To: Engineering Communications  
From: Patrick Austin (10-1)  
Date: April 14, 2017  
Subject: Core Capstone Defense – SLO #3 Rough Draft  
  
Patrick has researched and explored an important topic in contemporary computer science in Engineering 301: the implementation of digital rights management in software. Digital rights management, or DRM, is used in the software industry to deter piracy by attempting to restrict usage of software to licensed users only. However, the choice of strategy used to implement DRM comes with risks and tradeoffs, ranging from performance overhead to the risk of unintentionally inconveniencing legitimate users or even locking them out from access to their software. Issues of consumer rights and protections in the digital space, the legal limits of current digital copyright laws, and the existence of a global culture of software piracy all come into play in this issue.

Patrick is also knowledgeable in another area of contemporary computer science: he has studied the network security risk of denial-of-service attacks. These attacks, which work by flooding a computer connected to the internet with a massive volume of network protocol requests, can have severe consequences for the public welfare by inhibiting computer systems vital to the public health and welfare, such as those of the medical, energy, and banking industries. For example, a hospital unable to access patient records due to such an attack could be tragically ill-equipped in a medical crisis. Patrick has studied precautions network engineers can take to limit the impact of these attacks, as well as the continued evolution of new denial-of-service attacks over time.