

Project Title	Technical Review of SCADA/EMS Systems Currently Existing at Vietnam Electricity
Contracting Agency	Vietnam Electricity (EVN), under the direction of the Power Network Department of. Project execution and supervision under the responsibility of the National Load Dispatch Center (NLDC)
Project Organization	Prime Contractor: Electrotek Concepts, Inc. The work as performed entirely by Savu C. Savulescu as an Independent Consultant, with full responsibility for all the technical and project management aspects of the project
Summary	This project encompassed: reviewing and assessing the of the existing landscape of SCADA/EMS systems of EVN; proposing of an efficient scheme for maintaining and upgrading of the systems in terms of organization, training and staff; and developing an efficient scheme for SCADA/EMS migration and/or upgrading
Background	<p>In recent years, EVN has conducted several SCADA/EMS projects aimed at implementing modern real-time and information systems at the NLDC and the Northern, Central and Southern Regional Load Dispatch Centers (NRLDC, CRLDC and, respectively, SRLDC). The followings are some preliminary comments on the current SCADA/EMS systems: the systems at NLDC and Regional Load Dispatching Centers (RLDCs) are not complete in terms of number of Remote Terminal Units, which leads to the fact that the amount of information is not sufficient for network applications such as State Estimator and Optimal Power Flow to run; these SCADA/EMS systems are supplied by various vendors under different contracts with different management mechanism and procurement procedure, which leads to a consequence that the system design varies in a significant way and the consistency may not be ensured sometimes; the lengthy procurement and contract negotiating and approving process may cause problems to the status of the system to be delivered in terms of modernity and up-to-date level of technology; some changes in vendor's organization in terms of ownership may affect the product support policy of the company, for example, the discontinuation of the ALPHA Server series and Tru64 Unix operating system; the organizational restructuring of the power utilities and power market establishment that took place worldwide during last few years raise a question about the adequacy and suitability of EVN's SCADA/EMS system for power system operation in a market environment. In this basis, Dr. Savu C. Savulescu from Electrotek Concepts, Inc. was selected to carry out a technical review and assessment of existing EVN's SCADA/EMS systems</p>
Objectives	<ul style="list-style-type: none">▪ Provide a technical assessment of existing SCADA/EMS systems of EVN▪ Propose an efficient scheme for maintaining and upgrading of the systems in terms of organization, training and staff▪ Propose an efficient scheme for SCADA/EMS migration and/or upgrading
Scope of Work	<ul style="list-style-type: none">▪ Task 1: review and assess the current status of EVN's SCADA/EMS systems at NLDC and the three RLDCs, including the investigation and

assessment of the available facilities at NLDC and Regional Load Dispatch Centers

- Task 2: Provide a technical assessment of these SCADA/EMS systems in terms of adequacy, expanding and upgrading ability, potential impact of ceasing of production of some major components, ability to migrate to another product, adaptability and suitability of these system in the planned EVN's internal power market environment
- Task 3: Propose an efficient scheme for maintaining and upgrading of the systems in terms of organization, training and staff
- Task 4: Propose an efficient scheme for SCADA/EMS migration and/or upgrading

Period of Performance October 2002 – January 2003