ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

PROJECT REPORT

Originator:

Function	Nome
Project Manager	Leo Torchia
Project Programmer (internship)	Alessandro Rossi

Version:

Person	Date
Leo Torchia	2022/01/03

Contents

Project description

The development of an APP(Android) for the readout of a radiation sensor integrated with an NFC chip.

Problem with current solution

The current solution relies on the embedded NFC software available with android phones. This current software does not allow to collect the whole output data sent from the NFC chip. By collecting all the data, we can perform statistical analysis, reducing error bars and increasing data reliability.

Business case

The development of the app will

1. Increase sensitivity of the SENSOR.

2. Increase Sensor data reliability

This will increase possible applications and value of the end-product

Assigned resources

Resources	Value	Notes
Alessandro Rossi	125 Hours	
Torchia Leo	30 Hours	
BUDGET	200 Euro	Budget spent on buying NFC Board/Readers
PC Hp-elitbook	Total hours of Project	Pc for Alessandro

DELIVERABLES

#	DELIVERABLE	Priority	Completed
1	Reproduce basic features of current "no app" solution	High	YES
2	MVP: Retrieve and display multiple Ndef messages without exiting field	High	YES
3	Power chip, retrieve multiple Ndef messages and export data	Medium	YES
4	App outputs results of basic analysis of sensors data	Low Priority	YES
5	Deliver clear and concise documentation regarding the application	High	YES

Additional Deliverables

Deliverable	Priority	Completed	Main Deliverable
Improve design	Medium	Yes	
Extract data from NFC message	High	Yes	1
Ndef connect() method throws exception	Low	No	2
Start/Stop Reading	Medium	Yes	2
Exports selected records	Low	Yes	3
Exports the last measurement	High	Yes	3
Save exported files in micro SD	High	Yes	3
Display exported files	High	Yes	3

Future changes

Add Login/Registration
Creazione di un profilo per l'utente e gestione dei propri dati e delle misurazioni effettuate
Funzionalità per calcolare esposizione media
Tracciamento dell'esposizione e conseguente notifica all'utente
Gestire la terminazione della connessione nella lettura dei messaggi multipli
Creazione di un messaggio standard così da poter semplificare la classe MessageFormat
Aggiunta di altre misurazione statistiche
Cambiamento della logica del salvataggio dei file esportati e della conseguente visualizzazione

Stakeholders

STAKEHOLDER	ROLE	Notes
ORGANIZATIONS		
UNIBO	Umbrella Organization	Promote collaboration between departments
Physics Department (DIFA)	Host department	
IT department (DISI)	Sending department	
VERTIS	Sponsors	App that increases market appeal of sensor
PEOPLE		

Leo Torchia	Project Manager - code review/validation	Successful development of application to better perform data analysis
Alessandro Rossi	Principal programmer	Complete internship.
Beatrice Fraboni	DIFA referring professor	APPROVE of Project Idea
Lorenzo Donatello	DISI referring professor	APPROVE of internship suitability
Alessandra Pasi	Responsible Internships UNIBO	AUTHORIZE internship
Samuele Sanna	Responsible internships DIFA	Authorize internship at DIFA