



**ABB**

**Bluetooth®**

The BWE 800C interface combines a number of features and provides Ethernet interface to the AC 800C, built-in web server accessible from Bluetooth and Ethernet, access to process data via customized WEB pages, wireless access to the Local Area Network (Ethernet) and local logger of dynamic information.

## Reference Application

### Bluetooth® Technology in Oslo pump stations

Oslo Municipality is implementing a Bluetooth solution named BWE 800C, as a part of the ABB Industrial ITTM AC 800C control system to provide wireless maintenance and operation of water pump stations. The pump stations control fresh and waste water flow throughout the Norwegian capital. This means that the BWE 800C will be installed in several hundred pump stations. Key benefits include:

- A single interface that provides multiple functions is saving installation cost
- Replacement of fixed installed operator panels with PDAs for each support staff
- Convenient access to pump station data

### Wireless access to the process and network

The solution will enable Oslo Municipality staff to service machinery as well as reprogram and adjust the operations of each pump station on site using standard laptops or PDAs enabled with Bluetooth. The laptop or PDA will wirelessly connect with the Bluetooth card contained in the control system.

The embedded Ethernet interface connects to the Oslo Municipality WAN (Wide Area Network), which consists of several centrally located Scada systems.

The BWE 800C will simplify the current process by enabling reprogramming on site via a laptop enabled with Bluetooth, where new software adjustments can be monitored immediately as they occur.

The initial solution consisted of costly operating panels installed in each pump station, which now has been replaced by the BWE 800C interface. Staff will use the PDA's standard Internet browser to wirelessly adjust the pump station equipment by accessing data and the customized WEB pages stored on the built-in WEB server.

In addition, the BWE800C card features an Ethernet interface connecting the AC800C to the Oslo Municipality WAN that will allow staff on site at a pump station to simultaneously maintain a connection with the WAN. Software changes made at a pump station will automatically be stored on the WAN server, negating the need for staff to return to the central control room and download program adjustments before moving on to another pump station.

### Customized WEB pages with Java Script

The customized WEB pages displays all necessary process data and is used to control and change parameters from a handheld PDA. Process pictures have been developed using Java Applets to create advanced graphics and fast update of dynamic process values. WEB pages for alarms management are also part of delivery enabling the user to display and acknowledge alarms in the pump station.

To prevent unauthorized access to WEB pages, user access management is built in.

### Enhancements

As an enhancement the BWE 800C card might manage physical access control to the pump stations. The BWE 800C card will identify any of the staff members via his Bluetooth device (PDA or mobile phone) and allow access to the site as well as deactivate alarms.

### About connectBlue

*connectBlue is a leading provider of wireless solutions for demanding applications in segments like industrial automation, medical, instrumentation, diagnostics, logistics / transportation, vehicles and point of sales. Based on Bluetooth technology WLAN and ZigBee, connectBlue provides ready-to-use products and modules as well as custom design solutions in both hardware and software.*  
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