

Digital Forensics, Textual Criticism, and the Born Digital Musical

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When Jonathan Larson, author of the hit Broadway musical *RENT*, died in 1996 just before his work opened off-Broadway, he left behind about 180 floppy disks containing, among other things, drafts of the musical composed over a period of about six years. These disks, which were donated to the Library of Congress and are now held there, represent one of the earliest examples of a "hybrid archive" - a collection of both paper and inextricably digital artifacts. Along with a series of timestamped Microsoft Word 5.1 documents, the disks also preserve early and transitional versions of the music in MIDI and MOTU Performer format that could not easily be transferred to a more traditional medium without significant loss. In this poster I show some of what I found on these disks, what it reveals about the creative processes that shaped *RENT*, and, more generally, how the lessons learned in my experience might be applied by others working with hybrid archives.

The earliest file on the Library of Congress disks relating to *RENT* is a version of the music for the title song timestamped 1:37 p.m. on December 21, 1989 and created with the musical editing program Performer (now called Digital Performer). Accessing this file was not an easy matter. I had planned to create an image of the disks using the "dd" disk imaging command built into most versions of Linux, but, unfortunately, the disks were formatted in the 800K HFS disk format and could not be natively read by a "modern" floppy drive. I therefore used a live CD install of Ubuntu 5.02 running on a Powerbook G3 to create the image. Of course, if I had not had access to this Powerbook, things would have been slightly more complicated. I could, perhaps, have brought a desktop with a third party floppy controller card (such as the

Catweasel PCI card manufactured by Individual Computers), but getting such a bulky machine to the Library of Congress and through the airport level security would have been difficult. The Powerbook was an indispensable tool and well worth an eBay purchase for those doing similar work. Once the disk image was created I made a second working copy, mounted it on Mac OS X (the current version of the operating system still supports disk images in legacy formats) and used a modern version of Digital Performer to open the file.

Note, however, that this digital file is not the earliest draft of *RENT* in the Library of Congress collection. There is a paper copy of the script that was probably written in mid-1989 by Larson's collaborator Billy Aronson. The draft is an 11 page, typescript that appears to have been produced on Aronson's letter-quality NEC printer. The draft is labeled "pre-lyric" and, true to this label, contains no songs but does include some relatively lyrical language (especially by Mimi who has lines like: "I embroider sunsets onto pillowcases. Well, now you know..."). The second draft in the collection, again paper and probably produced by the same typewriter used to produce the pre-lyric draft is labeled "Boheme" and dated 9/22/89. It assigns sole responsibility for the book and lyrics to Billy Aronson and the music to Larson and was, again, likely typed by Aronson. Most of the songs in this draft did not make it to the final version of the show, however the draft does contain versions of the songs "Rent" and "I Should Tell You" and, in more or less the form it is now known, "Santa Fe" (indeed, the program notes for *RENT* always credit Aronson for his work on these songs).

Although the broad details of the narrative that begins to emerge from this archive are well known (Billy Aronson and Jonathan Larson decided to collaborate on the musical, Larson initially only as composer, and together wrote three songs before going their separate ways), the digital and paper artifacts together fill out the story with precise and fascinating detail. For instance, although Larson probably received a script from Aronson by September (based on the date on the first script in the collection) and by November at latest (interleaved into the second draft is a letter from Aronson to Larson dated 12/1 which Aronson begins with the words "Here's the new last chorus for SANTA FE that

you asked for"), Larson did not commit any work on the show to disk until December 21. The letter from Aronson indicates that Larson was probably working on the show before then, but likely recording his work, if at all, to analog media (perhaps, as he certainly did in other cases, to a cassette tape). However, in order to transcribe the music to digital format Larson required technology he did not have at home. Another Word Document on the disks dated 1/31/90 and named "STUDIO COSTS" appears to have been a kind of invoice to Aronson. It lists three studio visits, one for 6 hours on December 21 to create "Music Trax for SANTA FE & RENT," one for 4.5 hours on January 16 to create "Music Trax for I SHOULD TELL YOU" and one for 7.5 hours on January 30 to "Record Vocals for ALL SONGS" and to create "Mix Trax for ALL SONGS." That Larson sought out a digital studio so early in the creative process (and was willing to pay about \$300 per session at a time when his primary source of income was part-time work at a diner) suggests how important Larson saw digital technology for his creative process. To truly understand *RENT*, then, the scholar must understand the digital technologies and processes used to create it. The textual critic of *RENT* and other born digital musicals must therefore be skilled in recovering, reading, and analyzing digital artifacts - the processes I hope to demonstrate in this introduction to my work with *RENT*.