Shim Dance Application

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***Abstract*—**

I. Motivation

There exist various dance games for Android platform. But in most cases the player interactions are limited to the screen [5]. Despising the fact that this conflict with the dance nature itself (which is the movement of whole body), it shows the great limitation of today mobile devices in user interaction.

There is one game which recognizes player movements [4]. In this case phone is used as a game controller and movements are read from one hand. We wanted to focus on player feet.

Outside of the mobile world there exist dance game controllers for feet [1], [2]. But those solutions are not suitable for mobile applications.

Our goal was to create dance game application for Android where game controllers are player feet. We also wanted to replace external physical controllers with shimmer sensors to read player movements directly from they feet [3].

II. Methods

A. Software & Hardware

B. Data acquisition

C. Preprocessing

D. Game & Graphic control

E. Synchronization of application modules

III. Results

IV. Discussion

V. Summary and outlook

In the future we can expect to see technology such as Project Soli which will allow to recognize user motions far from device [6].

Acknowledgment

References

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[4] Google play, Just Dance Now https://play.google.com/store/apps/details?id=com.ubisoft.dance.JustDance 26.07.2015 (2015)
[5] Google play, Dance games https://play.google.com/store/search?q=dance%20game&c=apps. last visited: 26.07.2015 (2015)
[6] Youtube, Welcome to Project Soli https://youtu.be/0QNiZfSsPc0. last visited: 28.07.2015 (2015)