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PRESS RELEASE

Quality right from the outset

Nuremberg, November 27, 2019: Cross-vendor interoperability poses a special challenge for communication systems in the field. In addition to company-internal development and test processes for the function of devices and systems, suitable measures are needed through user organizations – measures that are as extensive as necessary but as simple as possible. And they are needed right from the outset. PI (PROFIBUS and PROFINET International) is consistently facing this task in the various development stages, making it possible for test processes to be carried out automatically and at a reasonable cost.

Through the parallel development of corresponding tests, PI first ensures that newly specified communication features are secured from the very start. Existing communication features, in contrast, are continuously maintained using experiences in the field. Specific examples for the current developments are the PROFINET over TSN testing concept, the PA Profile 4.0 and the automated PROFINET controller test. All of these are based upon the long-established ART tester (automated real-time tester). The PROFINET over TSN testing concept is already available; the first test cases are being implemented on the ART tester and will be available to manufacturers starting at the time of the Hanover Fair 2020. The respective experts are also currently developing the sequences on the ART tester for PA Profile 4.0 and the controller tests.

The ART tester offers considerable benefits for companies. They can test devices that are under development more easily and at a much earlier stage – and can do so right on-site, without the added step of going through a test lab. This facilitates the support of modern, agile development processes in companies, from the very start. The sequence and analysis of the testing procedures in ART – which, for instance, also takes care of switching the power on and off – is automated to a great extent. This enables



users to use the ART tester in a time-saving and flexible way. Some companies, for cost reasons, typically wait until the end of the development phase before sending the device for testing in a test lab; but with the ART tester, testing can be done after every stage of the development, e.g. coding the daily build overnight. As a result, the final inspection that takes place with the same tests in a test lab is unlikely to reveal unexpected problems or create delays.

Also, besides the test sequences by means of C# programming that are already prescribed by PI, company-specific tests can be integrated in the process using the ART tester, on the basis of custom test cases. Other tools that are already available – such as the PROFINET profile tester and the network load tester – also facilitate automated tests.

The PI Competence Center and test labs continue to provide support and consultation as they always have. Some companies now also offer pre-built testing environments. Thus, even in the ongoing development of communication features, the user's demand for high-quality standards in the area of interoperability can be met – by means of consistent testing, from the very start.

Graphic: Quality right from the outset - the PROFINET over TSN testing concept is available.



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