Design Goal-Oriented Level Design

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Figure 1: (a) Pace digraph, (b) level layout sketch from pace digraph.

Design Goal-Oriented Level Design is our new process for linking mechanics, narrative and environment design into one streamlined document for use by level designers. The most significant innovation of this research is the creation of a formal grammar of level design terms. This work is influenced by the previous work [Björk et al. 2003] on a formal grammar for all aspects of game design. It was also influenced by [Vick et al. 2010], from which we adopted the process of abstracting any gameplay mechanic and categorizing it as a subset of a larger categorization of mechanics.

By applying these concepts to level design it is possible to design levels focusing on the pace of the level as well as the specifics of gameplay mechanics. Another significant accomplishment of this process is the ability to pre-visualize an entire level before any design or construction has taken place thanks to the pacing digraph. By using this piece of the document, we can see exactly how the level will play in a moment-to-moment scale. This visualization is extremely helpful and quickly makes major problems very apparent.

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References