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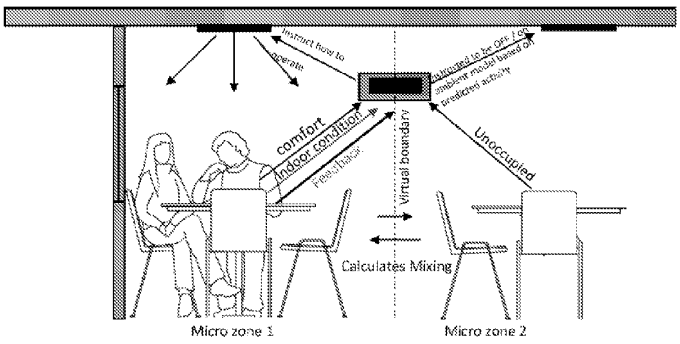


Figure 1

(57) Abstract: The present invention provides a process to implement and control localized air- conditioning of occupied regions in large confined space to reduce HVAC energy consumption comprising delineating the space into multiple micro-zones based on a first level of protocol and static parameters thereof including planned activities, occupancy patterns, diffuser characteristics, and furniture layout and controlling airflow through diffusers in the occupied and unoccupied micro-zones to achieve setpoint temperature or thermal comfort only in the occupied regions using minimum HVAC energy through implementing a second level of protocol with dynamic parameters relating to the micro-zones including real-time occupancy, thermal comfort preferences, ambient conditions, and inter-micro-zonal thermal interactions.

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