

PERANCANGAN *PROTOTYPE* APLIKASI MOBILE EMERGENCY SERVICE KABUPATEN BULELENG MENGGUNAKAN METODE *USER CENTERED DESIGN*

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ABSTRAK

Emergency Service merupakan aplikasi *mobile* yang dirancang untuk membantu masyarakat melaporkan kejadian darurat dan mendukung instansi terkait dalam merespons laporan secara efektif. Sistem pelaporan saat ini bergantung pada media telepon yang bersifat verbal dan tidak terstruktur memiliki keterbatasan dalam keakuratan informasi sehingga rawan terjadinya miskomunikasi antara pelapor dan petugas. Kondisi ini berdampak pada lambatnya proses identifikasi kejadian dan keterlambatan respons dari instansi terkait. Penelitian ini bertujuan merancang prototipe aplikasi berbasis *mobile* dengan pendekatan *User Centered Design* (UCD), melalui lima tahapan yaitu *Plan the Human Centered Design Process* menghasilkan perencanaan proses desain yang akan berpusat pada pengguna. *Specify and Understand the Context of Use*, mengidentifikasi target pengguna, karakteristik pengguna dan *user persona*. *Specify the User Requirements*, merumuskan kebutuhan pengguna, *user flow*, arsitektur informasi aplikasi, dan *task skenario*. *Produce Design Solutions*, menyusun *UI Style Guide* serta perancangan prototipe *low fidelity* dan *high fidelity* aplikasi Emergency Service. *Evaluate Design Against Requirements*, mencakup dua fase pengujian *usability* berdasarkan pengukuran terhadap lima aspek *usability* yaitu *learnability*, *efficiency*, *memorability*, *error*, dan *satisfaction*. Evaluasi melibatkan 5 orang pengguna masyarakat umum, 5 orang petugas Pusdalops Disdamkar, 5 orang Petugas Pusdalops BPBD, dan 5 orang Petugas Call Centre BES Dinkes. Secara keseluruhan, hasil *usability testing* prototipe aplikasi menunjukkan performa *usability* yang baik, mudah dipahami dan digunakan, serta mampu mendukung proses pelaporan darurat secara lebih efisien dan akurat.

Kata Kunci: *Emergency Service, User Interface, User Experience, User Centered Design, Usability Testing*

**PROTOTYPE DESIGN OF MOBILE-BASED BULELENG REGENCY
EMERGENCY SERVICE APPLICATION USING THE USER CENTERED
DESIGN METHOD**

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ABSTRACT

Emergency Service is a mobile application designed to help the public report emergencies and support relevant agencies in responding to reports effectively. The current reporting system relies on verbal and unstructured telephone media, which has limitations in terms of information accuracy and is prone to miscommunication between reporters and officers. This condition has an impact on the slow process of identifying incidents and delays in responses from relevant agencies. This research aims to design a mobile-based application prototype using a User-Centered Design (UCD) approach, through five stages: Plan the Human-Centered Design Process, which involves planning a design process centered on the user; Specify and Understand the Context of Use, which involves identifying the target users, user characteristics, and user personas; Specify the User Requirements, which formulates user needs, user flow, application information architecture, and task scenarios. Produce Design Solutions, which compiles the UI Style Guide and designs low-fidelity and high-fidelity prototypes of the Emergency Service application. Evaluate Design Against Requirements, which includes two phases of usability testing based on measurements of five aspects of usability: learnability, efficiency, memorability, error, and satisfaction. The evaluation involved 5 members of the general public, 5 Pusdalops Disdamkar officers, 5 Pusdalops BPBD officers, and 5 BES Dinkes Call Center officers. Overall, the usability testing results of the application prototype showed good usability performance, ease of understanding and use, and the ability to support the emergency reporting process more efficiently and accurately.

Keywords: *Emergency Services, User Interface, User Experience, User Centered Design, Usability Testing*