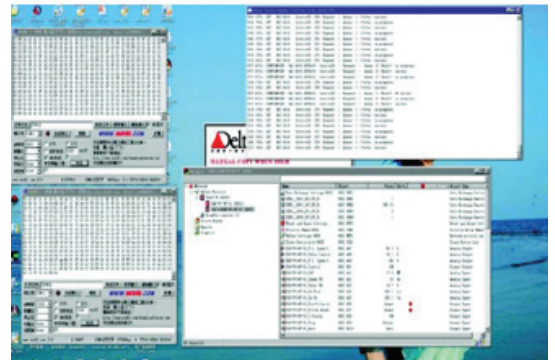


Personalized Thermal-Comfort Platform for Smart Building

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Heating, ventilation and air-conditioning (HVAC) system accounts for more than half of building energy consumption and leads to huge energy wastes. A Scalable Personalized Thermal-comfort (SPET) platform, which includes standardized data schema and SDK with adapters to harvest data of smart hardware and proactively guide building automation systems temperature setting services, analytic framework that optimize thermal comfort and energy conservation and visualization software package to show the thermal comfort of buildings, has been developed to quantitatively estimate the thermal comfort of any individual occupants or groups in daily operations. The research results have shown a preliminary version of the model can save energy for 18% and improve thermal comfort for 33.8%. SPET can benefit three industry sectors: 1)) smart energy systems for buildings and homes; 2) provides new meanings of data to smart personal devices and smart hardware; and 3) provides top up services for building automation and services.



System Deployment Experience

