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THE ECONOMIC EFFECTS OF DIGITIZATION ON THE ADMINISTRATION OF MUSICAL COPYRIGHTS

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ABSTRACT. Digitization has had a profound effect on the management of musical copyrights in terms of data requirements and has vastly increased the volume of transactions: both impacts have raised net costs of administration to collecting societies. This paper explores these points using information provided by PRS for Music, the UK's collecting society managing musical rights and considers them in the wider context of moves on the political front to increase competition in rights management as well as to promote multi-territorial licensing within the EU. An important question for economists is whether the natural monopoly argument for single national collective rights management using blanket licensing still holds up with digitization of music and management of musical rights. This paper suggests that collaborative concentration may be preferable to competition.

1. INTRODUCTION

That digitization has had a profound effect on the market for music is well documented but its equally profound effect on the management of musical copyrights has not attracted much attention in the academic literature. This article is about the changes digitization has wrought on licensing procedures. It is illustrated with data from the UK collecting society, PRS for Music. The Performing Rights Society, founded in 1914, has administered royalties for public performance of live and recorded music for almost a century. The Mechanical Copyright Protection Society managed the so-called mechanical rights for the use of musical works in sound recordings and films. In 1997, MCPS formed an alliance with PRS for administration purposes and together they have been known since 2009 as PRS for Music. PRS for Music had membership of over 95,000 writers and music publishers of a repertoire of over 10 million songs and collected £631 million in royalties in 2011 (PRS for Music, 2012), making it one of the larger collecting societies for musical works. It operates in much the same way as any other major collecting society and

I am very grateful to personnel at PRS for Music for their patience and willingness to explain licensing procedures and am especially grateful to Maurice Samuels who presented the data cited here at SERCIAC 2013 and to Frances Lowe who made a tremendous contribution to correcting this paper, without which it would have been riddled with inaccuracies. The analysis and views expressed in the paper are mine alone and do not represent those of PRS for Music.

is used here as a case study of the adoption of digital technology in the service of collective rights management.

There is a wider context to the economic effects of digitization: the European Commission (EC) has a proposed Directive 'on collective management of copyright and related rights and multi-territorial licensing of musical works for online uses in the internal market' (EC, 2012). There is concern in the EC about promoting European online musical services, which is seen as being held back by licensing problems across the 27 countries of the European Union (EU) and multi-territorial licensing is seen as a solution; in addition, there is concern with the quality of service that the societies offer not just to their members but also to foreign owners of copyrights that they also administer on behalf of other national societies and to users. In the UK matters have gone a step further: advocacy of a central Digital Copyright Exchange (DCE) (Hargreaves, 2010; Hooper, 2012a,b) that would act as a centralised clearing house for information on rights ownership and possibly also perform some of the functions of a collecting society is tied in with the aim that it would also 'promote competition'. But despite the focus on economic effects, no economic analysis underpins these initiatives: promoting competition is not always economically efficient and simply assuming in a vague sort of way that it is is not 'economics'. In fact there has been little attempt by policy-makers to understand either the economics of collecting societies or the effects digitization is having on them. The production (some would say, creation) of data on supposed costs and benefits of competition in licensing is not economic analysis and there is no attempt to *explain* the economic organization of copyright administration (Towse, 2012).

In earlier work on economics of collective rights management I raised the question whether digitization would reinforce or threaten the natural monopoly typical of the economic organisation of collecting societies (which usually administer a specific bundle of rights authorized by copyright law) and if the formation of a centralised clearing house for rights would exacerbate the tendency to natural monopoly or lead to its break up (Towse, 2012). This article discusses that topic in more detail with the insights provided by understanding the inner workings of a collecting society and using data made available by PRS for Music. Intriguingly, the answer seems to be that it is the non-profit status of collecting societies as cooperative member organisations that is leading to new forms of cooperation to deal with the impact of online licensing and using digital technologies for sharing data that are mutually beneficial not only for each society individually but also for its licensees.

This article begins with a description of the type of changes that digitization has brought about for the services of licensing of music and new office procedures in the collecting society and then considers the possible impact on the economic organization of collecting societies in general. Finally, it asks if private incentives

in the industry are able to achieve the benefits of digitization in music licensing or if state intervention is needed and concludes that private incentives are achieving (even have already achieved) the objectives of policy-makers in advance of their efforts to regulate copyright management organisations for fitness of purpose in online licensing.

2. The impact of digitalization on licensing music

Three general aspects may be identified of the impact of digitization on licensing music: online licensing, multi-territorial licensing, and its impact on collecting society office procedures.

2.1. **Online licensing.** Online licensing refers to a licence for online use of musical works that are made available on fixed and mobile platforms. In the UK, online licensing constituted ten per cent of domestic revenues by 2012 and was increasing, according to BPI (British Phonographic Institute, 2013); 43 per cent from online tracks, 42 per cent online albums; 9 per cent subscriptions, the remaining six per cent divided between ads and 'other digital' (ring tones, ring back, music videos etc). What was at one time a straightforward business of getting a licence to use music in a specific medium has changed as digitization has led to increasing convergence between broadcast, online and mobile uses. PRS for Music has experienced a growth of uses received from 21.5 billion in 2010 to 124.6 billion in 2012 with the growth occurring in streaming while download uses remained relatively stable.

As a consequence, PRS for Music offers several types of online and mobile licences tailored for these uses (PRS for Music, 2012, pg. 18). There has been some aggregation of licences and creation of new online licences to meet the needs of online use (for example the Online Music Licence, the General Entertainment On Demand Licence for audio-visual services) and some for special needs; for example, the PRS for Music has introduced the Limited Online Music Licence (LOML) for low value licences and a new higher value version (LOML+) (PRS for Music, 2012). Some online licences, for example, those for broadcast music, are extensions of the existing blanket licensing procedures; others, such as multi-territorial licences, call for new procedures.

2.2. **Multi-territorial licensing.** As digital delivery knows no national boundaries, though copyright does, multiple licences are required for the use of musical works in different repertoires and in all territories. Without cross-border licensing it would be necessary just within the EU (European Union) to obtain 27 licences for a Europe-wide online service that includes music. Cross-border licensing, however, depends on the mandates held by a collecting society from its members; PRS, for example, has agreements that enable issuing pan-European licences for

online music. In 2006 PRS and GEMA (Germany) formed a company, CELAS, offering pan-European licences for the online use of the 'Anglo-American' repertoire of EMI Music Publishing (PRS for Music, 2012, pg. 18). Similarly, SACEM (France) and Universal Music Publishing Group also worked out a multi-territorial online arrangement. At the same time Warner Chappell were experimenting with a non-exclusive online system of standards with several societies including BUMA-STEMRA (Netherlands), GEMA, PRS for Music, SACEM, SGAE (Spain) and STIM (Sweden) (CISAC, 2008, pg. 12).[1] But not all repertoires of all societies are available yet on that basis and still need to be cleared on a territory by territory basis.

Multi-territorial licensing is now being explored by the European Commission (EC) to simplify the process and reduce the associated transaction and contracting costs which are considerable (KEA, 2012). It is expected to thereby promote a common market for online musical services and increase Europe's share of the world's online music market (EC, 2012). The proposed Directive sets up high standards of capability in the back office for societies operating on a multi-territory basis. It is intended to ensure they are capable of managing transactional licensing, repertoire specific licensing and fragmentation (all of these are same thing in practical terms) so as to benefit creators and users. The Directive will not itself mandate how licensing is carried out, however.

2.3. **Collecting society office procedures: 'front' and 'back' office.** 'Front' office deals with licensing, which involves negotiating of contracts, royalty rates, etc. Front office licensing procedures have been affected by digitization, though less so than those for the 'back' office. The most visible effect in the 'home' territory is that licences for standard uses that have agreed royalty rates (under the blanket licence) can be obtained online, thus reducing both the effort of the licensee and the collecting society.

'Back' office procedures, the processes of collecting and distribution of licence revenues, and matching of usage reports to repertoire metadata, have been significantly affected by digitization, requiring considerable technological know-how and investment in IT. The 'digital ideal' is that technology can eventually handle the

[1]Societies and publishers had been developing multi-territory licensing since 2001 (albeit with setbacks). The EC, however, issued a decision that by coordinating the territorial scope of their reciprocal agreements there was concerted practice that violated its competition rules. The CISAC (International Confederation of Societies of Authors and Composers) model licence was part of the complaint. CISAC and 22 societies appealed the 2008 EC ruling to the General Court in Luxembourg and the decision was annulled in 2013 (CISAC, 2103). In the mean time, the development of multi-territorial licensing by societies was held back and that led to fragmentation of online licensing. Hilty and Nérisson (2013) provides an account of EC policy in relation to collecting societies, pointing out that there have been contradictions between the stance of the competition and trade arms of the EC.

main business of licensing, collecting revenues and distributing them to rights holders – the writer and publisher members of the society and others whose revenues are collected (at present, foreign collecting societies). That requires the following:

- a global database of unique titles of works
- a global database of unique names of writers and publishers
- detailed information about the contractual share of royalties between joint rights holders (writers/publishers) for every territory for each work
- that the user adopts the same system of work and name coding in its transmission of data to the collecting society.

Each element must be encoded for every transaction along with the rate relevant to the usage.

Some progress has been made in this direction: the Global Repertoire Database (GRD)[2] is being developed under the aegis of CISAC by its Working Group[3] which aims to create a single, authoritative source of the metadata used to describe musical works, together with the licensing information on who has the right to license what types of exploitations in which territories. Other initiatives in development include the ISNI (International Standard Name Identifier) and CIS-Net, a global network of creative works information (CISAC, 2013, pg. 13). The GRD would save costs by reducing duplication and errors in data registration and processing. It would speed up royalty distribution for writers, lead to fewer misallocations of funds to publishers due to inaccuracies and so reduce disputes due to data discrepancies that impose costs on collecting societies, make it easier for commercial users, such as internet service providers to know where to go for licences and make licensing easier for consumers (CISAC, 2013, pg. 12) – possibly reducing 'piracy' in an apparently an overall win-win situation. The GRD is expected to be operative by 2015.

In the meantime, individual collecting societies have made moves towards fully digitizing their back office processing, adopting codes for works that are compatible with the requirements of the GRD and automatic matching of works, rights holders and the share of revenue due to each from a specific use. At PRS for Music, 86 per cent of streamed and online downloads were matched automatically in 2012; 10 per cent were below the threshold and not matched and 3 per cent had to be matched manually, a process that is time-consuming and costly. Moreover, the value of the transaction may be less than the cost of processing it, and there is the issue of storing vast amounts of data worth very little. The 'fully-digital Nirvana' of digital rights management that seems to be implied in some reports (for instance, Hargreaves, 2010; Hooper, 2012a,b) is far from a reality and it is anticipated that

[2] http://www.globalrepertoiredatabase.com/

[3] There is also the IMR (International Music Registry being promoted by WIPO (World Intellectual Property Organisation) http://www.wipo.int/imr/en/

there will always be a need for manual input by skilled office staff to correct both data and processes.

3. Incentives to digitalize the back office

The main incentives for a collecting society to adopt digital procedures have been the need to respond to the growth of online use of music and the objective of reducing administration charges to members. Indeed, it may also be argued (as the EU Directive and Hargreaves do) that it is the other way round: the growth in legal (and therefore charged for) online use of music is due to collecting societies' ability to license it. That view, though, ignores the internal incentives to cut administration costs as well as to increase revenues.

While blanket licensing has been the chief modus vivendi for collecting societies for a very long time and, moreover, has been one of the main arguments for their monopoly, some collecting societies developed digitization of back office procedures for transactional licensing as competition for mandates for European licensing led to fragmentation of rights. Because there are far more transactions in the online world but with generally lower royalty rates, the cost to revenue ratio was rising, that trend also being exacerbated by the move to transactional rather than blanket licensing for some online uses (the difference between the two is whether the data processing is done after invoicing and against the whole repertoire (blanket) or before invoicing and for only part repertoire (transactional)).

With transactional licensing, every transaction is itemised and valued - in contrast to the blanket licence, where the user pays set rates for the whole repertoire and the distribution of revenues to the member is based on the quantity of a work's usage.[4] Thus there is greater transparency, to use the current policy-makers' term, and to an economist, a clearer market signal of the value of a work.

PRS for Music and STIM (its Swedish counterpart) have invested in a shared copyright database with a single point of registration and other economies with a multi-territorial ownership picture which may become the template for others either to join or to copy (PRS for music, 2012, pg. 13). Their joint ICE (International Copyright Enterprise), that adopted the technology solution for GRD with additions from Fastrack,[5] went live in 2010 after several years in development and a huge investment in IT and employee time, replacing previous databases that needed modernisation and anyway had insufficient information to support online licensing. As the former system required manual manipulation for most tasks and thus a larger workforce to maintain databases ICE reduces administration charges

[4]This is an oversimplification since the rates vary according to the contractual licensing arrangement that, for instance, may take the time of day of the usage into account. Distribution is done on a points basis where the points are calculated on minutage, taking account of those other items.
[5]http://www.globalrepertoiredatabase.com/index.php/technology-solution

to members. By enabling the sharing of data between societies, ICE also provides the metadata needed to support multi-territorial licensing.

Another twist in the digital story is that the big music publishers and alliances of independent ones have set up arrangements for their own 'front office' online repertoire-specific licensing deals while using the 'back office' facilities of a collecting society for the collection and distribution of revenues, as in the CELAS arrangement mentioned earlier. In principle both publishers and writers could shop around for a good deal on administration charges, giving societies an incentive to offer competitive prices for those services since they can then spread the very considerable sunk costs of the investment in digitizing their back office procedures. In fact, writers have been free to join foreign societies for some time; a combination of language issues and tax withholding practices seems to be what holds them back.

The proposed EC Directive (EC 2012) also may offer incentives to collecting societies to invest in digital procedures as it sets up high standards of capability in the back office for societies operating on a multi-territory basis. This is intended to ensure they are capable of managing transactional licensing, repertoire specific licensing and fragmentation so as to benefit of copyright holders and users, though the Directive will not itself mandate how licensing is carried out. It is motivated by two concerns: one, that there be more transparency and better governance of collecting societies and, two, to encourage aggregation of repertoire by setting standards for capability for collective management of rights for online and multi-territorial services. These concerns can be jointly achieved in part by the adoption of shared digital back office facilities as described above. However, while the 'larger' societies in Europe have the incentive and financial ability to provide these facilities, many 'smaller' ones do not. That is not only because they lack the financial basis but also the incentive: only the UK and Sweden are net exporters of music in Europe and hence benefit overall from multi-territorial licensing (a point is never mentioned in EC discussions of licensing) and it is not therefore surprising that PRS for Music and STIM have been the first to develop transactional licensing and the capacity for multi-territorial licensing. Accordingly, the EC proposes that the 'smaller' societies, which will be required by the Directive to offer their members the same facilities throughout the internal market, have a choice whether to develop facilities so as to be able to offer their members multi-territorial licensing or to make arrangements with a society that can do so. Presumably, as with repertoire-specific licensing, the 'larger' societies have the incentive to offer those services to them as a means of spreading their sunk costs. That is not the only incentive, though, because the success of these ventures depends on the sharing of some data, ultimately the GRD as common property, and on cooperation with other national societies.

To an economist, the presence of common property immediately raises the question of the incentive to free-ride: would that not be the case with the GRD? Clearly 'small' societies have fewer members and musical works and in some cases, works that are not likely to have international appeal and therefore their addition to the common pot is small compared to the benefits of access to it. On the other hand, they have to pay the costs of compliance with the technical requirements of the common database (which may be considerable). The transactions cost to the 'large' society is low compared to the benefits of economies of scope and networks and they benefit from extending the repertoire they can offer. But that raises the question what is the incentive to smaller societies to join? If Ruritania's works in Ruritanian do not reach beyond the domestic market but foreign works are popular there, the members bear the cost of licensing that repertoire and reporting use to the common database.

4. Cooperation, competition and natural monopoly

4.1. **Cooperation.** Cooperation between members and between national collecting societies has been the basis of collective rights management since they were founded. Collecting societies are non-profit cooperatives in most cases, governed by the members, in which revenues are shared (Kretschmer, 2002). Their use of the blanket licence as a business model reinforces cooperation and relies on solidarity and members' shared interests. Even though the owners of 'top' music works could in principle obtain a better rate for their use than the blanket licence fee, which is based on the 'average' value of the whole repertoire, the cost of individual licensing prior to digitization would have been prohibitive even if feasible, while the others lower down the line benefit from collectively bargained royalty rates, which are likely to be higher than that which they could negotiate themselves. Transactional and repertoire-specific licensing are a break with the blanket licence tradition and it remains to be seen to what extent these developments replace blanket licensing with the growth of digital uses of music and digitization of front and back office procedures.

Domestic licensing of both domestic and foreign works through mutual arrangements between national societies has also been done cooperatively for decades and procedures for sharing information have therefore been in place for a long time. PRS for Music has agreements with 90 societies worldwide that send regular data; in 2011, £138 million of distributable revenue was received from overseas societies (PRS, 2012). There are strong economies of scope and network economies to be had from this cooperation for society members as well as for users. They provide the incentive to the larger societies to share their data on works for the GRD and also for the developments of other metadata, such as standardization of names.

The 'commercial' asset of every society is its comparative advantage in domestic licensing (knowledge of the local scene, language, and so on). These features inhibit mergers and take-overs that one might expect to take place in the for-profit world. It is also the case that territoriality of national copyright law limits that incentive as well (Towse, 2012).

4.2. **Competition.** There is the suggestion in various academic papers and official reports that digital technologies encourage competition in collective rights management and would break the natural monopoly justification for the single national society administering a specific bundle of rights, for instance, Katz (2005), Hargreaves (2010), Hooper (2012a,b). These often vague aspirations need unpacking in the light of what we know about the impact of digitization on collecting societies. Collecting societies can be thought of as intermediaries in a two-sided market. On the one side, there has been competition for members which has led to fragmentation of repertoire for multi-territorial licensing, such as the CELAS and other such arrangements mentioned earlier. There is also competition for users. Competition can be both price and non-price in form and that applies to both sides of the market. The view held by CISAC is that 'competition between societies for users would be a race to the bottom on royalties, violating a society's duty to their members' (CISAC, 2008, pg. 11). As argued above, the culture and benefits of cooperation between non-profit societies also inhibit competition. Collecting societies do not appear to compete with each other on royalty rates: given that each society manages a specific bundle of rights, that competition would have to be between foreign societies for the same rights and repertoire and there are barriers to entry in domestic licensing as argued above. Moreover, many collecting societies require the transfer of rights from the copyright holder in order to administer them (Katz, 2005). PRS for Music does so for public performance, communication to the public and reproduction rights for musical works. A society's advantage in the market is its mandates from rights owners, its databases of works and licensing information on rights holders for distribution purposes and that of its licensees and its knowledge of the domestic music market. The scale of its operations is influenced by the size of the domestic market but also by the sheer number and success of its members. These represent considerable barriers to entry that would inhibit any competition.

There is some potential for competition, however. Having the GRD accessible to every society would obviously break the entry barrier to a works database; however the need to match that with the membership database is a barrier to a competitor. There is the incentive for competition on administration costs especially for multi-territorial licensing. PRS for Music aims to reduce these costs to 10 per cent through transactional licensing and with greater efficiencies from the ICE. That is a form of

price competition. It could be a draw for publishers looking for a special purpose vehicle – the repertoire-specific licence mentioned above – and create international competition for multi-national licensing. However, as is well-known, cherry-picking by the few top publishers and/or writers would be extremely damaging to a society and would weaken its ability to compete in this way: the loss of high-earners raises the costs to the remainder of members as costs are spread over all active works, thus disadvantaging the lower earners and so reducing its ability to compete by offering low administration costs. There is a strong element of insurance to collecting societies and adverse selection and moral hazard have been overcome by both the benefits of cooperation/solidarity and the higher transaction costs of going it alone (Snow and Watt, 2005).

The high sunk costs of setting up back office capability to manage transactional licensing (for example, the ICE between PRS for Music and STIM) are a barrier to entry for any but the larger societies, and an early adopter will surely gain first mover advantage, given that there will be smaller societies looking to purchase their services. But their incentives to compete in price/administration costs seem to be modified by the potential damage of a 'price war' to the cooperative model. It seems, however, that rather than price competition it is non-price competition in the scope of repertoire and in the speed and transparency of collections and distributions that is the main motive for these investments. The next section considers whether there are incentives for mergers and acquistions.

4.3. **The natural monopoly question.** As is well-known, in the 'analogue era' collective management of rights by a single national collecting society was accepted by both economists and by courts of law as most efficiently carried out by a natural monopoly (Gallini, 2011). Indeed, the concern of the EC's Competition Authority in ruling against the Santiago Agreement and in the 'CISAC case' was not the monopoly issue but that they were colluding in 'concerted practice' (CISAC, 2008, pg.12). The obvious issue for economists is whether these developments in digital rights management outlined here will lead to mergers between collecting societies – de facto or in name.

The question remains: would a single provider of copyright licensing services in music be more efficient than many? Is competition, in whatever form is envisaged by the EC and the UK government, an economically efficient means for providing licensing services? The UK government in advocating the development of the Digital Copyright Hub (Hooper, 2012a) - successor to the Digital Copyright Exchange in Hargreaves, 2010) - could risk concentrating licensing (Towse, 2012) rather than promoting competition as is claimed for it (though what form 'competition' would take is not defined). It is clear that significant outlays on investment in electronic

and human capital are needed to provide digital licensing services and that the marginal cost of another user or work is very small indeed – that is, the 'classic' conditions for natural monopoly are even more present with digital processes. Moreover, a situation in which smaller societies have to find larger ones as partners for multi-territorial licensing might also suggest that mergers could be an outcome. However, there seem to be economic and cultural incentives (or disincentives) that mitigate these pressures:

- a national society has the advantage in domestic licensing, even with a fully digital back office
- the main objective of a collecting society is to maximize royalties for members
- societies do not to promote competition between their members
- collaboration between national societies is seen as the successful business model
- the metadata needed for digital licensing is produced collectively
- collecting societies are non-profit organizations.

National societies seem therefore set to continue as national natural monopolies with some competition seeping in via multi-territorial licensing. Their non-profit status does not give them the incentive to behave as economists would expect them to behave in a for-profit situation. That leads to the observation that if private, for-profit 'big data' firms were to enter the market for licensing services, they would behave differently: probably the complexity if copyright licensing is a deterrent to that, however. To prevent competition of that kind, CISAC would have to exclude such private firms from common property resources such as the GRD. The potential for free-riding on GRD as a common property can be inhibited by turning it into a club good available only to members bound by certain conditions of use. But that would erect a massive barrier to entry to for-profit enterprise.

In addition to these 'standard' economic considerations, it is also the case, widely observed in cultural economics, that there are strong 'winner-takes-all' tendencies in the market for musical works; so far, the much hyped 'long tail' development of better opportunities for smaller players being available in the digital era has not yet shown up in distribution data of collecting societies (Kretschmer and Hardwick, 2007). PRS for Music has analyzed its distribution of download sales value: 5 per cent of the 7.5 million tracks accounted for 90 per cent of download sales value. Towse (2012) believes that online markets will exacerbate the existing tendency to market concentration. Still, it may be too early to be sure of that conclusion. There has also been a spate of criticism from performers of the low streaming fees paid by services such as Spotify and Pandora: the New York Times reported (10-2-13)

a detailed account by one musician revealed that more than 1.5 million plays in Pandora had yielded $1,653; plays on Spotify earned 0.42 cents.

5. Is state intervention needed to co-ordinate the need for greater efficiency and for multi-territorial licensing?

The development of repertoire specific deals, PRS for Music and STIM's developing the ICE and the fact that CISAC has been behind GRD and other collaborative initiatives to form international digital metadata for use by all its member collecting societies and their members and licensees suggests that internal industry incentives may be sufficient to solve the problem of multi-territorial licensing at least by the 'large' societies. A number of joint licensing initiatives have developed collaboratively: SACEM, SGAE and SIAE issue joint licences for France, Spain and Italy and in the Nordic/Baltic model, eight countries offer licences for that region for music downloads (CISAC, 2013, pg. 13). These developments are part of the collaborative cooperation that has characterized the history of collective rights management.

It is widely acknowledged that EC decisions on the Santiago Agreements and the CISAC case held back multi-territorial licensing and led to greater complexity; however, it did not lead to competition. It is fairly clear that the UK's promotion of the Digital Copyright Hub was not based on a full understanding of the underlying economics of collective rights management (Towse, 2012). The typical stance of the UK government in this has been to wait and see how the market develops before acting and the current EC proposal on multi-territorial licensing claims only to provide a legal framework for it. Probably, the less intervention the better is the conclusion to be drawn here.

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