RealiteQ Case Studies

Case Study 1 – Pumping station & WWTP American Water New Jersey USA

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

This pilot project is being carried out at American Water's Innovation Department as part of the company's strategy of constantly improving and increasing the efficiency of the water and waste disposal systems it operates.
For the pilot, two Environmental Disposal Corporation (EDC) facilities were connected in order to demonstrate RealiteQ System's capabilities and its compatibility with AW's needs, to allow the subsequent connection of the various remaining Water Company facilities to this system. All that resulting in the command and control of all of the corporation's facilities being managed by a single system.

Needs:

EDC features various facilities spread out over a fairly large geographical area, ranging from sewage pumping facilities, through a waste treatment and purification facility, to a system for discharging the treated waste into the river. The vast majority of these facilities are not equipped with telemetry devices, and are not connected to a comprehensive SCADA array. Therefore, no command and control exists for the various facilities and tracking their function and operation is complicated. As a result, the customer has defined a need for an advanced system that can connect all the sites to a single command and control array, quickly and at low cost.

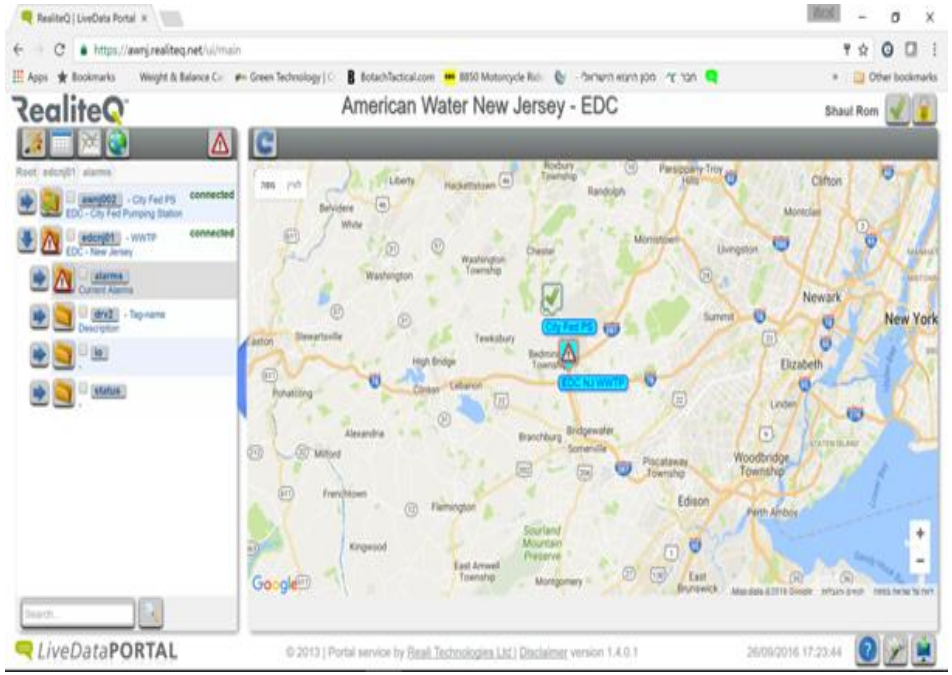
Case Study 1 – Pumping station & WWTP American Water New Jersey USA

Unique capabilities:

- A cellular telemetry system and cloud-based integral SCADA, saves the cost of installing any software or applications, while allowing an unlimited number of approved users to connect to the system (subject to their authorization level) from any device (computer, tablet, telephone etc.).
- The system can be installed very quickly. Connecting both sites, including splitting measurements using analog and discrete distributors, and wiring them to end units, took the installing integrator, who has never encountered the system before, six hours.
- From the moment physical installation was completed, data began to gather in the cloud database, and the system's functioning could be viewed in real time.
- Beyond the display of the facility’s real-time operational data and saving their history, effective dashboards were defined in the cloud management portal.
- The operation and maintenance personnel observe a larger amount of data and can, each according to their own authorizations, perform different actions in the system.

Case Study 1 – Pumping station & WWTP American Water New Jersey USA

- The installed system is simple and easy to operate and use.
- The system and installation costs are miniscule (CAPEX) and the regular operating costs are extremely low (OPEX).
- As the system is managed, there is no need for ongoing maintenance. Maintenance and are carried out as part of the service.



Case Study 1 – Pumping station & WWTP American Water New Jersey USA

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

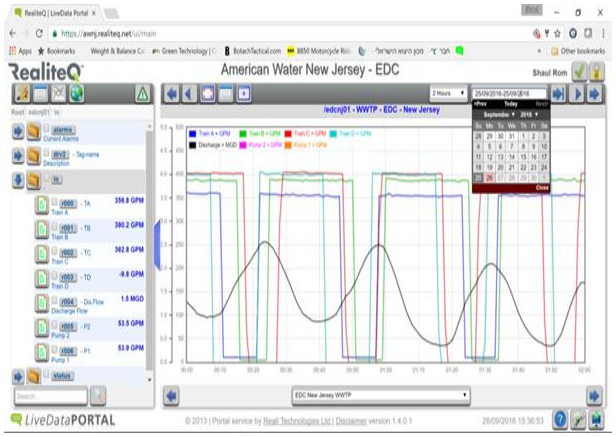
Summary and results:

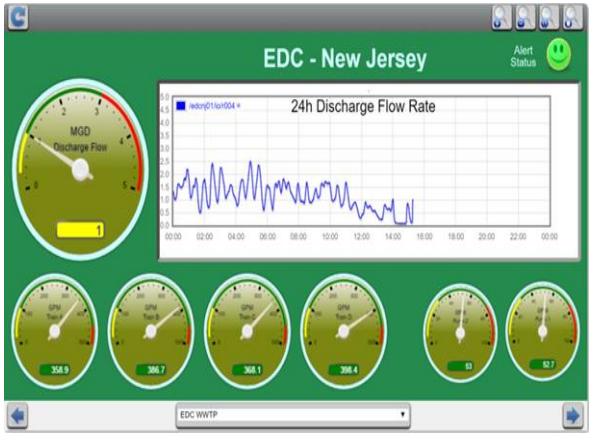
- The customer receives a working system within hours of its installment with no disruptions to the facilities' ongoing operation.

- Screens were defined (management and operation) allowing customers and employees to receive the required information in real time, and to operate the system from off-site in an effective, safe and highly secure manner.

- Concentration of problems read off the programmed controller, allows the manager and the operational personnel to receive email and text messages when a problem occurs and upon its conclusion.

- Access via the management interface allows one to view the problems' occurrence timetable ;, their confirmation time by the duty operator (including identification of implementing parties), the problems' end time and their overall duration.





Case Study 2 –Supply of Drinking Water to City of Carmiel, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

In 2013, RealiteQ was asked to provide a monitoring and operating solution for a relatively small corporation, which is only authorized to administer the Carmiel area, dealing primarily with operating and taking responsibility for the drinking water in the city and also taking some responsibility for the sewage stations.

In order to control, know and handle the regular supply of water, a real-time monitoring system was required, working 24/7, in order to operate as quickly as possible in any event.

Project Description:

This project includes 3 sites, each containing a drinking water supply reservoir for the area around it.

A control panel with solar cellular units (R3.0) was installed at each site, with command and control, level measuring instrumentation and a voltage backup system using batteries.

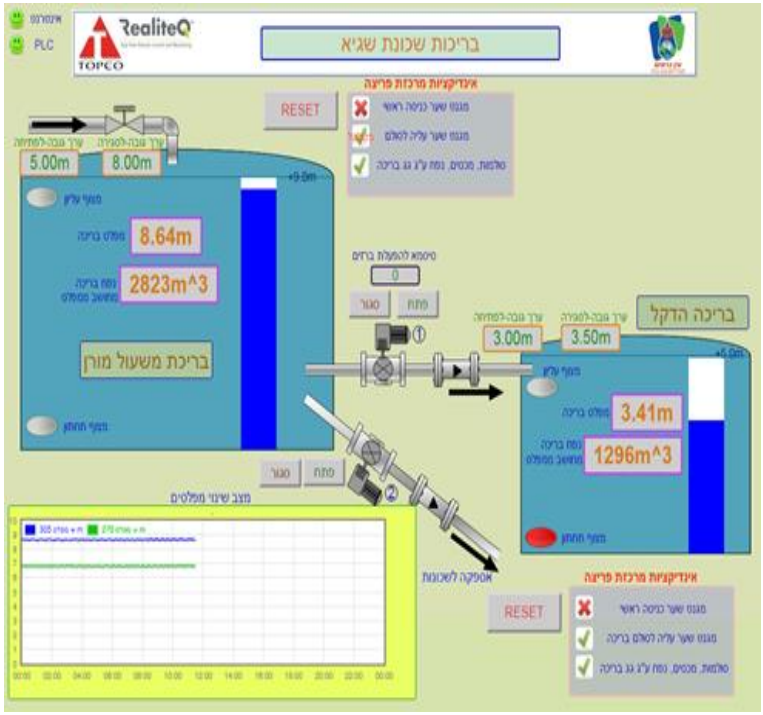
The system knows how to measure the real water level accurately, thus controlling a suitable filling profile according to consumer demand, and to present data and to warn about any incident.

At each site there was a homeland security system, which only provided a local warning. It has also been connected to the new system, so that it can light up and warn about any incident involving security.

Case Study 2 –Supply of Drinking Water to City of Carmiel, Israel

Unique Capabilities:

The use of a cellular solution solved the communications problems that stemmed from infrastructure limitations and enabled interfacing the dispersed water and sewage systems (including HMS systems as aforementioned), in an especially short time schedule (within a few days) and at low costs, since there was no need to construct a special immunizations infrastructure for a relatively small system.



Conclusion and Results:

The project became fully operational within a few weeks, and, in view of this, impressive operational streamlining has been achieved:

- Routine data on the height of the water level in the reservoir. (In the past, the height of the water in each reservoir wasn't known, and it was necessary to visit each site frequently – this problem has been resolved).
- Filling the reservoir became an accurate and efficient operation, and avoided the intensive handling that had been necessary in order to service the previous filling valves.
- In the event of an emergency, closing and emptying a reservoir by a remote rapid action is possible.
- The warning reception system is organized for the corporation's mobile devices.
- Collecting and receiving organized historical reports about the various level conditions throughout the year.
- The customer is satisfied and the systems are working well, without any need for special maintenance operations.

Case Study 3 –Desalination Plant, Maagan Michael, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

In 2009, RealiteQ was asked to upgrade and replace the Motorola radio system, which was highly inaccessible to both the operators and the regular service providers. The system was intended for both local and remote control at all the bores (near to the coast) that provide brackish water to the desalination plant at the control center, in order to collect data from 29 different brackish-water bores, and connect them to the control center.

Requirement:

An efficient, rapid and accessible solution for controlling all the bores at the desalination plant, with operational flexibility and with ability to carry out operations, by both local and remote control, rapidly and efficiently without the necessity of being in the area.

Case Study 3 –Desalination Plant, Maagan Michael, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Project Description:

The Motorola Moscad control was replaced by a programmed KOYO control for the purposes of activating the drilling itself and for local control, and, in addition, an iCex R-3.0 unit was installed, which is connected to the KOYO control and transfers the drilling data to the control center. Twenty-nine drillings were performed, most during the initial stage, and each time another bore was added... as required.

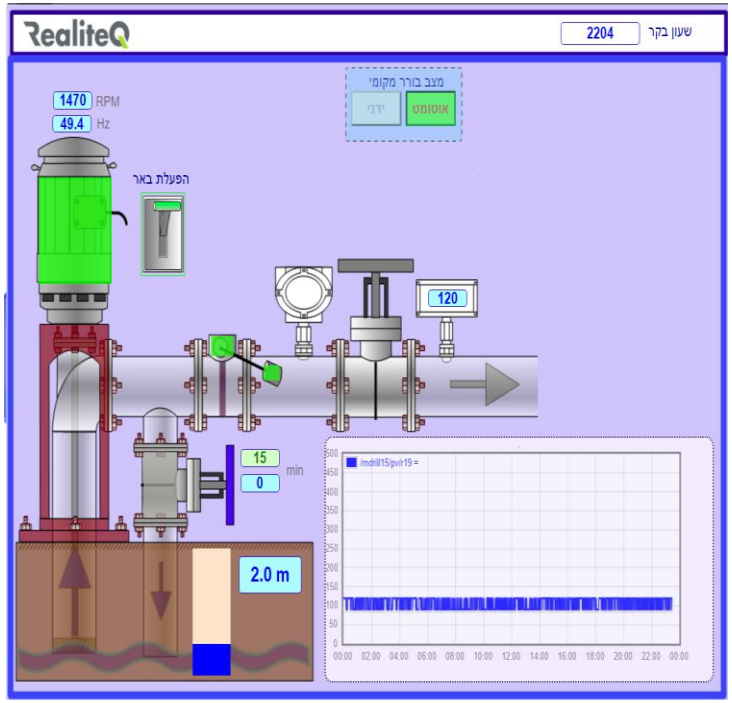
Unique Capabilities:

Interfacing and replacing the old end units (radio) by interfacing with the existing HMI systems.

Conclusion and Results:

The customer is very satisfied with the results and the extremely efficient and accessible solution, compared with the radio system that it replaced.

As a result of the customer's great satisfaction, at a later stage RealiteQ supplied a solution for additional uses for the same customer (the Kibbutz), in the generator and electricity disconnected fields.



Case Study 4 – Peleg Hagalil Regional Water & Sewage Corporation

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

A monitoring system for the sewage and water stations and water treatment plants of the Peleg Hagalil Regional Water and Sewage Corporation, which is intended to provide a solution for the maintenance personnel for the purposes of the regular operation of the installations and water supply.

The corporation covers a very wide area with very difficult topography, so that it takes a long time for field technician to get from site to site. Furthermore, the corporation deals with a very large number of stations (about 120 in this area), and has to keep a large fleet of vehicles and personnel for regular operations; the municipality was interested in streamlining the work and the level of handling breakdowns prior to incidents of water shortage or overflows at the various installations. We went to the site at which an initial unit had been installed by another company during a pilot stage.

In 2010, RealiteQ was asked to replace the company that had carried out the pilot and to supply all the stations at which there is control, and, at a later stage, to expand to stations in which a control system has not yet been installed.

Case Study 4 – Peleg Hagalil Regional water & Sewage Corporation

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Requirements:

Command and control of the water and sewage installations at any site and at any time, at sites with or without electricity; a solution for flowing systems, and monitoring them using solar energy sources at a large number of the water installations; receiving warnings in real time regarding the height of the sewage station; problems at the stations; the possibility of monitoring breakdowns over a 24-hour period, and a solution by analyzing the stages of the breakdown according to the history of the installation, protecting the equipment.

The first installation - replacing the system that had been installed by another company in the pilot that was carried out at the site. In fact, this installation served as the pilot for RealiteQ's system, and, as a result of its success, the pilot has been expanded into an ongoing project.

Case Study 4 – Peleg Hagalil Regional water & Sewage Corporation

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Project Description:

During the first stage, we added communications units to all the stations at which this was possible without carrying out complicated electrical work and without replacing equipment.

On completing this stage, the corporation decided that each new installation that is set up would be provided with a communications capability as defined in the basic tender. Today, each new station is implemented from the start with a connection to the control center, the establishment of which includes an online control center, which combines graphics capability with the operation of the installations from the field or from the corporation.
Within the framework of the project, we provided the field personnel with iPads with built-in SIM cards, for operating from the field.

Unique Capabilities:

A modular capability to start from a small (but still economic) specific solution and to grow into a system of dozens of installations in totally different fields, by making immediate adaptations according to the corporation's demands. Working and interfacing with the various products and integrators that performed the work over the years without any special problems; using mobile tools such as iPads, smart phones and computers...

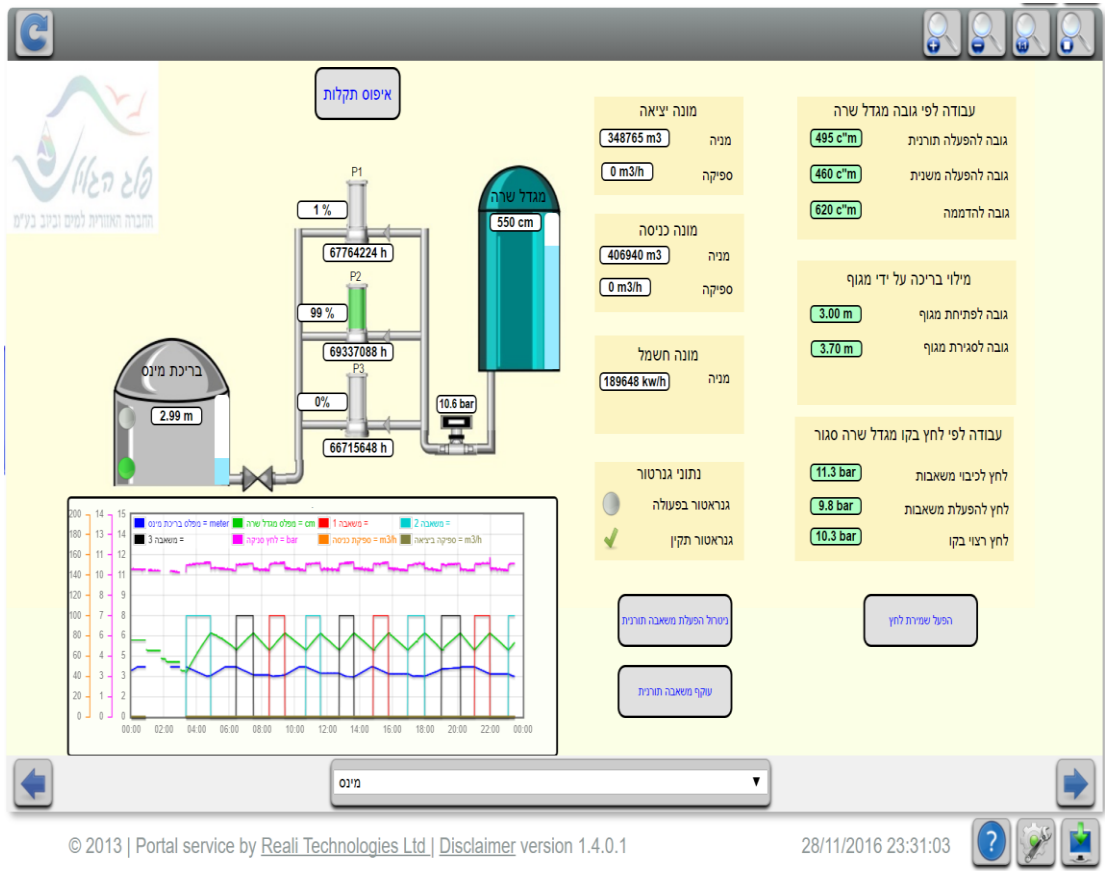
Work capability at sites without electricity, using an easily-installed and inexpensive integral solar system.

Case Study 4 – Peleg Hagalil Regional Water & Sewage Corporation

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Conclusion and Results:

The customer is very satisfied with the results and uses the system at a very high level. We can say, without doubt, that the system has become the most important tool in the corporation for improving regular operations, and, without it, the employees would feel as if their hands were tied behind their backs . Currently, this project, which started as a single pilot, has grown into many dozens of installations. and, in fact, constitutes the customer's standard for all water and sewage installations in the corporation.



Case Study 5 – Water & Sewage corporation, Kfar Saba, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

In 2009, RealiteQ was asked to provide a solution for monitoring and operating the sewage and water stations of the Peleg Hasharon Water Corporation. The system was intended to provide a solution for the maintenance personnel for the purpose of regular operation of the various installations that are spread over the Kfar Saba region, and to know what is happening at any given time, breakdowns, levels, the current conduct of the stations.

Requirement:

Command and control of the water and sewage installations from any location and at any time in a wide geographic area of the municipal authority and nearby rural settlements.

Project Description:

The project was carried out using various external integrators during the project, which has already continued for a number of years, and which included equipment – a programmed control for the station plus an iCex –R3.0 unit.

The project was carried out in stages, with the initial stage including 2 installations; it was expanded later, so that, currently, all the stations in the corporation are connected to the RealiteQ system.

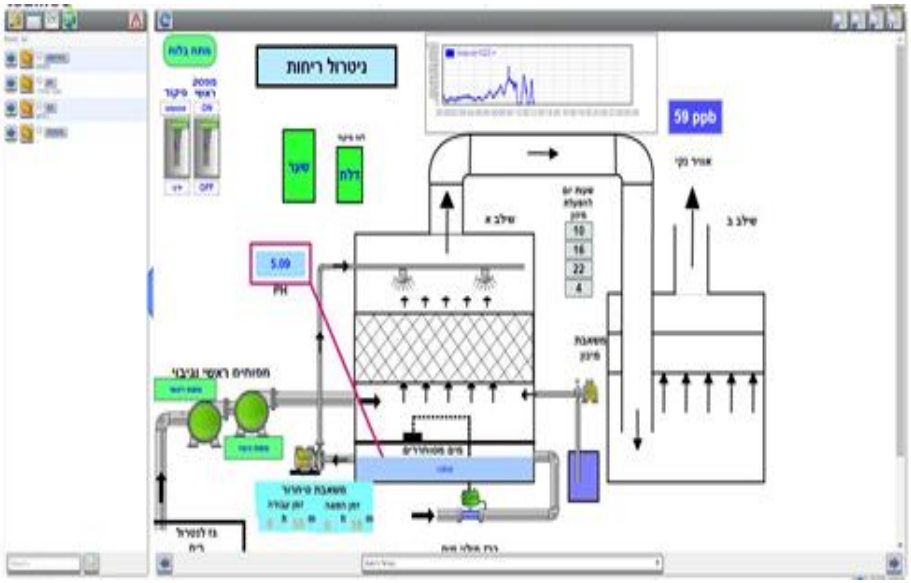
Case Study 5 – Water & Sewage corporation, Kfar Saba, Israel

Unique Capabilities:

The project was carried out at different stages by various integrators, all of whom are connected to one system, as a result of adaptation to a wide range of uses and equipment. The operating flexibility and the simplicity of the installation enables each integrator to learn about the system and install it, rapidly and without any difficulty.

Conclusion and Results:

The customer is very satisfied, and, after the initial stage in which only two installations were connected to the system, all the corporation's other water and sewage installations were also connected to the system, which has become the corporation's standard.



Case Study 6 – Water & Waste water installations, Jerusalem, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

The project was carried out for a rural water authority that extends over huge areas and has great distances between the various sites.
In 2010, RealiteQ was requested to provide a solution for a dynamic control center, which enables control and operation and alerts for water and wastewater systems and for the protection systems in these installations, after previous attempts to carry out the project using different technologies had failed.

The main challenges in the project were: problematic cellular reception levels, which required an integrated solution with a number of suppliers for the same project; the requirement to enable the field personnel to have access to the system from any computer, tablet or mobile phone (including WAP); the need to set up a mobile control center, integrated with the protection systems of the installations – a connection to the security systems!!

Case Study 6 – Water & Waste water installations, Jerusalem, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Project Description:

In the first stage, a number of medium-sized water treatment plants were connected to the RealiteQ system, and in light of the positive results, we were asked to continue adding communication units at all the important stations.
After completing this stage, the corporation decided that each new installation that it builds will have the communication capabilities according to the basic tender definitions.
Each new station is implemented from the start having a connection to the control center that we set up for them – a web-based control center that integrates graphic capabilities and operation of the installations from the field or from the corporation's premises. Currently there are over fifty active sites!

As part of the project, we supplied the field personnel with iPads with built-in cards to enable operation from the field.

Case Study 6 – Water & Waste water installations, Jerusalem, Israel

Unique capabilities:

The RealiteQ system is the only one that is able to provide a solution for connecting different cellular suppliers within the same control center, and that has the ability to integrate the whole system without depending on a static IP address. (The RealiteQ system works with a dynamic IP address).

The modular advantage of being able to start from a solution for a small number of stations, without the need for a large and rigid investment, and then grow to a system with tens of installations in completely different areas, while simultaneously making adjustments according to the corporation's requirements, all that at a reasonable cost and a short schedule.

The combination of different integrators to perform the work over the years, all of them able to provide the required solution without any special problems, using mobile tools, iPads, smartphones and computers…

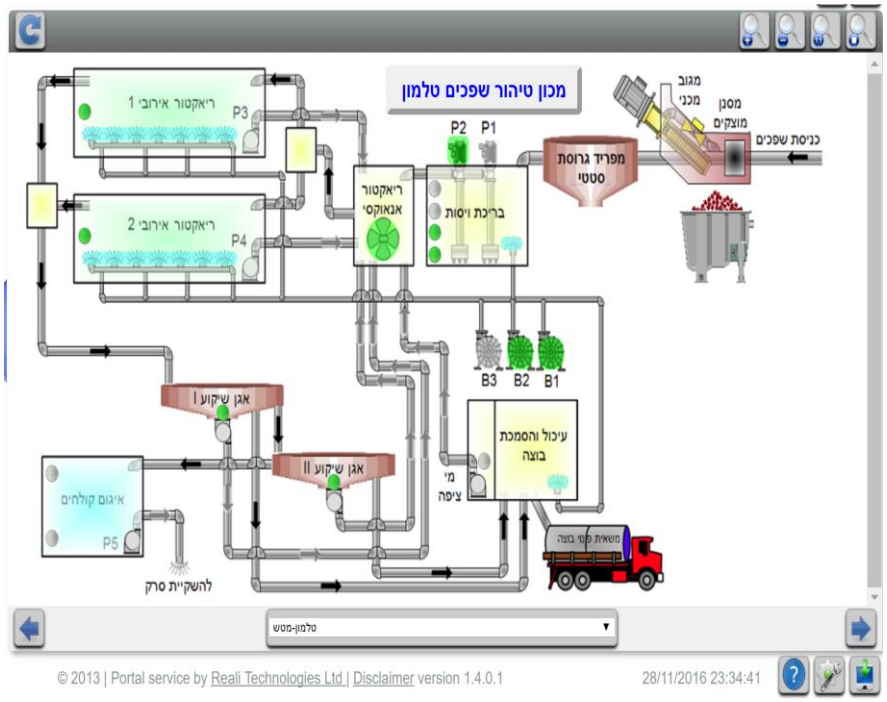
The ability to work at sites without electricity, using a solar system in a manner that is simple and very cheap to install .

Case Study 6 – Water & Waste water installations, Jerusalem, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Summary and Results:

The customer is very pleased with the product and uses the system to its highest extent. The system undoubtedly has become the most important tool in the corporation's regular operations, and without it they feel as if their hands are tied behind their backs. The corporation itself sees us as partners!
Since then, we have been carrying out additional projects for the same customer, such as irrigation for farmers and remote control of faucets, which are being implemented through 2016.



Currently, after a number of years, the project fills up and irrigates extensive areas and is able to supply and sell large quantities of water, which had not being utilized until then, with minimal operation and maintenance costs, thanks to the capabilities of remotely monitoring and fully controlling all the systems that are dispersed over a large area.

Case Study 7 – Monitoring & Control of drinking water wells, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

In the Lev Hasharon area in central Israel, there are a large number of wells that were intended for pumping groundwater for purposes of drinking and irrigation of orchards and farmlands, which were in use for many years. In recent years, however, these water sources gradually decreased, due to the decline in water quality, and the drying up of large sections of the orchards; some orchards have even been abandoned.

In the year 2010 , RealiteQ was asked to provide a monitoring and control solution for a new project, which utilized these water sources, and also channeled the unused water to remote areas according to demand, by using a new infrastructure that channels and collects the water into reservoirs and pumps it to remote areas.

Case Study 7 – Monitoring & Control of drinking water wells, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Project Description:

The project was carried out in two areas; in each of the areas a reservoir was created, which was filled up by water pumped from water wells in its vicinity. Each well was used for routine irrigation of farmlands, and at times when irrigation was not required, the water was pumped into the nearby reservoir, and from there supplied to more remote farmlands, according to demand.
A control panel was installed in each well, with cellular monitoring units (R3.0), a control unit for collecting data and controlling the end equipment that is present onsite.
RealiteQ's monitoring and control system enables changing the operation of each well, as required, when it is not needed for local irrigation, and channeling its water to fill up the reservoir; this is done by synchronizing all the wells so that they operate in a coordinated system, and are only activated when there is a demand to fill up the remote reservoir.

Case Study 7 – Monitoring & Control of drinking water wells, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Unique Capabilities:

Building a central real-time monitoring and control system – that is able to collect data simultaneously from all sites, and, by using software in the central controller, is able to synchronize the information and operate the system accordingly – was an essential condition in order to control a number of water sources that are distant from one other and also to fill up a central reservoir, thus providing water to near and remote fields, according to specific independent demands. The RealiteQ system, which is based on real-time data and a central server to which all the units are connected, enabled carrying out the project in good time and at attractive costs, since there was no need to build a special communications infrastructure or to invest in separate telemetric and SCADA systems. (RealiteQ is an integrated system from end to end.)

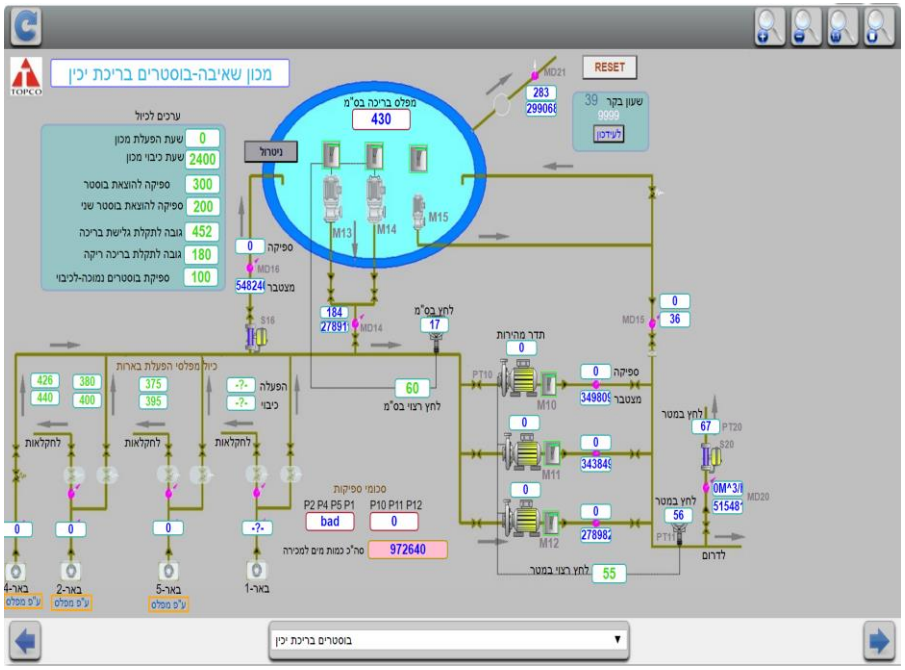
Case Study 7 – Monitoring & Control of drinking water wells, Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Summary and Results:

This project reviewed is very complicated – optimizing the operation of the wells in coordination with filling up the reservoirs posed a technological challenge.
In the first stage, only the operation of the wells was implemented, regardless of the water level in the reservoir, and only after that was it possible to see all the wells' operations on one screen – the logic was refined and synchronization between the wells was carried out according to the water level in the reservoir.

Currently, after a number of years, the project fills up and irrigates extensive areas and succeeds in supplying and selling large amounts of water, which were not utilized previously, with minimal operation and maintenance costs, thanks to the capabilities of remotely monitoring and fully controlling all the systems that are dispersed over a large area.

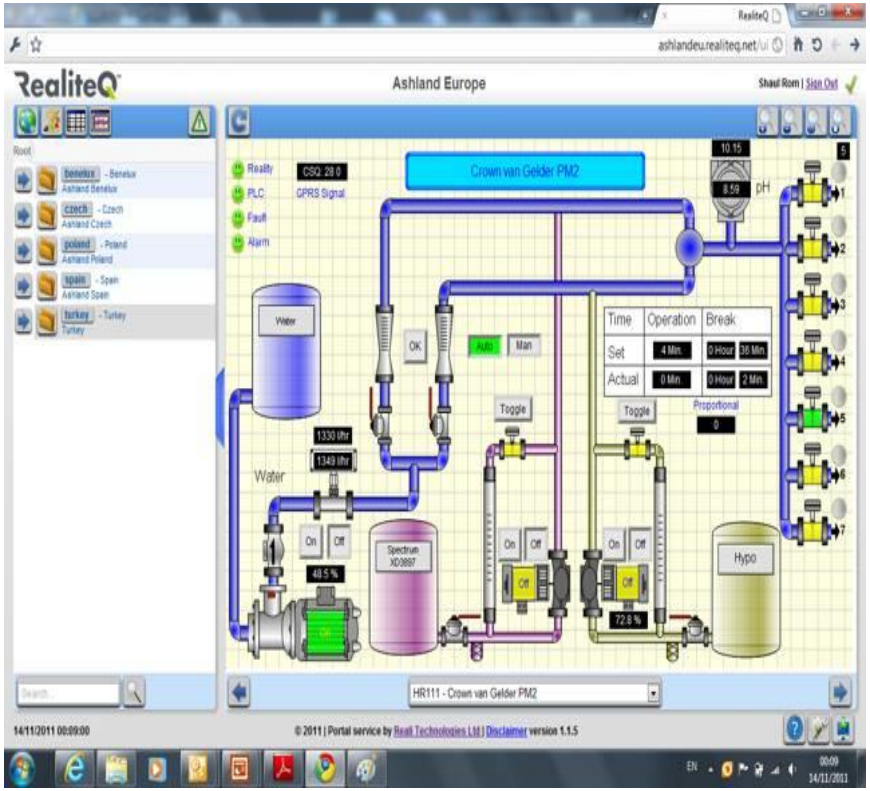


Case Study 8 – OEM Increasing Energy Efficiency in Cooling Towers (world wide)

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

Cooling towers are large energy consumers common in many applications around the world. These facilities undergo a drop in energy efficiency over time, and the companies that service the cooling towers face a major challenge to improve energy efficiency and save energy in the regular operation of the cooling towers.



Case Study 8 – OEM Increasing Energy Efficiency in Cooling Towers (world wide)

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Project Description:

The energy efficiency challenge requires high capabilities and reliability in the real-time monitoring and control of complex systems. In order to meet the challenge, a number of different companies have contacted RealiteQ to provide the remote supervisory and control system on these systems, in order to enable regular remote maintenance of the systems, which will preserve a high level of energy efficiency.

RealiteQ provided the communications, the integration and the systems' operating screens. RealiteQ connected to controllers that operate systems for cleaning scale without the use of chemicals in cooling tower pipes, thus significantly reducing the electricity consumption in the cooling facility processes. In addition to controlling cleaning and washing actions, RealiteQ also provided data on the quality of water in the towers.

In this project, RealiteQ is effectively serving as an OEM supplier of the remote monitoring and control technology implemented in the scale-cleaning system supplied by the manufacturer to the cooling towers.

Case Study 8 – OEM Increasing Energy Efficiency in Cooling Towers (world wide)

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Unique Capabilities:

The distinction of the RealiteQ solution is that it provides maintenance personnel with the ability to remotely access the various systems deployed around the world. The systems are connected to various customers such as public institutions, industries, etc., with the internet connection achieved by various means (cellular and other). No outside software is used and all activity takes place through the RealiteQ portal.

The system enables users to know in real time how much money was saved as a result of the energy savings achieved thanks to the cleaning actions.

Summary and Results:

Today RealiteQ is OEM supplier for Various manufacturer of energy saving systems in cooling towers. Dozens of such systems installed around the world currently, using RealiteQ technology for remote system monitoring and control.

Case Study 9 – OEM – international chemical company (World wide)

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

Solenis (Hercules Chemicals, which was later purchased by Ashland and is now called Solenis) is an international chemical company with two centers, one in Europe and the other in the United States. The U.S. center is responsible for all North American activity and the European center is responsible for activity in Europe and the rest of the world (particularly in South America and Asia).

The company provides, among other things, a water treatment system for paper-manufacturing plants around the world (hundreds of factories), and is responsible for operating them and for the regular supply of chemicals for these systems.

The project's key challenge was to enable full control of a large number of systems located around the world with minimal manpower and maximum uniformity, so that each constituent (product managers, region managers, sales managers and technical personnel) could see and operate their areas of responsibility easily and simply.

After examining the alternatives on the market, RealiteQ was selected to provide the system to all of the company's facilities around the world.

This project's distinction is that the RealiteQ system is the command and control component of the Solenis water treatment facility, and in effect constitutes part of the product Solenis provides to the end customer (the paper plant). In this case RealiteQ serves as a provider of technology to the manufacturer of industrial water treatment facilities.

Case Study 9 – OEM – international chemical company (World wide)

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RealiteQ
New Generation of SCADA & Telemetry Solution

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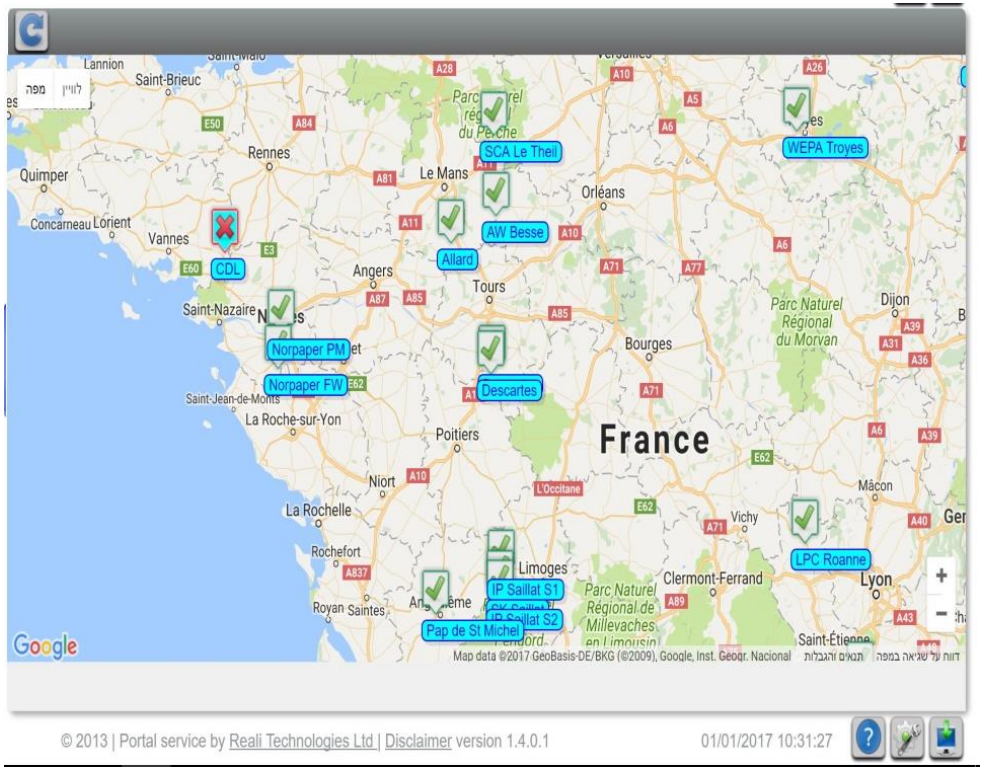

Case Study 9 – OEM – international chemical company (World wide)

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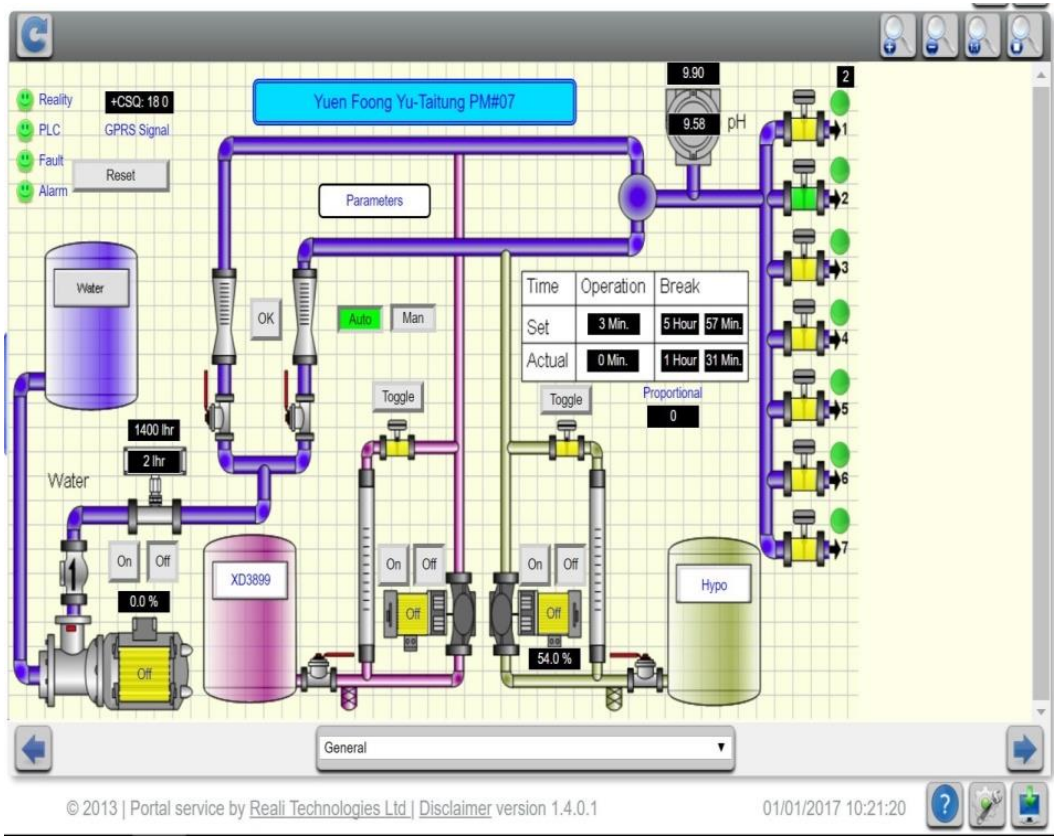


Case Study 10 – OEM – virtual Power Plants, Germany

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

The German company TBS is a virtual provider of energy that connects various generators throughout Germany to local power grids on the basis of designated contracts.

In order to operate these systems, the company needed real-time monitoring and control systems that enable it to send accurate data at predefined times (every minute, during the first ten seconds of the minute) to the purchasing electric company.

In the initial stage, Exor purchased the hardware from RealiteQ and supplied it to the customer, while TSB purchasing the service and software directly from RealiteQ.

Project Description:

In 2007 RealiteQ was asked to provide a solution to TSB, which at that time was entering the field of virtual power plants, and sought an advanced system for real-time monitoring and control.

The hardware was installed on the various generators and the software interfaced with the generator's IO models, as well as through the RealiteQ portal and using Reali OPC software (OPC Server program) to their management software, which is
connected to the power companies' centers to which the electricity was provided from the generators.

Case Study 10 – OEM – virtual Power Plants, Germany

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

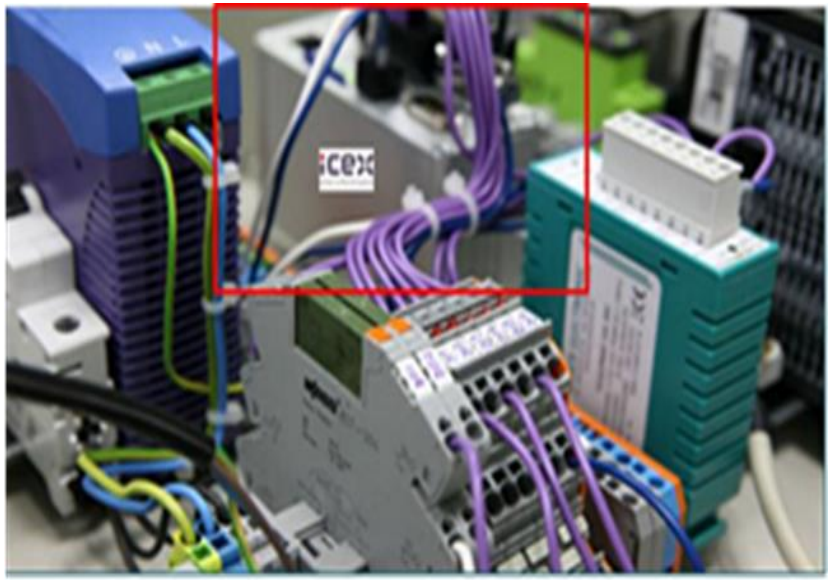
Unique Capabilities:

The distinction of RealiteQ's solution was its interface with the generator systems via concurrent local and IO communications, connection to external management software via the OPC interface.

This project showcased RealiteQ's ability to broadcast data in real time, reliably, consistently and with high determination and precision (always in the first 10 seconds of each operating minute) – from a number of different sites at the same time, and through various cellular providers.

Summary and Results:

The system has been operating successfully for a decade, and at its height handled dozens of sites at the same time, depending on how many contracts and active generators TBS had.



Case Study 11 – Industrial & Agricultural Desalination system (world wide)

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

Desalitech is an Israeli company that supplies advanced, energy-efficient seawater desalinization systems. The system was developed by Desalitech in 2008 and is supplied to industrial plants around the world.

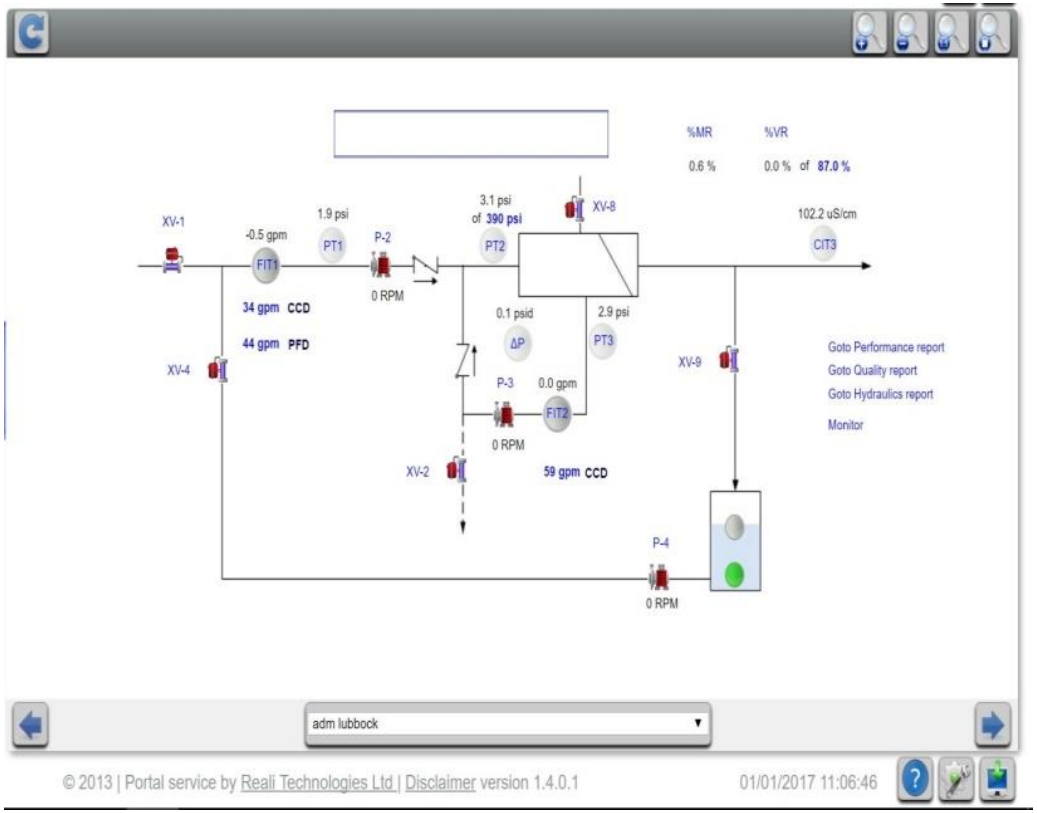
The key challenge in this project was real-time monitoring, in intervals of seconds, and enabling data collection to teach the system and improve it while it is in operation. (The RealiteQ system provides reports directly to a BI system developed by Desalitech specifically for this purpose.)

The distinction of this project is that the RealiteQ system is the supervisory and control component of the water desalination facility, which is installed in the facility by Desalitech at their plants in Israel, and sent to the relevant site as an integral part of the water desalinization system. In this case, RealiteQ serves as a technology provider to manufacturers of industrial water desalinization facilities.

Case Study 11 – Industrial & Agricultural Desalination system (world wide)

Project Description:

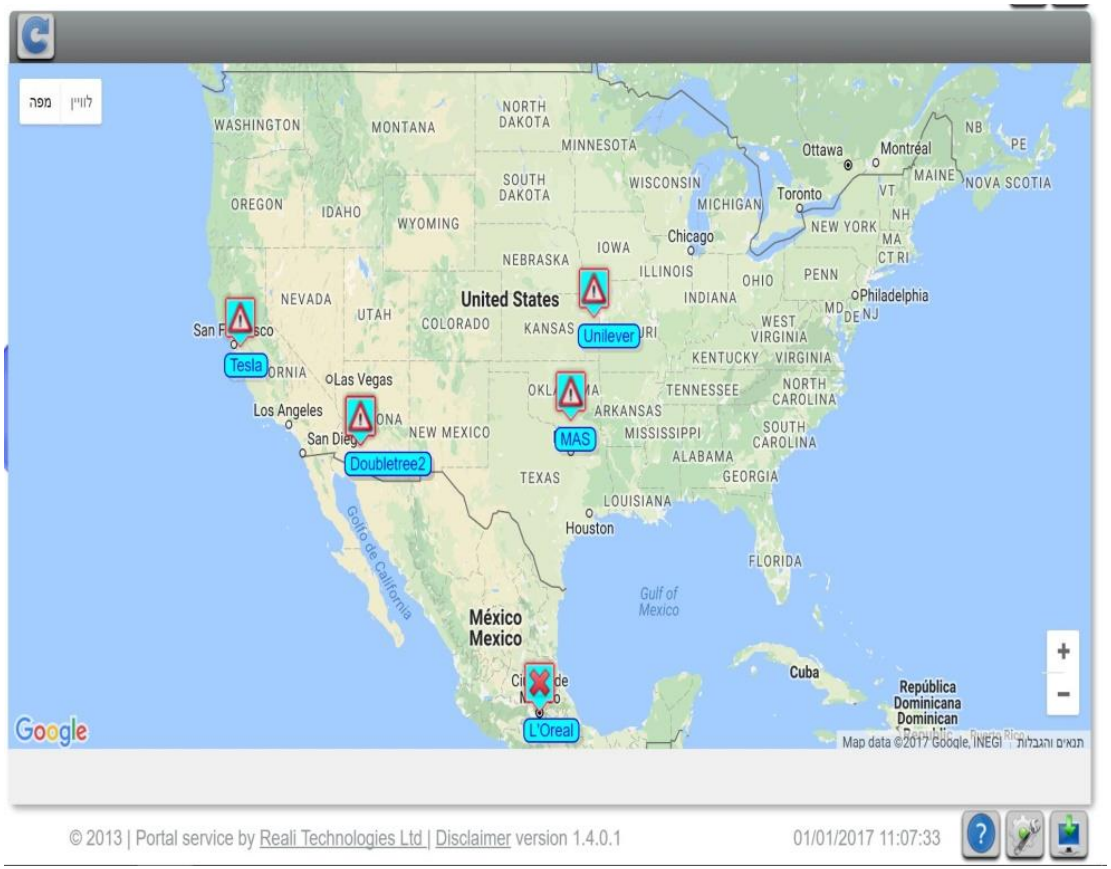
In 2008 the first RealiteQ systems were installed at the company's desalinization facilities in Israel, and since then the RealiteQ system has been exclusively used for Desalitech desalinization facilities throughout the world.



Case Study 11 – Industrial & Agricultural Desalination system (world wide)

Unique Capabilities:

RealiteQ's solution is unique in its real-time monitoring capabilities, at the level of seconds, in its real-time response capabilities and its ability to transfer data to an external BI system in order to analyze the data and teach the system for the purpose of streamlining and improving the finished product and the service.



Case Study 11 – Industrial & Agricultural Desalination system (world wide)

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Summary and Results:

The fact that a unique global customer such as Desalitech, which requires particularly precise and reliable systems for the world's leading industries known to have requirements for high quality, is using RealiteQ systems is a clear indication of the quality and reliability of those systems.

This satisfaction is a result of almost ten years of fruitful collaboration between the companies, starting from the beginning of their activity. Thanks to its innovation and openness to customer needs, RealiteQ has been accompanying Desalitech ever since it began developing its systems.

The systems have been successfully installed on four continents (America, Asia, Europe and Africa), in leading factories around the world, such as Coca-Cola, Tesla, Unilever, L'Oréal...

Case Study 12 – RealiteQ System interface with GE system, Austria

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

A local distributor and integrator of GE control systems in Austria was looking for a real-time communications system that would transmit the data of the controllers he provides to Austrian municipal water and sewage authorities.

The challenge in this case was to be able, on one hand, to provide a comprehensive system (communications and UI) where needed, and on the other hand, to provide communications that interface with existing UI systems at the premises of other customers through a Reali OPC server.

In this case, RealiteQ is in effect a technology supplier for the integrator in this country, who receives a solution adapted to the specific needs of various customers, while interfacing with appropriate UI systems and end systems as needed.

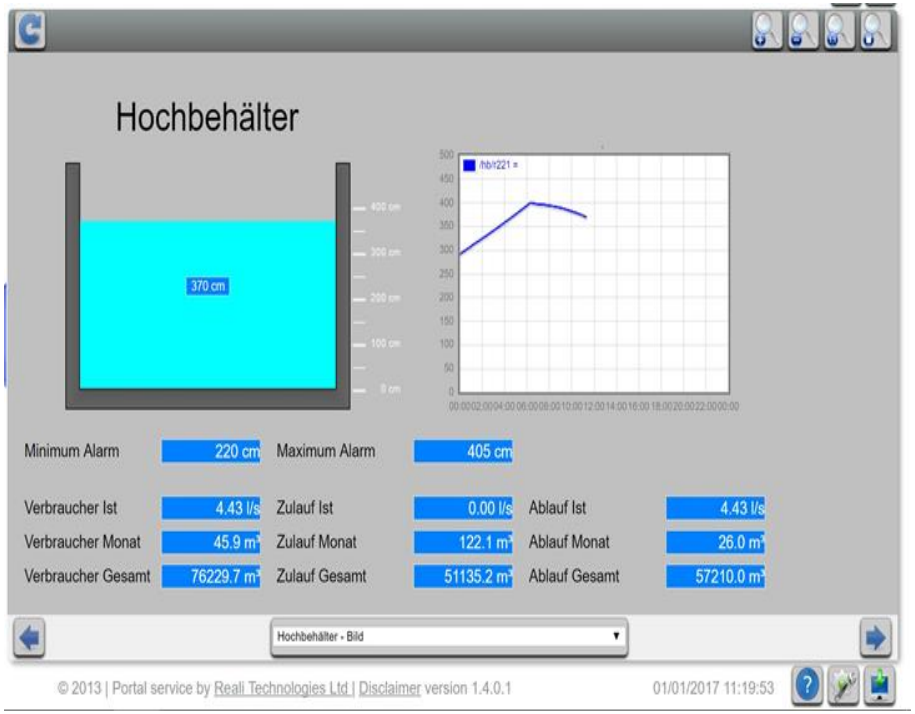
Case Study 12 – RealiteQ System interface with GE system, Austria

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Project Description:

In 2009 RealiteQ was asked to provide a solution for three sites in Austria for real-time monitoring and control of water systems controlled by GE controllers.

The systems were provided as part of a local integrator's need to provide a complementary system of communication and remote control for the controllers he provided, which would be able to interface with existing systems of the municipal water and sewage corporations.



Case Study 12 – RealiteQ System interface with GE system, Austria

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

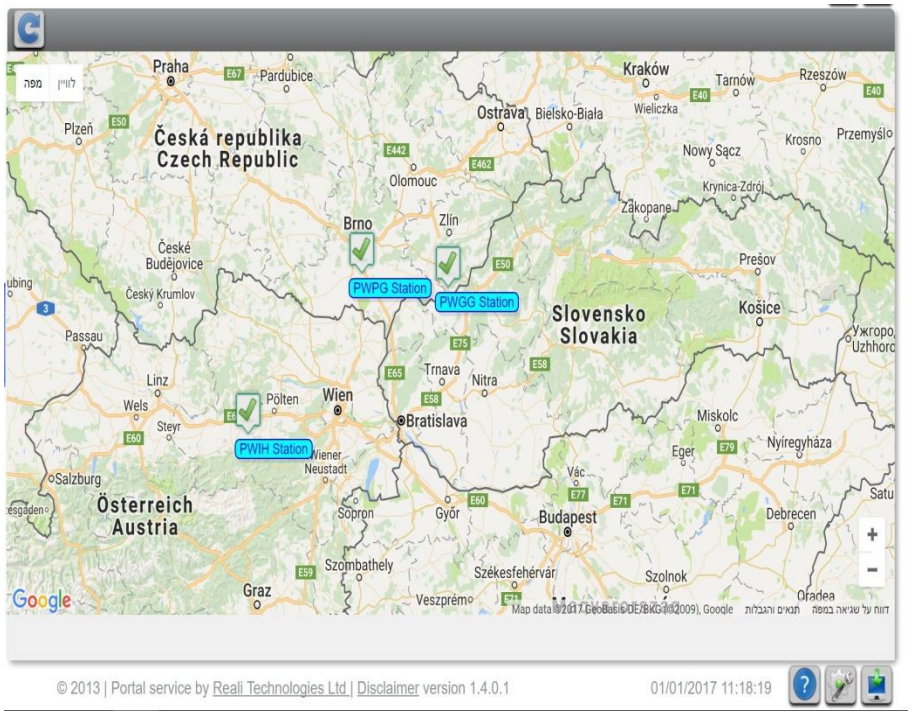
Unique Capabilities:

The distinction of RealiteQ's solution is the versatility of the interface, which enables it to provide a solution in accordance with requirements, from a comprehensive solution including communications and UI, to a communications solution that interfaces with customers' existing UI systems.

Prominent in this project was RealiteQ's ability to remotely support an individual integrator and provide a reliable and versatile solution in relatively small quantities.

Summary and Results:

In light of the project's success, the collaboration as continued, and there are currently, there are currently a few dozen sites active in Austria for municipal customers who receive real-time data for a variety of different UI systems, to the satisfaction of both the integrator and the customers.



Case Study 13 – Remote supervision & control of irrigation Machines , Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

The agricultural company at Kibbutz Mizra in Israel has a large number of linear/pivot irrigation machines, distributed over extensive areas, differing and distant from each other.

The irrigation machines move in a linear or circular manner at slow speeds, and irrigate the terrain they pass over. As they are machines in every sense, they are powered by a diesel engine or an electrical motor, and feature various controls for speed, direction, motor management and securities/protections, both for the motor and for the sprinkling and irrigation systems. Each of these requires appropriate control, and as the machine is in constant motion – it needs to be operated wirelessly.

Project Description:

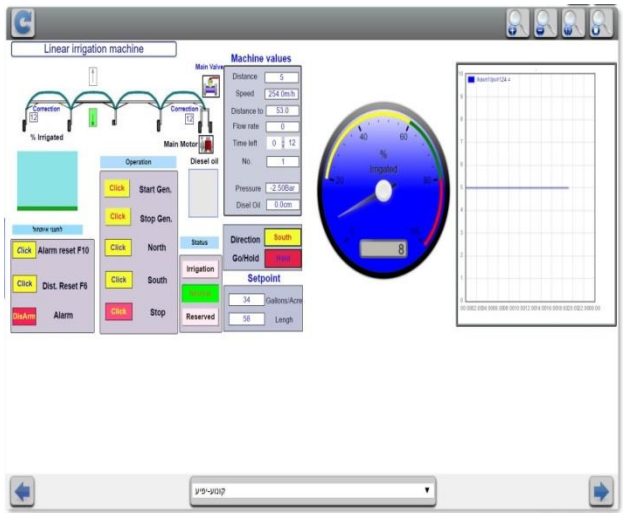
In 2014, the project began with a single irrigation machine for the customer, and the irrigation machine selected for this purpose was the one located at the greatest distance from the kibbutz.
An R3.0 iCex unit was installed on the linear irrigation machine, connected to the irrigation machine's controller, and it sends all of the information both to its operators and directly to the remote units controlling the supply of water and pressure to feed the irrigation machine (multi-directional communications).

Case Study 13– Remote supervision & control of irrigation Machines , Israel

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Unique Capabilities:

The distinction of RealiteQ's solution is the cellular communication capability, which enables different irrigation machines to be connected without the need to deploy a radio infrastructure. Another special capability of the system installed is that of its multi-directional communication, which enables the irrigation machine's controller to communicate directly, and concurrently with the water supply system and with the operators.



Summary and Results:

Immediately after RealiteQ's installation on the first irrigation machine, it was understood that this was a good way to monitor and control everything taking place in and around the irrigation machine.

As the machine operates and moves independently, it's very important and relaxing to see from afar, at any given moment, where it is and what its status is. This system in effect precluded the need for any wired connection, which is no longer unnecessary and had caused many problems in the past.

The system enables real-time control over the rate of progress and the amount of water needed, and of course issues an immediate alert regarding any problem or incident.

In light of the success and the customer's satisfaction, one season later, three additional irrigation machines were upgraded the same way, using a RealiteQ system.

Case Study 14 – Solar energy fed cellular communication base station, Africa

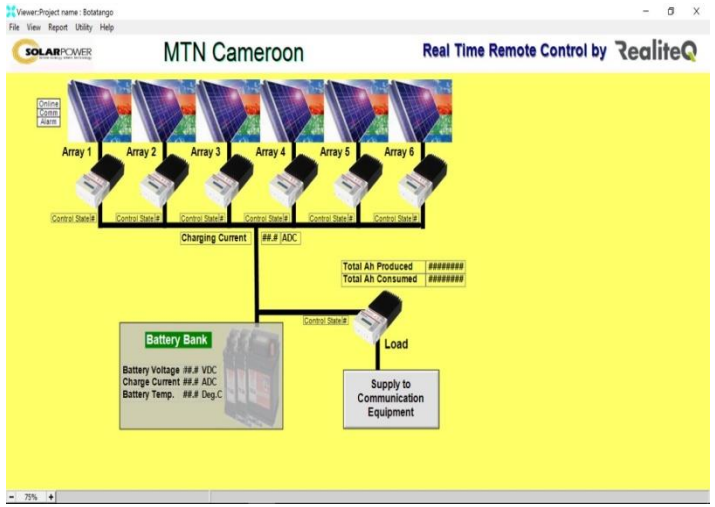
Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

In Cameroon, Africa, the base stations for its cellular network are partially fed by solar energy systems, particularly in areas that are difficult to access.
In 2011 RealiteQ provided systems for remote monitoring and control of cellular systems to South African company MTN, which is also active in Cameroon.

Project Description:

The project included 7 stations throughout Cameroon. Each station is divided into a number of solar arrays, each such array being controlled by a separate designated charging controller, with up to 10 controllers per station.
Each of them was connected, for station management technical reasons, each controller defined as being independent on the network, although they were all served by a single iCex unit. In each iCex, separate ports and separate drivers were defined for each controller, each iCex serving five controllers. The iCex unit is used not just to coordinate communications, but also as a System gateway, with significant monetary savings in the initial investment.



Case Study 14 – Solar energy fed cellular communication base station, Africa

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Unique Capabilities:

The distinction of the RealiteQ solution is that it provides maintenance personnel with remote access to systems in out-of-the-way locations that are difficult to access physically. Each iCex unit has the ability to serve a number of controllers, and the iCex units serve both as a communications coordinators and as gateways. They work at high temperatures. Data is shared between network operators and the solar energy systems' maintenance companies. In addition to remote monitoring, the interface was also used for calibrating the system and changing parameters.

Summary and Results:

The system operated under extreme climate and physical conditions, at very distant sites that require complex technological capabilities, all with relatively low investment (CAPEX) and off-site service (SaaS – Software as a service) that completely relieved the cellular company of the issue of maintenance.

Case Study 15 – SCADA and security in Neutral Gas infrastructure

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Background:

RealiteQ is a virtual ICT network that opens a reliable, redundant, safe and secure event channel for real time remote control, monitoring and crisis management. It facilitates real time monitoring, control, and data acquisition from remote systems
that are distributed at various locations and different networks worldwide.

The easy-to-install and user-friendly philosophy of the RealiteQ system have been applied to advanced control, so management and maintenance people can tackle large, interactive process problems. Users can now easily optimize their system for
maximum throughput, maximum profit and minimum energy.

Reali Technologies with its RealiteQ platform offers communication solutions for remote monitoring and control of oil & gas facilities.
Whether the process is drilling, refining, filtering, PRS, PRMS, city gate or other, RealiteQ is the perfect technology for remote control and monitoring.
With RealiteQ, you have a reliable and cost effective solution for monitoring gas well production, pipeline flow, distribution system pressures and more…

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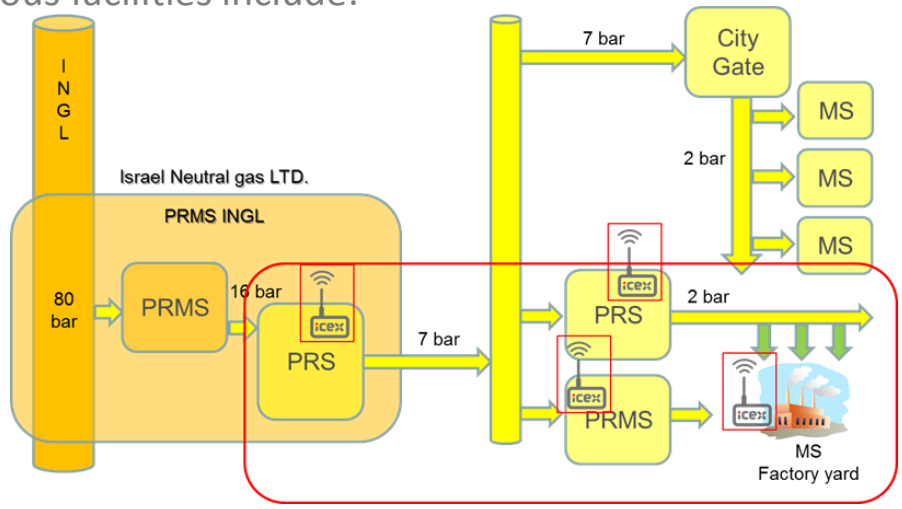
Project Description cont.:

The gas flows through the national transmission system, and after an additional pressure reduction, it is transferred to the distribution companies.

Our project extends across the north of the State of Israel.
As part of the project, the control, security and SCADA systems are implemented in about 160 facilities in total.
About 10 facilities are PRS / PRMS or THT addition (for adding smell to the gas), while others are installed in factory yards or other large consumers facilities.

The components of the control panels at the various facilities include:
- Programmed controller
- Flow corrector
- iCex (Integrated Cellular & Ethernet Explorer)
- Security cameras
- Perimeter fence sensing system
- Power supply & backup batteries



Case Study 15 – SCADA and security in Neutral Gas infrastructure

Hi Tech Low Cost
RealiteQ
New Generation of SCADA & Telemetry Solution

Project Description cont.:

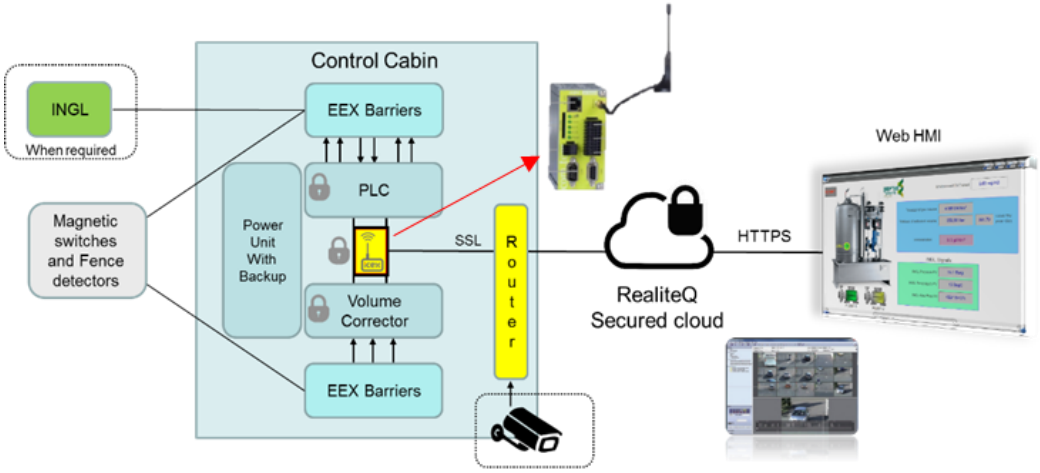
It is important to note that the iCex component, as part of the RealiteQ system, makes communication to the cloud very stable, reliable and secured.

Work stations at the Control Center allow system operators remote control of all installations and sites. The monitoring and measurement data of the gas supplied is routinely transferred to the national gas company through a secured channel for billing

.

In times of emergency, the gas supply can be stopped from the control center by typing a designated password and pressing the closing key of the dedicated facility where the event takes place.

In the definition of regulation, it was Determined that renewing the supply of gas requires reaching the site, and only from this it is possible to carry out a process of resetting and opening the supply plant.



Unique Capabilities:

RealiteQ was chosen to provide the solution for real-time monitoring and remote control of Natural Gas distribution system in the north of Israel. The neutral gas network is part of the national plan of moving the industry to use clean energy.

RealiteQ Platform was selected as for the combination of several unique advantages:

- Most advanced End-to-End, Real time cloud based SCADA solution.
- High system reliability
- Secured web system
- Real time system which allows to monitor and remotely control (close valves) crises and other events
- Technological flexibility, including the ability to communicate easily with different 3rd party technologies Moreover, it's very competitive cost together with the fast and simple installation makes RealiteQ the most cost effective option in this case.

Summary and Results:

RealiteQ has enabled the customer to install facilities in an efficient, economical and secured manner without the need to invest large sums in expensive communications and computer infrastructure.
Because RealiteQ is a modern and advanced cloud system, it enables the transmission company to develop at a pace that is suitable for market growth.

RealiteQ saves customers a lot of Money and allows them to control their expenses on the one hand, and provide their customers and regulation authorities wit
h excellent service on the other.