

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

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.

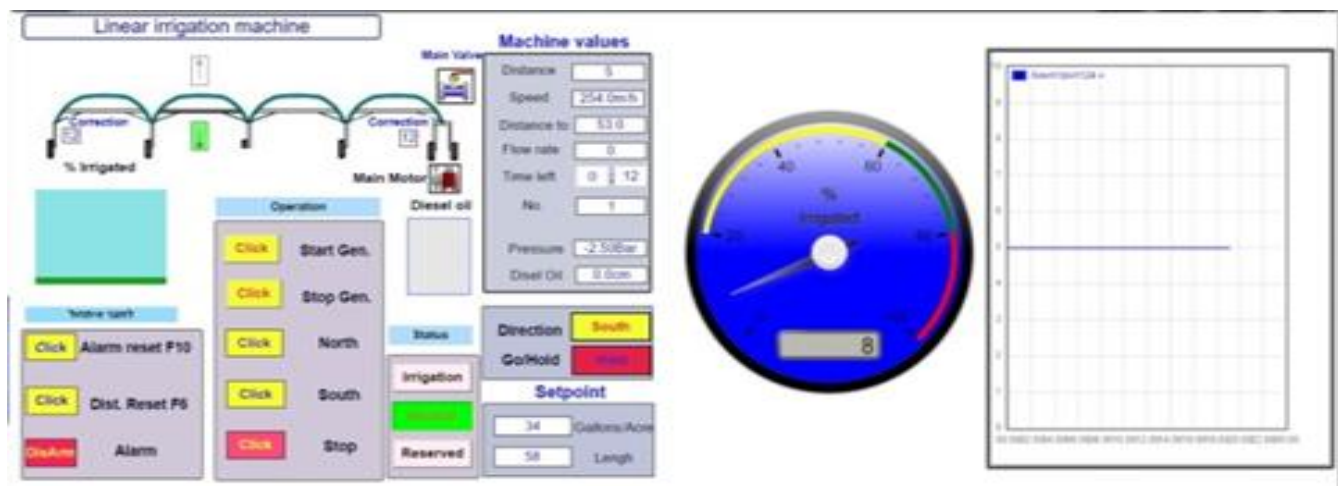
Project Description:

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).

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.



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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.

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