPhoenix 3 Powerline Modem-R9A06G37) in combination with TsuRuGi (sub-GHz transceiver-RAA604S00) has received the certification for the G3-PLC Hybrid specification. This paves the way to additional smart grid and IoT applications by using wired and wireless media in a single network.

For more information, please read the following press release.

https://www.renesas.com/us/en/blogs/cpx3-goesg3-plc-hybrid

### Follow G3-PLC Alliance on Social Media

Support the Alliance on Social Media! The Alliance has accounts on Twitter and LinkedIn. Feel free to follow, like and share. The more interactions we get on Social Media, the better the coverage we gain.



Best regards

Leon Vergeer G3-PLC Alliance General Secretary

#### **G3-PLC Alliance**

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<u>Unsubscribe</u>





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