

A case for open architecture

By TOM MALE

Technological advancements in communications now allow us to create a "thinking link" between pumping systems and sprinkler heads — and tee up a host of benefits for golf course superintendents.

That link ought to be open to everyone.

These communication evolutions can cut down on system breakdowns as the "brains" of the sprinklers unite with the pumping system to make intelligent decisions.

For example, a golf course relies on three 50-hp pumps to power 1,500 gallons per minute (gpm). One night while watering, one of the pumps fails, leaving the system with only 1,000-GPM capacity.

The current irrigation system would continue to demand 1,500 gpm until finishing its cycle. The pumping system, unable to keep pace, would have shut down on low pressure. In the morning, the course would end up with dry greens despite the irrigation system's "virtual watering."

With united brains, the system would have notified the user of the situation via a pager or phone and could have reconfigured itself to run at 1,000 gpm. The watering window might be longer, but it would be real water.

What other new benefits are possible?

- Smart water use and intelligent pumping — Sprinklers and pumps can share data that compares theoretical water flow to actual water flow. The data allows users to adjust the irrigation program, minimize the water window and improve pumping-system efficiency.

- Early detection of pipe leaks or blow-outs — By comparing data, the system can detect a leak or blow-out.

- Coordinating reset programs — Working together means the irrigation heads will pause when the pumping system faults, and resume once the pump is reset.

- Tailored pressure — Automatically fine tune pump-station output pressure to match actual requirements, accommodate high or low elevations, drip irrigation, nearby homeowners and more.

- Pre-starting the pumping system — Pre-starting pumping systems means the system is ready when sprinkler heads start.

We could offer these benefits if the industry takes the next step. The concept of open architecture may seem a bit mystical. After all, you can't touch or feel it. Most of us can't even see it.

That's because open architecture refers to a specific way of programming a system to make it universally accessible. Think of it as a toolbox designed so that any irrigation sprinkler manufacturer can open and use it. No one needs a special key. Nor is access restricted to only certain



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companies.

In other words, Rain Bird, Toro, Hunter and more can grab as many tools as they want.

Further, they can take this information and easily work with it. Why? Because our

"tool box" is written in TCP/IP protocol, the same common language that makes the Internet

accessible to different computer platforms.

Why is open architecture critical?

Imagine how well the web would work if it were "closed." Only a select few could surf, download and e-mail — limiting interaction and diminishing its value.

In the golf market today, there are hundreds of different kinds of pumping systems and dozens

of variations of irrigation controllers and sprinkler systems. Shouldn't we employ technology that works, regardless of manufacturer or style?

Open architecture is the best way to keep things simple, accessible and convenient. It's time to build that technology bridge.

Tom Male is general manager of Flowtronex PSI.

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