

Technology Update: Reducing the Environmental Footprint of an Irrigation System



Addressing Current Market Needs

- Reduce golf irrigation system capital and operating costs
- Increase value and playability with lower investment
- Protect the environment

Integrated Control System™

Innovation at a
Lower Cost *

- Intelligent Control Technology built right into the sprinkler.
- Same performance as a satellite system without the satellites!
- Elimination of 90% of the wire
- Environmentally friendly – smallest footprint in the golf industry
- Lower cost
- Easier to install

** compared to a traditional satellite system*



Where Does the Wire Come From?

Environmental Impact: Copper Facts



- Copper is mined as copper ore (chalcopyrite)
- Copper is a non-renewable resource
- 95% of the world's copper has been mined since 1900
- 25 to 60 years supply of copper available at current prices
- Currently mined at 0.4% To 1.0% concentration (avg = 0.6%)
- **Average waste per ton of copper*:**
 - **350 tons of waste rock**
 - **147 tons of tailings**
 - **4 tons of CO₂ released to the atmosphere**

**Source USGS,GOV*



Case Study: Copper used in an Irrigation System with 1400 Sprinklers

Integrated Control System™ A Lighter Environmental Footprint

Environmental Savings with an IC System:

- **9.5 tons of copper**
- **2.5 tons of PVC jacket**
- **3,340 tons waste rock**
- **1,403 tons tailings**
- **Water used in processing**
- **Energy used in smelting**



Satellite Wire Cart



IC System Wire Cart

