

## Status quo and perspectives of licensing synchronisation rights

Stephan Klingner & Julia Friedrich<sup>1</sup>

### Abstract

*The commercialisation of synchronisation rights has become an area of growing importance for music publishers and labels, since wide-ranging exploitation of musical works is needed nowadays to achieve a profitable level of business activity. The developments in the synchronisation rights area are closely linked to increased digitalisation. On the one hand, business processes can be optimised by using internet-based platforms or applying seamlessly digitalised workflows, yet on the other hand, both supply and demand of musical works is increasing, creating other challenges. This paper analyses the current state of the art in the sector by conducting market research as well as using various case studies. The goal was to capture current workflows, challenges and perspectives relating to the licensing of synchronisation rights.*

**Keywords:** synchronisation rights, licences, case study research, digitalisation

## 1 Introduction

At a time of declining revenues in the core business of record labels and music publishers, new, profitable distribution channels are vital to ensure the continued viability of the companies. In that regard, expanding

---

<sup>1</sup> **Stephan Klingner** is member of the "digital service systems" research group at the Institute for Applied Informatics (InfAI) in Leipzig, Germany. He leads various scientific projects in the area of business information systems and service engineering. The results of his scientific work are published in more than 50 conference proceedings, journal papers or book chapters. Mr. Klingner holds a PhD, a diploma in computer science and a master in media and computing. Besides his scientific work he is a web programming freelancer and an active musician with more than 600 played concerts in the last 12 years ([klingner@informatik.uni-leipzig.de](mailto:klingner@informatik.uni-leipzig.de)). **Julia Friedrich** holds a master's degree in religious studies and Indology. Since graduating, she has been working at the Institute for Applied Informatics (InfAI) in Leipzig, Germany, where she is part of the "digital service systems" research group. She focuses on questions of human-computer interaction. Scientific results dealing, for example, with knowledge management or motivational aspects for software usage were published in international journals and conference proceedings ([jfriedrich@informatik.uni-leipzig.de](mailto:jfriedrich@informatik.uni-leipzig.de)).

the exploitation options of a musical work is usually the choice to be made (Tschmuck 2016; Hughes et al. 2016). Whereas digital routes like downloading and streaming are of marginal financial benefit per transaction, the licensing of synchronisation rights for movies, TV or advertising is still an option for commercial exploitation, with opportunities for significant financial budgets even in the music business (Simmons 2015).

As most companies in the music business are individual or small entrepreneurs, having dedicated employees for specific operational tasks is rare. Therefore, efficient and effective access to all distribution channels and exploitation options is critical to overcome the disadvantages of being a non-specialised user as well as the challenges for individuals of having multiple areas of responsibilities (Thomson 2013).

This paper presents the results of research into the topic of synchronisation rights. It aims to both illustrate the current state of the art in music licencing as well as identify the challenges and needs from the user's perspective. Given the authors' scientific background we focus on IT-related subjects such as business processes, usability or functional requirements for information systems so additional topics such as the legal aspects were not of primary concern.

The rest of this paper is structured as follows. After a brief introduction outlining the scientific approach chosen, the various internet-based options for licensing synchronisation rights are then categorised and summarised in the subsequent section. This overview provides terminological clarification and clarity regarding the advantages, disadvantages and unique aspects of each available option. The next section incorporates the users' perspective and comprises the results of the interviews conducted with licensors and licensees. It focuses on identifying requirements and challenges that occur in the process of licensing synchronisation rights to determine the starting points for improving efficiency. Based on the results of the foregoing, the final section then proposes future perspectives for the licensing of synchronisation rights.

## 2 Methodology

Our research objective was to provide an up-to-date and complete as possible overview of the status and challenges within the field of synchronisation right licensing. In this paper, we aim to capture the typical usage scenarios from the different stakeholders including their

- approaches and preferences,
- primary requirements,
- and common challenges and pitfalls

when licensing synchronisation rights. Beyond the scope of this paper the resulting understanding of this sector can be used to stimulate innovations or to develop solutions targeting the gaps identified.

As the methodological foundation of this paper we employed a case study research (CSR) approach by conducting interviews. To aid a comparison of the results and to ensure completeness of the interviews, we used semi-structured questionnaires. Taking the two major roles in the licensing process into account, we created specific questionnaires for licensors and licensees. Although structure and content was mostly the same, the wording was adapted with a few role-specific questions added.

The sample included eight interviews with representatives of German and Austrian companies. The conversations took place between October and December 2016 and were conducted in person or by using internet-based conference tools. The duration of the interviews varied between 20 and 90 minutes. Since the market, comprising cinema, TV and advertising, is diverse, the perspectives of various stakeholders needed to be captured, so the business focus of the interviewees including marketing, (short) movies, audio books or brand management are listed in table 1.

	P1	P2	P3	P4	P5	P6	P7	P8
<b>Type of interviewee</b>	Synch manager	Owner	Owner	Owner	Owner	Owner	Synch manager	Owner
<b>Licensors/ licensees</b>	Licensor	Licensee	Licensee	Licensee	Licensee	Licensee	Licensor & Licensee	Licensee
<b>Number of employees</b>	6	1	16	4	2	1	>1000	6
<b>Business areas</b>	Publisher, label and synch	Production of short movies	Marketing	Music supervisor	Production of audio books	Music supervisor	Synch	Acoustic brand management

Table 1: Demographics of the cases

To ensure relevant as well as competent feedback, either owners or employees actively doing synch were interviewed. Mirroring the typical structures within the music industry, the majority of interviewees worked in small and medium-sized enterprises. The interviews were carried out by a team of two people and recorded digitally to allow for a comfortable analysis and unified evaluation by multiple people.

As a result of the design of the study a few limitations emerged. Due to the qualitative character of the study it is important to keep in mind that the result produced cannot be generalised so to allow for quantitative inferences further research should be conducted. Similarly, for a more detailed view of the unique aspects of the different groups of stakeholders in the synchronisation rights business, additional studies need to be carried out. Furthermore, the focus on German speaking participants impairs conclusions from a more global perspective. Especially varying legal restrictions or cultural preferences might influence the results in an international context.

A supplementary survey was conducted to examine the market for web-based platforms offering synchronisation rights. The goal was to assess the current state of the market of such platforms and to analyse their functionalities by linking with the interview findings. The survey encompassed fourteen different internationally operating platforms covering different licensing methods like dealboards, (major) platforms

or production libraries. Table 2 shows the distribution of the examined platforms in relation to their licensing methods. The platforms analysed were identified through an online search and complemented by platforms that were mentioned in the interviews. The results are presented in the second part of the paper.

Platform type	Major platform	Production library	Dealboard	Mixture of dealboard and production library
Number of examined platforms	3	2	2	2

Table 2: Distribution of platforms in accordance to platform type

### 3 Interviews

Interviews with eight licensors and licensees were conducted in the first part of the analysis. Due to the large variety of their business contexts (from licensing for low budget productions to international music copyright and synch management), the demands and wishes of the interviewees on licensing procedures were diverse. Overall, the interviewees wished for a more transparent and smooth process and as such each had clear ideas for potential optimisation and articulated starting points for improvements. An overview of the statements, classified into four categories, is given in fig. 1. Following this is a detailed explanation of the ideas and wishes of the interviewees, according to the categories.

process simplification	process transparency	features	communication
<ul style="list-style-type: none"> <li>• less administrative effort for registration with collecting society</li> <li>• downloading of licences</li> <li>• checklist for licence procedure</li> <li>• import/export of meta data</li> <li>• saving of search parameters</li> </ul>	<ul style="list-style-type: none"> <li>• status of licensing</li> <li>• clear licencing models, incl. rights, duties and pricing</li> <li>• prices for each track</li> <li>• key figures for licensors</li> </ul>	<ul style="list-style-type: none"> <li>• statistics</li> <li>• listing of new tracks</li> <li>• history of played tracks</li> <li>• search requests for parameters</li> <li>• identification/download/sending of moodsongs</li> <li>• sound-alikes</li> </ul>	<ul style="list-style-type: none"> <li>• direct communication channels for licensee and composer (compositional adjustments, pricing agreements for non-commercial projects)</li> </ul>

Figure 1: Demands and wishes on music licensing procedures

### **3.1 Process simplification**

Statements that dealt with the simplification of licensing procedures were summarized under the category of process simplification. Interview partners expressed their wishes for better handling of data that are already in use. As an example, time could be saved by simplifying the process of registration with the collecting society. The large administrative effort involved in completing registration sheets with pre-existing data is another barrier in licensing synchronisation rights that prevents quick registration and leads to frustration in further processing. Technical interfaces to import and export metadata between the information system of the licensor and a synch platform could be implemented to avoid unnecessary duplication of work within the licensing process. Additionally, support for the licensing process could extend to less experienced licensees for example by checklists and guidance through the complex music licensing procedures. Additionally, while most of the platforms already use data like search parameters and other licensee metadata to make customized recommendations based on playlists or user behaviour, the metadata collected could also be at the licensees' disposal. For example, saving of search parameters would be beneficial to speeding up repeating music searches.

### **3.2 Process transparency**

Next to the demands for process simplification, the interviewees expressed the wish for a greater process transparency. Whilst the general process of synchronisation right licensing was described as quick and simple, individualisation and changes to standard procedure often become time-consuming, so licensors desire more transparency on the status of the ongoing licensing processes. In the same way, straightforward clear communication of licensing models, including any legal restrictions, cost certainty as well as flexibility on musical adaptations, would ensure a swift processing and support licensees; these aspects are important especially for low budget productions. Another benefit for licensing would be an increased transparency between the participating actors. As an example, the collection and evaluation of key indicators for

licensors such as response time behaviour, completed deals or adherence to schedules, would enable licensees to choose licensors with a certain reliability or experience. Especially in critical situations this could support and accelerate decision-making processes.

### **3.3 Features**

Statements that expressed wishes for additional features were summarised in the third category. Licensors wanted statistics like the number of requests for each title or most requested tracks, achievement of shortlists etc. From these key figures, conclusions about the success of tracks or market trends can be drawn. Licensees on the other hand could also be supported by displaying recently added new tracks to the database as well as showing a history of earlier played tracks. The option to mark favourite tracks would be another possible benefit that could support music search. Furthermore, the possibility of saving and periodically executing a search request would allow for a presentation of new tracks on the platform matching the parameters defined by the licensee. By including the possibility to define license domains (e.g. independent movie production, game, VR), the search could be customised to the licensee's requirements. Another feature of relevance, especially for licensees, would be the platform-supported listing of sound-alikes or covers, in the same way as mood-songs could support the identification of customer requirements. The possibility to download tracks or share playlists would enable music supervisors or producers to assess the suitability of a track easily prior to licensing.

### **3.4 Communication**

The potential for optimisation was also seen in the context of communication, especially between licensees and composers. A common request is for adaptations of compositions or agreements for an alignment of music and film. In order to improve efficient communication, licensees wanted possibilities for direct dialogue between the music composer and the licensee. This as well as agreements on pricing within music licensing, especially for non-commercial purposes, could be simplified.

In summary, the usual procedure for licensing between experienced partners mostly runs smoothly, yet even minor deviations can cause delays and complicate the entire process; the weakest aspect of the process is communication. Besides a lack of transparency of the licensing conditions, difficulties in articulating requirements and ideas cause particular problems due to the highly subjective music descriptions. Interviewees described difficulties in the articulation of requirements and identification of matches. Tag based search is an option but has to be maintained well. If tags are pre-specified by platforms, they might not suffice for licensors. On the other hand, a tagging system without limitations leads to a lack of clarity. Therefore, innovative approaches for music search are needed in order to better handle the growing number of tracks without losing clarity and user-friendliness.

#### **4 Market analysis**

With pervasive digital distribution and commercialisation of music, the market has become global, resulting in an increasing supply but also intensified competition. This requires efficient workflows to remain profitable and to exploit the various commercialisation options at the same time. In support of that, numerous internet-based platforms offer musical works, trying to provide efficient and effective workflows. As already stated by the interviewees in the first part of this paper, the key challenges in that regard are a powerful, yet simple and fast process of licensing as well as effective search to match the specific demands of the licensees with the individual offers of the licensors. The following section presents the results of the second part of the research that focused on the analysis of the various available platforms.

Synchronisation right licensing platforms can be divided into three groups:

- *Major platforms* promote their own repertoire of, mainly well-known artists under exclusive contract with the platform owning label. As such, the platforms are not accessible for every licensor, meaning independent labels and publish-



ers do not have access. Major platforms operate actively through promoting and offering their repertoire, focusing on the requirements of a licensee, but also passively by providing platforms for systematic music search performed by the licensee itself. The target of major platforms are licensors or supervisors with high production budgets that search for high quality tracks composed by professional or renowned musicians. A high level of approximation between offer and demand is required. The systematic music search within a large pool of tracks is complex and expensive. Due to the high effort for licensing the number of synchronisation licenses is limited to a few high-volume projects.

- *Production Libraries* are agencies or platforms that promote music, specially composed for media productions. The repertoire of Production Libraries includes predominantly instrumental music of various genres and styles, mainly produced by semi-professional artists (licensor). Their main customers are licensees searching within a limited budget for music in their productions. Given the quality on offer, the lack of individuality and the low approximation level between demand and offer, the prices for licensors are relatively low. As a consequence, the profits for licensees are likewise limited.
- *Dealboards* provide a platform that match media professionals, who describe their requirements by publishing a project description, and artists that can pitch by offering music corresponding to the published requirements. The licensee gets pitches from licensors until he/she finds something suitable. Finally, the synchronisation rights are licensed usually manually. Even though the effort for active music research can be reduce on the licensee's part, the ap-

proach of dealboards results in more effort for the licensor. The process of licensing, starting with the identification of relevant projects through pitching up to final negotiation, is time-consuming and inefficient. Furthermore, there is a time lag between the publication of demands and receipt of offerings which is only acceptable for the licensee if there is no pressure of time in the production process.

Besides these groups of platforms, there are also hybrid platforms that combine various characteristics. They provide opportunities for both licensors that search for promoting opportunities in the field of synch licensing as well as for licensees to use the platforms for searching music or creating pitches. Due to the fact that such licensors are professional musicians, the quality of music is higher than it is the case with production libraries.

High-cost productions also have the option of commissioning composers to exclusively create music where the producer and artist become co-workers, with the composition of the music becoming part of the entire production process; as such there is no need for any support from the platforms or labels.

In the following, the detailed findings from the market analysis are presented with a particular focus on content specification, the music search approaches and the conditions and processes for licencing including customer support. This then leads to the challenges and perspectives on the future of synchronisation rights licensing.

#### **4.1 Portfolio specialisation**

Most of the platforms we analysed did not explicitly specialise, either for certain media formats (e.g. apps or games) or specific domains (e.g. short movies or audio books). Only a few Production Libraries described advertisement, film or apps as an area of expertise. Priorities in music genres or any kind of specialisation of the music pool content were also not provided by the platform owners. The exception to this were Major Platforms that use the platforms to exclusively promote their own catalogues and hence reflect the character of their portfolio. Generally, the

lack of portfolio specialisation of platforms complicates the licensee orientation and efficient music search. A clear communication of portfolio specialisation would benefit licensors from independent or non-mainstream music genres who are looking for suitable marketing channels for their music.

A clear communication of preferences as well as designating the significant parameters for a platform holder in choosing artists would facilitate a selective, yet transparent application process for licensors. Moreover, licensees could profit from a clearer specialisation to support their orientation in the growing range of available synchronisation licenses. In the current situation, whether the music offered matches the licensee's personal preferences can only be determined through time-consuming music research.

An overview of the specialisation of all three platform types is given in table 3.

		Major Platform	Production Library	Dealboard
Portfolio	Specialisation media format	no	mixed	no
	Prioritised domains	no	mixed	no
	Specialisation pool content	no	no	-

Table 3: Portfolio specialisation of Major Platforms, Production Libraries and Dealboards

#### 4.2 Music search and download

Without any orientation by portfolio specialisation, the search for compositions matching the needs of the licensee, becomes an important task. Even though most of the platforms offer algorithmic recommendations of music immediately after the first clicks on any of the listed categories, the quantity and variety of tracks remains huge. Furthermore, compliance with the licensees' requirements remains low in this approach so an effective and efficient music search requires a precise description of the music.

The Major Platforms administer a large number of tracks and support music search by customers. Accordingly, an efficient music search and well-structured categorisation of content is vital to allow for a simple and fast identification of prospective licensing options. Keywords and categories like artist, title, genre, year but also mood, language and tempo of the music can be defined by the user in order to filter the music pool. Commonly, a refined search can be used for further filtering of the first search results. One platform provided the additional option of defining a minimum number of matches of search criteria (match all, match one or more, match across). This way users with only a vague idea of their needs are not forced to limit their search scope. Well-structured menus and a search history offered by some platforms are further aspects of a user-friendly application. Not every platform provides masters of all their tracks for direct listening, which complicates the selection process, although most platforms provide a download function for registered users. Sharing of playlists is not standard practice on the Major Platforms, nevertheless some provide this option. Sharable playlists enable licensees to collect tracks that might suit the needs of a project to share with co-workers or clients before starting the licensing process.

In the case of Production Libraries, the functionalities for music search and browsing through the music pool are limited. Search functionalities rarely exceed the fields of artist, title and album. Refined search is limited to drop-down menus or keyword clouds that hold categories like genre, mood, style, instrument or topic, but do not always provide good quality results. The missing functionality for a keyword search and the poor matching of search criteria and results of some platforms evidence flaws in music description. Some platforms offer tagging functionalities, which, however, do not always lead to appropriate results. The music within Production Libraries can be played directly and some platforms also provide the opportunity to create and share playlists. Additionally, most of the platforms examined offer a download functionality.

Dealboards offer brokerage services for licensors and licensees by providing a platform that supports the processes of pitching, choosing

and licensing of music. Every transaction refers to a specific licensee request, which means that dealboards do not administer a music pool and do not have exclusive contracts with licensors. Accordingly, they generally do not provide the opportunity for autonomous music search even though licensors can upload compositions describing their style. Nevertheless, the music on offer can be played directly and playlists can be shared. Downloading music prior to licensing is not always possible so that tracks on offer can only be played by the licensee on the platform.

The variety of approaches for music search as well as differences in download and playlist functionalities is shown in table 4.

		Major Platform	Production Library	Dealboard
Music search	Pre-sorting according to selectable categories	yes	yes	pitch-related
	Refine search / additional filter (e.g. genre, moods, vocals, instruments)	yes	yes	-
	Direct search (title, artist, album)	yes	mixed	-
	Open keyword search	mixed	mixed	-
Download	Prior license download	with log-in	mixed	mixed
Playlist	Playlists creatable	mixed	mixed	yes
	Playlists sharable	mixed	mixed	yes

Table 4: Aspects of music search, download and playlist functionalities in music licensing platforms

### 4.3 Licensing process and conditions

Approaches to licensing synchronisation rights vary considerably (table 5). In the case of the *Major Platforms*, the licensee can perform the mu-

music search without much advance effort and the creation of an account or payment of other charges is not necessary for music search. However, the creation of an account becomes mandatory for the purpose of licensing. All the Major Platforms examined here defined certain requirements for the registration, which is mostly limited to the various kinds of creative producers. Accounts are thus confirmed manually without charging licensees any kind of subscription fee. With a confirmed account, licensees can submit license request forms. Details of the license, e.g. fees or conditions, are not transparent prior to the licensing request. More transparency could be enabled through direct communication of the license conditions prior to the request. For any kind of consulting, the Major Platforms provide personal customer support via phone or digital communication channels. Due to the fact that licensors have an exclusive contract with platform holders, the conditions for the licensors are not transparent.

Similarly, the Production Libraries also do not charge subscriptions fees. The only exception to this was for a platform that offered a flat rate agreement. In this case, the subscription fee for licensees included licences for the entire pool of music. In general, music search within Production Libraries can be performed without any registration. As opposed to the Major Platforms, most Production Libraries provide the opportunity for speedy licensing, meaning that at least parts of the catalogue are classified in advance and all restrictions and conditions for licensing are set. On that basis prices can be determined within only a few clicks. The fees vary according to the context of the intended usage. In case of pre-cleared synchronisation licenses, licensees profit from quick transactions and clear conditions. On the other hand, Production Libraries do not provide individual support for their customers. Besides agreements on conditions for the split of licence fees, some Production Libraries additionally charge licensors with fees for tagging or private sales.

In the case of Dealboards, licensees initiate the licensing process as they publish projects describing their requirements. Licensors then have to identify and pitch their work to the relevant projects. Accordingly, all

platform users need to create an account that includes their profile, skills, previous works or short bios. For a better presentation, licensees can upload and store representative music in their own playlist which might support the licensors decision process. Due to the fact that there is no music pool, Dealboards do not offer speedy licensing. Conditions for the synchronisation of licensing rights are pitch-related and need to be negotiated individually. Depending on the individual pricing model of the platforms, different kinds of fees are levied. Commission fees are common for licensors. But there also exist platforms that charge licensees with subscription or connection fees. In case of one Dealboard, licensees have to pay the platform per pitched project.

Licensing parameters differ between all platforms. Media type and territory seem obligatory for all except for flat rate agreements. Exclusivity, theme song, term, project type and project budget are also key parameters in influencing the price. With the exception of two Production Libraries, the conditions for licensors are not transparent but in the case of Dealboards, the licensing conditions are published within the project and result from negotiations.

		Major Platform	Production Library	Dealboard
Licensing process	Pre-cleared licenses	mixed	yes	-
	Free access on licensing conditions	no	mixed	pitch-related
	Individual consulting	yes	mixed	yes
	Negotiation with licensor	no	?	yes
Pricing conditions	Subscription fees for licensees	no	no	mixed
	Commission fees for licensors	-	no	mixed
	Transparent pricing/pricing range	no	yes	pitch-related

Table 5: Approaches and conditions for licensing of synchronisation rights

#### **4.4 Results from market analysis**

The analysis in the preceding sections revealed certain general weaknesses that are shared by every platform type. Overall, most platforms lack a structured and clear presentation of the specialisations within their portfolio. Dealboards and Production Libraries focus on the presentation of popular licensees and successful completed projects, while artists are rarely presented, although this differs from the major platforms that work with and promote famous licensors exclusively. For independent labels this means, even if they manage to get into a pool of a platform, their options for representation and marketing are limited. If the description of music is insufficient and music search is limited to basic categories like artists, songs or albums, unknown artists and their compositions are hardly visible. Where only keywords can be used for research, stereotypes are used to articulate requirements, meaning independent music that differs from the mainstream is hard to find.

### **5 Conclusion and perspectives**

Based on the interviews, in the field of synchronisation rights the profound impact of digitalisation can be observed. On the one hand, there is extensive IT-support making the production of music easier and multiple digital platforms simplifying market access, which leads to an increasing and diverse supply of music. On the other hand, as stated in the interviews, there is a high and still growing demand for music due to the intense use of multimedia content in various channels. This leads to the change from previously rarer, but highly priced licensing to more frequent, but financially limited transactions.

Two major challenges emerge from this paradigm shift to a greater diversification and more "long tail" transactions, analogous to the core music industry in the context of downloading and streaming. Firstly, as per transaction budgets decline, it is essential to have highly efficient business processes to stay profitable and this can be achieved by increasing automation and providing digital workflows as complete as possible. This challenge can be addressed by the platforms, especially in



the context of licence agreements. In that regard, the solution may vary between providing functions supporting the conclusion of complex contracts and the simplification of agreements by generalisation. The latter can be observed in the context of stock audio platforms.

Secondly, the growing supply and diversity of musical works available for licencing demands effective search algorithms to identify the musical work exactly suited to the needs of the particular case. There are various efforts to create innovative and powerful search approaches complementing conventional search criteria like genre, tags or "harder" characteristics like bpm. Examples ranging from supporting semantic queries (Dittmar et al. 2012) to an emotion-based music description as in a current research project of the authors. The main advantage of such developments is the alignment of the works' description with the common vocabulary of the licensees. The assumption is, that licensees tend to have difficulties with the common music focused descriptions. Thus, new approaches should support the emotional and soft factors they preferably describe music with. By this means, a more efficient search could be implemented.

An additional challenge emerges from the growing quantity and diversity of the forms of exploitation of musical works. In the past, sales were dominated by movies and TV. The current market is increasingly diverse including YouTube, social media and games. A constant growth of available forms of exploitation can be assumed, adding additional complexity for licence agreements.

Keeping that in mind it becomes vital, as stated multiple times in the interviews, to adapt the so-called "anachronistic" model of collecting societies to the described developments. The growth in diversity of possible usages of a musical work increases the challenges to thorough control and to fair and correct distribution of royalties. Current advocates of the concept of blockchains as well as smart contracts see those as possible answers to these challenges (O'Dair et al. 2016), but as currently developed it remains unclear whether these are appropriate solutions, at least in regard to performance and latency. As the interviews indicate, the users' priorities are a legal and financial certainty, even for (future)

costs or new ways of exploitation and an easy and swift licensing procedure. How these, in part contradictory, goals are achieved is not relevant in most cases.

## 6 Acknowledgements

Parts of the work were funded by grants of the German Ministry of Education and Research in the context of the joint research project "SyncMatch" (01IS16013C) under the supervision of the PT-DLR.

## 7 References

- Dittmar, C., Mercado, P., Grossmann, H. & Cano, E. (2012) "Towards lyrics spotting in the SyncGlobal project", conference proceedings, IEEE 28-30 May 2012, pp. 1–6.
- Hughes, D., Evans, M., Morrow, G. & Keith, S. (2016) *The New Music Industries*, Palgrave Macmillan, London.
- O'Dair, M., Beaven, Z., Neilson, D. & Osborne, R., Pacifico, Paul (2016) *Music on the blockchain*, report no. 1, July 2016, University Middlesex, Middlesex.
- Simmons, R. (2015) "How to Navigate Music Licensing and Make Money", in *Audio Branding Yearbook 2014/2015*, eds. K. Bronner, C. Ringe & R. Hirt, Nomos, Baden-Baden, pp. 73–92.
- Thomson, K., (2013) "Roles, Revenue, and Responsibilities", *Work and Occupations*, vol. 40, no. 4, pp. 514–525.
- Tschmuck, P., (2016) "From record selling to cultural entrepreneurship: the music economy in the digital paradigm shift", in *Business innovation and disruption in the music industry*, eds. P. Wikström & R. DeFillippi, Edward Elgar Publishing, Cheltenham, UK, pp. 13–23.