

Augmented Reality Usability Analysis of AR-Based VHF A/G Learning Design in Aviation Polytechnic

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Fakultas Teknologi Informasi UKSW
Untuk Memperoleh Gelar Magister Komputer

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November 2023

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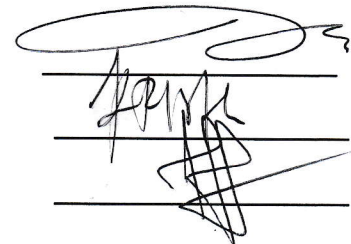
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Dinyatakan Lulus Ujian Tanggal : 28 November 2023

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Abstract—Considering the benefits of AR technology, an AR- based system has been developed at the Indonesian Aviation Polytechnic of Curug. Evaluation is conducted to ensure that the product can be effectively and efficiently used by specific users to achieve their goals while ensuring user satisfaction. Therefore, usability evaluation needs to be performed in the early stages of product development. The assessment framework uses two specific frameworks for usability assessment of AR designs, Handheld Augmented Reality Usability Scale (HARUS) and the Usability Augmented Reality framework. Consequently, the perceptual and ergonomic issues that arise are not significant. The three task designs in the VHF A/G AR design are highly feasible in terms performance, with each variable and sub-variable score above 80%. It can be concluded that they are very feasible and meet the criteria for the behavioral and physiological variables. After the implementation of the learning practices, a questionnaire was distributed, revealing that the VHF A/G AR system that was developed is comprehensive and manipulative. Additionally, respondents stated that the performance of the VHF A/G AR system was very good, and the workload presented did not affect the user’s behavior and physiology.

Index Terms—Augmented Reality, Usability, HARUS, AR Us- ability Framework, AR-Based VHF Learning Design

