

Commenter's name: Alan Nelson

Class of works: I support 2, 3, and 4

Class 2

As a graduate student in medical physics (the field in radiation therapy that specializes in the technical side of accurate and safe delivery of radiation dose to patients suffering from, among other diseases, cancer) and computer programming hobbyist, I am regularly thinking of possible approaches to optimize the clinical treatment and workflow in a radiation oncology clinic. Funding for coming up with implementations of my ideas is basically non-existent, however. Furthermore, although some clinical solutions have been created by commercial businesses, they generally are very expensive (tens or hundreds of thousands of dollars).

Gaming consoles today often come with hardware with powerful capabilities at an extremely reasonable price. These capabilities can easily be utilized (through circumvention) to develop inexpensive approaches to solve important clinical problems--particularly in the real of radiation therapy. Although I focus my comments on clinical problems, the same could be said for many other practical problems in the wide world of cutting-edge research. Furthermore, allowing solo innovators to gain access to these capabilities through circumvention in the development of their ideas certainly promotes and enables creativity (which, as I understand it, is the entire point of copyright).

As an example, a commercial system exists to use optical imaging in order to render a surface map of a patient's body while they are on the treatment table receiving their radiation treatment. The surface rendering is used to ensure that the patient does not move outside of the "planned" position (within a certain tolerance)--and if they do, then the treatment is held until they are brought back in the correct position. This can occur, for example, if the patient coughs, or shifts their body in some way (a situation of particular concern when treating lung cancer patients). Accurate setup and maintaining that setup throughout (the sometimes long) treatment is absolutely essential for the safe and accurate delivery of the prescribed radiation dose to the patient's planned treatment volume. The technology provided by this vendor, however, is expensive. It could be quite possible to build upon this technology, and to make it available in our clinic, by utilizing the capabilities in a Kinect device (which is very affordable). Without hardware such as this that being available for use in innovation (which is often only possible through circumvention), only companies with a large amount of capital can afford the development of these kinds of cutting-edge technologies. It should not, therefore, be a violation of copyright to circumvent such devices as gaming consoles.

Class 3 and 4

I make a similar argument as for Class 2: the hardware of a purchased device can be used in many instances for the development of new innovative technologies. However, access to the device's capabilities could require circumvention in many cases. For those of us without a large budget, having the option to legally circumvent these devices to gain access to their hardware capabilities is very important.