



Are Power System Engineers Crazy?

Marco C. Janssen

Thus this should be our new credo: Engineers around the globe, unite and be "crazy" enough, to make this world a better place!

WHEN PEOPLE FROM outside the electric utility industry look at power systems engineers, they see a bunch of people that talk about technical details as if they are the most important thing in the world. Most of the time these people start discussing the latest technological developments the moment they meet a peer. And if you, as an outsider wish to follow this conversation, I wish you good luck. The language they speak is so special that unless you are an engineer yourself, there is no way to understand what is being discussed.

PAC Engineers have their own language that has one characteristic - it is filled with acronyms and abbreviations.

Here is an example:

Engineer 1 (E1) meets Engineer 2 (E2) and they engage in an enthusiastic conversation.

E1: Have you heard the latest yet?

E2: No, tell me about it.

E1: Manufacturer ZYX can actually make GOOSE messages routable over a WAN, so that the intertripping scheme will be much more efficient.

E2: Oh really? And are they using SCL to configure them?

E1: No, the IEDs will have to be setup using their own configuration tool.

Do you have any idea what this was all about? Well, if you do, you must be a PAC engineer.

PAC Engineers are crazy, because if



you think that when one of them is talking about the latest issue of a fashion magazine when he mentions models, you are wrong. He is merely referring to a virtual representation of a physical power system component or function.

Let me ask you a question. Why would anybody want to study formulas that are so complex, that may span a whole page? Because it is exciting? I can imagine that for most people this is not the case. So why do engineers like it?

PAC Engineers have created systems that are so complex, that they now need international standards that describe and define them. How great one may think, but do we really need standards, or is standardization just some kind of therapy to make the engineers think that they are doing something meaningful for the world? Anyone who travels knows that standards are relative. Have you

ever tried to plug in you hair dryer, laptop computer, phone charger in another country? How many converters do you need to carry in order to be able to do so anywhere in the world? What do you mean - standardization?!

PAC Engineering is seen as a difficult, even somewhat boring, profession that is made for very special people. So you must be a little bit crazy to become one of them. Yet most engineers that I know are highly skilled and intelligent people. Then why do these intelligent people become members of this very special society of PAC Engineers?

The answer is simple!

BECAUSE IT IS FUN!

PAC Engineering means dealing with almost every technical discipline there is, from Maxwell's equations to the newest technologies such as UML, XML, Internet and Ethernet. And that is not all. Nowadays financial, commercial and legal aspects are more and more connected to the protection, automation and control engineering process.

Therefore everybody should consider becoming a member of our society! You will be responsible for making economies more efficient and support the digital economy by providing the necessary power to people, thus increasing their wellbeing. Isn't that great? YES IT IS!

Biography

Marco C. Janssen is an utility industry professional with more than 16 years' experience. He graduated from the Polytechnic in Arnhem, The Netherlands and developed further his professional skills through programs and training courses. He is President and Chief Commercial Officer of UTInnovation LLC – a company that provides consulting and training services in the areas of protection, control, substation automation and data acquisition, and support on the new international standard IEC 61850, advanced metering and power quality. He is a member of WG 10, 17, 18, and 19 of IEC TC57, the IEEE-PES and the ICA International Users Group.