

Reference: Hotelkit-Prototype

Topic: Integrated Hotel Management Communication System

Lecture-Type: ASE, Practical course, Bachelor thesis

Start: As soon as possible

End: To be defined

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Background

Communication and message exchange between guests and the hotel management team enable pleasant stays in the hotel for guests and allow seamless hotel processes to address guest requests, such as housekeeping, reservations for rooms and restaurant tables. In practice, guests typically express their requests via phone or personally with guest service team members, who pass orders or tasks to service team members via phone. In a large hotel, these communication paths may become inefficient, error-prone, and might lead to dissatisfied customers.

The *hotelkit*¹ communication platform enables direct communication via smartphones or laptops by assigning requests and tasks to service team members. The application also allows status tracking for requests and tasks. However, guests still have to come to the guest service to express their requests.

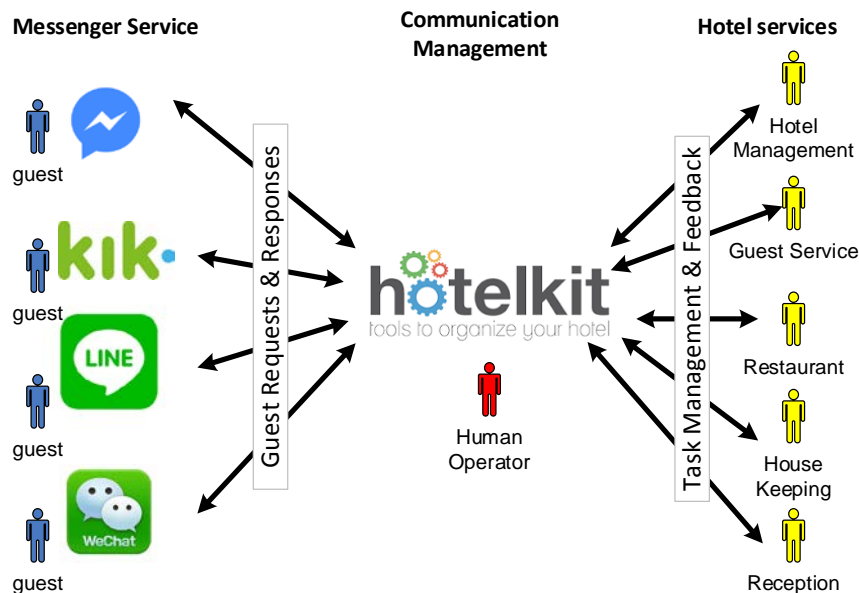


Figure 1: Integrated Hotel Management Communication System.

Common communication approaches, such as messenger services (e.g., *Facebook*², *kik*³, *line*⁴, and *we chat*⁵) are frequently used for private, public, and commercial use. However, there is only limited support for integrating these communication services into specific applications for hotel communication. Therefore, the goal of this work is to bring together messenger services and the *hotelkit* platform. Figure 1 presents the planned concept of an integrated hotel management and

¹ Hotelkit: <https://www.hotelkit.net/de/>

² Facebook: <https://www.facebook.com/>

³ Kik: <https://www.kik.com/>

⁴ LINE: <https://line.me/de/download>

⁵ WE Chat: <https://www.wechat.com/en/>

communication system with semantic technologies for integration and analysis. The main goal is to extend the *hotelkit* application by integrating various messenger services (e.g., plug-ins) and to support hotel management processes

Tasks

Main goals include (a) identifying and evaluating messenger services towards the architecture needs of the *hotelkit* platform and scenarios derived from hotel management processes; and (b) prototype implementations of selected messenger service interfaces with the *hotelkit* application to support these processes. In a first step, a human operator is responsible for scheduling individual guest requests, managing orders and tasks, and monitoring the status of these tasks. The status of the tasks is available in the dashboard of the *hotelkit* application. Based on these requirements the following tasks are required.

- Identification of *hotelkit* requirements and application scenarios for integrating messenger services to the communication platform.
- Tool Study with focus on Messenger Services and their integration with a communication platform.
- Prototype implementation and evaluation of selected messenger interfaces.
- Report on the system requirements, design, and evaluation results.

Expertise and Skills Needed

Based on different tasks, required expertise and skills may vary. For this project, at least 2 of the following skills are needed.

- Software Engineering Skills
- Java and the standard technology stack (e.g., Build Tools, Issue tracker, SCM)
- Empirical studies, such as a systematic tool survey.
- Interest in working with real-world industry applications.

You can learn ...

- How to plan and execute systematic tool studies.
- To practice implementation skills in context of business software and messenger services.
- Note that you will be in touch with real industry partners in professional software development environments.