

Viper

a tool for creating video programs that can re-edit themselves

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Traditional television is one-size-fits-all. Editing is fixed, and although viewers see the same thing, they often don't experience the same thing. Viper allows video producers to create responsive programs whose editing can change during viewing in response to preference or profile information, presentation equipment or conditions, or real-time sensor feedback.

Unlike traditional editing systems in which producers build a single linear video program, those using Viper create a database of annotated video and audio clips and other media objects along with a set of editing guidelines that describe which bits of this source material should be included and how they should be layered and assembled into complete high-quality programs for different viewing situations.

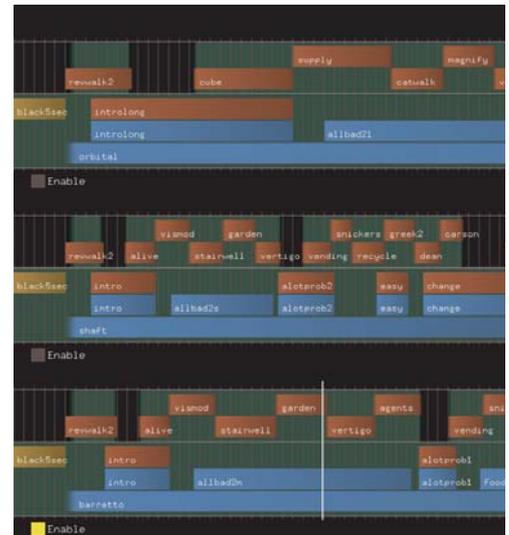
Viper consists of a prototype graphical interface for creating annotated media databases, and a framework of primitives, based in the Isis programming language, for expressing the editing guidelines. As opposed to simply splicing clips end to end, this framework enables the use of complex editing constructs, such as inserts, AB rolls, graphics, and transitions of various sorts.

Viper's playback engine supports client-side personalization, in which the final edit is performed on the viewer's receiving device, eliminating the need to transmit personal information to a distant and perhaps untrusted server.

Viper enables a new genre of video programming, distinct from traditional television, that offers new narrative possibilities and enables directors and producers to gain more control over how their programs are edited and exhibited in different viewing situations. Potential applications include individually-personalized advertisements, responsive educational video programs, and documentaries that aim to equalize experience across a population of viewers.

Several productions have been created with Viper thus far, including a responsive political campaign advertisement that tailors its presentation to portray the candidate in the most persuasive way for each individual viewer.

Viper is a continuation of a project created in the Object-Based Media group at the MIT Media Lab.



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