



## INTERNSHIP REPORT

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# Android middleware & software development, integration & tests

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# Contents

<b>1</b>	<b>Introduction</b>	<b>4</b>
<b>2</b>	<b>Context</b>	<b>5</b>
2.1	CELAD . . . . .	5
2.2	Intel . . . . .	5
2.2.1	Opensourcing . . . . .	5
2.2.2	Android . . . . .	5
2.3	MCG Audiocomms feature team . . . . .	5
2.3.1	Android audio architecture . . . . .	5
<b>3</b>	<b>Organisation</b>	<b>6</b>
3.1	Planning . . . . .	6
3.1.1	Gantt . . . . .	6
3.2	Agile working . . . . .	6
3.2.1	Sprints . . . . .	6
3.2.2	The team . . . . .	6
3.2.3	Daily scrum . . . . .	6
3.2.4	Demos . . . . .	6
3.2.5	Retrospectives . . . . .	6
3.3	Workflow . . . . .	6
<b>4</b>	<b>Achievements</b>	<b>7</b>
4.1	Context . . . . .	7
4.1.1	Android architecture . . . . .	7
4.1.2	Audio XML HAL . . . . .	7
4.1.3	Parameter framework . . . . .	7
4.2	Defining the new middleware standard . . . . .	7
4.2.1	Open-sourcing on GitHub . . . . .	7
4.2.2	Tutorials . . . . .	7
4.3	Improving build process . . . . .	7
4.3.1	Xml checker . . . . .	7
4.3.2	Schemas . . . . .	7
4.4	Porting the Intel Audio HAL on a new platform . . . . .	7

4.4.1	Pandaboard . . . . .	7
<b>5</b>	<b>What I have learned</b>	<b>8</b>
5.1	Android system development . . . . .	8
5.2	Tools . . . . .	8
<b>6</b>	<b>Conclusion</b>	<b>9</b>
6.1	Conclusion . . . . .	9

# Forewords

Thanks to

Thanks to

Thanks to \*\*\* for \*\*\*

# Chapter 1

## Introduction

Listing 1.1: A simple hello world

```
1 #include <stdio.h>
2
3 int main(int argc, char *argv[])
4 {
5     printf("Hello, World!\n");
6     return 0;
7 }
```

## Chapter 2

# Context

Introduction of this part.

### 2.1 CELAD

### 2.2 Intel

#### 2.2.1 Opensourcing

Contribution leader to kernel 3.14, ...

#### 2.2.2 Android

### 2.3 MCG Audiocomms feature team

**MCG** Mobile Cons

#### 2.3.1 Android audio architecture

HAL, multiple platforms with different architectures.

## Chapter 3

# Organisation

### 3.1 Planning

#### 3.1.1 Gantt

### 3.2 Agile working

#### 3.2.1 Sprints

#### 3.2.2 The team

Developer, Product Owner, Scrum master.

#### 3.2.3 Daily scrum

#### 3.2.4 Demos

#### 3.2.5 Retrospectives

### 3.3 Workflow

## Chapter 4

# Achievements

### 4.1 Context

#### 4.1.1 Android architecture

#### 4.1.2 Audio XML HAL

Scalable, fully configurable, userland

#### 4.1.3 Parameter framework

Middleware, gap, no standard

### 4.2 Defining the new middleware standard

#### 4.2.1 Open-sourcing on GitHub

#### 4.2.2 Tutorials

### 4.3 Improving build process

#### 4.3.1 Xml checker

#### 4.3.2 Schemas

### 4.4 Porting the Intel Audio HAL on a new platform

#### 4.4.1 Pandaboard



## Chapter 5

# What I have learned

### 5.1 Android system development

### 5.2 Tools

## Chapter 6

# Conclusion

### 6.1 Conclusion