The digital substation

ABB’s digital substations enable substation concepts that will be a space-saving, reliable, cost-effective and integrated.

Hanover, April 13, 2015 – Built on the international substation automation standard IEC 61850 9-2, the digital substations now deliver the great potential of this technology: interoperability, ease of configuration, maximized reliability and availability, real-time performance, Smart Grid communications capabilities and reduced cost of ownership.

Due to the reduced demand for copper cables for signal transmission within a substation, the effort and therefore the costs for the construction of a substation can be optimized. In addition, the error rate is reduced in this part of the system, since copper has always been a source for failure.

The use of novel combined devices that combine multiple functions in a single device can reduce the space requirement of a substation. ABB exhibits an example of such a combined device with the DCB with FOCS (Disconnecting circuit breaker with Fiber-Optic Current Sensor) at the Hannover Messe. Another application is to integrate the sensor as free-standing solution. Besides, the environmental impact of a substation is improved by the substitution of oil or gas-insulated instrument transformers by optical transducers as the FOCS. The evolution to a comprehensive control and monitoring system of a substation using a tool for substation management completes the concept of digital substation.

Digital substations enable new approaches for the development of substation concepts that will be space-saving, reliable, cost-effective and integrated.

Photos can be found on the press area of our website www.abb.de.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering their environmental impact. The ABB Group of companies operates in around 100 countries and employs about 140,000 people.

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