

# **Creating a Digital Project for NASA: The Hubble Space Telescope Operational History Archive**

John D. Ruley

Since 2015, a team from Foresight Science & Technology has been documenting the operational history of the Hubble Space Telescope (HST) under contract to NASA's Goddard Space Flight Center. The deliverables under that contract include a scholarly history of HST operations for publication in book form and an internet-hosted archive of historically significant materials, available to other historians and ultimately to the general public. Using the web-based, open-source *Omeka* platform from George Mason University, we developed a working prototype in less than one week and in three years archived almost 22,000 pages of PDF documents, 152 still image files, 84 hours of digital audio and over 9 hours of HD digital video. Benefits of our digital approach included being able to do the work remotely, use of optical character recognition (OCR) to make most documents searchable without having to manually define keywords, easy incorporation of multimedia material and a simple method for responding to requests from other researchers. Challenges encountered included dealing with handwritten material and poor-quality scans which caused OCR to fail, issues converting certain digital documents to the archival PDF/A format, and the fact that the lead researcher used his own copies of material as references rather than using the digital archive under construction, as originally planned. We identify issues of concern to future digital archive projects, including workload, schedule, methods for quality assurance, transition from traditional page-oriented media such as newsletters to pageless content like blogs, and the huge size of multimedia content – in our case, oral history interviews represent less than 10% of the items in our archive, but account for 90% of the storage requirements – we anticipate future requirements may be higher.