Wampac in smart grid Uzbekistan

Why do we need wide-area monitoring and protection & control (wampac) systems?
Abstract: The evolution of power generation systems,along with their related increase in complexity,led to the critical necessity of Wide-Area Monitoring,Protection,and Control (WAMPAC) systems in today's smart grid.

What is a wampac system?
WAMPAC systems rely on the efficacy of primary and secondary plant in substations at all voltage levels. Utilization of modern communication protocols like IEC-61850 is contributing to the quality of communication between different intelligent electronic devices.

Which countries have developed wampac systems?
Both China and Great Britainare countries in which the importance of development of WAMPAC systems has been already recognized,so that Wall's paper is providing a contribution addressing developments in the GB power system.

Do wampac systems integrate with other utilities?
Within the same organization,WAMPAC systems may integratewith infrastructures owned and operated by other utility groups,which may use different cyber security policies due to the different regulatory bodies. The last consideration in the previous section relates to the need to enforce interoperability across components of the WAMPAC design.

Does a wampac policy extend beyond a single enterprise?
The cyber security WAMPAC policy may have to extend beyond a single enterprise when WAMPAC systems are used across multiple organizations, which requires a broader stakeholder base when deciding on the use of standards.

Are wampac standards addressing cyber security issues?
Current WAMPAC related standards are addressing cyber security aspects of data management and communication issues, but the issues associated with an attack that affects the time reference signal are not fully explored. Penetration testing of WAMPAC solutions for cyber security vulnerabilities is currently ad-hoc.

Hence, this study aims to present possible list of stages of the concept for creating smart grids in Uzbekistan by analysing the development of the electric power complex via creation of smart grid systems as a platform for market, managerial and technological innovations that provide a transition to a new level of development of the electric ...

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