Blockchain in the Caribbean music industry

Helping Caribbean musicians monetize their talent

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The problem we addressed...

• Musicians are underpaid because of high transaction costs, and complex red-tape.

• The intermediaries in the music industry exploit copyright licenses they negotiate with musicians under a monopolistic position (Copyrights Processing Entities, Collective Rights organizations, Performing Rights Organizations).

• Effective copyrights usage is expensive: it requires knowledge and expertise.

• IP offices in the Caribbean: understaffed, overburdened, underfunded.
Music/Film monetization between 1890-1999

• For the first time in history creators could store their art in a physical object other than paintings or sculptures (i.e. records, films)

• Institutions evolved around the objective of turning art into physical objects and deliver them to whoever wanted them.
Music Industry Today
Complex web of connections between centralized databases

Composer

Assignment of musical-works copyright

Publisher

Reproduction license

BMI; ASCAP; SESAC

Performance license

Harry Fox Agency

Subpublishing license

Performer

Syncroization license

Blanket licenses

 Assignment of sound recording copyright

Radio or TV Station

Mechanical license

Restaurant

Sound Exchange

Webcaster

Record Company

"Indies"

payola

Sheet Music Printer

Foreign Subpublisher

Movie Studio

Record Company
Then streaming arrived in the 1990s...

**LESS MUSIC IS PURCHASED—AND MORE PURCHASES ARE DIGITAL**

![Chart showing consumer spending on music by format from 1991 to 2012.](chart.png)

- **Vinyl**
- **CDs**
- **Cassettes**
- **Digital**

<table>
<thead>
<tr>
<th>Year</th>
<th>Vinyl</th>
<th>CDs</th>
<th>Cassettes</th>
<th>Digital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>$13.7B</td>
<td>$12.5B</td>
<td>$17.0B</td>
<td>$12.2B</td>
</tr>
<tr>
<td>1994</td>
<td>$13.2B</td>
<td>$13.0B</td>
<td>$15.8B</td>
<td>$12.4B</td>
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<tr>
<td>1997</td>
<td>$12.8B</td>
<td>$13.5B</td>
<td>$15.6B</td>
<td>$13.0B</td>
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<tr>
<td>2000</td>
<td>$12.5B</td>
<td>$13.8B</td>
<td>$15.3B</td>
<td>$13.6B</td>
</tr>
<tr>
<td>2003</td>
<td>$12.2B</td>
<td>$14.0B</td>
<td>$15.0B</td>
<td>$14.2B</td>
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<tr>
<td>2006</td>
<td>$11.9B</td>
<td>$14.3B</td>
<td>$14.7B</td>
<td>$14.8B</td>
</tr>
<tr>
<td>2012</td>
<td>$11.7B</td>
<td>$14.5B</td>
<td>$14.4B</td>
<td>$15.5B</td>
</tr>
</tbody>
</table>
Monetization business models collapsed for everyone, artists included.

Creators’ income plummeted
BMI breaks a billion-dollar record

Perhaps it’s time for the “B” in BMI to stand for “billion”—as in $1 billion in annual revenue.

The music agency, whose full name is Broadcast Music Inc., announced Thursday that it set an industry record by raking in $1.015 billion over the year ending June 30. That’s BMI’s highest yearly revenue ever, and it squeaks by the $1.001 billion reported earlier this year by ASCAP, BMI’s main rival for handling music licensing and artists’ songs for play on radio, television, streaming media, and other platforms.

BMI and ASCAP — the latter of which said it was the first performing rights organization to top $1 billion — have increased their revenue in recent years even as the music industry on the whole remains in flux due to evolving distribution models.

The increase comes amid higher consumption of digital music, which requires streaming services like Pandora (P, 2.78%), Spotify, YouTube (GOOG, +0.25%), and Apple Music (AAPL, +0.12%) to pay BMI and ASCAP royalties to stream songs by their songwriter members. Together, ASCAP and BMI represent a reported 90%...
Creative Goods

A limited amount of data exists in terms of the Caribbean’s region’s creative services sector’s earnings, where CMOs’ collections remain largely undocumented. As such earnings related to intangibles such as trade in services (e.g. fees from live performances, tours, concerts, etc.) and intellectual property (e.g. royalties from designs, authors and composers rights, and digital trade, etc.) were not able to be captured here. However some data does exist in terms of goods export activities. From 2002 to 2011, there was significant growth in creative goods exports from the CARIFORUM region (see Figure 5).

Figure 5: Creative Goods Exports to the World and EU 2002-2011 (USD million)

Source: UNCTAD, UNCTADstat several years.
In 2008
blockchain was
born
Three ways of conveying information in (social) systems
How a blockchain works

1. A wants to send money to B
2. The transaction is represented online as a 'block'
3. The block is broadcast to every party in the network
4. Those in the network approve the transaction is valid
5. The block then can be added to the chain, which provides an indelible and transparent record of transactions
6. The money moves from A to B
Verification only valid after all parties involved agree.

Minimum Viable Data Set:
- Complete ownership information
- ISRC/ISWC/ISNI
- Publishing information
- Mechanical rights information
- Performer information
- Global licensing rules
- Usage rights
- Lyrics/Images
- Payment information
- Contact info

In the Master File:
- Creator
- Creators
- Publisher

Smart Contract
The Blockchain ecosystem
Five areas of BCh impact in the music industry

- Enabling smart contracts
- Establishing transparent P2P transaction
- Establishing a reputation system
- Promoting dynamic efficient pricing
- Allowing micrometering / micromonetizing
Copyrights in the Caribbean are important.
The 2017 Summer Lab
Goals

1. To introduce blockchain use as a means to help musicians monetize their artistic creations.

2. Avoid institutional hurdles created by the current IP (copyrights) registration system.
The Summer Lab

- The Lab hosted 20 fellows (student software developers, musicians and visual artists) from June 5-July 29 in Boston, MA.

- Three Caribbean artists attended the LAB from July 24-29 (selected among 62 artists (44 from Jamaica and 18 from T&T)

- The goal: To learn about the emerging technologies that can improve artist compensation

- The concept: The LAB is an intense program that hosts musicians, visual artists, and student software developers to collaborate on developing new technologies that address artists’ compensation and industry cooperation. At the end of the summer, teams will demo new art works utilizing blockchain registration, shared evolved use cases, and make recommendations for additional features to the Open Music

- The activities: The week long LAB includes participation in specifically designed workshops on intellectual property commercialization, work with the technologists to develop the use cases and to provide feedback on the feasibility of the technologies, and the opportunity to meet with mentors and other industry professionals.
The Lab explored the technical challenges of using distributed ledgers (i.e. blockchain) for:

1. Cataloging, attributing and distributing live DJ mixes
2. Commercializing mixtapes built from original material and back catalogs
3. Compensating musicians for visual works using their songs as data
4. Identifying individuals for their contributions to single tracks in new works
Elegibility of artists

- Residing citizen of Trinidad and Tobago or Jamaica.
- Ability to travel to the US in mid-late July.
- Valid US Visa (valid until August 2017).
- Ability to videoconference into Summer Lab at least twice weekly throughout June and July.
- Must have at least 2 years experience recording as well as working in live music settings.
- Must either be a musician or artist, or a professional working with a label, production company, studio, publishing company, management company, or other music industry company based in Jamaica or Trinidad and Tobago.
- Must be able to access musical works for use in the Lab (not exclusively controlled by a label).
- Only individual artists are eligible (no groups)
Selection criteria

• Multifaceted and versatile experience both within genre and musical instruments
• Live performance history (at least 5 live performances)
• Quality of submitted recordings (lyrics, production level, performance)
• At least one year of experience generating revenue from music
• Experience experimenting with new technologies, or collaborating across genres
• Branding/image development and visible industry presence/following
The musicians were expected to...

- Actively participate and contribute to objectives of the LAB
- Participate in a follow up workshop to share their experience on use of the new technologies developed. The time and place of the end of project workshop will be coordinate with artists and confirmed at a later date
- Artists may be asked to conduct interviews, including the designers of an online MOOC
- Openly share their knowledge on IP monetization, including how technology injection may improve artist compensation, with other artists in the region.
Meet our Caribbean participants
Chino McGregor

• Chino, born Daniel McGregor on the 12th of February 1983
• His most memorable performance was at the age of twelve at Jamaica House in front of Prime Minister PJ Patterson.
• He has in-depth knowledge of recording and production techniques. He started his career as a rapper when he was asked by fellow artiste "Bryan" (brother of Papa San) to contribute a rap verse to the song "Joy".
• Important songs that furthered his career were two collaboration with Kiprich, "Leggo Di Bwoy" (No. 1 on the Jamaican charts) and "Gimmi Di Gyal", which resulted in heavy video rotation and airplay locally as well as internationally.
• Chino has performed in and toured major cities such as New York, Miami, Alabama, Mississippi, London, Europe, Africa, Japan, Bermuda, U.S Virgin Islands as well as in the Caribbean islands.
• A major milestone in his career was a collaboration with his father "There's a Reward For Me" on the Grammy-nominated album "Anything for you".
Johan Chuckaree

• He has been a senior front line tenor pan player with Phase II Pan Groove which copped four Panorama titles in 2005, 2006, 2008 and 2013.

• Collaborated with the legendary Len “Boogsie” Sharpe to put together the winning arrangements for Phase II. Chuckaree lends his talents to the St Theresa’s RC Church Saturday Evening Choir and is in demand as an entertainer for many corporate functions and events.

• Chuckaree has had the privilege of also playing alongside Ray Holman; has accompanied Phase II on cultural tours to Germany for World Cup 2006 and to Barbados; he has been to Indiana, New York, Texas, California (USA), and twice to London (UK). His performances in London were both in 2012 to entertain at the T&T Olympic Cultural Village and as a cultural representative at the World Travel Market. Chuckaree performed alongside Trini-born Grammy award-winning recording artiste Heather Headley during her first local concert at the National Academy for Performing Arts in December 2011.
Shawn Kalieba

• Jamaican studio engineer, he owns a studio in Kingston, Jamaica and works with most of the established Jamaican artists.

• He has recorded a lot of material and produced a number of projects for artistes like Beenie Man, Elephantman, Ken Boothe, Marcia Griffiths, Luciano.

• Also a song writer and Reggae artist, he is also manager for artist Austin James and he has done bookings for a few artistes and last year September.

• He is also a show promoter with upcoming artistes Jahmiel, Masicka and Spice in a Caribbean island called St Lucia.

• His work, experience and love for reggae and dancehall music was beneficial for the Open Lab.
MEET OUR FELLOWS FOR THE OMI SUMMER LAB 2017!

Fangting Qu
Maryland Institute College of Art
Graphic Designer
Portfolio
Team: BLUE
Brief: Composing music for visual works using their songs as data

Jenna Klein
Maryland Institute College of Art (MICA)
Graphic Designer
Portfolio
Team: BREAD
Brief: Identifying individuals for their contribution to single tracks in new works

Jonathan Koh
Berklee College of Music
Electronic music/music performance & technology
Portfolio
Team: Not Tomato loves
Brief: Cataloging, attributing, and distributing live DJ mixes

Jordan Boone
Massachusetts College of Art and Design (MCA)
Graphic Design
Portfolio
Team: BLUE
Brief: Composing music for visual works using their songs as data

Megan Griffith
School: Berklee College of Music
Role: Business Entrepreneur / Music Therapy Major
Portfolio
Team: BREAD
Brief: Composing music for visual works using their songs as data

Soma Suzuki
Kyoto University
Blockchain Engineer
Team: BREAD
Brief: Identifying individual contributions in musical works

David Kim
Berklee College of Music
Musicalian
Team: BREAD
Brief: Identifying individual contributions in musical works

Elias Jarzombek
Tufts University (IES): Computer Science, German, Minor: Music Engineering
Developer
Portfolio
Team: BREAD
Brief: Identifying individual contributions in musical works

Gabriel Rothman
Tufts University (IES)
Musical and Business Analyst
Team: BREAD
Brief: Identifying individual contributions in musical works

Luying Sellie Xu
Maryland Institute College of Art
Visual Communicator
Portfolio
Team: Not Tomato loves
Brief: Cataloging, attributing, and distributing live DJ mixes

Xucai Zhang
Smith College Technical Musician
Team: BREAD
Brief: Composing music for visual works using their songs as data

Luís Cláudio Arcos
Holyoke Media Lab
Creative Director / Visual Arts and Technology
Portfolio
Team: BREAD
Brief: Composing music for visual works using their songs as data

Michelle Wu
Wellesley College
Computer Science and Music
Team: Not Tomato loves
Brief: Cataloging, attributing, and distributing live DJ mixes

Garrett Swanson
Berklee College of Music
Business Management / Market Research
Team: BLUE
Brief: Composing music for visual works using their songs as data
At the end of the LAB, the teams presented the outputs to a group consisting of leading industry professionals and other major players in the music industry.
DEEPDIVE

An organized platform were fans can view the entire identity of an artist and share the meaning behind the music
LÜM

• A new service that allows for unique emotional moments in a live performance to be captured and analyzed for artists and businesses involved in the music industry
A sample marketplace where copyright holders can set the intention of their music, so it can act on its own as if it was alive.
FIBER

• A media player that tell the holistic story of a song by bringing it to life in virtual reality
FIBER demo

• https://vimeo.com/227336595

Fiber is a conceptual product that uses the story of a song to create immersive musical experiences in virtual reality. We incorporate non-traditional musical data, such as influential figures, places, history, and community feedback, with traditional musical credits to represent the story end-to-end. Our goal is to utilize musical stories to foster deep emotional connections between artists and listeners.

• In this prototype, we give Same Drugs by Chance The Rapper the Fiber treatment.

• Fiber was developed by Elias Jarzombek, Jenna Klein, David Kim, and Gabriel Rothman in the 2017 Open Music Initiative Summer Lab (http://open-music.org/summer-lab/). The Summer Lab was sponsored by the Berklee School of Music, IDEO, Intel, The Inter-American Development Bank, and TiVo.
Problems in the New World of Blockchain

• **Licensing issues**: Not yet clear what threshold of artists will be big enough to disrupt the status quo, where distributors, record labels, and other intermediaries have established terms, including stipulations for payments and use.

• **Artist promotion**: Blockchain empowers creators to obtain higher revenues but probably artists will still need to rely on traditional agents to advertise their content.

• **Intellectual-property (IP) frameworks**: Governments and IP rights consortiums will need to define legal frameworks recognizing transactions conducted using blockchain. While blockchain technology provides the means for keeping a record of the property holder, we may still need to rely on traditional mechanisms to enforce owners’ rights, especially when contracts are not upheld.
Solutions to become irrelevant due to Blockchain

One of the key recommendations is the establishment of a digital aggregator (see Table 14). The digital aggregator would involve the creation of a database of music copyright or catalogue owners. This database would be accessible to international content distributors like iTunes, Spotify, Pandora, RDIO, YouTube, and Phonofile.

Table 14: Digital Music Aggregator

<table>
<thead>
<tr>
<th>Strategic Interventions</th>
<th>Key Actions/Deliverables</th>
<th>Key Stakeholders/Beneficiaries</th>
<th>Implementation Agency/Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital music aggregator</td>
<td>- Feasibility study and business plan</td>
<td>- Music labels &amp; producers</td>
<td>Caribbean Development Bank in conjunction with ACCS and UWI Consulting as implementing agencies.</td>
</tr>
<tr>
<td></td>
<td>- Network of music labels, producers, publishers and copyright owners</td>
<td>- Music publishers &amp; catalogue owners</td>
<td>Estimated budget US$300,000</td>
</tr>
<tr>
<td></td>
<td>- Digital database of tradable content</td>
<td>- Caribbean CMOs &amp; ACCS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Distribution agreement with global aggregators</td>
<td>- Telecoms firms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Marketing campaign to promote Caribbean digital catalogue</td>
<td>- Global music distributors (e.g. iTunes, Spotify, RDIO, Pandora, YouTube)</td>
<td></td>
</tr>
</tbody>
</table>
Table 15: Music Publishing

<table>
<thead>
<tr>
<th>Strategic Interventions</th>
<th>Key Actions/Deliverables</th>
<th>Key Stakeholders/Beneficiaries</th>
<th>Implementation Agency/Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publishing, Synchronization and Licensing of music</td>
<td>• Incubator for export-ready and emergent firms and entrepreneurs</td>
<td>• Music publishers</td>
<td>ACCS and UWI Consulting as implementing agencies.</td>
</tr>
<tr>
<td></td>
<td>• Network of music publishers and catalogue owners</td>
<td>• Songwriters and composers</td>
<td>Estimated budget US$150,000</td>
</tr>
<tr>
<td></td>
<td>• Partnerships with audio-visual sector for synchronization and licensing in on-location films, TV shows, advertising, mobile apps, Internet videos, gaming, animation, etc.</td>
<td>• Audio-visual sector</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cable and TV Broadcasters</td>
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<tr>
<td></td>
<td></td>
<td>• Telecoms</td>
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<tr>
<td></td>
<td></td>
<td>• Gamers and animators</td>
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<tr>
<td></td>
<td></td>
<td>• Apps market</td>
<td></td>
</tr>
</tbody>
</table>

Solutions to become irrelevant soon
In the end, this is what matters
Thank you!
Descripción de RG-T2627

- Monto $300,000
- 30 meses para desembolso
- Inicio en Diciembre 2015 (vence en junio 2018)
- Preparación de paper de concepto sobre aplicación de Blockchain en industrias no Fintech
- Consultoría para examinar posibilidades de uso de tecnología Blockchain y de alineación con Propiedad Intelectual: 1) Uso y alcance del sistema de PI (copyrights) en JA y TT; 2) Limitaciones institucionales del sistema de PI
- Actividades a financiar: 6 Visitas de MIT Media Lab a JA y TT (2 por país)
- 4 workshops con Branson Centre of Entrepreneurship