The NCTE Statement--"Multimodal Literacies and Technology" addresses some of these concerns, paying special attention to delivery, but not to ethos. The NCTE statement supports the multimodal assignment by proclaiming, “all modes of communication are codependent. Each affects the nature of the content of the other and the overall rhetorical impact of the communication event itself” (NCTE). The modes reflect the attention given to delivery. The visual nature of delivery within these modes account for the inclusion of design in the discussion, which forces instructors to understand that “certain conventions of design are more effective than others for visual, aural, or multimodal texts,” and as a result “teachers will need to become more informed about these conventions because they will influence the rhetorical and aesthetic impact of all multimodal texts.” Design is linked with delivery, and here delivery aligns itself with ethos again. The knowledge of the composer gives them credibility in delivery. In an attempt to answer the calls by leading scholars in the field of rhetoric and composition an influx of work was produced that aligns itself with the visual aspect of delivery when incorporating technology into curriculum. This is reminiscent of the work of Eyman in 2015. Shortly after this push toward multimodal composition Zappen publishes his work on procedural rhetoric. Around the same time, chronologically, the divergence of how to approach technology and its uses in composing, and communicating takes place.

Before one can question and critique the technology used in digital spaces it is important to understand what it is, and inversely what it isn’t. The limitations and advantages of different technologies directly affect the writing and communication occurring within them. If there exists a relationship between how a user interacts with technology and how this usage enacts a change for both, then the technology that builds what we use to communicate can’t be ignored. Black box technology refers to technology that is unseen or unavailable to users. Cressman (2009) discusses it in “A Brief Overview of Actor-Network Theory: Punctualization, Heterogenous Engineering & Translation.” In it Cressman describes actor-network theory (ANT) as an attempt to “open the black box of science and technology by tracing the complex relationships that exist between governments, technologies, knowledge, texts, money, and people” (p. 3). These connections he argues are lead to science and technology and only through examining them can we understand the how and why of our technology. Specifically, how the technology we use came to be, and why we have it and use it. This also allows for discussion on how and why we know what we do about technology we use, and its relationships/connections to the governments, people, and money previously mentioned. The black box technology can easily go unnoticed so long as it, whatever it is, works as we think it should. Only when it does not work is attention given to the pieces and parts that make it up. If it works as expected, then there is no reason to question how it came to be. For users this usually is not an area of concern until it can no longer be ignored.
 The discussion technology that exists in a black box until research uncovers it creates an opportunity to further research the impact of digital spaces, but from a different point of view. This approach accounts for viewing the technology as active in its own right, and not just a tool we use to communicate. It is clear then that this questioning of technology and uncovering the black box of science and technology would be closely associated with actor-network theory.

Like digital rhetoric actor-network theory can mean and represent different concepts. Actor-network theory (ANT) is applied and used in numerous disciplines. Because of this ANT is often, according to Cressman (2009) “in the abstract, divorced from particular case studies” (p. 1). This is problematic because the theory is acted out and performative, therefore it shouldn’t be summarized when it could be analyzed. Latour (1987) writes that ANT “approaches science and technology in the making” and not when it is already made. However, like digital rhetoric ANT can and does mean different things to different people and will thus represent different uses and understandings. Cressman in his overview points to the fact that “ANT cannot be reduced, once and for all, to a catch-all theory that can be universally applied,” (p. 3) which accounts for the various uses, and possibly the reason for it existing in the abstract as scholars continually attempt to summarize and present their understanding of ANT. It is not important that there is an ongoing discussion of what ANT is, and how to define it. Rather, it is important to understand that the role of actor and network can be applied to anything; depending upon perspective and as such it can be a process and not a stagnant object. The importance of this to digital rhetoric is that applying ANT to how communication takes place in digital spaces allows for the computer, for example, to be an actor in the network same as the person using it. It is not only a tool as Bogost suggests, and using some of the concepts of ANT can also allow for the exploration of procedural rhetoric in the network. The linking of these two concepts is not meant to put two different things together and attempt to neatly use them, but to demonstrate that not only is a application of theories possible, but that using them together may give scholars in the field of digital rhetoric an opportunity to analyze how they work in classroom rather than theorizing about their impact.
 Using ANT in digital rhetoric to attempt to understand how digital spaces

Impact writing and living within our networks, and expose black box technologies represent only a small amount of the work done within digital rhetoric. The work in black box technology and making it known to the users must go beyond the users experience with the technology not working as they expect it should. It should reflect the users ability to understand what is happening to make the technology work, and the political and business end that influenced, or limited development of the technology. These issues and concerns, I think, lead the field of digital rhetoric to interface and glitch.
 Lori Emerson (2014) in *Reading Writing Interfaces: From the Digital to the Bookbound* calls attention to the blackbox technology in iPads and iPhones. She describes the interface as “magical,” and that it’s continually presented as “something that allows us to perform magic tricks” (11). This assists in keeping the technology hidden behind the “glossy, attractive packaging” that serves to lock away the “inner workings” of the iPhone and iPad. The issue of concern here is that the iPad was built to keep how it works from becoming public knowledge. The implications here are that an interface that is commonly used, and that other products mirror or mimic, will never truly be known or comprehended by those that users. Therefore, the iPad/iPhone users are unlikely to effectively understand its function in a network. Emerson refers to this as “closed computing” (p. 17). For this reason she urges writers to take the hacker approach to using these devices, so that the users can draw attention “to the process underlying the writing product, the way in which process and product were unavoidably intertwined” (p. 30). It is important to note that this approach is not directly aimed at the iPad/iPhone. Most of our interactions in a digital space, if not all of them are through an interface. The technology that exists behind the display of the interface is usually hidden. Therefore, understanding what is behind it, but also doing work that helps to expose it.
 One area of study that helps to expose the technology and allow scholars to do work with the exposed technology is the glitch. Glitch often refers to “brief bursts of unexpected behavior in electrical circuits, but is also more specifically used to describe a style of electronic music that was created from already-malfunctioning technology,” which essentially means that it is an opportunity to create from an error. When something does not work as it should, and the black box technology is exposed, the resulting visual error can be the source of a new creation. Casey Boyle applies a rhetorical lens to glitch. In “The Rhetorical Question Concerning Glitch” Boyle offers that glitches are “models for expanding our current, critical approaches to rhetoric, especially as those practices concern mediation” (p. 12). Continuing the work done in exposing black box technology scholarship written about glitches are popular due to the nature of their existence. The fact that they exist, and ultimately expose what design and interface work to keep hidden makes glitches both popular and important in digital rhetoric. However, as work continues in glitches, and glitch art the field moves away from discussion of how this impacts our communication and writing in digital spaces.

 According to Boyle (2015) glitch art “seeks not to error-check but to produce error” (p. 22). Producing an error certainly plays upon the ability to expose technology that would otherwise go unseen. It brings to the attention of the user and the audience that technology, visible or not, may deviate from what it should do and still communicate a message. Boyle suggest that “if we understand error as a wandering away from a predetermined plan or path, then the practice of producing error complicates our notions of intentionality and determination” (p. 23). This production of an error may very well complicate the process a user is accustomed to, but other than demonstrating it as a possibility and using Emerson’s hacker approach it does not necessarily allow the producer of the error the ability to disrupt the process. Rather, I think the user is using a different process within the preexisting process and limitations of the software to create the glitch. The attempt to create as a result of a glitch is interesting, and brings about the possibility for many rhetorical implications, but does it bridge the gap between theory and application? Does glitch art represent the theories and apply them in a practical sense that helps continue the conversation of digital rhetoric? Theories and work done with glitches and in glitch study help to push digital rhetoric towards application. However, I argue that while glitch art exposes hidden technology it does not create a deeper conversation about the now unhidden technology. Glitch art assignments and creations, while digital in nature, exhibit many of the elements commonly associated with visual rhetoric. This is not surprising. With most of our world existing in a digital space, and our experiences often coming through a screen, or interface, most visual rhetoric exists in a digital space. The presentation and theories that inform visual rhetoric are not always in alignment with digital rhetoric. Personally, I don’t see them as deviating as much as other rhetoricians might, but it is my opinion that while glitch art is concerned with commonly written about areas of interest in digital rhetoric it does in fact approach application from a visual rhetoric lens.

However, it cannot be ignored that Boyle’s work in glitch addresses how the user is changed by their experience in composing in a digital space and how the user changes the technology itself. Boyle’s work on glitch proves that the different definitions and theories addressing different areas of digital rhetoric do build upon each other. At its roots digital rhetoric is concerned with the relationship between the technology used and the user. Where it goes from there differs from scholar to scholar. There still exists a disconnect between the attention given to what scholars in the field suggest we should be talking about, thinking about, and ultimately writing about and how to incorporate these concepts into the classroom. The numerous theories in digital rhetoric urge the field of rhetoric and digital rhetoric to be aware of networks, black box technology, interfaces, and the impact of working, writing and living in digital spaces. The next logical step is to begin to apply this work and incorporate it into composition classrooms. The theory cannot only exist in the realm of the scholars that research and work in digital rhetoric. If the theories that influence the scholarship in digital rhetoric, then it also needs to be reflected in the assignments we teach. The disconnect that exists between theory and practice is a gap that needs to be filled. Not every theory will work, same as not every assignment will neatly wrap up and teach complex concepts to students, but this should not detour scholars. There is no perfect definition of digital rhetoric, and yet scholars continue to try and summarize, understand and present their definitions. The same tenacity that goes in to theory needs to be applied to pedagogy and attempting to apply these theories. Simply put, the theories need to be put to use.