Mobile Cloud Computing: Design and Implementation of a Generic Architecture for Healthcare System

Submitted as FYP Proposal

BACHELOR

IN

COMPUTER ENGINEERING

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1   Introduction

Discuss the opening perspective of the problem area, the challenge in that area and refine the challenge into a concise e.g.

Mobile Cloud Computing which is abbreviated as (MCC) is a combination of mobile computing and cloud computing. There is no scientific or technical definition exist for mobile cloud computing like cloud computing. So, according to some scientists its a combination of Mobile Networks with Cloud Computing or a combination of Wireless Network Infrastructure, Portable Mobile Devices, Web and Location based Services with Cloud Computing.
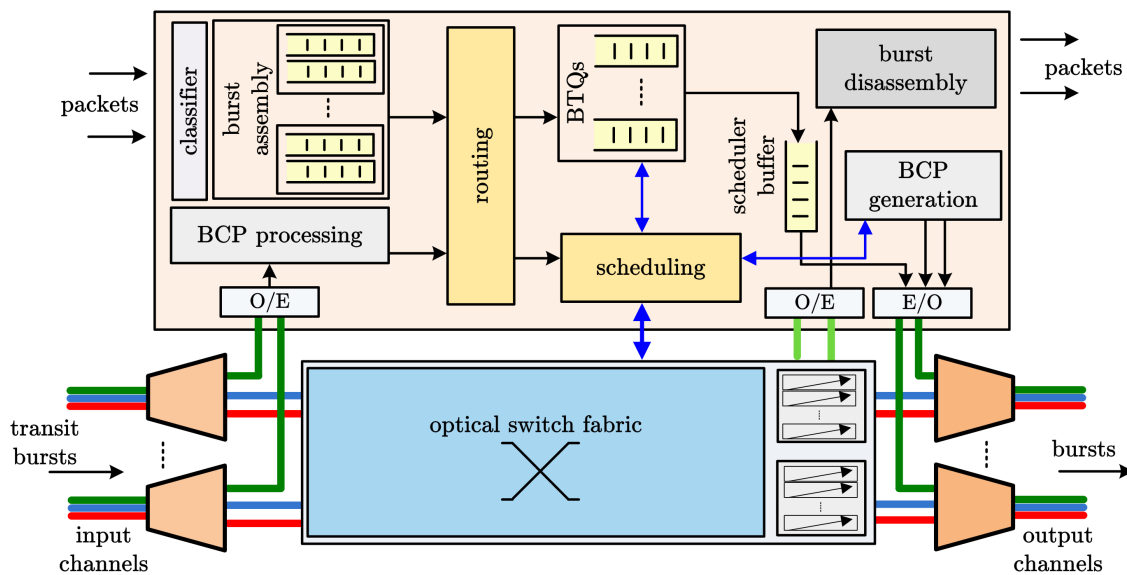

Figure 1: Overview of Cloud Applications

2 Literature Survey

A one page review of field study establishes your understanding and command in your project area. This chapter should provide a complete review of work already done in this area. Please provide atleast 5 references. and cite them as [1], [3] , [2], [4]

3   Problem Statement

In this section you need to report your identified Problem Statement. Furthermore, also provide a clear scope of your proposed work. e.g.

To understand the concept of Mobile Cloud Computing (MCC) in healthcare industry and its issues regarding network based service, a design technique and implementation of a generic architecture of Mobile Cloud Computing for Healthcare System.

4   Objectives

The objective of this thesis is to understand the concept of Mobile Cloud Computing and its applicability in healthcare industry. Our primary goal is to design a generic architecture of mobile cloud computing for medical applications and its implementation to provide un-constrained application flow (i.e. constrained on resources, energy consumption, flexibility, bandwidth, latency and handover). Our secondary goal is to study the encroachment with Issues and Challenges of Mobile Cloud Computing to deal with the limitations of both cloud and mobile computing. To achieve these goals, I must:

- Understand the Cloud and Mobile Computing concepts and their different services.

- Familiarize with Mobile Cloud Infrastructure types.

- Know about Mobile Cloud Architecture existing Models.

5 Methodology

Please follow the flow given as general guidelines.

- Design Generic Architecture for Healthcare System To deal with the limitations of previous/ proposed architectures of MCC, design of a generic architecture.

- Selection of Modules After design process, selection of modules for research oriented application development.

- Development of Application Development of an application of selected modules form proposed architecture for smart phones to test the proposed architecture of healthcare systems.

5.1 Design

5.1.1 Analyze Cloud Apps

5.1.2 Data Preparation/Acquisition

5.1.3 Design of System/Architecture of System

5.1.4 Design the User Interface

5.2 Implementation steps

5.2.1 Implementation of Database

Figures should be clear along with text inside.

if you want to include some table here is the sample

sample of equations
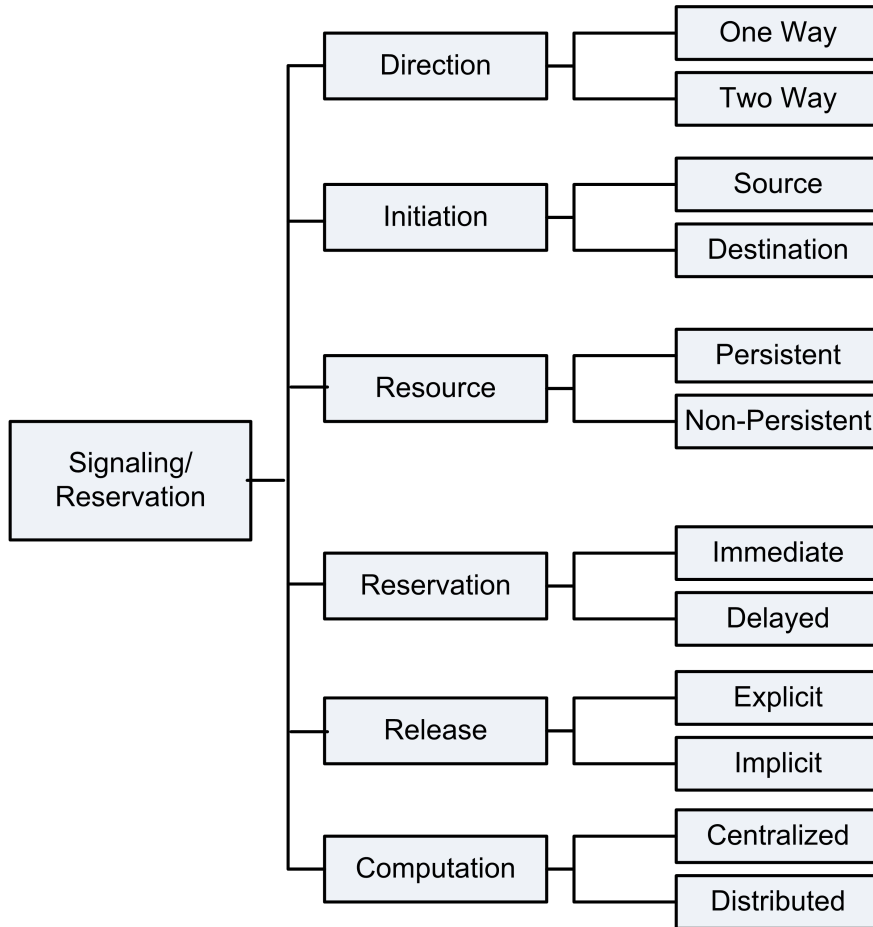
$$T_m = min(\lceil \frac{T_m}{T_m} \rceil, R) \tag{1}$$

Figure 2: Methodology

Table 1: Syzer Parameters

CNN Parameters			
Parameter Name	**Symbol**	**Tiling**	**indexing**
output	M	T_m	m
input	N	T_m	n
rows	R	T_m	r
columns	C	T_m	c
FPGA/Hardware Resources			
No. of available DSP blocks	$\mathbb{D}$		
No. of available slice LUTs	$\mathbb{G}$		

For simplification we take all columns of a layer to be the tiling factor for ofm columns.

$$T_c = min(\lceil \frac{C_{TH}}{\mathcal{O}} \rceil, C)$$

(2)

6 Proposed Project Plan

This objective of this section is to provide a clear set of tasks and intended approaches that shall be executed and evaluated to complete the project work. All major milestones should be clearly mentioned. Evaluation plan can also be provided as to how the results shall be evaluated. A Gantt chart should be provided highlighting the outline of the work to complete the project, and the time required for completion

There are following milestones to study

1. First Goal

2. Second Goal

3. Third Goal

4. Froth GOal

7 Socio-Economic Benefits

8 Business Model (optional)

9 Required Hardware Software

Activity \ Time	F 18	S 19	F 19	S 19	F 20	S 20
Literature Review and Study	✓					
Task 1		✓				
Task 2			✓			
Task 3				✓		
Task 4					✓	
Final Write-up & Thesis Submission						✓

Table 2: List of tasks

References

References should be presented in a consistent manner throughout the proposal. Use APA Referencing style for formatting the bibliographic material. It is important that figures, tables, and references in the proposal are presented in a manner consistent with professional publication standards. When placing a figure or table and its identifying description in the proposal, it is important to consider ease of access for the document reader. In most cases the text which introduces a figure or table will precede the placement of the figure or table in the proposal

References

[1] S. Aalto. Required work in the M/M/1 queue, with application in IP-over-Photonics packet processing. *Telecommunication Systems*, 16(3-4):555–560, 2001.

[2] A. Agusti and C. Cervello-Pastor. A new contentionless dynamic routing protocol for OBS using wavelength occupation knowledge. In *12th IEEE Mediterranean Electrotechnical Conference. MELECON*, 2004.

[3] H. Akimaru and K. Kawashima. *Teletraffic: Thoery and applications*. Springer, 1993.

[4] J. Jones. Networks (2nd ed.). (1991, May 10).