

*HydroScada™*

*We  
Control  
Water*



## ***What is HydroSCADA™***

**HydroSCADA** is the chosen HMI/SCADA solution for national water management of Israel since 1994.

Owned by Contel Group, an Automation & Control market leader (est. 1964), **HydroSCADA** provides real-time visibility and control over nationwide water facilities and water infrastructure by enabling unique capabilities for water management, dramatically reducing water waste, energy consumption, enables unprecedented ease of use and maintenance and offers low cost of ownership

**HydroSCADA** in Merkot, controls over 3000 different water facilities and monitors over a million I/Os while maintaining high efficiency and high visibility thanks to **HydroSCADA's** unique architecture which allows a large scale macro-level control with micro-level capabilities and visibility.

## ***Water-Driven Design:***

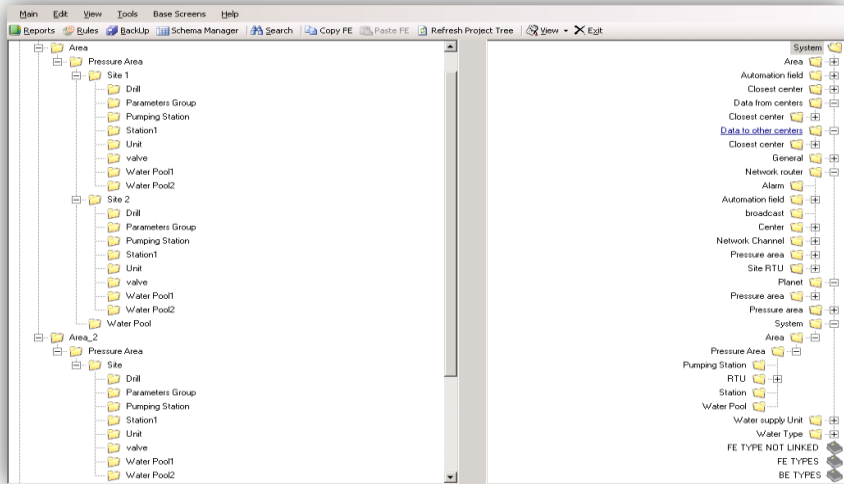
***We Control Water*** is not another Moto.

With *HydroSCADA* we enable the customer super efficient control over its water network by using unique features:

- ***Hierarchical Software Architecture*** – Simple capture of large-scale water networks and water infrastructure
- ***Tariff Mechanism*** – Provides efficiency driven data for operational excellence
- ***Recipes*** – Captures algorithms for water management policies
- ***Scenario Mechanism*** – Provides complex "What If" capabilities over micro and macro levels to allow full control and visibility while enforcing company decisions
- ***Backward Calculations*** – Designed for highly distributes networks, guarantees data integrity if communication fails by enabling formulas and algorithms to run automatically and retroactively
- ***Playback*** – Enables visible playback over a requested period of time. Unlike other SCADA solutions, this playback is designed to seamlessly playback the data, regardless of the amount of I/Os and elements
- ***Business Intelligence*** – *HydroSCADA* offers best-in-class BI functionality, powered by QlikView™
- ***3<sup>rd</sup> Party Integration*** – *HydroSCADA* allows 3<sup>rd</sup> party applications to use its unique Hierarchical structure thus providing a major additional value to the integrated application
- ***Automation Mechanism*** – Enables pre-scheduled execution of VB scripts over the system

## What is the Hierarchical Architecture?

Over the past 15 years, *HydroSCADA* has developed a proven hierarchical software architecture which allows highly distributed or national water companies to easily manage nationwide facilities and to apply nationwide policies with a simple click of a button.



The concept is simple – while standard HMI/SCADA application provides object oriented environment, *HydroSCADA* is doing the same on an infrastructure level in which the developer defines the facility from the machinery level and up through local facility, district facility, county facility and nation facility (e.g).

Once completing the initial step of infrastructure setup all is left to do is to drag & drop objects that will automatically inherit their properties according to the infrastructure configuration.

This mechanism allows updating the object only once and the changes will apply according to the level that it is required. Even if that means that there are more than a million objects.

For Example, adding a new calculated tag (BE) for all the pumps in the network to give an alert when the pump overheats. It means no different if there are 100,000 pumps in the systems or just a few, the change of a single pump will apply to all the pumps that meet the same level in the hierarchy.

Traditionally, using standard HMI/SCADA solutions, this would have taken hundreds of programming hours and increase the risk of errors and bugs. With *HydroSCADA* it takes less than a few hours without compromising data integrity.

## ***Features Powered by Hierarchical Architecture***

*HydroSCADA*'s unique water management features comply with the hierarchical structure which results in greater usability and higher functionality of those features.

- Scenario Mechanism enables to capture a single scenario or a set of scenarios based on equipment, facility, region or any level that appears in the predefined infrastructure
- Recipes can be allocated to different levels in the hierarchy
- Graphs & Reports can be automatically generated and executed according to predefined templates that comply with the hierarchical structure
- And more...

## ***HydroSCADA with Business Intelligence***

*HydroSCADA* is provided with built-in graphs and reporting services to allow better and easier management over countless inputs of data.

Additionally *HydroSCADA* offers complete Business Intelligence capabilities, powered by the best in class *QlikView* BI tool

Entry **Consumption Analysis** Trend South North Negev Center Negev Arava Element Analysis Analyze by type Details Daily summary South

Daily summary North Negev Daily summary - Arava Daily summary - Central Negev Reports Props Exceptions Tests Selections Graphs

2010 Q1 Q3 1 3 5 7 9 11 1 4 7 10 13 16 19 22 25 28 31  
 2011 Q2 Q4 2 4 6 8 10 12 2 5 8 11 14 17 20 23 26 29  
 3 6 9 12 15 18 21 24 27 30

06.04.2011 תחנת מטרות

**Total consumption per week day**

יום	ש	ו	ה	ד	ג	ב	א	Total
מיכני	6,444,973	8,088,978	7,362,016	7,256,003	7,649,851	7,408,271	6,988,930	51,199,023
ערבה	3,725,036	3,750,389	3,568,776	3,565,180	3,765,342	3,722,150	3,725,630	25,822,502
צפוני	8,087,402	11,330,254	10,850,991	10,638,098	10,811,262	10,079,615	9,185,815	70,983,458
<b>Total</b>	<b>18,257,411</b>	<b>23,169,622</b>	<b>21,781,783</b>	<b>21,459,281</b>	<b>22,226,475</b>	<b>21,210,037</b>	<b>19,900,375</b>	<b>148,004,983</b>

**Consumption by area**

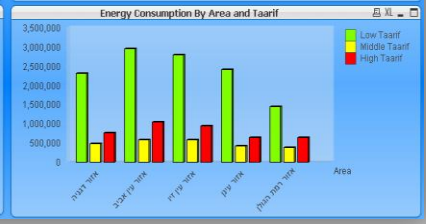
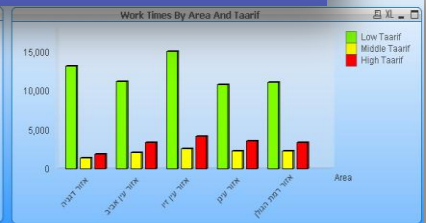
**Consumption by area - Qty**

**Region**  
 מרכזי  
 ערבה  
 צפוני

**Water type**  
 רשת השלישי  
 מילגם  
 מים מליחים  
 מים אפריים  
 מליחים  
 אשד"ן  
 אפריים

**Classification**  
 איזום  
 תאורה  
 כושר  
 לא כלומיניום

**Element**  
 500253366  
 500253689  
 500311451  
 710000693  
 710000690  
 710000580  
 710000449  
 710000521



## ***HydroSCADA at Mekorot, the Israeli National Water Company***

Over the past 17 years, *HydroSCADA* is the sole HMI/SCADA solution for nationwide control of water network, controls over 3000 different sites spread all over the county and more than a million tags (BE's)

**Mekorot** has contributed to *HydroSCADA* with priceless knowledge of water technologies and water management over the years which results in a one of a kind SCADA solution for highly sophisticated water companies and national networks.

Thanks to a winning product design and product openness, **Mekorot** has been developing and maintaining the *HydroSCADA* system independently throughout the years which greatly contributes low cost of ownership and conforms to national security restrictions and regulations



Contel Group was established in 1964 and specializes in the supply of hardware and software end to end solutions for industrial purposes.

With its 5 subsidiaries Contel has been leading the market in the areas of Control & Automation, Manufacturing Execution Systems (MES), HVAC & R control, building management systems and process control.

Over the past few decades, the group has implemented turnkey projects in Israel and abroad, drawing on the wide-range of capabilities from the Group's subsidiaries to provide comprehensive solutions to customer requirements.

#### **Our Offices:**

##### **Headquarters**

Contel Automation and Control  
21 Yegea'-Kapayim Street, **Ground fl**  
Kiryat Arie, Petach Tikva, **ISRAEL**

**Tel:** 972-3-9260300  
**Fax:** 972-3-9260333  
**Email:** [contel@contel.co.il](mailto:contel@contel.co.il)

##### **HydroCom**

HydroCom  
21 Yegea'-Kapayim Street, **1<sup>st</sup> fl.**  
Kiryat Arie, Petach Tikva, **ISRAEL**

**Tel:** 972-3-9260320  
**Fax:** 972-3-9260333  
**Email:** [contel@contel.co.il](mailto:contel@contel.co.il)

##### **South Branch**

Contel South  
Omer Industrial Park, PO Box 3033  
Zip 84965, **ISRAEL**

**Tel:** 972-8-6909999  
**Fax:** 972-8-6909990