





EQUIPMENT VENDORS

## BACSOFT CASE STUDY BLUE I



### ABOUT BLUE I

Blue I Water Technologies is a global provider of advanced controllers and analyzers for the water treatment market. Blue I devices identify, quantify and analyze the chemical components of water by measuring parameters such as chlorine, pH, and temperature. These measurements are then used to optimize water-based analysis for a variety of applications including the chemical industry, the food and beverage industry, water purification facilities, the oil and gas industry and for swimming pools and spas. Headquartered near Tel Aviv, Israel, Blue I Water Technologies is a privately-owned company, operating since 2003.

### THE CHALLENGE REMOTE MONITORING AND CONTROL

The quality of water is vitally important for industrial operations as well as for swimming pools and spas. Though Blue I Water Technologies has been delivering reliable and cost-effective water quality analysis for years, they realized that by providing remote access, they could offer expanded data collection, increased control, and greater safety.

This required not only retrofitting their existing hardware to wireless connectivity, but also creating new, battery-operated product lines that would connect to the network only once a day in order to conserve energy. Blue I understood that they would either need to develop a whole new system themselves or find a partner who could provide a flexible, secure, low cost, low energy solution for their customers.

## THE SOLUTION BACSOFT IOT PLATFORM

Blue I then turned to Bacsoft to connect their equipment to the Internet of Things and to create the command and control applications that their customers needed. The Bacsoft Platform includes:

### M2M Communications

The Bacsoft Smart Communications Controller plugs into the Blue I equipment to provide wireless connectivity instantly anywhere in the world.

### IoT Cloud

The Bacsoft IoT Cloud handles all aspects of communications, data storage, security and auditing in a high-availability cloud platform which can be hosted by Bacsoft or privately.

### Bacsoft Application Builder

The rapid, no-coding Application Builder enables Bacsoft and Blue I to rapidly deploy custom web and mobile applications for both current and future products. The App Builder, includes a rich selection of graphical widgets and Blue I could easily import graphics of their own.

## OPTIMIZING CONNECTIVITY AND POWER CONSUMPTION

Blue I started off with their new low-energy LEA product line. With the powerful Application Builder, Bacsoft was able to build both web and mobile applications to enable Blue I's customers to collect data, change parameters, see and graph data history, check online status, generate reports, view maps and receive smart alerts and updates.

To extend the life of battery-powered units, Blue I monitors are optimized to connect to the network only once a day. However, water quality control involves continuous analysis of data retrieved over time in order to gauge fluctuations in water quality. Using standard MODBUS protocol, which transmits only data collected in the moment of connection, was insufficient. Together, Bacsoft and Blue I quickly created a custom protocol, which enabled Blue I's monitors to collect data throughout the day, to store it and then to transmit all of the data at the moment of connection to the Bacsoft Cloud. This allowed Blue I to optimize water quality and conserve energy at the same time. Blue I launched the new, low energy monitors in 2015. The roll out was a great success, both with existing and new customers.

**"BACSOFT WAS ABLE TO OFFER SOLUTIONS NOT ONLY IN THE INDUSTRIAL IOT PLATFORM BUT ALSO THE PRIVATE WATER ANALYSIS MARKET. THEIR IOT PLATFORM IS EASY TO USE, COST-EFFECTIVE AND HIGHLY SECURE."**

Oren Blunder CEO

## RETROFITTING VETERAN PRODUCT LINES

Because of the success of their first joint project, Blue I decided to retrofit their Hydroguard product line with the Bacsoft IoT Platform as well. The Hydroguard family of products is able to take very high-precision measurements even in challenging environments such as colored water, oily water, sea water, very low chlorine levels, and high temperatures, allowing for remote alarm monitoring and control, increasing safety and reducing site visits. Retrofitting Hydroguard monitors with Bacsoft's protocols will allow customers the ability to monitor both their low energy monitors and their conventional water monitors using the same web and mobile applications. This solution will be commercially available in 2016.

## SUPPORTING DIFFERENT TYPES OF CONNECTIVITY

Blue I developed the new Prizma water analysis and monitoring system especially designed for private pools and spas. By constantly and automatically measuring and balancing the chlorine and pH levels of the pool or spa, the system prevents chemical overdosing or under-dosing and ensures environmental and personal safety. Prizma includes an integral wireless communication module. With just a few lines of configuration, Blue I was able to integrate their hardware with the Bacsoft platform in order to send water data to the Bacsoft cloud through the home internet connection. Data is fed directly to the pool owner via the "iPrizma" application, developed with Bacsoft, for smartphones. Pool maintenance companies world-wide will employ this revolutionary system to limit the amount of human site visits their employees will need to make to individual pools and spas.

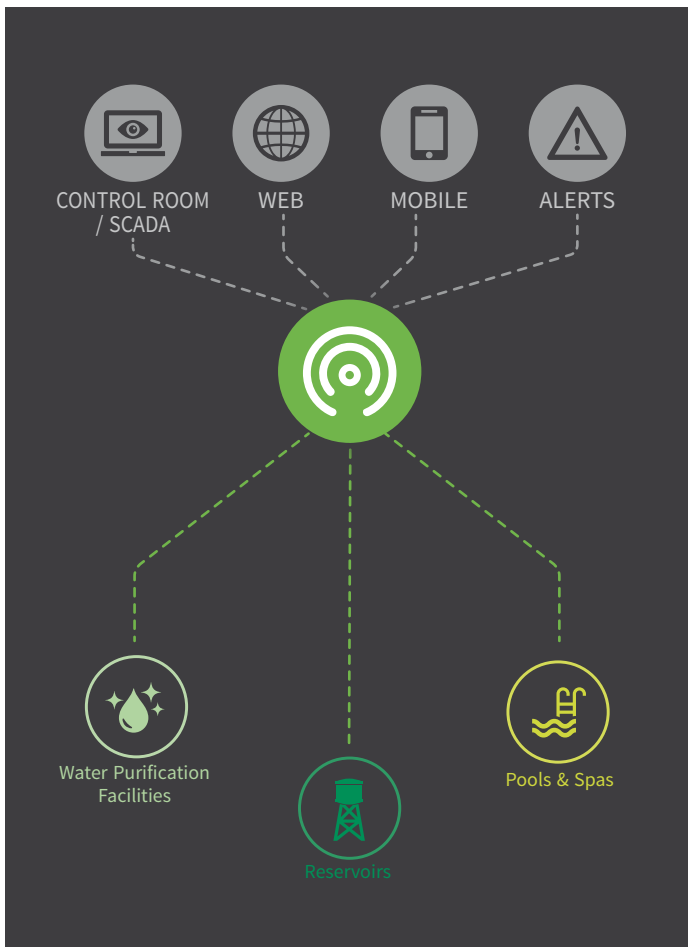


## THE MOST SECURE WATER ANALYSIS SOLUTIONS

Industrial water utilities, desalinization plants and other water infrastructure companies provide critical services and require high levels of cyber security. The Bacsoft IoT Platform supports SSL encryption for data security. It can be deployed in the Bacsoft cloud or in the customer's private cloud. The platform also supports secured private cellular networks and a variety of additional cyber security features to meet Blue I's customer requirements.

"WITHIN JUST A FEW WEEKS BACSOFT DEVELOPED A ROBUST AND RELIABLE SOLUTION TO OUR CLIENTS' NEEDS. THE FAST RESULTS AND CONTINUED FLEXIBILITY OF THE BACSOFT PLATFORM HAS ALLOWED OUR LOW ENERGY MONITORS TO COLLECT MORE DATA WHILE USING LESS ENERGY, THUS EXTENDING BATTERY LIFE WITHOUT LIMITING DATA COLLECTION."

Nelson Zakinov R&D



## BACSOFT BENEFITS FOR BLUE I

- RAPID AND SIMPLE CONNECTIVITY FOR LEGACY EQUIPMENT
- NEW, LONG LASTING BATTERY-OPERATED PRODUCT LINES
- REMOTE CONTROL FROM THEIR SCADA, & WEB & MOBILE DEVICES
- NEW CUSTOM PROTOCOL
- SCALABLE AND SECURE CELLULAR M2M COMMUNICATIONS
- CODE-FREE CREATION OF NEW APPLICATION FOR POOL OWNERS
- REAL-TIME ALARMS AND ALERTS
- EASY TO EXPAND, CONFIGURE AND MANAGE
- LOW TOTAL COST OF OWNERSHIP

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