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DMCA is an abbreviation for Digital Millennium Copyright Act, a new law was introduced in 1998 to protect intellectual property over the internet. With the growing impact of the internet and the importance of protecting individuals and companies’ digital contributions over the internet. DMCA aims to combat digital piracy by preventing unauthorizes distribution or copying of copyrighted content. However, DMCA remains somewhat controversial due to its terms and conditions.

DMCA protects copyrighted content from circumventing copyright which means that individuals are not allowed to bypass or defeat Digital Rights Management (DRM) technology, even for personal use, Additionally, the law restricts the development of circumvention technology, which means programmers are not allowed to develop any product that defeats the DMC like key generator, software cracks or batching. Since key generators and cracks are the result of reverse engineering therefore, DMCA is considered an “anti-reverse engineering” law which crucially hinder the practice of reverse engineering.

What makes DMCA a controversial law is allowing reverse engineering under certain circumstances. So, to interoperate with software that we don’t have a documentation or a manual for, we can practice reverse engineering to demystify the underlying system. Additionally, defeat encryption algorithms to evaluate them by researchers of encryption technologies. Security Testing purposes are included in DMAC, which creates a loophole in the law itself allowing people to circumvent copyrighted products.

It’s challenging to clearly define the boundaries of reverse engineering’s purposes, as the DMCA (Digital Millennium Copyright Act) enforces laws to protect intellectual property from infringement and unauthorized distribution while also permitting reverse engineering for critical reasons such as public safety, information protection, and research. I believe the DMCA is essential for safeguarding intellectual property online. However, reverse engineering will likely persist alongside the DMCA due to its significant role in advancing technology, analyzing systems, assessing security, and revert malicious activities caused by malware and viruses.

**References**

Eilam, Eldad. *Reversing : Secrets of Reverse Engineering*, John Wiley & Sons, Incorporated, 2005.