ABSTRACT

MONITORING OF CUSTOMER ACTIVITY IN A RETAIL SPACE USING LAMPS WITH NETWORKED THERMAL IMAGERS

Monitoring customer activity **C0,C1,C2** in a retail space **20** using a plurality of lamp units **1-00** mounted in the retail space **20**. Each lamp unit **1-00** includes a lamp housing **10** with a z-axis, a light source mounted within the lamp housing **10**, a board **14** with a microprocessor **14B** and a network module **14A** configured to connect to a server **23**, and a thermal imager **15A** including an infrared sensor grid in electrical connection with the board **14**. The infrared sensor grid of the thermal imager **15A** is directed downward along the z-axis of the lamp housing **10** and configured to capture a plurality of thermal images **15B** of the customer activity **C0,C1,C2** in the retail space **20**, each thermal image **15B** comprising a plurality of temperature readings captured by the infrared sensor grid. The server **23** comprises a thermal history database **23A**, a map library **23B**, and a thermal mapping module **23C**. Thermal images **15B** are stored in the thermal history database **23A**. The thermal mapping module **23C** is configured to create a heat map for each floor plan through an analysis of the thermal records.

FIG. 1