Environmental Control:

Types of Controls

Manual

Thermostat

Step Controllers

Buffers

Computer Control

Computers (Centralized)

Dedicated Microprocessors (Distributed)

PID Control

Proportional Control

Integral Control

Derivative

Additional Computer Applications/Capabilities

Irrigation

Water Quality

Fertility

Weather

Diagnostics

GIS/GPS

Diagram of a bimetallic thermostat. Bimetallc strip (11) is brass brazed to steel. Expansion and contraction due to temperature shifts causes the strip to change shape. As the temperature drops, 11 makes contact with 7, causing a heater to turn on. As the temperature rises, 11 bends towards 6. When the temperature reaches the upper limit temperature (about 2 °F above the set point temperature, 11 makes contact with 6, turning off the heater. The thermostat works the same for a cooling device except contact between 11 and 6 would turn on the cooler (fan) and contact between 11 and 7 would turn it off.