

A LOCATION-AWARE CALL FORWARDING MANAGER SYSTEM FOR A SMART TELEPHONY NETWORK OF THE SMART SPACE

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Abstract- A smart space, such as smart sensor rooms, an office, or simply an area, requires a smart telephony network for an effective voice communication between users. Nowadays, modern Private Branch Exchange (PBX) system does not only provide telephone exchange, but also supports many heterogeneous telephony networks and provides many other useful functions as well. Despite its powerfulness, PBX still cannot achieve a basic requirement for a smart space: It cannot adapt its surroundings automatically, i.e. people still need to make the call forwarding setting manually. In this paper, we propose a system with an algorithm named "2D location-aware" for tracking a person in a smart space. According to the ever-changing environment, the system performs an on-the-fly configuration to provide a dynamic telephony network. In other words, we aim to make all the telephones in the network available to every user in the smart space for receiving his phone calls without any manual call forwarding settings.

Index terms: Location-aware, Sensor Network, Smart Space, Smart Sensor Rooms, Real World Interaction, Call Forwarding, IP phone.