

devolo optimises the interaction between VDSL and Powerline Communication

Aachen, 28 January 2021. Home network specialist devolo is now rolling out the new DIM feature with a firmware update for its Magic series. The abbreviation stands for "Dynamic Interference Mitigation", a function that improves the smooth interaction between VDSL and Powerline Communication (PLC). DIM therefore makes it unnecessary to manually adjust devolo Magic adapters to different VDSL profiles and also independently ensures that customers automatically obtain maximum performance in their home network.

Challenge: overlapping frequency bands

Into the home with VDSL and then further in the home with Powerline Communication (PLC): that's how many customers obtain fast Internet in every corner. However, this may lead to problems in some rare cases due to the overlap between the frequency bands of VDSL and PLC. If the telephone line and power line run too close to one another in parallel, interference may occur resulting in performance problems.

There is often a simple solution, e.g. untangling cables close to the router. If this doesn't help, it was necessary in the past to manually adjust the PLC adapters to the particular VDSL profile via the user interface. devolo Magic now performs this task automatically through the DIM feature. DIM was developed by devolo in close cooperation with leading international telecommunications providers and router manufacturers.

Solution: Dynamic Interference Mitigation from devolo

A PLC-based home network is typically set up like this: A PLC adapter is connected to the router via an Ethernet cable and feeds the powerline signal into the home mains supply. The customer then plugs in additional adapters at any socket in the house to turn them into Internet access points.

DIM is based on an information exchange between the VDSL router and the PLC adapters: After the firmware update, they query the router for various parameters, including the signal-to-noise ratio, which shows the ratio between the useful signal and the noise signal, as well as the VDSL profile. The query is based on the standard protocol TR-064. The adapters then detect their own possible influence on the data traffic and adjust their transmission level accordingly. In this way, the optimal setting can be determined for each customer's broadband connection as well as each adapter and maximum performance can be ensured.

Minimal effort for maximum performance

In order to benefit from DIM, most customers need not do anything: If the automatic update function of their devolo Magic adapters is activated, updating is carried out without any action on the customer's part. The effort involved is also remarkably low for router manufacturers or telecommunications companies. To

facilitate exchanges between the router and the PLC adapters, only the standard protocol TR-064 has to be activated or implemented in the router.

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About devolo

devolo enables smart connectivity and inspires consumers as well as businesses to embrace the opportunities of our digital world. devolo home networking solutions bring high-speed Internet and perfect mesh Wi-Fi to any corner of the home – via the existing electrical wiring. Additionally, in the professional sector, devolo makes the vision of the comprehensively networked Internet of Things a reality. Whether in industry projects or in the changing energy sector: wherever highly secure, high-performance data communication is required, partners count on devolo. The company was founded in 2002 and is represented in 19 countries with its own subsidiaries and partners.