

Journal of the Music & Entertainment Industry Educators Association

Volume 11, Number 1 (2011)

Bruce Ronkin, Editor Northeastern University

Published with Support from



Music Industry Administration in the Digital Age – A brief description of the evolution of current industry practices and some of the challenges to come:

Will our college graduates possess the necessary skills to enter this marketplace?

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Introduction

The conversation regarding digital media and the transformation that has occurred in the music industry has been the subject of many articles over the past decade. While it is the hope of the industry that the digital formats and sources will continue to increase and fill the void of the lost physical format sales, it remains a fact that the overall income from the sale of music has contracted. The value of the global recorded music industry has dropped 31% over the years 2004-2010.

What is not often discussed is the impact that this event, most notably the release of iTunes 1.0 in January of 2001, has had upon the administration departments for both record labels and music publishers.² While income has decreased, the amount of licensing and resulting data that must be managed has grown exponentially. Employees in these departments are now required to possess basic music licensing and accounting knowledge as well as advanced data management and analysis skills.

This paper provides an overview of some of the history of, and changes in, industry practices with respect to the royalty administration of copyrights contained on both physical and digital products and the administrative problems associated with the rapid growth of new formats such as streaming, tethered downloads, and subscription services. Each of these new business models represents a radical change in the way music is monetized. Are music business education programs adequately preparing the future entrepreneurs and innovators in this industry?

Student learning outcomes in topics such as music publishing and record label management must be updated in order to include relevant computer-based projects designed to promote the development of problemsolving and critical thinking skills. An introduction to this combination of abilities will better prepare the student interested in seeking employment and/or entrepreneurship in the growing and constantly developing area of online royalty administration and data management. According to David Rezner, Chairman/CEO of Universal Music Publishing Group, "Long term, this [online royalty administration] is probably going to be the future of the music industry."³

A Little History

In order to fully grasp the breadth of the data problem facing the record labels and music publishers, it is necessary to understand the basics of how the royalty systems have been constructed. Most systems, whether purchased or designed as a proprietary system consist of a relational database with functionalities built in to handle such tasks as reporting, tracking, and calculation. Since the record labels were the first business entities to be faced with the explosion of data, we will focus on that system. The Michael Jackson album *Thriller* is a good example due to its relative simplicity with respect to song ownership. The following is a description of that project along with the process of payment to all interested parties hereinafter referred to as "payees."

Step 1

The title of the project is entered into the system and assigned a product number. This project was released as Epic Records product number EK-38112. At this point, the product number becomes the basis of payment, with all other "contracts" such as artist and producer agreements, mechanical licenses, etc. attached. Most systems could also allow for different configurations that existed at that time such as cassettes, compact discs, and vinyl.

Step 2

There are nine tracks associated with this title. (Product information collected from allmusic.com⁴ and song ownership information from Songfile.)⁵

1) Wanna Be Startin' Somethin' (Jackson)	One Publisher
2) Baby Be Mine (Temperton)	One Publisher
3) The Girl Is Mine (Jackson)	One Publisher
4) Thriller (Temperton)	One Publisher
5) Beat It (Jackson)	One Publisher
6) Billie Jean (Jackson)	One Publisher
7) Human Nature (Bettis/Porcaro)	Two Publishers
8) P.Y.T. (Pretty Young Thing)	Two Publishers
(Ingram/Jones)	
9) The Lady In My Life (Temperton)	One Publisher

Step 3

Any additional contracts such as artist and producer agreements would also be attached to this number along with the retail or wholesale price and the percentage to be calculated. Obviously, details regarding artist and producer payments are confidential, so for our example, we will assume one artist agreement and one producer agreement.

Once all of the information has been entered, the next step is to calculate the sales of the product for the calendar quarter. Since we are using the "pre-digital" method for this historical example, the calculation of sales is fairly simple. Sales information would be collected from the various warehouses and communicated to the royalty department. Again, because this is a simplified example, payment issues and complications such as reserves against returns, escalations, and free goods will not be addressed. All of those calculations would likely be handled by the royalty system and would be entered with the agreement to which those items pertained. The primary focus here is on the payees associated with the product and not the rates and actual payments involved.

Figure 1 is a simple visual example of the flow of information through a royalty system, using our example album. As you can see, sales data flows down through the attached contracts and ultimately produces a line item on a statement payable to each payee. For those payees listed on multiple tracks, each track is treated separately but added to the same statement. In our example, six music publishers would receive a statement, along with the required statements for the artist and producer(s).

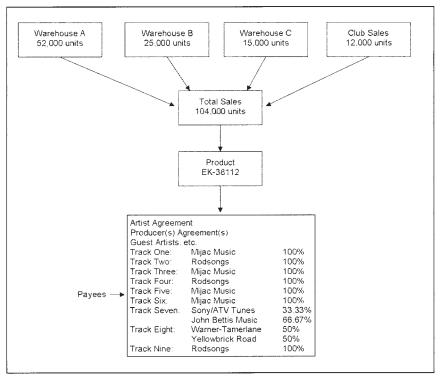


Figure 1. Information flow through a royalty system (Michael Jackson, *Thriller*).

Enter the Digital Era

The calculation of payments used to be relatively straightforward when music was sold in the form of records, cassettes or CDs. However, digital downloads have vastly increased the complexity of royalty processing. The old systems, many of which are still in use today with modifications, were not designed to deal with the complexities to come (Bob Kohn).⁷

If the digital transformation had only provided for digital sales of full albums, the accounting processes for record labels would not have required much alteration. The same flow of royalty information would have remained, with the exception of adding to the sources of sales and therefore increasing the number of outlets reporting. The overall volume of sales data would have presented some companies with systems capacity issues, but the structure of the system could have remained largely intact.

However, iTunes provided consumers with the ability to choose and purchase only those tracks they wanted. Within a very short amount of time, record labels were faced with, for example, trying to account for only track four or track five. Given the structure of the system previously described, it is impossible to assign and process sales data for an individual track. Record labels were suddenly confronted with the positive problem of many new outlets through which to legally sell product and actually be paid for it, but with a royalty system that would require significant restructuring in order to account for it correctly.

Data Entry, Data Entry, Data Entry

Again, back to Figure 1. This product, once completed and ready for sale, would not have taken long for an employee to enter along with licenses, etc. However, only physical sales can be tracked using the product number assigned by the record label. Digital downloads for the full album are tracked using the UPC code (Universal Product Code). In order to properly account for this new form of distribution, a duplicate entry in the royalty system would have been entered, but this time using the UPC code as the product identifier and new mechanical licenses for digital downloads added to each track. The real problem came in accounting for digital singles.

In order to correctly track, account for, and pay all of the payees assigned to a particular track, the track itself would need to be entered into the royalty system with a product number unique to that particular recording. In response to this need for permanent, international identification of a single sound recording (and music videos) the International Organization for Standardization (ISO) helped to develop the International Standard Recording Code, or ISRC. The International Federation of the Phonographic Industry (IFPI) has recommended since 1988 that all of its members adopt the international code as a means of accurate identification of sound recordings and short form music videos.⁸

Record labels in the United States adopted this code and began using that unique identifier as the product number in their royalty systems to identify each single track as well as different versions of that particular

track. In order to prepare *Thriller* each of the nine tracks would need to be entered as an individual product with a digital download license allowing for the sale of that configuration. Just to summarize, in order to prepare a new product for sale in both physical and digital formats, the following represents a normal progression of events:

- Product is entered with the record company designation. Mechanical licenses and any other contractual agreements such as those for artists and producers are connected for calculation.
- 2. An additional entry of the entire product is completed using the UPC code as the identifier. Additional mechanical licenses (for full product digital downloads) are connected as well as the artist and producer agreements. This product likely has a different retail or wholesale price, requiring some adjustments in order to adhere to contractual obligations.
- 3. All nine tracks would be entered as individual products. Yet another mechanical license (for single digital downloads) would be connected as well as the artist and producer agreements according to their contractual obligations regarding the sale of singles.

It should be noted that the Harry Fox Agency requires three types of licenses for this product. One for the physical format(s), one for full product digital downloads (DA), and one for the single digital downloads (DS). As one can see, if the digital market had stopped developing at this point, with the sales of digital albums and singles, the mountain of new paperwork facing the record labels would have been significant already. For nine tracks, the label is facing an absolute minimum of 27 mechanical (and digital download) licenses along with the artist and producer agreement nuances. As stated previously, this particular project was a relatively simple example.

To further complicate the process, in many genres, particularly hiphop, R&B, and gospel, music publishing royalty splits have become increasingly complex. In order to research the changes in this particular area, a list was compiled of the top-selling albums using the *Billboard* Top 200 chart for every year beginning with 1978 and ending with the most

recent top seller in 2010 (see Table 1).¹⁰ The contents of each album were then determined, focusing on the track listing and song ownership. Finally, each song included on the album was researched using the Harry Fox Agency database, Songfile¹¹ and the various performance rights organization databases.¹² What is represented in the column marked "# of payees" is a total of music publishers (and in some cases, sample owners) listed as having an interest in the song, therefore requiring a separate mechanical and/or digital download license. As one can see, some of the most recent projects have an extraordinary number of payees, with some having as many as eleven for some individual tracks.

If the record label is in compliance with the standard licensing procedures for physical product, full, and single digital downloads, the number of required licenses is multiplied by three for each payee.

Billboard Number One Albums				
Year	Title	Artist	Num- ber of Tracks	Number of Payees**
1978	Saturday Night Fever ST	Bee Gees/Various	17	31
1979	52nd Street	Billy Joel	9	9
1980	The Wall (2 disc set)	Pink Floyd	26	29
1981	Hi Infidelity	REO Speedwagon	10	11
1982	Asia	Asia	9	34
1983	Thriller	Michael Jackson	9	11
1984	Thriller	Michael Jackson	9	11
1985	Born in the U.S.A.	Bruce Springsteen	12	12
1986	Whitney Houston	Whitney Houston	10	24
1987	Slippery When Wet	Bon Jovi	10	41
1988	Faith	George Michael	11	12
1989	Don't Be Cruel	Bobby Brown	11	40
1990	Rhythm Nation 1814	Janet Jackson	20	24
1991	Mariah Carey	Mariah Carey	11	34
1992	Ropin' The Wind	Garth Brooks	10	22
1993	The Bodyguard ST	Houston/Various	12	21

1994	The Sign	Ace of Base	12	16
1995	Cracked Rear View	Hootie and the Blowfish	12	12
1996	Jagged Little Pill	Alanis Morissette	13	39
1997	Spice	Spice Girls	10	31
1998	Titanic ST		n/a	n/a
1999	Millennium	Backstreet Boys	12	25
2000	No Strings Attached	*NSYNC	12	33
2001	1	The Beatles	27	28
2002	The Eminem Show	Eminem	16	68
2003	Get Rich or Die Tryin'	50 Cent	18	69
2004	Confessions	Usher	15	107
2005	The Massacre	50 Cent	21	100
2006	Some Hearts	Carrie Underwood	14	48
2007	Daughtry	Daughtry	12	43
2008	As I Am	Alicia Keys	14	69
2009	Fearless	Taylor Swift	17	47
2010	I Dreamed a Dream	Susan Boyle	9	17
**Music Publisher payees only. Does not include any artist/producer/master use payees.				
Multiple tracks per music publisher were not combined.				

Table 1. Number One albums 1978-2010: licensing analysis.

New Technologies Bring New Challenges

Music consumers know the digital revolution did not end with the simple download of a digital single. Many different products, all with various royalty rates, have exploded into the marketplace. In 2011, only one year after the Copyright Royalty Board set rates for subscription downloads and interactive streaming, digital licensing and payment accounting is still proving to be a trying task in the marketplace.¹³ The exponential growth in digital commerce expected during the next few years will challenge many companies and organizations that may have insufficient personnel to process the information, inadequate software, or both.¹⁴ Given the description of a typical royalty system included herein, it is easy to comprehend the magnitude of the challenge the music industry faces. This challenge would not be as difficult to overcome if the music industry as a whole was dealing with an increase in revenue, and therefore able to fund increases in necessary personnel, research and development of software systems, and costly increases in overall infrastructure. This is not the case. Following are some key statistics recently released by the IFPI in its 2011 Digital Music Report.¹⁵

13 Million	tracks licensed by record companies to digital music
	services
400+	licensed digital music services worldwide
US\$4.6 billion	trade value of the digital music market worldwide
6%	growth of global digital music revenues in 2010
29%	proportion of record companies' global revenues from
	digital channels
1000%+	the increase in the value of the digital music market
	2004-2010
-31%	the decline in the value of the global music industry
	2004-2010

Clearly the growth of the digital music market is a very positive sign for the music industry. However, the addition of so many digital music services in a relatively short amount of time has created an even larger problem that has just recently become the focus of music industry executives. According to Steve Grady, co-founder and President of RoyaltyShare, "Most digital music services are just making [digital distribution] work. They're not necessarily putting a ton of time into how to make it easier for labels and publishers." As a result, there is a tremendous variation in the way the services have been identifying and reporting streams, permanent downloads, portable temporary downloads, ringtones, ringbacks, and other uses. Identifying information like ISRC codes, UPC codes, song titles, and publisher names is included in some reports and not in others. There is no level of confidence today that there will be a consistent format soon on how that information will be reported.

Rich Conlon, Broadcast Music, Inc. Vice President of New Media and Strategic Development has suggested a centralized global database containing an industry-wide song registry that has one code for each composition. This would eliminate confusion over what license is being sought in instances when many songs share the same title.¹⁹ This is a good idea,

but many business entities have spent millions of dollars and many years developing their own song registries and databases. Maurice Russell, Vice President of Licensing, Collections, and Business Affairs at the Harry Fox Agency stated, "Everyone focuses on the incremental revenue, but no one is focusing on the incremental costs associated with paying out that revenue. The resources to build the infrastructure to handle all the transactions are huge."²⁰

The Road Ahead

Through my continued work as a consultant in the areas of music publishing administration and record label royalty processing, I have seen firsthand the slow progress of royalty reporting. Many independent record labels are still struggling to make the software or processing changes required to simply report the sale of a single digital download. Monthly sales reports from digital service providers (DSP)²¹ contain many thousands of lines of data for even the smallest of record labels. Of course, the volume of sales data processed by the record labels and digital services has translated to a massive increase in royalty information transmitted to their payees.

As a music publisher, just last month I received my first "micro penny" report from the Harry Fox Agency representing three months of earnings from the streaming of client song catalogs on the Rhapsody²² service. The royalty amounted to just over \$40, but the statement contained 4,116 line items, 62% of which totaled less than one penny. After two hours of number crunching in an excel spreadsheet, the statement was successfully processed to the point of being able to account to the sixteen clients that received a very small amount of earnings. Clearly, this was a frustrating experience and one that will surely be repeated as statements from other services such as Napster, Slacker, and Listen.com begin to arrive. With an industry standard administration fee of 20% of the gross earnings, those two hours of work earned my company approximately \$8. This business model will not work in the new music industry brought about by the digitization of music and the resulting new revenue streams. In August of 2008, Billboard published an article by Antony Bruno entitled, "The Other Digital Revolution." This "other" revolution was described as the "digitization of back-office administrative functions," referring to the many efforts by large music publishers and agencies to digitize sales reports and offer online web portals for clients and payees by which statements can be downloaded, analyzed, and reported.²³

Now let us return to the question posed in the introduction, "Are music business education programs adequately preparing the future entrepreneurs and innovators in this industry?" As an educator, my primary focus is on the topics of music publishing and music publishing administration. In the past, the class Music Publishing consisted of a survey approach to the basics of song ownership, contracts, acquisitions, and the various licenses needed in order to participate in the many revenue sources available such as mechanical licensing, print, synchronization, and performance. As the digital landscape began to change, the need to add topics to this particular class became evident. But what areas could be emphasized in order to better prepare the student for the marketplace they are expecting to enter? Clearly the student needs to possess basic knowledge of the income sources, both historical and future, as well some knowledge of how the administrative process has been structured and how it is changing—not unlike what has been discussed previously in this paper.

A recent conversation with an executive of a major music publishing company was enlightening. In the conversation, I asked about the background of a new employee in the royalty tracking department because I was under the impression that he had recently relocated for this position and was not previously employed in the music industry. The executive stated, "I can teach him music publishing...what I really needed was someone that could analyze and construct reports from large data files in order to help the IT department with the design of the new royalty system." That conversation provided the idea to visit various human resources web sites of music industry related companies and analyze the job descriptions for what would be considered entry and mid-level positions. What was found was interesting.

The following are excerpts from official job postings for major record labels and music publishing companies (see Figures 2, 3, and 4). Please note: wording directly related to an individual company has been redacted.²⁴

It should be noted that only one job description mentions a Bachelors Degree in Music Business, Technology, or related field. The emphasis is clearly on computer skills, data management, reporting, auditing and analysis.

Excerpts from Job Description 1: Department: Digital Sales Reporting (label)

Duties:

Working with new digital partners to set up sales files to process in royalty systems

Overseeing the processing of all digital sales files

Working with partners on correcting errors in files

Ensure new products process correctly in systems

Propose enhancements to current systems and work with IT to implement reports

Update digital sales reporting schedules for the business

Help to investigate discrepancies between payments and sales processed Digital Audit Projects

Liaison between company reporting and third-party auditors

Requirements: Essential

Degree qualified (business, accounting, finance) or equivalent

3 years of accounting, business, and/or finance experience

High proficiency in Excel and Access; proficiency in Outlook, Word, PowerPoint

Comfortable with large file and data volumes

Aptitude for financial systems

High attention to detail

Strong analytical skills, ability to review processes and make (proactive) recommendations Strong verbal and written communication skills

Requirements: Desirable

Experience using SAP (systems, applications and products), Lawson financials, JDE

Experience in and knowledge of the entertainment/music industry

Familiar with digital music products

Figure 2. Job description 1.

Excerpts from Job Description 2: Department: Income Tracking (publisher)

Duties:

Assist Income Tracking Analysts with license tracking reports

Work with Licensing department to help ensure accurate license entry in the US and Canada Maintain Major labels' quarterly digital receipts summary

Assist with managing tracking resources, i.e. SoundScan and RingScan sales figures

Assist in the review of computer systems, reporting errors and any maintenance issues

Requirements: Essential

Ability to maintain a professional and positive attitude while working with multiple departments

Ability to manage multiple tasks while prioritizing and meeting various deadlines

Highly organized and detail oriented

Excellent verbal and written communication skills

Strong analytical ability

High proficiency of various computer applications such as MS Excel and MS Access, with the ability to quickly learn programs that work with large volumes of data

Requirements: Desirable

At least one year of office administration experience

Figure 3. Job description 2.

Excerpts from Job Description 3: Department: Royalty Processing (Agent)

Duties:

Fully process assigned royalty accounts

Assist in input, data preparation, exceptions matching and processing of electronic royalty accounts

Convert paper-based royalty accounts to electronic forms via scanning and other available techniques

Assist in user group testing of royalty systems

Requirements: Essential

Bachelors Degree in Music Business, Technology or related field

2 + years of Royalty/Music Business or related work experience

Computer literacy and familiarity with the processing of electronic data; this includes: Microsoft Excel, Access, and scanning (OCR), as well as the ability to quickly gain expertise with new systems processes and software

General understanding of various data files, data representation (flat files, CSV, PDF) and simple algorithms

Must be proficient in Microsoft Excel skills including but not limited to: data fill, sorting and writing simple formulas

Ability to effectively use skills with algebra, electronic data analysis and accounting to assess errors

Analytical and problem solving, abilities, data pattern recognition and analysis Strong written and verbal communication skills

Knowledge of royalty rates as well as publisher ownership agreements and splits Excellent research and electronic search skills

Figure 4. Job description 3. Note: Job postings accessed May 2011 from the following web listings: http://www.simplyhired.com (search: Sony/ATV Music Publishing), http://www.harryfox.com/public/jobs/, and http://www.emimusic.com/about/careers/.

Conclusion

With the realization that music business programs at the university level are not housed within computer science departments, we are faced with a problem. In order to fully provide our graduates with the skills needed to compete in the job market in which they will enter, we must begin to introduce students to hands-on, problem-based experiential learning projects having to do with data processing and analysis. This will have at least two benefits. One, it will provide students with an introduction to the process by which music publishers and record labels receive and distribute earnings, and two, it will better prepare students interested in internships or careers in these areas

Endnotes

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- 7. "Company Helps Calculate Complex Royalties for Digital Music Sales," *The Paramus Post.com*, August 23, 2007, http://www.paramuspost.com/article.php/20070824232135356.
- 8. The ISRC (International Standard Recording Code) is the international identification system for sound recordings and music video recordings. Each ISRC is a unique and permanent identifier for a specific recording, independent of the format on which it appears (CD, audio file, etc.) or the rights holders involved. Only one ISRC should be issued to a track, and an ISRC can never represent more than one unique recording. ISRCs are widely used in digital commerce by download sites and collecting societies. An ISRC can also be permanently encoded into a product as its digital fingerprint. Encoded ISRC provide the means to automatically identify recordings for royalty payments, http://www.usisrc.org/about/constructing with code.html.
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- 24. http://www.applyhr.com, accessed May 27, 2011.



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Professionally, she has worked with several music publishing companies representing songs and songwriters from country music and Contemporary Christian music. Throughout her career, she has represented the songs of writers including Alan Jackson, Amy Grant, Keith Urban, and Steven Dale Jones. The Dallas native began her undergraduate studies at Baylor University as a piano and music education major, but transferred to Belmont University to complete her Bachelor of Business Administration degree majoring in the Music Industry. She earned a master's in adult education and distance learning from the University of Phoenix and is a member of the Leadership Music class of 2011.