Conservation expertise required for software-based art varies depending on the nature and function of its components. Our focus in this study is technology, specifically related to the impact of changes and upgrades to the operating environment that can adversely impact future exhibition of software-based art. In our research to date, we found that each specific work requires individual analysis and conservation strategies due to unique technical risks. We also concluded that artist-generated source code is a primary risk for software-based works. We then devoted the next phase of our research to a closer examination of risks associated with source code. The purpose of the research reported in this article is to investigate whether examining and documenting the source code can inform conservation practice. A corollary second goal is to define relevant best practices for documenting source code for software-based art. In order to address these questions, we selected two artworks at the Museum of Modern Art for a collaborative study using students and faculty from both the Museum Studies and Computer Science departments at New York University. This collaboration helped ensure that technology skills complemented a deep understanding of art history in the museum context. We based the methodology for our study on current software engineering practices and composed diagrams and narrative documents to reflect what we found in the source code. We also relied on artist interviews to explore the requirements and goals of the system, and user manuals to assist in understanding the implementation and physical installation of the works. It was our hypothesis that once the behavior of software-based art is understood by combining a standard software engineering approach with considerations specific to artist and museum needs, conservators and programmers will be better prepared to address changes in the operating environment. Based on our experience, we found this to be true. We conclude this paper with plans for our next phase of research.

Keywords: Computer, Digital art, Documentation, Software, Software-based art, Source code

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