



From the everyday life of a standard

I guess, many of you have already heard about **IEC 61850** and as well you may know a lot about the technical content and scope of IEC 61850. As a Convenor of the IEC working group that is responsible for the development and maintenance of IEC 61850, I will regularly address in this column topics related to IEC 61850 that are of interest for our readers.

TOPICS THAT MAY BE COVERED will include a large range. I will certainly highlight some important events related to IEC 61850. But it can as well be that I discuss a hot TISSUE. You don't know what a TISSUE has to do with IEC 61850? So continue reading, I will explain below. If you have a specific topic you would like to hear about, you can send me an email and I may select that topic for one of my columns.

If you are familiar with IEC 61850, you may be impressed by the number of pages this standard consists of and you may wonder, how such a comprehensive specification is developed. In the Cover Story of this issue you will find information about the history of IEC 61850. For those of you who are not familiar with the standard and did not read the article, here are some brief explanations: IEC 61850 is an international standard with the title "Communication network and systems in substations". It is a series of 14 parts dealing with different topics – communication services and communication protocol mappings, engineering process object models and configuration aspects to conformance testing.

The major parts of IEC 61850

were published in 2002 / 2003. It is a total of more than 1000 pages. With the first implementations some inconsistencies and some ambiguities have been discovered. For these TISSUES (Technical ISSUES) have been created. The TISSUES are maintained in a database and they are the basis for preparing the second edition of the standard. Some of the TISSUES are as well important as a basis for conformance testing of products.

But there are other items that will go in the second and future editions. The concepts of IEC 61850 have been applied in other domains than substation automation. Object models are being developed for wind power plants, for hydro power plants and for distributed energy resources. While these new domain specific models will be individual parts of the standard, some basic new requirements will be incorporated in the basic documents. With the expansion of the applications outside the substation, it was necessary to consider a new name. Although not yet finally decided, currently the favourite is "Communication network and systems for utility automation".

Besides these new domains, we are currently also working on preparing reports on how to use IEC 61850 for communication between substations and for communication between substation and control centres or other system level applications. And in addition, a task force is working on preparing a technical specification for the mapping of IEC 61850 on IEC 60870-5-101/104 for a gateway.

Many of these issues are handled in the working group 10 (WG10) of the technical committee 57 (TC57) from IEC. WG10 has the basic responsibility to maintain IEC 61850. To achieve this work, WG10 is meeting typically three times a year as a whole working group and in addition, task forces and editor groups may have additional meetings. Members of the working group are from all over the world. The majority is from North America, Europe and Asia, but we have as well members from South Africa and South America. While we are working on the future of IEC 61850, the current version is already in use in many projects around the world. The number of installed devices talking IEC 61850 is increasing every week.