

Marc Manzke

Thermal Comfort Chair

The thermal comfort chair is intended to provide a personal level of comfort beyond what a traditional heating and cooling system can provide. Modern HVAC systems are reactive to large temperature swings as detected by a thermostat in a given zone. TCC allows the user to further control the thermal environment at a local level. If the user goes through a period of elevated metabolic activity, the thermister sensor array will detect the change in skin temperature and activate cooling fans in the overheated zones. As the user's body temperature returns to equilibrium the sensors will slow the fans accordingly until the system detects normality and shuts down. TCC displays the heat transfer from user to chair via an array of blue LEDs that animate the chair. As the user exchanges heat with the chair, TCC feeds off these excess watts and outputs them as light.

