Analysis of an advertisement based business model under technological advancements in fair use personal recording services

Myunsoo Kim *, Byungtae Lee

College of Business, Korea Advanced Institute of Science and Technology, 85 Huegioro, Dongdaemoon-gu, Seoul 130-722, Republic of Korea

ABSTRACT

In 1982, Betamax, the world’s first personal recording service was ruled as a fair use in court. Although the copyright holders of TV content claimed that Betamax was an infringement of copyright, the court determined that the benefits of personal recording services were significant and that the copyright holder’s profits could be protected because the original service was of better quality and had a better cost structure. It also ruled that the loss from manual advertisement skip was minimal. However, recent advancements in information technology have allowed new kinds of personal recording services such as a cloud DVR that provides unlimited storage and flawless quality, and an Auto-hop feature that automatically removes embedded advertisements. This paper introduces a microeconomic model for reviewing the copyright holder’s business model and social welfare under the court’s decision in relation to newer personal recording services powered by information technologies. Before cloud DVR existed, applying fair use to personal recording services increased social welfare while protecting the copyright holder’s profits; however, after the introduction of cloud DVR, it may no longer do so.

1. Introduction

Innovations in information technology have greatly helped content providers with low copy and distribution costs (Shapiro and Varian 1999, Davenport 2013). Ironically, the same information technologies are now threatening content providers’ major business models by automatically removing advertisements from content. In March 2012, Dish Network Corp., a satellite TV provider, introduced an Auto-hop feature that allows users to automatically skip commercials when playing TV content recorded with its Hopper Digital Video Recorder (Bauder 2012). TV networks such as Fox, CBS, and NBC who hold the copyright of the broadcasted content considered the service a threat to their business models, which they claim are supported by advertising, and filed against Dish in May 2012 for copyright infringement (Jeffery 2012). According to CBS spokesperson Shannon Jacobs, “this service takes existing network content and modifies it in a manner that is unauthorized and illegal.” In response, Dish CEO Joe Clayton pointed out that about 50% of viewers had already been skipping advertisements with VCR and DVR technology while watching their recorded content. Since the VCR and DVR technologies were already ruled as personal fair use under copyright law, he claimed that Auto-hop is only a “slightly complicated version of a fast-forward button.” The court subsequently denied Fox’s request for a preliminary injunction against Auto-hop in November 2012 (Flint 2012), which was confirmed by the U.S. Court of Appeals in July 2013. The court also came to the same conclusion for ABC Television’s request on September 2013 (Jeffrey 2013). Disney finally settled with Dish, who agreed to “postpone” enabling the Auto-hop feature for selected Disney digital content (Palmeri and Moritz 2014).

The Auto-hop legal dispute is not the first battle between fair use personal recording services (PRS hereafter) and TV content copyright holders. When Cablevision Systems Corporation launched its cloud based digital video recording service (cloud DVR hereafter), which stores personal recordings in central server storages and plays them back via Internet streaming, in March 2006, copyright holders sued Cablevision for copyright infringement, but ultimately lost the case (Albanesius 2008). The Supreme Court agreed with Cablevision’s argument that their cloud DVR should be treated the same way as customer-owned fair use devices such as a Betamax, because only its storage location differs. The fair use doctrine of copyright law, which has thus far been applied to PRS, should protect both social welfare and the copyright holder’s incentives by allowing some personal copies to be free of copyright infringements (Cooter and Ulen 2011). When Betamax first entered the market in 1982, a similar legal dispute between Sony Corporation of America and Universal Studios went to court and the service
was eventually ruled to be a fair use. The court ruled that the copy-
right holders’ monetary incentives could still be protected, because
the risk of zapping the advertisements embedded in the TV content
was minimal (Sony Corp v. Universal City Studios 1984). From the
copyright holders’ viewpoint, applying fair use doctrine to PRS is
done in order to achieve better social welfare at the expense of
potential profit, however minimal it may be.

It was not until around the year 2000 that copyright holders
finally acquired another major technology with the potential to
greatly extend their business model to the realm of fair use: video
on demand (VOD hereafter). VOD allowed copyright holders to
provide their content via digital streaming and it did not require
any specific hardware or storage medium, gaining higher ground
against PRS such as DVR, because earlier versions of DVR still
required individual hardware, individual installation, upgrade
costs and were limited in storage size (Bertolucci 2009). The cost
structure difference between VOD and early DVR was significant.
It followed the traditional law and economics assumptions that
state that the producer has a better cost structure when copying
and distributing the copyrighted materials (Novos and Waldman
1984). Because of VOD technology, the copyright holder’s business
model was extended and protected against PRS by two important
technological barriers: (1) The copyright holder can provide
time-shifted material with better cost structure; and (2) The copy-
right holder may still generate revenue from the advertisements
embedded in the recorded content.

However, recent developments in information technology are
removing the two technological barriers that justified the fair use
doctrine applied thus far on PRS. Theoretically, cloud DVR has
the same cost structure as the copyright holder’s most advanced
form of time-shifted content, VOD, and Auto-hop is surgically
removing embedded advertisements from TV content. Both of
the copyright holders’ business models are being threatened by new
information technologies and are now dependent solely on legal
protection. Cloud DVR is again determined to be a fair use because
the court could not find any legal difference between it and the
previous fair use PRS. In addition, Auto-hop is currently the subject
of a fierce legal debate, as some law professors recently urged the
court to give up fighting technological evolution with the law,
which would save needless legal costs (Gershman 2013). Table 1
shows the development of PRS and related court rulings.

Therefore, it is imperative to generate economic implications
for both lawmakers and business managers, because information
technologies that are applied to PRS have made rapid advance-
ments in the last few years to the point where these are now
threatening the copyright holders’ business model and social wel-
fare. While some previous Information Systems (IS hereafter)
papers focused on business implications from information technol-
ologies used on PRS and piracy of digital content (Chellappa and
Shivendu 2005, Regner et al. 2009, Margolina et al. 2011), these
relatively newer information technologies and their interactions with
fair use doctrine are not yet fully addressed. This paper aims to
provide a link between law and economics research and IS research
on new technological development regarding the fair use doctrine
and PRS. It suggests a microeconomic model that describes the
interaction between both business models in conjunction with
technological characteristics of PRS.

The research objectives are: (1) Review previous court rulings
on PRS to date, to examine social welfare and copyright holder’s
profits, taking into consideration the technological advancements
of PRS and copyright holder’s business models, and (2) Generate
economic implications for the court over the Auto-hop legal dis-
pute. In Section 2, the related literature is reviewed. Section 3 pre-
sents and analyzes the economic model. In the final section, the
limitations of the paper and future research opportunities are
suggested.

2. Literature review

Once PRS was allowed as a fair use, the copyright holders of TV
content gained two additional business models that could contrib-
ute to their profit. The first is by directly selling copyrighted con-
tent to potential viewers with PRS. The second is by exposing
viewers to advertisements that are embedded in the private
recordings. In this section, through a review of related literature,
it is explained how the new PRS is different from descriptions in
previous literature, and why a link is needed between law and eco-
nomics research and IS research. The summary of the literature
regarding the economic analysis of fair use and advertisement
based strategies is in the Appendix.

For the first business model, the competition between original
and private copy was enabled by the fair use doctrine, drawing
much attention in the fields of law and economics. Before Betamax,
there were no practical means to distribute TV content apart from
live broadcasting, which in turn imposed strict time and space con-
straints on viewers. Once the potential viewers have access to PRS,
the copyright holders can produce their own version of time-
shifted content in the appropriate medium and compete with the
viewer’s own personal recordings. Klein and others (2002) pointed
out that the new time-shifting market can be beneficial to the
copyright holders. Moreover, in terms of competition, it has usually
been assumed that the copyright holder who is the producer of the
content is protected by technological barriers that allow better
quality and cost structure compared to an personal copy (Novos
and Waldman 1984). At this point, understanding the performance
and characteristics of the technologies used in fair use is essential
to balancing the costs and benefits of the fair use ruling. Johnson
(1985) showed that if the cost of private copying is too low, reduc-
ing the scope of the fair use doctrine might be necessary. Besen
(1986) even argued that consumers do not benefit from inefficient
investigated how a technology may change the application of fair
use for photocopying, while Gordon (1982) analyzed how time-
shifting technology such as Betamax may hamper market structure.
Miceli and Adelstein (2005) claimed that the optimal level of
fair use is determined by the level of technology, implying that
courts may have to adjust their rulings as the performance and
cost structure of the technologies evolve (Adelstein and Peretz
1985, Klein and others 2002).

However, when PRS moved from using analog tapes to the dig-
ital medium, the quality difference between the original and per-
sonal recordings was at first removed. Subsequently, cloud DVR
eliminated the difference in cost structure, because viewers no
longer had the need for specific devices installed in their homes,

Table 1

<table>
<thead>
<tr>
<th>Private recording</th>
<th>Year introduced</th>
<th>Quality</th>
<th>Time shifting feature</th>
<th>Space shifting feature</th>
<th>Advertisement removal feature</th>
<th>Court decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV only</td>
<td></td>
<td>Original</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Fair use</td>
</tr>
<tr>
<td>Betamax VCR</td>
<td>1982</td>
<td>Limited</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Fair use (assumed)</td>
</tr>
<tr>
<td>DVR</td>
<td>1999</td>
<td>Perfect</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Fair use</td>
</tr>
<tr>
<td>Cloud DVR</td>
<td>2006</td>
<td>Perfect</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Fair use</td>
</tr>
<tr>
<td>Auto-hop</td>
<td>2012</td>
<td>Perfect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Under debate</td>
</tr>
</tbody>
</table>
دریافت فوری
متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات