A Keystroke Level Analysis of a Graphic Application: Manual Map Digitizing

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Manually transforming analog graphic data, such as maps, into digital form is slow and expensive, but widely performed. The work reported here investigates the possibility to apply the Keystroke-Level Model to the modeling and optimization of manual map digitizing tasks. We tested the suitability of the model at a national mapping agency and determined unit tasks with their performance times. The paper describes an experiment to measure performance times under production conditions. Two new keystroke level operators are defined for manual digitizing. The use and suitability of the model are demonstrated by comparing predicted and measured performance times.

A GOMS Analysis of the Advanced Automated Cockpit

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A GOMS analysis of a subset of skills needed to use the Flight Management Computer on advanced, commercial "glass-cockpit" aircraft revealed the existence of just three common methods, as well as inconsistencies in the interface. Novices given low-fidelity, part-task Macintosh computer based training in accordance with this formal modeling effort could carry out similar tasks in a full motion flight simulator, using real aircraft hardware. Their performance was compared with pilots who had just completed professional training as well as with experts. Their performance of all groups reflected difficulties with the interface as revealed by the analysis.