



Creation, Innovation, Technology and Research Exposition (iTreX) | 12<sup>th</sup> - 13<sup>th</sup> February 2020

**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

2. Rapid Applications Development



3. Time Study

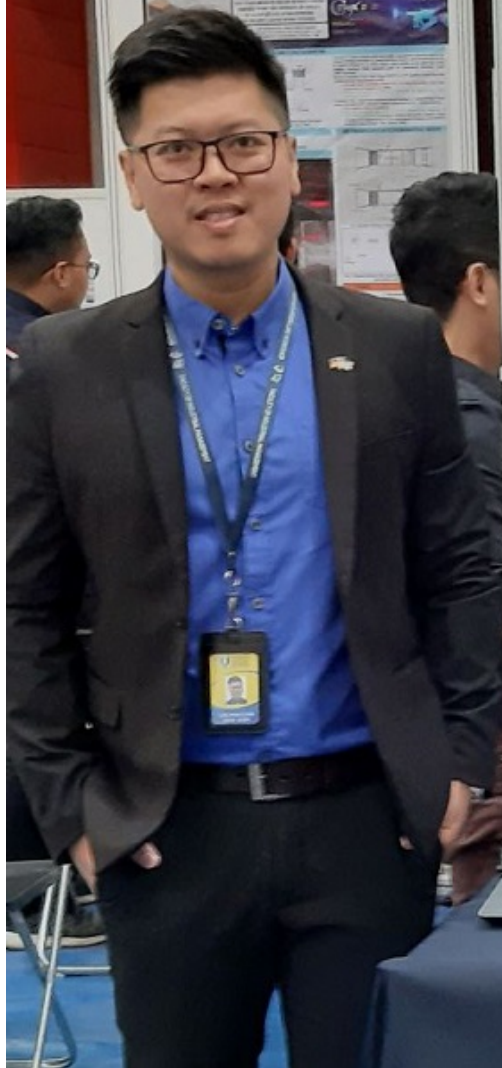
Time Study (Customer Reserved Earlier)	Current Cycle Time (min)					By using ChaMS				
	1	2	3	4	Avg	1	2	3	4	Avg
Customer Check in (Reserved Earlier)	88	92	128	82	89	80	85	100	82	87
Check in Customer (Reserved Earlier)	28	45	30	24	32	28	28	30	25	28
Find the Customer Data (Reserved Earlier)	200	180	188	172	183	22	20	20	20	20
Confirm the details with Customer (Reserved Earlier)	30	25	35	30	30	25	25	25	25	25
Let the details of Customer (Reserved Earlier)	62	43	26	44	44	38	38	38	38	38
Calculate the total payment (Reserved Earlier)	10	25	15	15	16	10	10	10	10	10
Collect the cash from Customer (Reserved Earlier)	110	90	135	117	113	95	95	100	100	100
Print the receipt in manual receipt book (Reserved Earlier)	18	15	18	14	16	15	15	15	15	15
Close System File and Proceed to Customer (Reserved Earlier)	65	57	60	57	57	55	57	60	57	57
Total cycle time (min)	778	778	778	778	778	575	575	575	575	575
Total cycle time (min)	13	13	13	13	13	8	8	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  
**WYIE** MALAYSIA INVENTION EXHIBITION

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

NEW UPDATE!

**20 • 21**  
NOVEMBER 2020

KUALA LUMPUR  
CONVENTION CENTRE,  
MALAYSIA

**ASIA'S LEADING  
INVENTION, INNOVATION &  
TECHNOLOGY EXHIBITION**



**Chalet Management System**

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

# INVENTION FEATURES

Today 07-Dec-19 's Booking Check in(s)

Filter Booking (Customer Name/ NRIC)

Booking ID	Customer Full Name	IC ID / Passport	From Date	To Date	Room Type	Room No.	Multi(Paid)	ChkIn(Paid)	WiFi Package	Total Amount(RM)	AmountPaid(RM)	Check in Status	Check in Date Time	Check In	Cancel	Extend Stay
BK00001	See Hui Lun	94000989611	2019-12-07	2019-12-08	Chalet	10	10	0	Yes	1,400.00	0.00	No		Check In	Cancel	Extend Stay
BK00002	See Hui Lun	94000989611	2019-12-07	2019-12-08	Chalet	8	10	0	Yes	4,700.00	0.00	No		Check In	Cancel	Extend Stay
BK00003	See Hui Lun	94000989611	2019-12-07	2019-12-08	Chalet	9	10	0	Yes	2,800.00	0.00	No		Check In	Cancel	Extend Stay
BK00004	See Hui Lun	94000989611	2019-12-07	2019-12-08	Chalet	7	10	0	Yes	1,400.00	0.00	No		Check In	Cancel	Extend Stay
BK00005	See Hui Lun	94000989611	2019-12-07	2019-12-08	Chalet	9	10	0	Yes	5,800.00	0.00	No		Check In	Cancel	Extend Stay

Add New Booking Add New Customer

Figure 1: Check in Interface for Customers

## APPROACH

Rapid Applications Development

Create New Booking

Mobile/Custom: 30194238

Please search availability:

From Date: [ ] To Date: [ ]

Title: [ ]

Room No: [ ]

Room No: [ ]

Room No: [ ]

WiFi Package: [ ]

Search

Current Booking(s):

Booking ID	Customer Name	Room No.	From Date	To Date	Room Type	Room No.	Multi(Paid)	ChkIn(Paid)	WiFi Package	Total Amount
BK00001	See Hui Lun	10	2019-12-07	2019-12-08	Chalet	10	10	0	Yes	1,400.00

Figure 2: Interface for Create New Booking

Invoice 07-Dec-19 3:45:56 PM

RM000000

Room No	ROOM No	Quantity	Amount(RM)
Chalet Room No 10	10	1	1,400.00
Room with Package Included		0	0.00
			+1 Day(s)
Booked By: See Hui Lun			Payment Total: RM 1,400.00

Figure 3: Invoice Report

Transaction Report 07-Dec-19 8:32:46 PM

01-Dec-19 To 31-Dec-19

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
				31,480.00

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.

---

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**

- 125 views

[View PDF](#)

