MicroSCADA Pro takes over Southeast Asia’s major airport.
SCADA renovation for efficient management and control.

The airport in Southeast Asia is a hub for domestic and international airlines and today it handles more than 50 million passengers every year. In ten years time, the airport intends to double the amount of international passengers, alongside increase the millions of domestic flyers, but working towards that goal means improving system management with a cutting edge SCADA and new supporting infrastructure.

**ABB solution**
The existing SCADA system had been stretched as the giant airport developed and ABB was asked to provide a better way of controlling, and monitoring, power across the eight-thousand-acre site. To achieve that in the first phase ABB offered a SCADA system which could handle the airport operations safely. ABB supplied a MicroSCADA Pro system, with a hot-standby, ready to step in following any critical failure in the primary system. 83 Remote Terminal Units (RTUs) were fitted to secondary substations around the site, and connected back to the paired SCADA systems.

To measure just how much better the new system is, in the second phase ABB also provided an historical database, the Historian, to monitor and log operational data. Historian operates as an adjunct to the MicroSCADA Pro system, gathering up the historical data so trends and correlations can be easily be spotted for making accurate business decisions.

ABB also provided a distributed network management system, in the form of MicroSCADA Pro DMS600, which provides a geographically-based interface – color coded by topology – so faults can be quickly identified and located. The DMS600 system not only reports detected outages, but can also aid network and operational analysis including low-voltage networks. The software creates an intuitive user experience, reducing the potential for human error.

**Customer benefits**
Using MicroSCADA Pro can improve the reliability of the operation, as well its efficiency. Centralizes monitoring enables disturbances to be quickly identified. The project was aimed at simplifying the management of a system which had gradually become more complicated. The existing SCADA system was replaced with ABB’s MicroSCADA Pro to manage the power distribution and to present the network in an easy and understandable way.

The provision of a hot-standby system increases reliability, creating an automated fallback in the case of critical failure. Such a system ensures contiguous management in the most challenging of environments, and will become increasingly important as the airport continues to expand. Reliability issue was also improved with the intuitive display of DMS600. It reduces the risk of operator error, while increasing the speed of response, as faults can be quickly located and allocated to service staff.
Gathering of historical data is also important to complex system, as it permits operators to understand trends and track correlations in demand and to facilitate future planning as well as operational performance. Historian provides a historical context from which future demand can be predicted, and essential maintenance scheduled.

**ABB advantage**

Not only was ABB able to deliver the entire range of products needed, from SCADA system to RTUs, but it was also able to fit the system with minimal disruption to airport operations – a critical requirement of the customer.

ABB’s MicroSCADA Pro provides the integrated user experience, but ABB’s ability to be the single supplier for all components was also important. With ABB supplying everything there were no concerns around interoperability, and with a single team managing the installation the process could be completed very quickly.

The expandability of the platform was also a deciding factor, as the airport has aspirations to carry more than twice the current passenger numbers within a decade. That will require an additional terminal, and more infrastructure, so the airport wanted to deal with a supplier, and a product, which will be ready to take on the additional work when it comes along.