




**ABSTRACT**

The constant growth of tourism industry in Malaysia has led to the rise of the hospitality industry over recent years. The major tourism SMEs are usually providing the needs or demand of tourists such as food, accommodation, transportation and other necessities. This paper focuses on the issues of poor customer satisfaction and operation performance that occur in a small and medium scale hospitality company and the ways to solve the problem by developing a prototype of ChaMS. The five whys analysis was used to identify the problems that occur in the hospitality company. The prototype of ChaMS is developed by using Rapid Application Development (RAD) technique with Microsoft Access. This study showed that the ChaMS had improved their customer satisfaction and operation performance by decreasing the registration process lead time and improving the data accuracy and efficiency. The proposed system also received positive feedbacks with its functionalities from the company.

**RESEARCH PROBLEM**


 • Faced the difficulties of satisfying their customers and ended up with poor customer satisfactions.

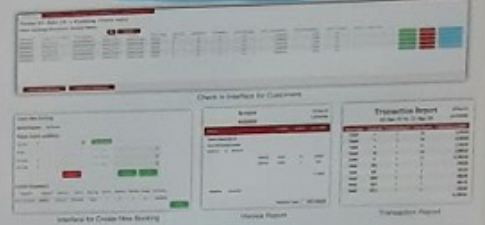
- RESEARCH OBJECTIVES**
- 01 To investigate the factors that affecting poor customer satisfaction in ABC Chalet.
  - 02 To enhance the registration process lead time of ABC Chalet by a prototype of ChaMS.
  - 03 To improve customer's data accuracy and efficiency of ABC Chalet by a prototype of ChaMS.



FACULTY OF INDUSTRIAL MANAGEMENT



  
 LIM XUE TING      DR. LEE KHAI LOON



3. Time Study

Time Study (Customer Reserve Earlier)	Current Cycle Time (min)					By using ChaMS				
	1	2	3	4	Avg	1	2	3	4	Avg
Customer Check in (Guest with 0 items)	85	90	120	82	89	80	85	100	82	87
Creating to Customer (Present Customer IC card, Book, Mobile No.)	28	45	30	24	32	28	28	30	25	28
Find the Customer Data (Confirm the details with Customer)	200	180	180	170	183	75	75	75	75	75
Let the details of Customer	65	65	25	60	54	15	15	15	15	15
Calculate the total (payment)	10	35	15	15	19	15	15	15	15	15
Collect the cash from customer	110	90	120	110	108	110	90	110	110	110
Print the receipt in manual receipt book	18	15	35	14	21	15	15	15	15	15
Close System File and Present to customer	65	17	60	57	58	17	60	57	60	57
Total cycle time (min)	778				679	340				340
Total cycle time (min)	13				8	8				8
Save					36%					36%

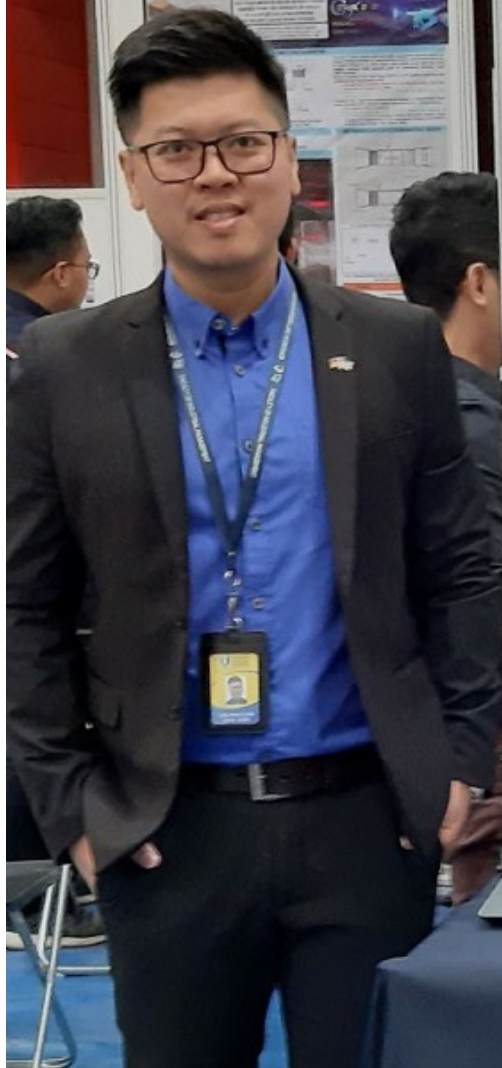
Time Study (Walk in Customer)	Current Cycle Time (min)					By using ChaMS				
	1	2	3	4	Avg	1	2	3	4	Avg
Customer Check in (Walk in Customer)	85	90	120	82	89	80	85	100	82	87
Creating to Customer (Check the availability of room)	170	180	150	150	163	45	45	45	45	45
Reserved Customer IC card from Mobile No.	28	45	30	24	32	28	28	30	25	28
Present the Customer Data (Calculate the total payment)	130	140	120	120	130	50	50	50	50	50
Calculate the total (payment)	10	35	15	15	19	15	15	15	15	15
Collect the cash from customer	110	90	120	110	108	110	90	110	110	110
Print the receipt with a manual receipt book	18	15	35	14	21	15	15	15	15	15
Close System File and Present to Customer	65	17	60	57	58	17	60	57	60	57
Total cycle time (min)	630				530	340				340
Total cycle time (min)	13				8	8				8
Save					36%					36%

**CONCLUSION**

- ✓ A prototype of ChaMS was successfully developed to automate the process of bookings and customer registrations.
- ✓ Provide better quality of registration service.
- ✓ Tracking of records can be done easily.

**MARKETABILITY / COMMERCIALIZATION**

- ChaMS is a simple system that able to customized based on the needs of small and medium enterprise.



**ITEX'20**  
31ST INTERNATIONAL INVENTION, INNOVATION & TECHNOLOGY EXHIBITION, MALAYSIA

CONCURRENT EXHIBITION  
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INCORPORATING  
**AYIE** MALAYSIA INVENTION EXHIBITION  
**MYIE** MALAYSIA INVENTION EXHIBITION

NEW UPDATE!

**20 • 21**  
NOVEMBER 2020

KUALA LUMPUR  
CONVENTION CENTRE,  
MALAYSIA

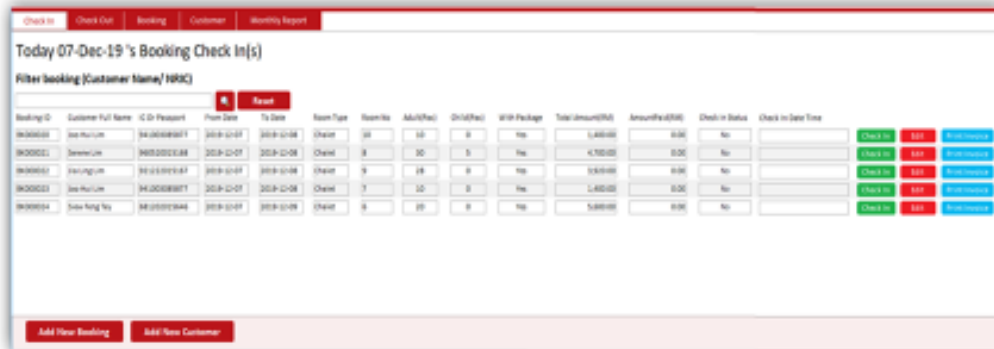
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**Chalet Management System**

ITEX Exhibit Category:  
**Household & Office Products**

# INVENTION FEATURES



Booking ID	Customer Full Name	IC ID / Passport	From Date	To Date	Room Type	Room No	Multiplier	Dishes	WiFi Package	Total Amount (RM)	Amount Paid (RM)	Check in Status	Check in Date Time
BOOK001	Jee Hui Lun	9400089871	2019-12-07	2019-12-08	Chalet	10	10	0	Yes	4,400.00	0.00	No	
BOOK002	Jee Hui Lun	9400089871	2019-12-07	2019-12-08	Chalet	8	10	0	Yes	4,700.00	0.00	No	
BOOK003	Jee Hui Lun	9400089871	2019-12-07	2019-12-08	Chalet	9	10	0	Yes	3,900.00	0.00	No	
BOOK004	Jee Hui Lun	9400089871	2019-12-07	2019-12-08	Chalet	7	10	0	Yes	4,400.00	0.00	No	
BOOK005	See Hong Yu	9400089871	2019-12-07	2019-12-08	Chalet	9	10	0	Yes	5,000.00	0.00	No	

Figure 1: Check in Interface for Customers

## APPROACH

Rapid Applications Development

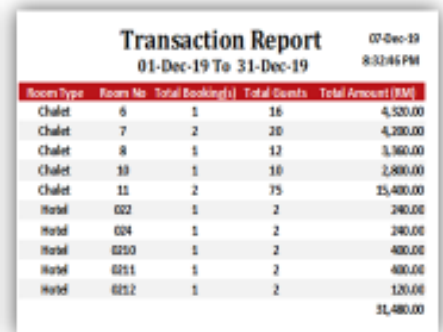


Figure 2: Interface for Create New Booking



Item ID	DESCRIPTION	Quantity	AMOUNT (RM)
<b>Chalet Rooms No 10</b>			
Room with Package Included			
07-Dec-19 To 08-Dec-19			
	Admin Fee	1400.00	RM 1,400.00
	Chalet Fee	2000.00	RM 2,000.00
			x1 Day(s)
Payment Total			RM 3,400.00

Figure 3: Invoice Report



Room Type	Room No	Total Booking(s)	Total Guests	Total Amount (RM)
Chalet	6	1	16	4,500.00
Chalet	7	2	20	4,200.00
Chalet	8	1	12	3,300.00
Chalet	10	1	10	2,800.00
Chalet	11	2	75	15,400.00
Hotel	002	1	2	240.00
Hotel	004	1	2	240.00
Hotel	0250	1	2	400.00
Hotel	0251	1	2	400.00
Hotel	0252	1	2	120.00
				<b>31,480.00</b>

Figure 4: Transaction Report

## Research

# Ts. Dr. Lee Khai Loon creates specially designed chalet management system for hotel industry

11 May 2021

A lecturer from the Faculty of Industrial Management (FPI), Universiti Malaysia Pahang (UMP), Ts. Dr. Lee Khai Loon, 34, has created a research product called ChaMs.

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According to the Penangite, ChaMS is a chalet management system based on a special design for small and medium enterprises (SMEs) in the hotel industry.

“This software is easy to use and involves low cost and affordable for SMEs.

“It is also user friendly and only requires minimal computer skills.

“The ChaMS prototype was produced using rapid application development (RAD) techniques through Microsoft Access,” he said.

He added that ChaMS can improve the accuracy and efficiency of data management and even speed up processing time.

“At the same time, it improves operational performance and overall customer satisfaction compared to conventional methods in processing and managing data.

“This research started in September 2019 and was completed within a year for a trial run.

“The idea to produce this study is based on my experience while staying in several small and medium chalets and hotels,” he said.

His research was conducted with a FIM final year student, Lim Xue Ting.

He added ChaMS automates the customer data management process involving booking management, registration, payment, invoice printing, and transaction reports generation.

“The current ChaMS design focuses on internal management.

“Therefore, the next step is to combine website functionalities to enable direct interaction with customers.

“ChaMS offers a promotional price of RM500 one-off purchase and is made based on the needs of consumers,” he said.

This research won gold medals in CITREx 2020 and ITEX 2020.

**By: Hafizatulazlin Abdul Aziz and Nur Hartini Mohd Hatta, UMP Press**

**Translation by: Dr. Rozaimi Abu Samah, Engineering College/Faculty of Chemical and Process Engineering Technology**

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