Woody Vasulka was born in Brno, Czechoslovakia and studied metal technologies and hydraulic mechanics at the School of Industrial Engineering there. He then entered the Academy of Performing Arts, Faculty of Film and Television in Prague, where he began to direct and produce short films. He emigrated to the United States in 1965, and freelanced in New York City as a film editor for the next few years.

In 1967, he began experiments with electronic sounds, stroboscopic lights and (two years later) with video. In 1974 he became a faculty member of the Center for Media Study at State University of New York, Buffalo and began his investigations into computer controlled video, building "The Vasulka Imaging System", a personal imaging facility.

With Steina, he founded "The Kitchen", a New York Media Theater, and has participated in many major video shows in the States and abroad, given lectures, published articles, composed music and made numerous video tapes. He is a 1979 Guggenheim fellow currently residing in Santa Fe, New Mexico. Since his move, he has produced two video tapes, "Artifacts" and "The Commission", an operatic work based on the legend of Paganini and Hector Berlioz.