

Case Study: IEC 61850 Server for IED

Provider Name : KALKI Communication Technologies (P) Ltd.

Client Name : Indian Power OEM

Project Title : IEC 61850 Native Server on IED

The Problem

The Client, a Major Power Automation OEM, required to support IEC 61850 Server Protocol on its IED Platform. IEC 61850 is a complex protocol, which requires major modifications from conventional driver support on the IED system. The customer worked with experts from Kalki in designing the platform to meet his design requirements.

The Solution

The stated protocol was developed using the following Resources:

1. Embedded Real-Time Operating System
2. ANSI C Source Code for IEC 61850
3. IED Interface Definition
4. IEC 61850 Server Specifications as per IEC 61850 Conformance Blocks

The said IED platform runs on a real-time operating system on an embedded hardware. The IED interface available for adding protocol support was studied and a model prepared to make the said interface support the requirements of IEC 61850. The interface was designed to meet the IED design specifications and an interface definition that better meets the requirement for IEC 61850 was arrived at.

The IEC 61850 Server was tested with various 3rd Party Clients.

Tools Used:

- GNU C Compilers
- IEC 61850 Protocol Stack
- Real-Time OS Development Tools