



## Intelligent Hotel Room

### Overview

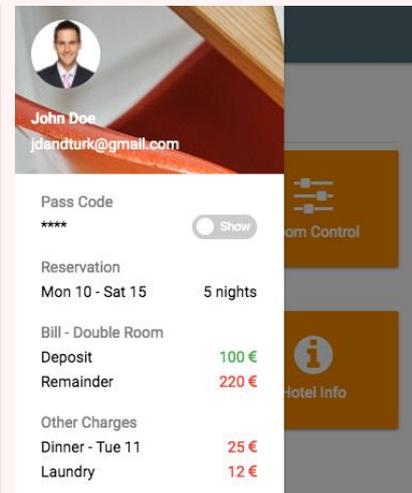
The **Intelligent Hotel Room** is a combination of technologically-enhanced physical artifacts with stationary and mobile applications, aiming to introduce the concept of Disappearing Computing in the domain of Tourism and Leisure. The main purpose of this system is to **offer unique experiences and personalized services** to the new generations of tech savvy tourists, thus providing stakeholders a **competitive advantage to gain and retain guests**. Guests' experience is enhanced through:

**Administrative task automation.** Guests are able to check-in / check-out from their room either on their own using their smartphone (e.g., for notification of arrival, generation of the personal electronic key, payment, etc.) or by visiting the reception desk, where the receptionist will use the Clientele management system.

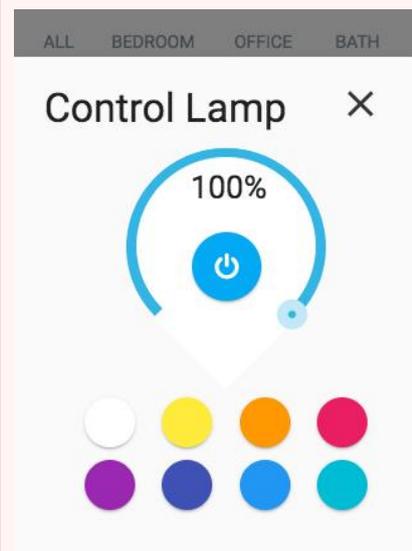
**Area Information and Guidance.** Guests are able to identify, with relative precision, their location within the hotel and can easily find their way around it, whether they wish to visit a specific room or a utility area of the building.

**Advanced Control of Room Facilities.** Guests are able to control appliances, order room services, manage repetitive routines (e.g., going to bed), work, communicate, be entertained and receive detailed instructions in case of emergencies, using any of the following interaction means: (i) traditional wall-mounted switches, (ii) a universal remote control, (iii) their tablet or smartphone or (iv) hand-gestures.

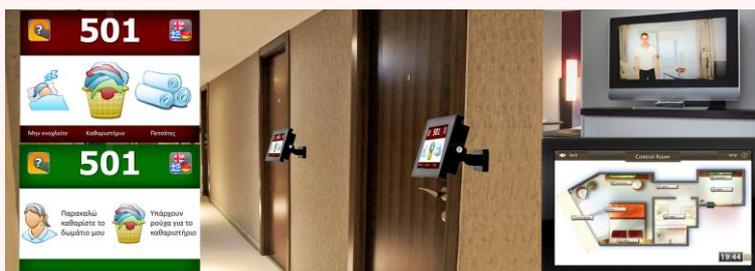
**Hotel Services Information.** Guests can receive detailed information (e.g., textual descriptions, photographs, etc.) regarding: (i) the available services (e.g., room services, well-being services, etc.), (ii) promotional material that the hotel disseminates in a timely- or location- based manner and (iii) hotel-related notifications (e.g., a service completion)



Administrative information screen



Lights control via guest's own smartphone



Intelligent Devices



Clientele Management Suite

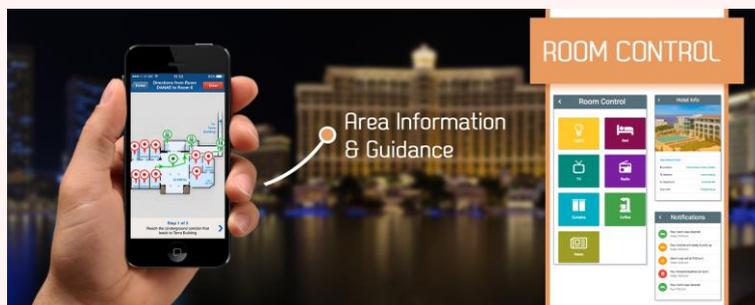
## Target Domains

This Intelligent Hotel Room can be integrated in almost any facility in the domain of tourism and leisure in order to improve the quality of services offered by the hospitality industry.

## Description

The system provides a ubiquitous attentive environment that constantly monitors the activity and location of people and objects within it, and uses this information to control technology in anticipation of the guests' needs. Various technological devices and software agents are incorporated in the physical environment to form an ambient ecosystem.

- **The Room Manager** aims to extrapolate potential user habits and adapt the room's behavior. It utilizes data that represent contextual information (e.g., guest number, room occupancy, state of electronic appliances) and interaction history (e.g., motion detected, device switched off) to initiate the decision-making process and act accordingly.
- **The Room Butler** is a 3-D character, deployed on a TV, who welcomes the guest upon arrival, provides an interactive tour of room features, delivers personalized offers, suggests activities and assists the hotel personnel by delivering notifications based on guests' requests.
- **Intelligent Devices** ease interaction with the room facilities and the request of the available hotel services. A **"Universal Remote"** controls every electronic appliance. The **intelligent laundry hanger** automatically requests the laundry service. The **intelligent touch panel** lets the guests easily request for the cleaning service. The **DoorMate** manages room access and provides messages for the personnel (e.g., Do Not Disturb).
- Through their smartphones the guests can **control the room facilities and services**, while via the **in-house navigator**, they can get directions to the hotel's points-of-interest.
- **Reception Application.** The receptionist manages the hotel's clientele and monitors at real-time, the status of the entire hotel and the progress of the various room service requests.



Smartphone application for room control and hotel navigation



The DoorMate device

## Additional Information

More information about the Art Table is available at:

[www.ics.forth.gr/ami/project/intelligent-hotel-room/](http://www.ics.forth.gr/ami/project/intelligent-hotel-room/)



Intelligent Hotel Room web page

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