Major upgrade of ABB Ability™System 800xA transforms future project engineering

The new release of ABB's Distributed Control System (DCS) 800xA 6.1 brings significant value to capital projects with more flexible and efficient engineering.

ABB Ability[™] System 800xA 6.1 provides significant innovations to the entire DCS architecture and introduces technologies that shorten timescales for project execution, reduce the impact of late changes and enhance the scalability of the system, bringing substantial value to capital projects. This is achieved by the introduction of new Ethernet I/O solutions, additional High Integrity controllers and a series of new engineering tools such as a new Ethernet I/O Field Kit, an Ethernet I/O Wizard for field commissioning and the possibility to engineer with signals in the Control Builder.

"Our new flexible I/O solutions and engineering workflow will significatly change the way projects are delivered in future," said Luis Duran, ABB's System 800xA Product Manager. "The new system can deliver major cost savings on large captial projects. Through greater standardization, tasks can be done in parallel allowing users to make late changes more easily".

The Select I/O is an Ethernet based single channel I/O that uses xStream engineering to reduce project delivery schedules. Independent teams can work in parallel and then bind together with precision and efficiency later. This reduces the impact of changes during the project, particularly late changes and effectively reduces the commissioning time. Testing efforts and the hardware footprint are considerably reduced as well. Pre-tested, standardized cabinets can be wired directly to field devices and eliminate the needs for physical marshalling cabinets, reducing drawings, equipment and labor. Testing efforts and the hardware footprint are considerably reduced as well.

The new version supports IEC 61850 Ed 2 which means that it is ready for new digital solutions, e.g. digital substations. The electrical integration capabilities in System 800xA offer detailed, real-time information on power consumption down to the individual loads and secure a reliable and steady electrical power supply. The system prevents blackouts and disturbances of operations – while controlling energy costs, enhancing safety and mitigating both environmental and health impacts. Moreover, it's easier to configure and integrate IEC 61850 networks within System 800xA's engineering environment providing additional project execution flexibility and the further decoupling of project tasks which in turn reduce design and commissioning time.

System 800xA's hardware is equally effective for small hybrid systems as it is for large, high availability, integrated automation applications. The modularity of the subsystem results in higher return on assets by providing the flexibility to choose the specific functions necessary to meet actual requirements.

The new system also includes support for two new safety controllers; PM857 and PM863. providing even more flexibility for the most mission critical applications. These characteristics in combination with new Select I/O Safety Single Channel Modules expand the existing capabilities and increase the flexibility. The High Integrity controllers offer flexibility of network design as they can be used for integrated but separate safety operations or for fully integrated applications where safety and business critical process control are combined in one controller without sacrificing safety integrity.