

Pengembangan dan Evaluasi Desain Visualisasi Informasi Bencana Alam Berdasarkan Data Media Dengan Pendekatan User-Centered Design = Development and Evaluation of Natural Disaster Information Visualization Design Based on Media Data Using a User-Centered Design Approach

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Abstrak

Berbagai upaya telah dilakukan untuk meliput peristiwa bencana alam. Kendatipun demikian, upaya-upaya yang dilakukan belum secara optimal menampilkan informasi dari perspektif pengguna. Informasi terkait bencana alam yang dipublikasi oleh media lewat berita meliputi lokasi, kronologi, dan statistik terkait bencana. Berita yang dipublikasi media dapat dikumpulkan dengan menggunakan data mining dan diolah untuk memvisualisasikan informasi berbagai jenis bencana alam yang terjadi di Indonesia secara real-time. Visualisasi informasi bencana alam dapat memberikan masyarakat akses ke informasi bencana-bencana alam yang terjadi di Indonesia. Visualisasi informasi bencana alam dikembangkan menggunakan metode User-Centered Design (UCD) yang melibatkan pengguna dalam pengembangan. Dilakukan user research dengan menyebar kuesioner daring dan melakukan wawancara lanjut. Hasil user research digunakan untuk menspesifikasikan kelompok pengguna dari visualisasi informasi bencana alam. Hasil user research juga digunakan sebagai design insights untuk mengembangkan desain solusi dari visualisasi informasi bencana alam. Desain visualisasi informasi bencana alam yang telah dikembangkan dievaluasi dengan melaksanakan usability testing dan pengisian kuesioner system usability scale. Desain yang sudah dikembangkan memiliki rata-rata task success sebesar 89% dan tingkat penerimaan Acceptable. Terdapat peluang perbaikan lanjutan untuk desain yang sudah dikembangkan. Peluang tersebut meliputi kebutuhan utama visualisasi informasi bencana alam dan kebutuhan di luar desain seperti bantuan korban bencana alam dan edukasi bencana alam. Various attempts have been made to cover natural disasters. Nevertheless, the efforts made have not optimally displayed information from the user's perspective. Information related to natural disasters published by the media through news includes location, chronology, and statistics related to disasters. News published by the media can be collected using data mining and processed to visualize information on various types of natural disasters that occur in Indonesia in real-time. Visualization of natural disaster information can give people access to information on natural disasters that occur in Indonesia. Visualization of natural disaster information is developed using the User-Centered Design (UCD) method which involves the user in development. User research was conducted by distributing online questionnaires and conducting further interviews. The results of user research are used to specify user groups from visualization of natural disaster information. The results of user research are also used as design insights to develop design solutions from information visualization of natural disasters. The design of the visualization of natural disaster information that has been developed is evaluated by carrying out usability testing and filling out a usability scale system questionnaire. The design that was developed has an average task success of 89% and an acceptable acceptance level. There are opportunities for further improvement for designs that have already been developed. These opportunities include the main needs for visualization of natural disaster information and needs outside of design such as assistance for victims of natural disasters and education for natural disasters.