Demonstration User Manual

GitHub Project: Python2-Dango-REST-API

Date: April 21, 2018

Acknowledgement: This work was performed within the Department of Computer Science (MT2521) project, which is supported by the Electrical and computer Sciences Engineering department. This is not an individual work we as 1D group combined our expertise field and produce this work.

Outline

Group Members

Group members positions and responsibilities

Wireless Platform

Key Factors and Components

Best and Worst Performance Based on Positioning

Implementation

Neural Network Algorithm Implementation

Summary

Key points repetition

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- Positions
- > Athanasios Garyfalos (Project Manager)
- > Taha Mohammad (Research and Development RnD)
- > Jaroslaw Rykaczewski (Software Engineering)
- Responsibilities
- > Planning-executing-closing the project based on deadlines.
- > Develop new ideas and products. Will give us the competitive edge.
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Hardware Description

- Single component of the base winding Figure: 1a.
- Receiver platform values Figure: 1b.
- Worst coupling position Figure: 1c.
- Best coupling position Figure: 1d.

(a) Single Transmitter Winding

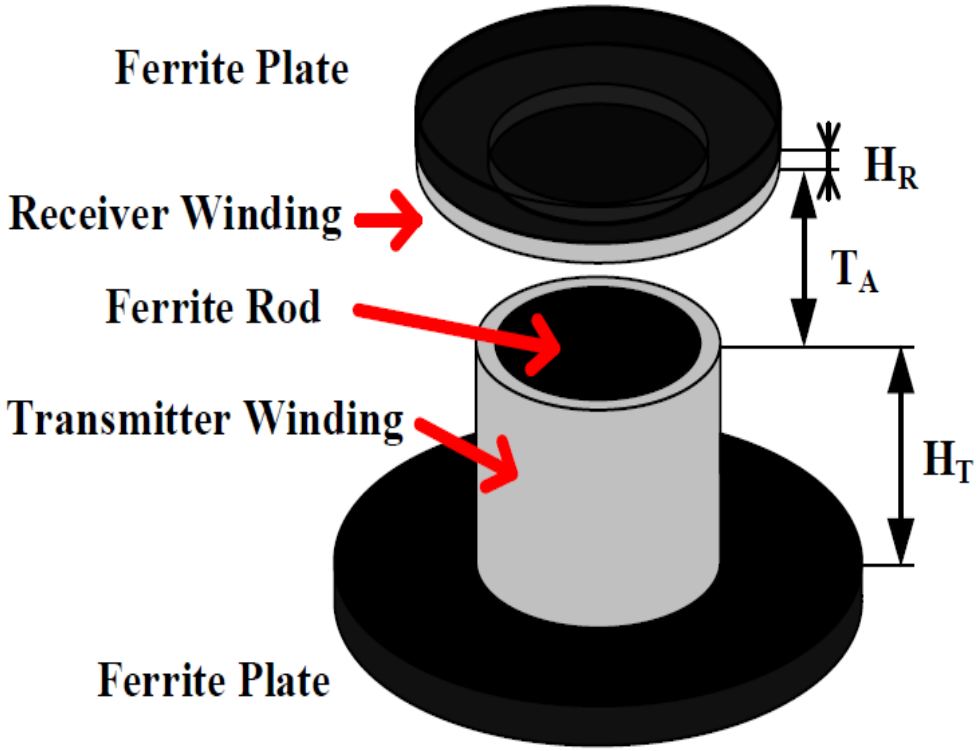

Figure 1: Project Positioning Analysis

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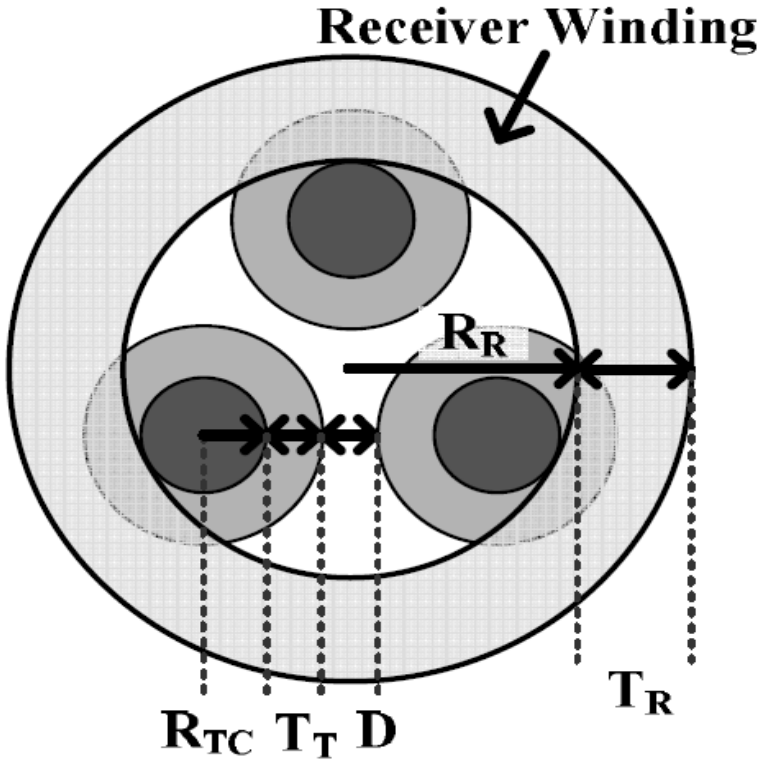
(a) Receiver Parameters Values



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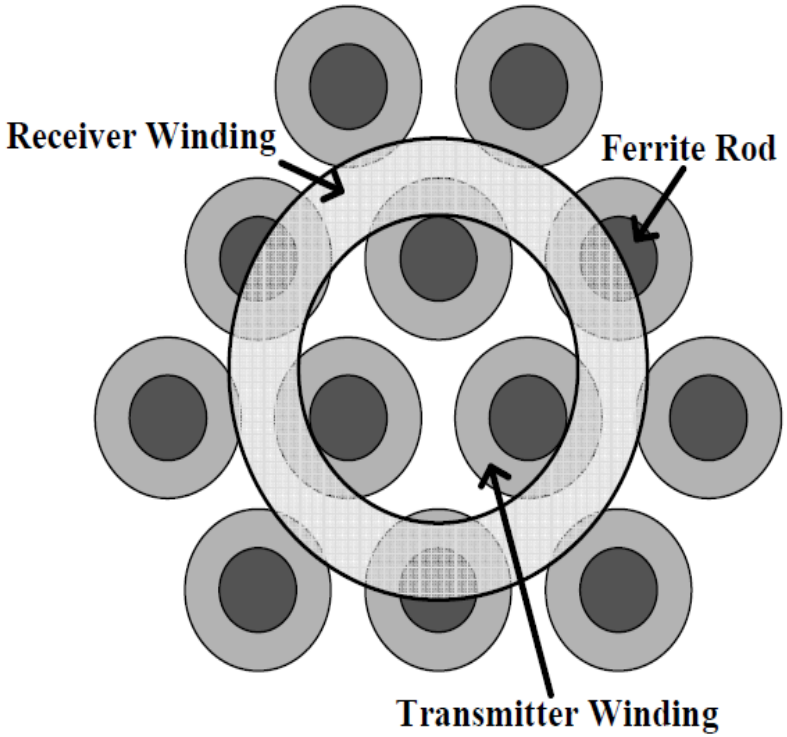
(a) Worst Coupling Positioning



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(a) Best Coupling Positioning

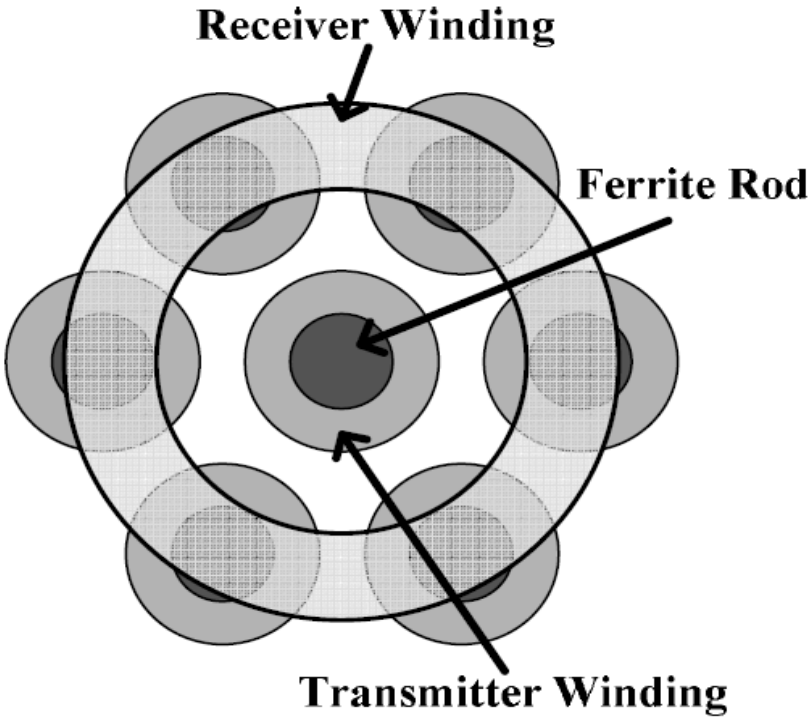

Figure 1: Project Positioning Analysis

Theory Vs Practical Experimentation

- Best Position Simulation (●)
- Worst Position Simulation (■)
- Best Position Measured (●)
- Worst Position Measured (■)
- Simulation is a perfect line, in "Theory"
- Practical measuring shows "150KHz"!

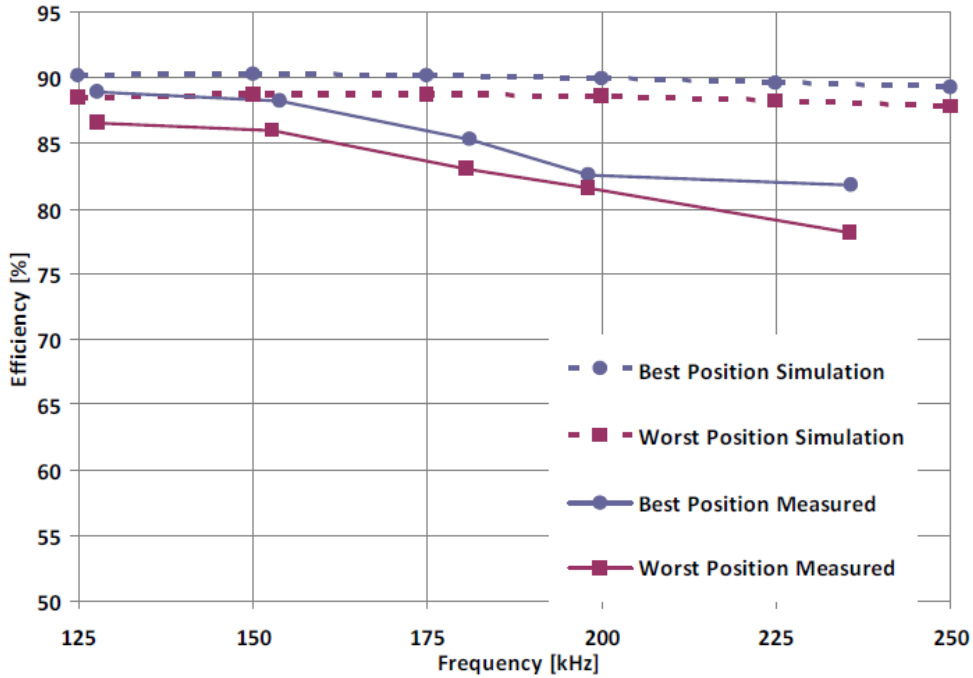

Figure 2: Simulation Vs Real Time Efficiency [2]

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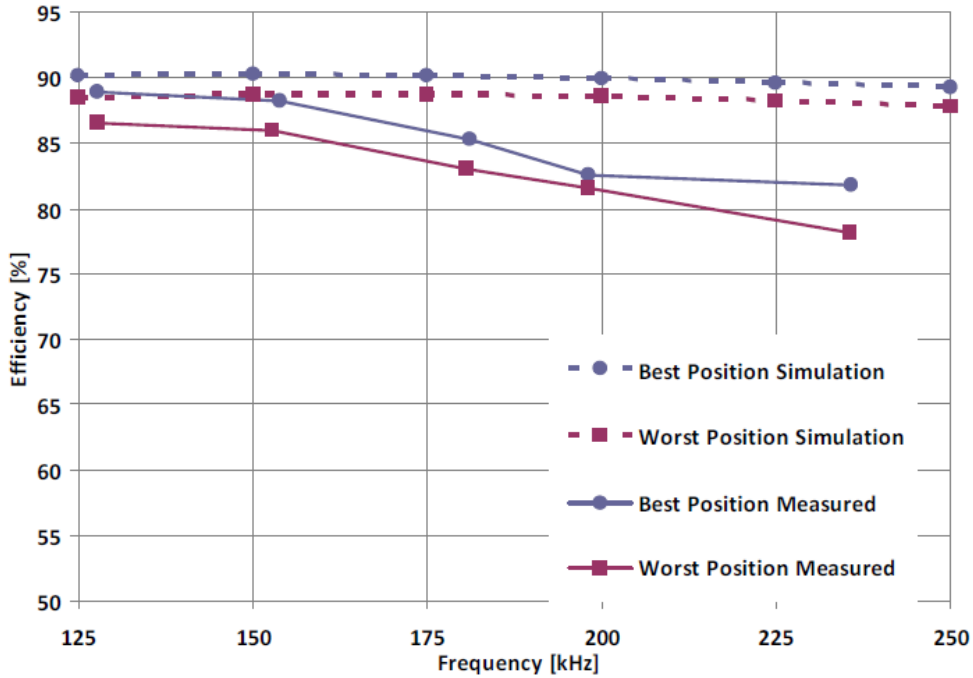

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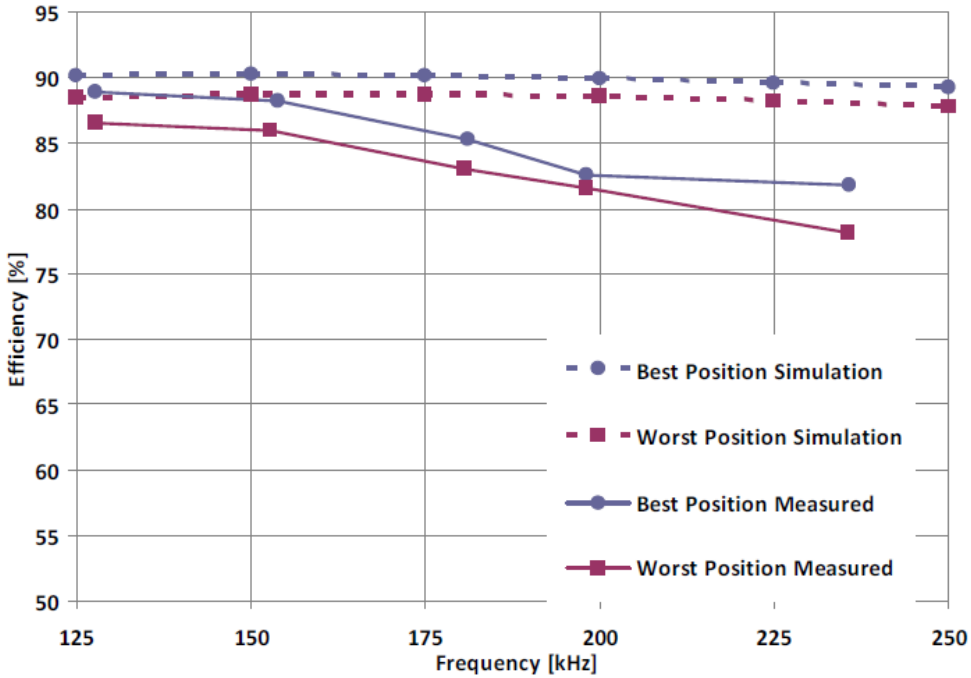

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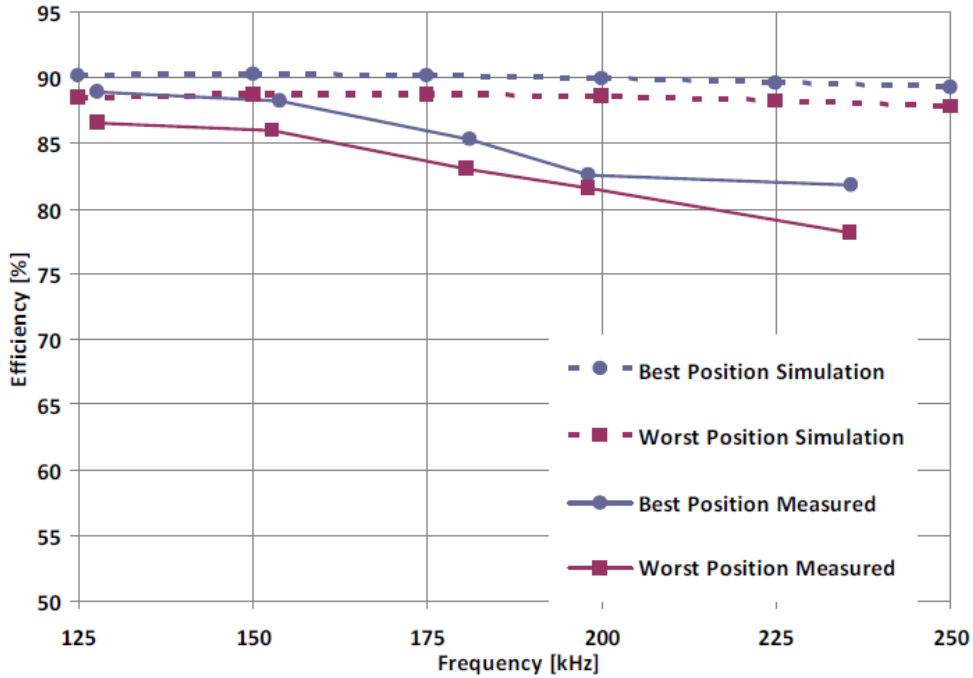

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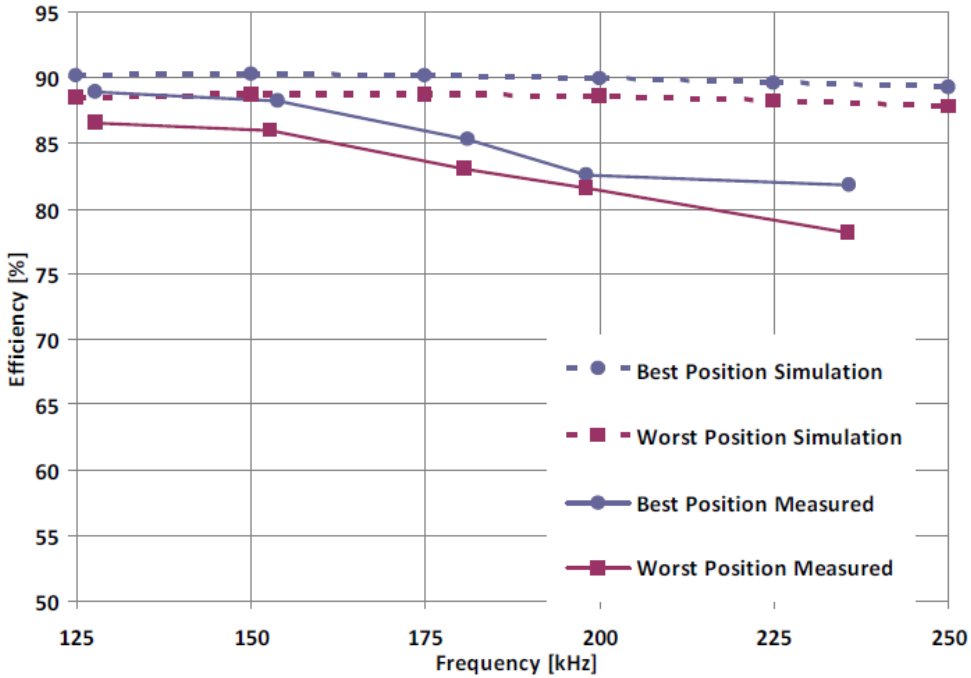

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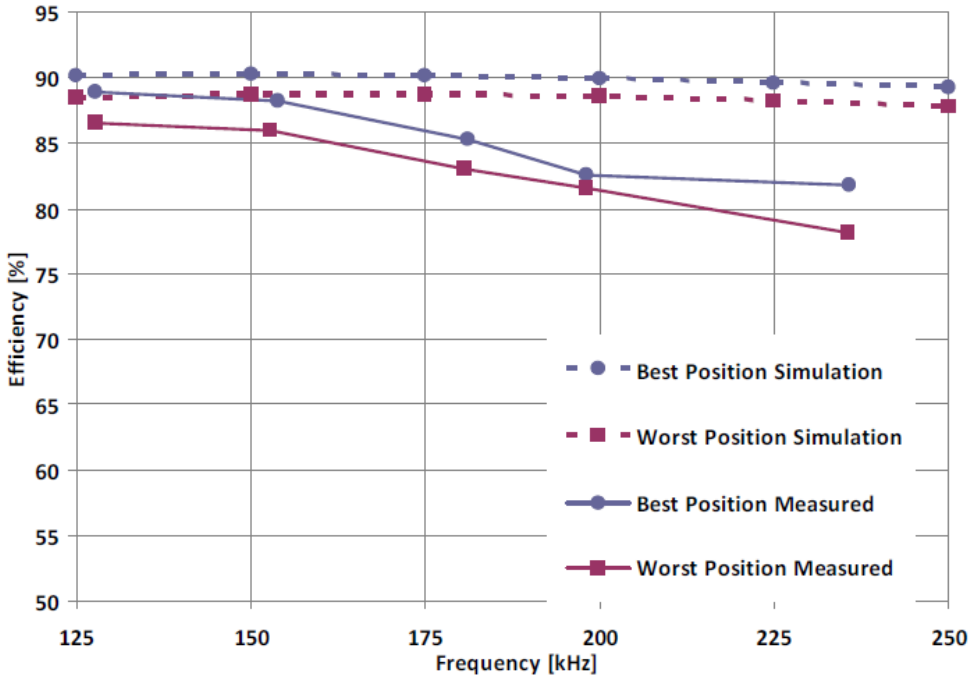

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(a) Free Positioning

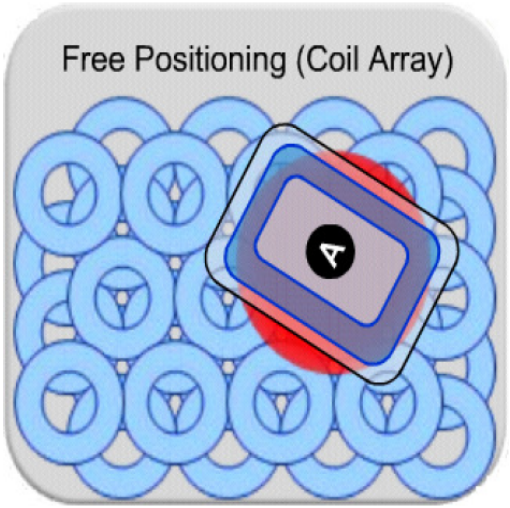

Figure 3: Different wireless charging approaches [2]

- $>$ Free positioning charging based on Inductive coupling [1].

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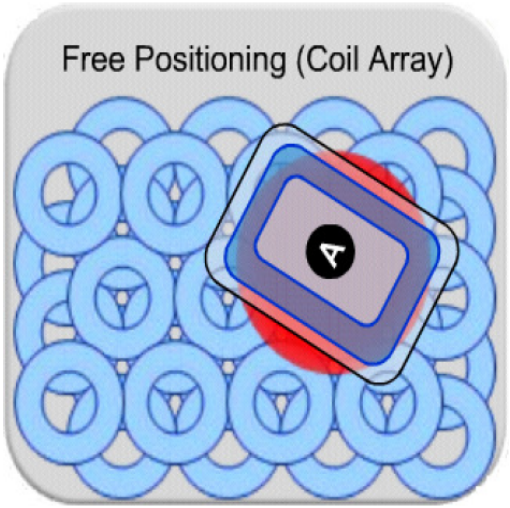
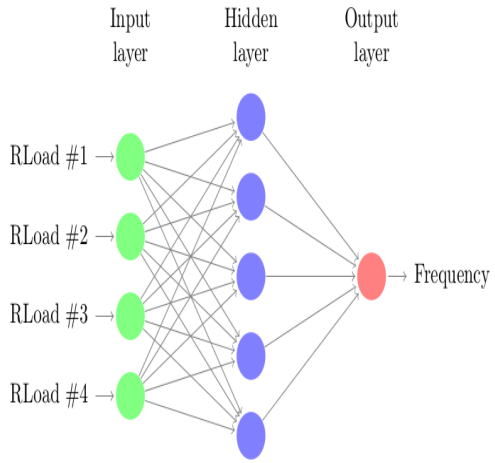


(b) Neural Network



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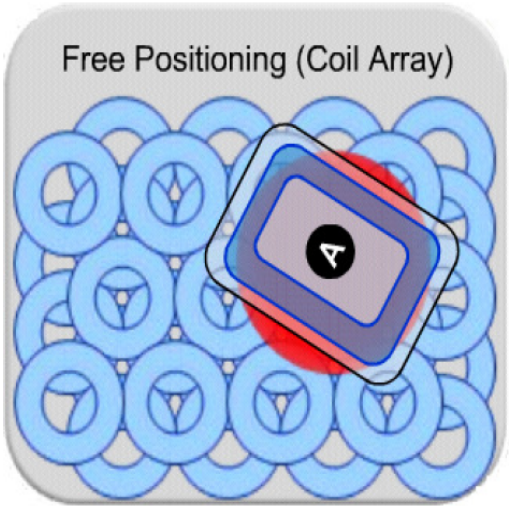

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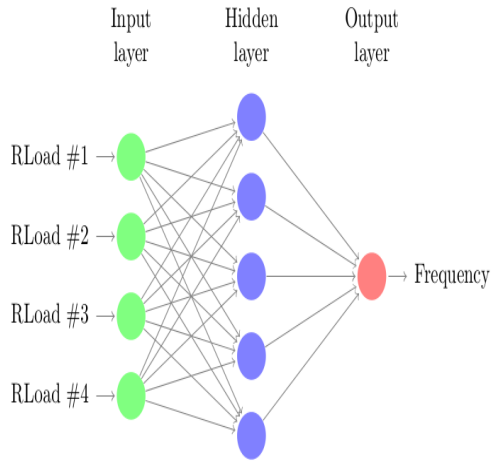

(c) Matlab Output

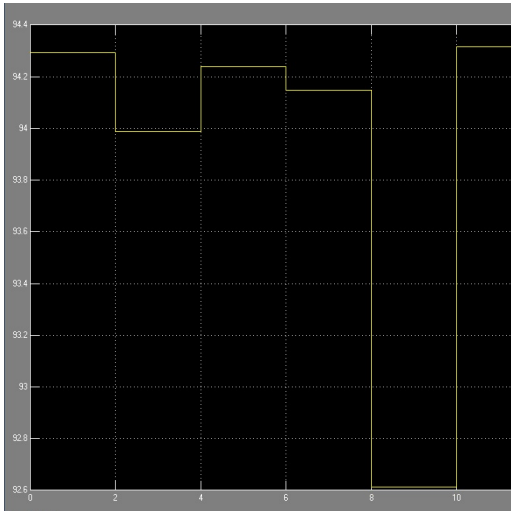

Figure 3: Different wireless charging approaches [2]

- > Free positioning charging based on Inductive coupling [1].
- > Based on RLoad and Frequency Input and Output [1].
- > Simulation of Matlab Output based on RLoad as an Input [1].

Summary

- In section “Group Members” page “3” we mentioned member positions and responsibilities.
- In section “Wireless Platform” page “4” we mentioned hardware components and best/worst positions.
- In section “Implementation” page “5” we mentioned our approach and proposed solution to the problem

Extra Notes

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- Thanks a lot – questions & comments?

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Optimize wireless charging efficiency for different devices
Volume: 2, Produced in LaTeX, (BTH):1–3,2013