PRIVATE COPYRIGHT DOCUMENTATION SYSTEMS AND PRACTICES: COLLECTIVE MANAGEMENT ORGANIZATIONS' DATABASES (PRELIMINARY VERSION)

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* The views and opinions expressed in this Study are the sole responsibility of the author. The Study is not intended to reflect the views of the Member States or the WIPO Secretariat (September 2011)

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I. Musical rights

Intellectual Property laws and conventions have granted Rights to the Property's Creators and other contributors. The Management of these Rights has generated the need to properly document the description and ownership of Musical Works and their subsequent exploitations.

To better understand the requirements of Musical Works documentation, it is useful to understand the underlying legal principles.

A. Author's rights

Author's Rights is a legal term underlying the Rights granted to Authors over the use of their Work.

Authors' Rights apply to literary, dramatic, audio-visual, musical and artistic Works. The present study will focus on Musical Works.

It is a basic right, providing legal protection to the owner of the rights. Although rights and protections vary from territory to territory, most territories provide one or more of the following rights:

- To receive credit as the Author
- To authorize or forbid the use of his/her Works
- To receive remuneration for the use of his/her works

Author's Rights originate from the Universal Declaration of Human Rights, adopted by the United Nations in 1948 that stipulates "Everyone has the right to the protection of moral and material interests resulting from any scientific, literary or artistic production of which he is the Author".[1]

Moral Right

Moral Rights are defined by in the Berne Convention as follows:

- To claim authorship or anonymity
- To object to any distortion, mutilation or other modification of his/her work, this would be prejudicial to his/her honor or reputation

It is worth noting that the Attribution of Authorship to an Author may be one of the least enforced Rights. It is very seldom that the Author of a Musical appears in any online Music Service.

Economical Right

The Berne Convention and other International Treaties set forth certain rights that signatory territories provide to their authors as including:

- The right to make reproductions in any manner or form
- The right to broadcast and cable transmission
- The right of communication to the public

[1] Article 27-2

- The right to adapt or translate

The right of communication to the public has been extended in more recent treaties to include new distribution channels such as by wire or wireless means, covering in particular on-demand, interactive communication through the Internet.

It is those economical rights that form the *raison d'être* of Collective Rights Management, created to help Authors benefit and protect those fundamental Rights.

B. Neighboring rights

Neighboring Rights are similar to Author's Rights but granted to Performers and Producers of the sound recordings. Neighboring Rights are defined by the Rome Convention adopted in 1961.

Neighboring Rights slightly differ from Author's Rights in the sense that they do not grant a Moral Right. They provide similar although more limited Rights, targeted primarily at protecting the investment made in Sound Recordings.

II. Description of a Musical Work

A Musical Work is defined as an abstract Creation which can be expressed and fixed through sound with or without Lyrics.

Musical Works are described using metadata sets.

To fully describe a Musical Work a minimum number of metadata elements need to be accurately defined.

There are 2 sets of metadata elements:

- The Descriptive Metadata describes the Musical Work. It allows for the identification of the Musical Work. Among other things, this metadata set is used for Search and Discovery services.
- The Rights Management Metadata defines the ownership of the Musical Work. It identifies the entity or entities that can grant the licenses and manage the subsequent royalties.

A. Descriptive metadata

Descriptive metadata elements comprise all the information necessary to uniquely describe a Musical Work.

The primary descriptor is the Title of the Work.

Title

Main Title

The Main title is a character string containing the name by which the Musical Work is known. It is a mandatory metadata element.

The Main Title may theoretically be provided in any language using any character set. To this extent, additional Language Code fields are provided. In reality, all Main Titles are provided in Latin Character set, as to allow full interoperability between different IT systems.

Alternate title

Alternate Title is an optional character string containing another name by which the Work may be known.

Typical examples are for Classical Music (eg. Symphony No. 3 in Eb, Op. 55 is also known as “Eroica”) or translations where the German Main Title “An der schönen blauen Donau” would be provided as an Alternate title “On the Beautiful Blue Danube” in English.

A Language Code metadata element specifying the language and the character set must accompany the Alternative Title Metadata element.

Secondary descriptors

A number of optional metadata elements can help describe the Musical Work.

Some of those descriptors are further described in the official ISO Standard for Musical Works (ISO 15707:2001 – ISWC – International Standard Work Code), while others are implemented as part of a Best Practice.

Duration

The Duration of a work is the theoretical time length of a Work.

While duration can easily be measured for a Sound Recording (that is performance), duration of a Work needs to be calculated based on the number of bars and the proposed tempo.

Derivation

Works are sometimes adaptations or derivations from other Works. It may be useful to specify for a given Musical Work if it has been derived from an original Work and from which Work.

Typical Derivations are Composite Works where different works may be blended or assembled and Excerpts where a Musical Work is only a portion of an existing Work, such as the Movement of a Symphony.

Performer

Strictly speaking, there is no such thing as the Performer of a Musical Work. Performers, as its name suggest, can only apply to a Performance, and a Musical Work exists regardless whether is has been performed or not.

Yet, most usages of Musical Works are performances of Musical Works, through its most common manifestation: the Sound Recording. Broadcasters or music retailers usually report back to rights-holders the Sound Recording information, including its Performer (also known as Main Artist).

It is therefore useful to add the Performer to the descriptive metadata of a Musical Work. It is not necessary to list all of the Parties that ever performed the Musical Work, but just a few of the most common.

There are currently no or little constraints on how Performers are described, beyond their Name, but it is an Industry Best practice to also provide a unique Identifier, such as the International Standard Name Identifier (ISNI - ISO 27729).

Contributors and their Associated Rights

This section is by far the most complex and critical component of Musical Works.

In summary, an integral part of a Musical Descriptor is the identification of the Creators and Rights holders.

As an absolute minimum, there must be at least one Composer.
In addition there can be one or more Authors.
There can also be additional contributors such as Adaptors and Arrangers.

Collectively, Composers, Authors or Arrangers are called Creators.

In addition, other Rights Holders may claim ownership over a Musical Work, in particular Publishers or Sub-Publishers.

This section will describe how Creators, Rights Holders and their associated rights are described.

Creators
Composers

The Composer element holds the reference to the natural person that has created the musical composition. Reference to a Composer is mandatory.

As further described in section 0 a Party may be named after its “real name” sometimes called its patronym, or under his “public name” also called his pseudonym.

It is important to note that the Composer’s name specified in the metadata associated with a Musical Work will usually be the name that is publicly known, whether it is the composer’s real name or pseudonym.

The Composer’s name must also systematically be accompanied by a Party Identifier. Homonyms are very frequent and the only way to differentiate between two homonyms is to refer to their identifiers.

The Party identifier can be of any type, but good practice recommends that either the IPI number be used for compatibility with the CISAC environment, or the ISO-ISNI. Those Party identifiers are further described in Section 0.

There can be one or more Composers declared.

Authors

The Author(s) of a Musical Work is the Creator of the Lyrics. He is sometimes called the Lyricist.

The Author element is an optional element, as Musical Works can exist without incorporating any Lyrics.

The Author abides to the same rules as the Composer, in regards to its Pseudonym, its Party Identifier and Cardinality.

The Author and the Composer can be one and the same person, but serving in two distinct roles. It is important that each role is distinctly expressed, as each role is assigned a share of the global rights attached to the Musical Work.

Arrangers and Adaptors

There are other optional roles that may need to be referenced, as they also may claim a portion of the rights.

These roles are defined in the ISO ISWC Standard as Adapter, Arranger, sub-Author or Translator. They are further defined in section 0

Others Rights Holders

Beyond the original Creators, portions of the Rights may be transferred or represented by other rights-holders such as Publishers or sub-publishers.

Those additional Rights-Holders need to be referenced in a Musical Work description.

Publishers and sub-Publishers

Publishers and sub-Publishers are commercial entities that own and/or control Rights in a Musical Work.

Those rights are usually licensed or assigned by the Creators to the Publishers, in exchange for management and representation services.

A description of a Publisher is somewhat similar to the description of a Creator. The major difference is that a Publisher is usually a Legal Entity whereas a Creator is always a natural person. Natural persons have date of Births for instance, whereby a legal entity will have a date of incorporation.

As for the Description of Composers or Authors, Publishers will be identified with a Name (a corporate name) and an Identifier.

Description of a Party

In this section, we dig a little deeper into the descriptive components of a Party, or Contributor.

The rules or principles relating to descriptive components of a Party apply to any type of Party such as Natural Persons like Authors and Composers or to Legal Entities like Publishers; and they represent either a required compliance with a recognized Standard or a Best Practice necessary to ensure full interoperability with existing industry environments.

The name

The Name of a Party is the most commonly used descriptor, but also the one the most prone to errors. Here are a few characteristics of string based name elements:

- A Party may carry different names: a “real” name with additional pseudonyms.
- A Party’s name may be spelled differently in different countries, different languages, different character sets.
- Different Parties may carry the same name; they are homonyms.
- Spelling mistakes are frequent and may lead to confusion or misappropriation.

As an example of the extent of such vulnerability, the IPI database contains no less than 139 different Parties with the name “Michael Jackson”. It is then very clear that only a string based Name element is not sufficient to find out who wrote the Work called “Thriller”.

For all these reasons, Party names are useful as a basic metadata element to identify a Party but require the additional use of a Party Identifier.

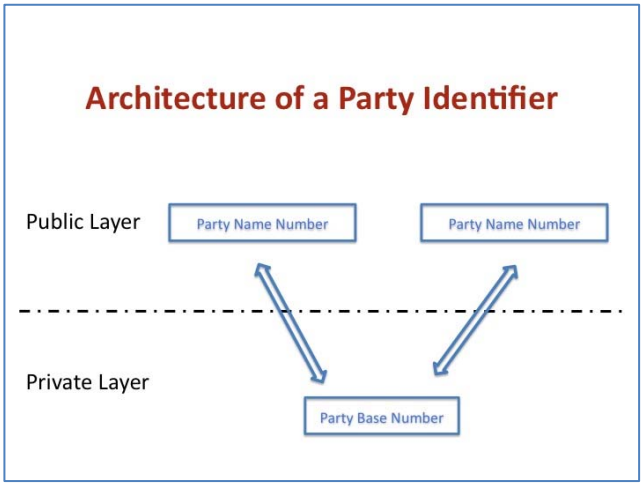
Structure of a Party Identifier

Descriptive metadata pertaining to a Party may be peculiar in nature. Date of birth, bank account references, for instance, are highly sensitive pieces of information that may need to be preserved and maintained, but must not be disclosed publicly.

Most, if not all, party identifiers carry a similar dual layer structure as follows:

- A private layer containing sensitive information and a
- Public layer containing a minimum of disambiguation metadata

While Private Layers hold well-guarded secrets, Public Layers hold information that may be safely disclosed and shared. It is the combination of these two layers that determines the full functionality of a Party Identifier.



Different Party Identifiers serve different purposes. ISNI for instance only provides the Public Layer and thus provides a high level of interoperability. The Interested Party Identifier, IPI, on the other hand, has both layers - the IPI base number acting as the Private Layer and the IPI name number acting as the Public Layer - and its

level of interoperability drops accordingly.

Identifiers

As discussed above, Parties need to be uniquely identified with an Identifier.

There are a number of potential candidates used across the Industry that can be used to Identify Parties. This section reviews the most commonly used in the Music Industry.

IPI

The IPI (Interested Party Identifier)[2] is a Proprietary Party Identifier used within the CISAC community.

The IPI, created by the Swiss Author Society, SUISA, had its genesis in the 1970s “CAE” (Composers-Authors-Editeurs) system. CAE data was migrated to IPI three decades later to accommodate emerging multi-territory, multi-rights agreements.

The IPI is a mature and very complete Identifier that meets all of the requirements of Authors Societies. It is broadly adopted by all CISAC members, up to a point where it is actually a mandatory element.

The purpose of the IPI system is the global unique identification of a natural person or legal entity acting across multiple creation classes, roles and rights.

Beyond the descriptive information pertaining to a Party, the IPI will also maintain its Author’s Society affiliation along with all the associated rights, creation classes, roles and associated territories.

IPN

The International Performer Number (IPN)[3] is a proprietary identifier maintained by the International Performer Database Association (IPDA). Its members are Performer Management Organizations (PMO) managing neighboring rights.

The main objective of the IPD (International Performers Database) is to identify individual performers in audio recordings and audiovisual works and the legal mandates they have assigned to Performer Management Organizations (PMO) or Collective Management Organizations (CMO) in a unique way, assigning them an International Performer Number (IPN). This number can be later used in the data exchange between PMOs and CMOs, simplifying and improving the matching algorithms and the proper identification of right holders, as well as in other databases and information systems linked to the IPD.

The IPD is available for all PMOs or CMOs administering performers' rights in the audio or audiovisual field, after their application to the IPDA’s General Assembly.

[2] http://www.ipisystem.org
[3] http://www2.ipddb.org

The IPN is a sequential number consisting of 8 digits starting at 10000000. In order to allocate an IPN to a performer, a PMO/CMO uploads data to the IPD in a specific format, including all the needed and mandatory information about its members. The data will then be validated and the performers will be matched against the existing ones inside the IPD, searching for possible duplicates. The possible duplicates are stored in an intermediate system waiting for the response of the uploading PMO/CMO and the hosting society. Those performers without possible duplicates are automatically inserted in the database and they receive an IPN number. Once the uploading PMO/CMO sorts out all the possible duplicates and once all its members receive an IPN, the PMO/CMO downloads a file containing all the assigned IPNs so that they can be stored in its local information systems for future use and reference.

ISNI

The International Standard Name Identifier (ISNI)[4] is a draft ISO Standard (ISO 27729) whose scope is the identification of Public Identities of parties: that is, the identities used publicly by parties involved throughout the media content industries in the creation, production, management, and content distribution chains. The ISNI system uniquely identifies Public Identities across multiple fields of creative activity. The ISNI provides a tool for disambiguating Public Identities that might otherwise be confused. ISNI is not intended to provide direct access to comprehensive information about a Public Identity but can provide links to other systems where such information is held.

An ISNI is made up of 16 decimal digits, the last one being a check character.

ISNI 1422 4586 3573 0476

ISNIs are assigned to the Public Identities of Parties that participate in the creation, production, management or distribution of cultural goods in the digital environment. Those Parties can be natural persons (a human being like a book author), legal entities (like a Record Label) or even fictional characters (like Peter Pan).

ISNI can be assigned to Public Identities involved throughout the media content industries in the creation, production, management, and content distribution chains. This applies for instance to Authors, Actors, Publishers, Researchers or Performers.

A Public Identity is the name by which a Party is publicly known. For example Lewis Caroll is the Public Identity of a natural person called Charles Lutwidge Dodgson.

A Party can be a natural person (a human being), a legal entity (such as a registered company) or a fictional character such as Peter Pan.

Below are some of the basic allocation rules of ISNI:
Each Public identity of a given Party shall have its own ISNI. For example Lewis Caroll shall be assigned an ISNI and Charles Lutwidge Dodgson another ISNI.
Günter Graß, Guenter Grass and Guenter Graß are character set variances of the same Public Identity.

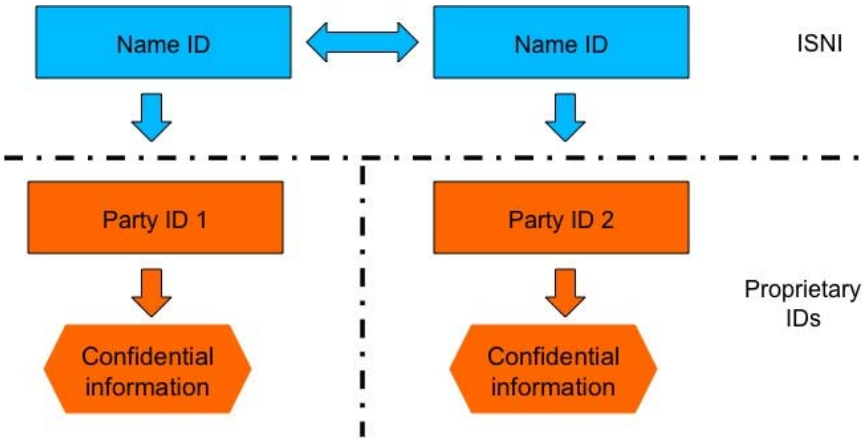
[4] http://www.isni.org

Ciaikovsky, Pjotr Iljc and Пётр Ильич Чайковский are transliteration variances of the same public identity and also receive the same ISNI.

Pyotr Tchaikovsky and Peter Tchaikovsky are linguistic variances of the same public identity and again receive the same ISNI.

All the specific assignment rules of ISNI will be published in due course by the ISNI Registration Authority.

The ISNI has been designed as a bridge identifier, as an open layer above proprietary Party identification systems.



It allows various industry partners to exchange information relating to a Party without the need to disclose confidential information. To that extent the ISNI only maintains the minimum metadata set needed to differentiate (disambiguate) two public identities. All other relevant information remains in proprietary databases secured by conditional access.

An authorized Registrant (an individual or a company entitled to register a Public Identity) may obtain an ISNI by providing - at least - the following information:

- The name of the Public identity
- Date and place of birth and or death (or registration and dissolution for legal entities)
- Class and Roles as defined by the RA. Classes defines the repertoire (such as Musical, Audio-Visual, Literary,..) and Roles can be Author, Performer, Publisher,..
- Title or reference to a creation
- A URI (or URL) providing a link to more detailed information about the Public Identity.

Registrations are processed by registration Agencies. Any organization with a recognized interest in the digital media value chain is eligible to become a Registration Agency.

Registration Agencies are nominated on a non-exclusive basis. There may be more than one Registration Agency for a given territory or a given industry sector. The list of Registration Agencies providing services to end-users is published on the ISNI web site.

B. Rights Management metadata

Beyond the description of a Musical Work and its Contributors, a number of additional metadata elements are necessary to properly manage the royalties generated by the usage of those works.

This section describes those Rights Management metadata elements.
Resource Identifiers

ISWC

The International Standard Work Code (ISO 15707)[5] is the industry Standard for the identification of Musical Works.
The ISWC is maintained by CISAC, acting as the International Registration Authority.

The International Standard Musical Work Code (ISWC) for a musical work is usually stored in a database. It is divided into three elements, consisting of the letter T (the "prefix element"), followed by nine digits and a numeric check digit.

When an ISWC is written or printed the letters ISWC shall precede it. For ease of reading only, hyphens and dots may be used as separators.

EXAMPLE

ISWC T-034.524.680-1

Note: In territories where the Latin alphabet is not used, an abbreviation in the local script may be used in addition to the Latin letters ISWC.

ISWC is assigned in accordance with the specifications of the International ISWC Agency user manual.

Elements of such descriptive data shall include, at a minimum, the following:

- At least one original title for the work, together with the appropriate title type code.
- All creators of the work uniquely identified with their respective roles in the creation of the work indicated
- An indication of whether or not the work is derived from an existing work and, if so, the type of derivation indicated by a derivation code.
- One value of category must be attributed to the work when an ISWC is allocated (composite type, version type or excerpt type category).

NOTE: Performing artists should also be provided where known.

The ISWC Validation Centre is comprised of a database containing all ISWCs that have been allocated for musical works and the metadata that describes each musical work for which the ISWC was allocated. This database is commonly referred to as the Common

[5] http://www.iswc.org

Search Index (CSI), managed by FastTrack[6] on behalf of CISAC. For more details on the CSI refer to section 0.

The CSI currently contains 38, million work metadata references and over 26 million unique ISWC codes.

ISRC[7]

While not a Work Identifier, the ISRC is worth mentioning as it (a) affects neighboring rights and (b) is extensively used in usage reports (see section 0)

The International Standard Recording Code (ISO 3901)[8] is the recording industry standard for the identification of sound recordings.

ISRC was developed by the international recording industry through the International Organization for Standardization (ISO) as a response to a need to identify sound and music video recordings. The current version is known as International Standard ISO 3901:2001.

The International Federation of the Phonographic Industry (IFPI) has recommended since 1988 to its members that ISRC should be adopted as an international means of identification of sound recordings and short form music videos.

In 1989 the IFPI Secretariat was appointed as the International Registration Authority for ISRC by ISO and functions as the International ISRC Agency; since 1989, 49 National Agencies have been appointed by the International Agency.

It is stressed that ISRC identifies sound recordings and music video recordings and not physical products ('carriers' such as CDs) and that there is no conflict with existing product catalogue numbering systems with which it co-exists. Neither does ISRC identify a digitally distributed package, although sound nor should music video recordings included in such a package be identified with an ISRC.

For code allocation purposes, the ISRC is separated into its different elements. However when the code is being used, it is the whole number that represents the sound or music video recording and no significance should be accorded to any element. In particular, the Registrant Code cannot be assumed to identify a current rights owner as ownership of a recording may change hands after code allocation. Additionally rights may vary territory by territory. Further, the year of reference cannot be assumed to be a year of recording. It represents the year the ISRC was assigned, which may or may not be the year the sound recording was released

The ISRC is alphanumeric, using digits (the ten Arabic numerals 0 - 9) and the 26 letters of the Roman alphabet. The ISRC consists of twelve characters representing country (2 characters), Registrant (3 characters), Year of Reference (2 digits) and Designation (5 digits). For visual presentation it is divided into four elements separated by hyphens and the letters ISRC should always precede an ISRC code. The hyphens are however not part of the ISRC.

[6] http://www.fasttrackdcn.net/
[7] source: IFPI (International Federation of the Phonographic Industry)
[8] http://www.ifpi.org/isrc

The elements appear in the following order:

- Country Code
- Registrant Code
- Year of Reference
- Designation Code

The structure of the ISRC is shown in the following example:

ISRC FR - Z03 - 98 – 00212
Where
FR = France
Z03 = Registrant Code (Mercury)
98 = Year of Reference
00212 = Designation Code

Classes

The type of Rights that a contributor may be granted depends on the repertoire to which the Work belongs. A Musical Work will have certain Rights, while an audio-visual Work will enjoy other Rights.

It is therefore necessary to define the Class of Repertoire to which a Right is assigned.

Classes of repertoire may be defined differently in different Industry sectors in which case mapping tables are used to relate one Class to another.

In the CISAC domain, the main classes associated with music are:

- Architectural Work
- Documentary Audio-Visual Work
- Fiction Audio-Visual Work
- Audio-Visual Work
- Choreographic Work
- Dramatico-Musical Work
- Dramatic Work
- Literary Fiction Work
- Literary Non Fiction Work
- Literary Work
- Multimedia Work
- Musical Work
- Photographic Work

Roles

In conjunction with Classes, it is mandatory to specify the Role that a contributor has played in a given Musical Work.
As for Classes, there exists different classification for Roles in different Industry Sectors.

In the CISAC domain the main roles associated with music are:

- Composer
- Lyricist
- Arranger
- Publisher
- Sub-Publisher

Roles are generally represented as a two-letter code such as LY for Lyricist.

The relevant information then becomes the Class/Roles combination.

Types of rights

For a given combination of Class and Role, a number of specific Rights are granted to a Creator. Those rights are initially defined by National or supranational laws or treaties (see Section 0).

For Rights Management and Royalty processing purposes, those Rights are codified.

As for Classes and Roles, there are a variety of Classifications depending on the Industry sector.

In the CISAC domain, those rights are defined as part of the IPI standard.

As an example some of those rights are:

- Radio Broadcasting
- Television Broadcasting
- Mechanical Right

To facilitate the processing of those Rights, a two-letter code is assigned for each type of Right. Radio Broadcasting is represented as RB.

Shares

During the Declaration process of a Musical Work to an organization that will represent the Work, be it a Collective Rights Organization or a Publisher, the Creators will declare their interest or share that they claim to own in a given Musical Work.

A Lyricist may claim a 25% ownership in a Musical Work while the Composer will claim another 25 % ownership. The remaining 50% may have been assigned to a music publisher.

Shares are specified for both Performing Rights and Mechanical Rights.

For each of the rights, the total amount of shares must always equal 100%. This condition is necessary for the completeness of the royalty processing. This is the most critical metadata element, as all the shareholders have to be declared and must agree of their respective contribution. It is frequent that there are more than one Creator per Class and Role. There may be 2 or 3 co-Authors and an Arranger.

Musical Work documentation cannot be validated if the total of all the shares does not sum up to 100%.

It may be that the sum of all of the declared shares exceeds 100%. To resolve those cases, there exist pre-defined procedures called dispute resolution. Dispute resolution processes may vary for different Industry Sectors.

Territories

Rights assignments or Mandates may vary from one territory to another.

For instance, it is frequent that a sub-publisher will be able to claim rights only for a given territory.

Rights claims must therefore be specified on a territorial basis.

To specify territories, it is common to use the ISO 3166 Standard also known as the ISO Country Code.

For Right Managements purposes CISAC has created its own Standard called TIS or Territorial Information System. This Standard is freely available from the CISAC web site[9].

The first component of TIS is an up-to-date list of all the Countries of the world provided in 4 languages: French, English, Spanish and German. The list contains the following elements:

- TIS number (e.g. 76)
- Official name (e.g. Federative Republic of Brazil)
- Abbreviated name (e.g. Brazil)
- A two-letter code (e.g. BR)
- A three-letter code (e.g. BRA)

In addition the TIS Standard defines broader geographical or political areas that are useful for Rights Management purposes. Those so-called “Country groupings” are represented by a 2 followed by a two letter code. Here are a few examples:

- The World ➔ 2WL
- Africa ➔ 2AF
- Middle East ➔ 2ME

TIS Country groupings may or may not have a political or economical existence. They are defined for convenience.
Each Country grouping specifies the list of countries contained in a group. For instance North America includes United States, Canada and Mexico.

[9] http://www.cisac.org and search for TIS.

The most important component of TIS is its ability to combine into arithmetically computable expressions. TIS incorporates an additive (+) or a subtractive (-) prefix. Territories may be added or subtracted to Regions to define in a very condensed form a very specific geographical area.

+ ES means Spain
+ DE+CH means Germany and Switzerland
+2WL means the whole world
+2WL-CN means the whole world except China
+2EU-FR-UK means the whole of Europe except France and England.

Mandates

The last element of the Rights Management metadata set is the Entity through which the rights are licensed and administered.

The Creator or Publisher will mandate either a Collective Right Organization such as an Author Society or an Agency to license his Musical Works and collect the Royalties.

The mandate may define one or many territories, one or many Rights for one or many Musical Works, on an exclusive basis or not.

For example, an Author may mandate an Author Society to manage the Mechanical Rights for all of his Works for the World.
Another may mandate an Agency to manage on a non-exclusive basis his Mechanical Rights for Online Interactive use, for the United States for a given Musical Work.

C. Business Processes

This section will describe the business processes necessary for the proper management of Musical Works.

The sub sections follow a chronological order as follows: Declaration, Licensing, Reporting, Identification, Invoicing and Distribution.

Declaration

The first and foremost step is for the Creators of Musical Work to declare their work and all of their contributors to an organization that will manage their Rights on their behalf.

Declarations

A full Declaration requires a two-step process: Declaration of the Creators and other Rights holders (together, referred to as Participants or Interested Parties) and the declaration of the Musical Work.

Within the CISAC domain, all Participants who are registered with a CMO are assigned an Interested Party (IP) number. The allocation of an IP number is a requirement to obtain an ISWC code, which is in itself mandatory.

Most CMOs will offer mail-in, walk-in or an online declaration form to declare the Participant. Conditions to be registered as a Participant will vary from country to country but the service is usually free for Creators.

Once all the Participants of the Musical Work have been assigned IP Numbers, the Musical Work can be declared. Some CMOs require a physical proof of the existence of the Musical Work such as a recording of it or sheet music. Some CMOs also employ Musicologists who will determine the existence of any plagiarism.

The Declaration process must be handled with great care and diligence. A poorly documented Participant or Musical Work will make the identification process weak or expensive, thus depriving the Participant of the full benefit of their royalty flow.

At the end of the process all Parties must ensure that each Participant has its own unique IP Number and that each Musical Work has its own ISWC code.

CWR format

The declaration process for large catalogues can be streamlined using a CISAC Standard called the Common Works Registration format (CWR) which is mature EDI specification. It is freely available from the CISAC web site[10].

The purpose of the CWR format is to provide publishers and societies with a standard format for the registration of works. This provides many benefits for both publishers and societies. Publishers will be able to create one registration file and send it to participating societies around the world. Each society that receives that file will follow a similar process, and provide acknowledgement in a common format back to the publisher. Similarly, as more and more publishers adopt the CWR format, societies will receive the majority of the work registrations in the one standard format which can save time and resources.

Another benefit of the CWR is that it is flexible enough to provide for all of the data elements that rights organizations require in a registration for a work. Some of these data elements may not be available at present, but they can be added to the database of publishers and societies alike, so that in the future this data can be captured. For some data elements, the CWR provides a means of capturing those data elements. For example, the societies will provide IPI numbers for participants, and ISWCs for works in their acknowledgement records whenever possible. The publishers can then populate their databases with this additional data.

The electronic submission of unique identifiers such as the ISWC and IPI provides a much more efficient way for the societies and publishers to accurately and quickly identify works and interested parties.

Licensing

Each use of a Musical Work requires an authorization from its rights holders – or their representative - called a License.

Licenses can be obtained for a single Musical Work, for a global Repertoire, and for many

[10] http://www.cisac.org and search for CWR

combinations in between.

Each different type of use, triggering a different type of right – requires a license, sometimes issued under one agreement, sometimes requiring separate agreements.

Most Collective Rights Organizations offer Standard licenses directly from their web site. Specific or new usages of Musical Works require new types of licenses that often follow a negotiation process.

For traditional usages such as Radio Broadcasting or Mechanical Rights for Compact discs within a given Territory the licensing process is easy as a single CMO may be able to offer a single license for the world repertoire.
For other types of usages a music user, such as an online retail store, may need to obtain multiple licenses from multiple right holders to clear 100 % of all the Rights contained in a given Musical Work.
Standard Licensing

Standard licensing applies for traditional music usage such as Radio or TV broadcasting, usage in bars, pubs and restaurants, live performance, or the creation of recorded media.

Most CMOs will propose predetermined rates from their web site. Music users simply need to provide a set of metrics, such as quantity, audience, expected revenues and territorial coverage.

For traditional usage such as radio or television broadcasting, a given CMO will usually be able to provide a single license to the world's repertoire for a given territory, thanks to reciprocal agreements with all the other CMOs.

CMOs will provide a license for Rights pertaining to the Creators –and their representatives - of the Musical Work. It may be that other licenses are required for other types of Rights such as Phonographic Rights for the sound recording.

Central Licensing

Special arrangements have been negotiated, particularly in Europe, to facilitate the licensing of Mechanical Rights on a pan-European level.

The so-called "Central Licensing" allows the manufacturer of recorded media, such as CDs or vinyl records, to obtain from a single CMO a license for the Mechanical Rights in all European Countries.

MWLI

As licensing becomes more complex in a multi-territory environment with fragmented rights, a new Licensing architecture has devised within the DDEX framework (see section 0 for further details).

The Musical Work License Identifier (MWLI) is a DDEX standard that assigns a unique Identifier to a given License. The MWLI standard defines an automated process to grant and track a Musical Work License in complex environments.

The MWLI Standard comprises a suite of messages that are exchanged between Music Users seeking a License and the Licensors such as a CMO or a Publisher. In Addition, the

license is assigned a unique number – the MLWI – that is used as a key reference number in all subsequent transactions, such as invoicing and reporting.

GRD and IMR

To further streamline and automate the licensing process additional efforts are being made by different groups of stakeholders namely the Global Repertoire Database[11] and the International Music Registry[12].

GRD

In December 2010 the Global Repertoire Database Working Group ("GRD WG") published a set of recommendations relating to the creation of a Global Repertoire Database for musical works. The work to get to that point had been initiated by Neelie Kroes and by the European Competition Commissioner.

The principle recommendation was that a Stakeholder Engagement and Scoping Study ("the Study") should be undertaken. The objective of that Study, as its name suggests, is to engage with a much broader range of stakeholders than was possible in the work leading up to the recommendation document. This will involve a more precise determination of the functionality inherent in the implementation and management of a GRD for musical works and, more importantly, how it could be governed, financed and owned.

There is currently no single document, catalogue or searchable open database available to the user community, rightsholders or intermediaries (including those representing rightsholders or those aggregating rights on behalf of users) that details the several million musical works that are commercially available across the globe, or the links between them. A comprehensive and up to date database confirming ownership and licensing mandate information for the musical work repertoires is critical to the various players in the industry and would be an asset to the development of the digital music services throughout the world.

At this time CISAC, ECSA, ICMP have joined the GRD WG as it prepares to launch the Study.

IMR

The International Music Registry (IMR) aims to facilitate licensing in the digital environment by providing faster, easier and simpler access to reliable information about musical works and sound recordings throughout the world. This idea is a collaboration of the worldwide music sector, with WIPO as facilitator.
In the last decade, the rapid growth and development of the Internet as a delivery mechanism for music has challenged the established music rights management architecture, which was not designed to facilitate use of music in the digital world.
The IMR seeks to create an international system that provides a single access point to all the different rights management systems used around the world. An accurate, authoritative, registry of basic information on musical works, sound recordings and music videos is a fundamental, essential public good that supports a healthy framework for digital music licensing.

[11] http://www.globalrepertoiredatabase.com/
[12] http://www.internationalmusicregistry.org/

Public Domain

Music users who want to use Musical Works that fell into the Public Domain need to operate with great care.

A Work that has fallen into the Public Domain may still be subject to a license in a number of cases.

- In some countries, Works that are in the Public Domain still require a license for Performing or Mechanical Rights. This license may only be an authorization without payment, but is still required.
- The definition of Public domain differs from country to country. A Work may be considered as Public in a given territory and not in another one. This often occurs because of legislative differences in the term of copyright following the death of the creator(s).
- While the Rights pertaining to one Right Holder may be considered as Public Domain, Rights pertaining to some co-Authors may remain applicable.
- Other Rights such as Neighboring Rights for Performers or Producers may still be applicable.

It is always wise to seek advice from a CMO that will determine the full licensing status of a given Musical Work.

Creative Commons

A number of Musical Works are available under the Creative commons Scheme[13].

It is widely believed that Works available under the Creative Commons (CC) framework can be used without a license, but this is far from being true.

CC provides an actual Musical Work licenses and are represented in different ways. There is a machine-readable license, a human readable license and complete legal text that acts as the enforceable license.

Even the simplest license defines some specific requirements on the licensee. The CC-BY-3.0[14] license requires that the user makes a clear attribution of the Work to its Author. Failing to do so is a breach of the license, making this license voidable and the user in a potential infringing situation.

Reporting

Once the Music user has obtained all the required licenses, it can operate its Music Service and at regular intervals report to its licensors the exact usage of the Musical Works.

[13] http://creativecommons.org/
[14] http://creativecommons.org/licenses/by/3.0/

Usage Reporting has always been a very weak point in the metadata value chain.

- Firstly, Licensees have generally been unable to access the original set of descriptive metadata of the Sound Recording or Musical Works that they have licensed. They have therefore gathered from different sources descriptive metadata that do not always reflect the original and authoritative data set.
- Secondly, many licensees regard usage reporting as an expensive and superfluous overhead.

- Thirdly, the majority of Licensees always report on the Sound Recording that has been used. A sound recording is described typically by its Title and Performer which is different from the descriptive metadata of a Musical Work. Licensors then need to reconcile sound Recording and Works information.

As a result, licensors have to invest large amounts of effort and resources in the reconciliation of Usage reports with their own data sets.

It is only recently that sincere efforts have been undertaken by the Music Industry at large to improve this critical step.

Flat file formats

Traditionally, licensees provided usage reports either as flat files such as an Excel™ spreadsheet.

The first problem is that all Licensees used different layouts to describe the sound recording. Licensors need to map those different layouts into their own internal standard.

The second problem is the technical limitation. An Excel™ worksheet is limited to 65’536 lines. While this may sound sufficient for a local or national broadcaster reporting a month of broadcast, it falls short of meetings the volumes generated by online exploitations.

Inherent to all file formats, the quality of the metadata is often poor and incomplete, as the Licensees receive data from a variety of sources, some authoritative, some not.

Finally, as applicable to all reporting formats, the licensees report back on Sound Recording information which cannot be readily mapped to Musical Work documentation.

Flat files formats are still widely used for small to mid size traditional licensing. It is definitely inadequate for large online music operations.

DDEX

DDEX (Digital Data Exchange)[15] was set up to develop a single set of standard XML messages for the business-to-business communication of information between organizations operating in the digital media supply chain. DDEX is a cross industry Standards Organization co-founded by 3 categories of Stakeholders, namely:

- Record Labels
- Authors' Societies
- Digital Service providers

There are currently over 100 members. The full list of members can be found at http://ddex.net/members_list.htm.

The mission of DDEX is to enable highly standardized and automated transaction processing of metadata and its associated content to provide, at a cost effective price, the highest possible levels of operational efficiency amongst participants in the digital media supply chain.

To that end, DDEX has created the following technical Standards:

- Electronic Release Notification Message Suite (ERN):

  This supports the communication of information about albums, sound recordings, musical works, and the contracts associated with them -- usually sent from a record company or aggregator to a digital retailer

- Digital Sales Reporting Message Suite (DSR):

  This supports the communication of sales and usage information about albums, sound recordings and musical works and the financial transactions associated with them -- usually sent by a digital retailer to record companies and music rights societies or music publishers

- Musical Work Licensing Message Suite:

  This supports the communication of information about musical works to enable musical work licensing -- usually exchanged between record companies or digital retailers and music rights societies or music publishers

- Business Profile for Sales Reports to Societies:

  This provides subsets of the DSR Standard for musical works but for a range of specific business models, reducing the amount of data that needs to be exchanged -- usually sent by digital retailers to music rights societies or music publishers

- Automated Message Exchange Protocol (AMEP):

  This defines how DDEX messages and other data, such as the content files themselves, can be exchanged using FTP and/or Web Services.

[15] http://ddex.net

- ERN and DSR Choreography Standards (ECHO/DCHO):

  These set out standard ways to use the AMEP protocols when exchanging ERN or DSR messages by enabling the "daisy-chaining" of "helper" and expected behavior messages

- Data Mismatch Message Suite:

  This can be used for business partners to exchange information about "data errors" beyond those detected by simple XML validation

- Data Dictionary:

  This contains all the terms used in the DDEX messages including the semantics for those terms including "allowed-value lists"

- DDEX Party Identifier:

  This is a unique identification system used to identify each sender and recipient of a DDEX message. Each party implementing DDEX messages is provided with a DPID.

- DDEX Digital Signatures:

  This is used to help ensure that a recipient knows they have received a message in its entirety and that it has not been tampered with in transit.

Key to streamlining the reporting of the usage of Musical Works is the DSR (Digital Sales Report) message. The DSR message is very versatile and allows for the reporting for a wide range of business cases. The most common business cases are summarized in Business Profiles.

All online retailers are strongly encouraged to adopt the DDEX Standard for Reporting purposes. It greatly improves the Reporting process and significantly reduces the cost of processing all of the data.

To understand the scale at which DDEX can operate, in 2010 a Single Author Society has processed over 10 billion lines of DDEX Sales Reports. Without a Standardized approach, such processing would simply not be possible.

Event Reporting

In 2006, ISO/IEC MPEG (Moving Picture Expert Group) developed a global multimedia framework called mpeg-21 (ISO/IEC 21000)[16]. The vision for ISO/IEC 21000 was to define a multimedia framework to enable transparent and augmented use of multimedia resources across a wide range of networks and devices used by different communities.

Part of this multimedia framework is a component called Event Reporting (ISO/IEC 21000-15:2006)[17].

[16] http://mpeg.chiariglione.org
[17] http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=41837

Event Reporting is a method

- to express Event Report Requests (ER-R) that contain information about which Events to report, what information is to be reported and to whom;
- to express Event Reports (ER) which are created by an MPEG-21 Device in response to an Event Report Request when the conditions specified by an ER-R are met.

Event Reports Requests are used for specifying a set of conditions upon which a device will generate an Event Report and send it to a Recipient. Event Report Requests also specify what information is to be included in the resulting Event Report. The scope of Event Reporting is limited to reporting of Events between devices, and does not include internal reporting of Events within a Peer.

Event Reporting is a powerful mechanism as it allows a licensor to define and trigger the generation of a Sales Report automatically.
Identification

Once the Licensor receives a Sales Reports, it needs to be processed.

As indicated previously Sales Reports contains almost exclusively Sound Recording information, as this is the element of trade between Licensors and end-users.

In an ideal world, the Licensor would directly report the Musical Work information, but this information is generally not accessible to them, as the primary source of data for Licensors are the Record Labels.

After extracting the Sound Recording information from the Sale Report, for example from a DDEX DSR message, the information needs to be matched against its corresponding Musical Works information. Once the Musical Work has been identified, then and only then can the actual Rights Holders be identified.

The hierarchy of information can be summarized as follows.

Sound Recording ➔ Musical Work ➔ Contributors

Matching processes

The primary descriptive elements of a Sound Recording are the Title of the Track, the names of the Performer and in many cases, an ISRC code.
The discussion of ISRC is treated in the next section (see 0)

The Title of a Track is in most cases the same as the Title of the Musical Work. The problem being that out of the 45+ million Works currently registered within the Author's Society databases, many carry the same name. There are for instance over 10'000 registered Works called "I Love You".
It is then necessary to revert to the Performer data element to disambiguate recordings with the same name. Even though Performers are not official metadata elements of Musical Works, they need to be maintained by Authors' Society to provide a link between the Sound Recording and the Musical Work to enable matching

Matching Performer data is not a trivial task in itself. There are no global Identifiers deployed to date for Performers. The only matching method is a string-to-string matching on the name. As with Musical Works, many Performers carry the same name. There are over 10 bands called “Bliss” and 139 Artists whose name includes “Michael Jackson”.

In spite of these difficulties and with the benefit of years of expertise, many Collective Rights Organizations reach an auto-matching rate of 80 to 90 % or more.

A recent study published during the 2011 CISAC Copyright Summit[18] revealed that a fully automated match costs as little as 0.02 € while a single human intervention to disambiguate 2 candidates trigger a cost of 15 €. Knowing that a single download might generate 0.08 € of Royalty revenue, it takes a single download to recoup a fully automated identification process. It takes more than 190 downloads to recoup a manual identification. As Carl Inwood - Director of Content & Rights Metadata at Universal Music Group International - said at the World Copyright summit: *“Poor metadata is a cost while clean metadata is an investment”.*

Database search performance is increasingly becoming an issue, as it takes up to 16 times longer to “not find” a musical work than it does to find one. This is because large groups of data are searched exhaustively, including progressively unlikely matches.

One quickly understands the need to improve metadata quality and optimize the cost of identification. One solution is the full deployment and cross mapping of Identifiers, in particular the ISRC and ISWC codes.

ISRC- ISWC

ISWC codes (See section 0) and ISRC codes (See section 0) are respectively used to identify Musical Works and Sound Recordings.

Unique identifiers are the holy grail of Rights Management systems – when properly implemented.

A key goal of the Music Industry is to achieve an authoritative cross-reference table of all the sound Recordings and their underlying Musical Works. This may be easier said than done. Such a cross-reference table requires two initial conditions: Authoritative data sources and Authoritative matching.

Authoritative data sources

Authoritative data sources means that the ISRC codes must strictly identify a unique sound recording. It is not infrequent that a given sound recording is identified by more than one ISRC code or worse, that different sound recordings are identified with the same ISRC code.

To achieve an absolute level of reliability, it is necessary that (a) the allocation of an ISRC code to a Sound Recording is mandatory and that (b) such allocation follows a proper business process.
Since iTunes™ has made it a requirement to provide an ISRC code to be eligible to be on their Music store, the ISRC is now present for almost every Sound Recording available on line.
The main problem remaining is the business process of allocating the ISRC. The only viable

[18] http://www.copyrightsummit.com

solution to guarantee uniqueness to an Identifier is to structure the code around a central registry. Failing to do so often results in 2 entities (ie. Record Labels) issuing different numbers in different places. By having a Central Registry that keeps track of all the ISRC codes and the Sound Recording descriptive metadata that have been allocated to date, such errors cannot happen.

While a Central Registry for Sound Recording has never existed, the Recorded Music sector (ie. the Record Labels) are now working on a new Governance model that will ensure that a Central Registry can be put in place to ensure the uniqueness of ISRC codes.

As for the ISWC code, the same is true. Uniqueness is only guaranteed by a Central Registry and by a central code allocation tool. To that extent, CISAC, the Registration Authority for ISWC, uses a tool called the Common Search Index (CSI) (See section 0 for more details).

The CSI operates as a Central Registry of allocated ISWC codes. It also functions as a Central Allocation tool that will systematically verify (and validate) if a given set of work metadata has already been allocated an ISWC code, thus reducing the possibility of duplicates.

Authoritative matching

The CSI also features a matching tool, to identify the underlying Musical Work of a given Sound Recording.

In partnership with Digital Sales Provides (or online retailers), the CSI will match catalogues of Sound Recordings to their respective Musical Work. By following very strict matching rules, the reliability of those matches is close to 100%.

Strict rules are based on confidence levels. A confidence level of 100% means that all string based metadata element match perfectly and that the matching algorithm returned no other possible candidates. Whenever small differences occur between two candidates, the confidence level lowers.
Matching algorithms are tuned to maximize the number of fuzzy matches while maintaining a very high confidence level.

Once a Sound Recording metadata set has been positively identified against a Musical Work, both sets are then locked. The link is deemed Authoritative and the link can be reused in highly automated processes.

The CSI has only partially achieved the objective of an ISRC-ISWC cross-reference repository. It is only when an authoritative source of ISRC codes will be available that the CSI would be in a position to provide a reliable service.

Invoicing

For Standard licensing schemes (See section 0) the rates are predetermined and the invoicing mechanism is a standard process. It is also in this framework that a given licensor can provide all encompassing licenses covering 100 % of the Works' shares.

In the online world, the licensing process is more complex because of fragmented Rights. Fragmented Rights occur when Shares in a Work are licensed from more than one licensor.

To make things even more complicated, ownership may change over time, when a Publisher will acquire the repertoire of another Publisher or when he will mandate another CMO to manage his Rights.

To overcome this problem, CMOs will invoice after the fact, based on the mandates that they manage in a given period of time.
An online retailer will generate a Sales Report containing all the transactions in a given period of time – say one month.
The CMO will identify which Works are under its control for that time period and issue an invoice to the retailer.

To streamline the process a Standard format has been created called the CCID format (Claim Confirmation and Invoice Details). Many Major Authors' Societies and some major online retailers have now adopted it.

Distribution

Once all license fees have been collected and Musical Works Contributors have been identified the Distribution process starts.

Before entering into the different phases of Distribution, it is important to understand the international organization of CMOs.

Reciprocal agreements

A CMO typically operates in a given territory. The proximity factor to licensees is by far the most effective solution for licensing and monitoring music usage.

Within a given territory, the CMO receives two mandates:

- The first mandate comes from its own members; these authors, composers and publishers assign a Rights Management mandate to the Author Society for world wide usage of their works

- The second mandate comes from foreign Societies – also called Sister Societies. Each Author Society signs a Reciprocal Agreement with every other Society, and through these agreements all Societies represent each other's repertoires in their respective territories. By summing the mandates from those reciprocal agreements, a Society has the capacity to license and collect for all the other societies in the world.

Considering both mandates, a CMO must therefore distribute royalties to its own members – called Domestic distributions – and to foreign Societies – called International distributions.

Domestic Distribution

Domestic Distribution refers to the payment of collected Royalties to a Society's own members.

It is a straightforward process, as all of the required information (Domestic Works, Members declaration,..) is already stored in the Societies Domestic database (See section 0 for further details).

Depending on the Territory, there are nonetheless a few constraints:

- Near real-time distribution. It is a constant objective to reduce the delay between the Collection of license fees and the Distribution of royalties. This delay is mostly incurred by the fact that Sales Reports are not all simultaneous. There are great variations in the frequency at which Sales Reports are received. It is necessary to consolidate a large number of Sales Reports before a Distribution can be triggered.

- Unidentified Performances. Some reported usages refer to musical works that cannot be identified; this is especially true of new releases. There is a delay between the time when a new Sound Recording is put onto the market and the time when its underlying Work is declared and integrated into a Society's Domestic Repertoire. Collected Royalties for those unidentified performances are put aside until such time that the Work and its Rights Holders are properly documented.

- Blank Media Royalties. In some territories, royalties are collected when recordable media for music are sold, and it is generally impossible to know to which musical works those royalties should be attributed. A common Distribution methodology is to use the Sales Reports from other sources as a basis for Distribution ("distribution by analogy"). The Blank Media Royalty distribution is therefore dependent upon the reporting of other usages.

International Distribution

When the license fees collected by an Author Society result in royalties payable to a Right Holder of a foreign Society, those Royalties enter into an International Distribution.

International Distribution is more complex, as the Local Society does not fully control the documentation used to identify those Right Holders. The Documentation is maintained by the foreign Society and is made available through the Common Information Network (CIS-Net – see section 0) to the local Society. Maintaining the full documentation of all the other Foreign Societies is complex and prone to errors, and ownerships - especially those of sub-publishers - will often change over time.

Another difficulty to overcome is the consolidation of all the usages by all the licensees of a given Society. As an International Distribution is a complex task, a society may wait until is has a critical mass of Sales Reports from all or most of its licensees before it proceeds with an International Distribution.

The third challenge is the identification of foreign works whose documentation exists in different character sets, as is the case between the Latin characters used in Western Countries and some Asian or Cyrillic Character sets. While CISAC's CIS-Net does provide support for multiple character sets, this functionality is not yet in use by all Societies.

CRD

There is a standard reporting format for International Distribution called the Common Royalty Distribution (CRD) Format. This is an Electronic Data Interchange format designed to facilitate the reporting of distributed royalties for society-to-society and society-to-member applications.

The CRD is gaining broad adoption within the CISAC community. The file specifications are freely available on CISAC's web site.[19]

D. International Systems

As described in Section 0, the complete Business process for managing the Authors' Right is quite complex, in particular in its International dimension.

Collective Rights organizations need to exchange large volumes of data to perform their obligations.

In 1994 CISAC foresaw that Technical Standards would be the key to efficiency and accuracy. CISAC initiated a long-term project called the CIS (Common Information System).

CIS

The CIS can be thought of as a toolbox that comprises Technical Standards such as the ISWC code (see section 0), Common tools such as the IPI (See section 0) or the WID (See section 0) and well-defined business processes.

Over a period of 10 years, the CIS project was developed and implemented by all CISAC members, thus allowing for the Management of Author's in a Global scale.

CIS-net

As the online digital music market started to develop, not only the volume of data started to soar but also the depth of the repertoire used by Music Services enlarged. Global Music Services such as iTunes brought yet untapped repertoire into the picture. It was increasingly necessary for any Author Society to have access to its Foreign Sister Societies' documentation to identify Musical Works and their Rights holders.

In 2000 a number of Author's Societies had created "FastTrack", a technical alliance aimed at creating a network connecting the key documentation nodes to improve data flow and information exchange.
In 2005, FastTrack GDDN (Global Documentation and Distribution Network) was expanded to all CISAC members and was renamed "CIS-Net powered by FastTrack".

CIS-Net is now the backbone of all Musical Works Documentation exchange.

Underlying Architecture

CIS-Net is a distributed platform, where Documentation is maintained at its point of Creation. This topology allows for greater accuracy, as the information is maintained in real-time by the entity that has full Authority over the data.

[19] http://www.cisac.org/CisacPortal/documentLink.do?sw=on&lang=en&id=19514

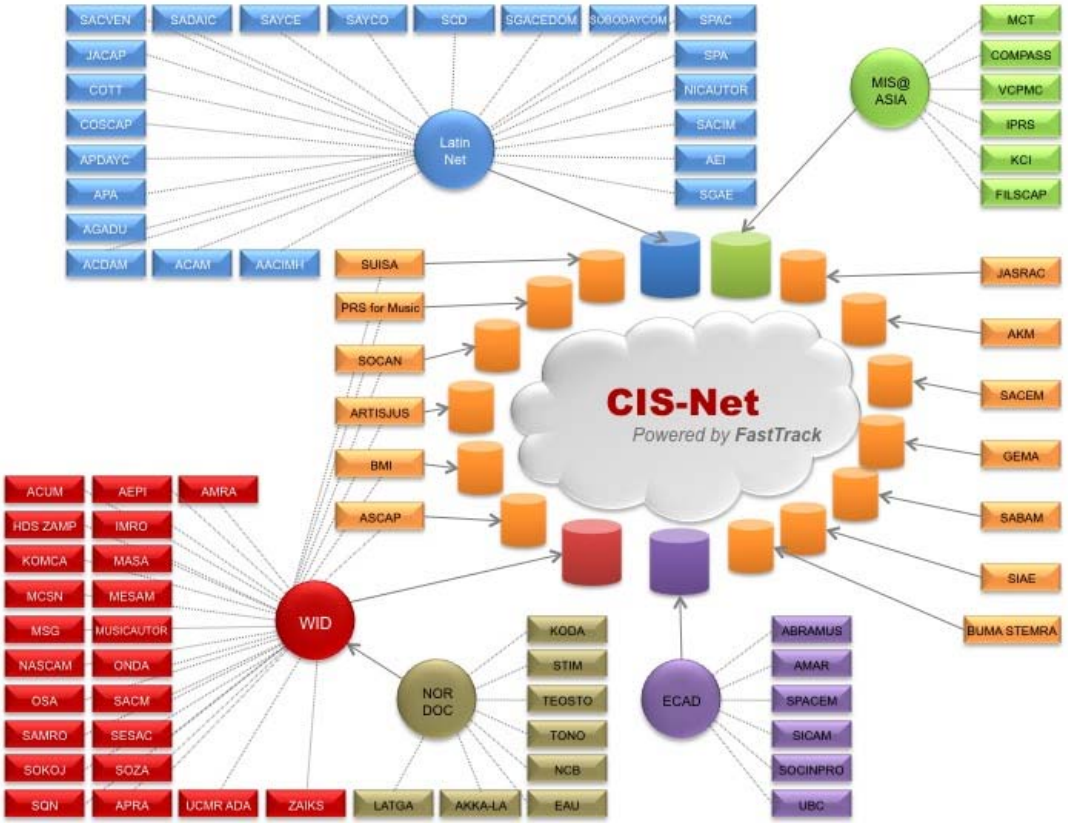


Figure 1: Topology of CIS-Net Powered by FastTrack.

All the nodes use a common protocol called CISML (Common Information System Markup Language). It is an XML based language that allows all of CIS-Net sub-systems to communicate with all other sub-systems. CISML communication is used for queries, data requests, and data packages.

The end-user – typically the Documentation department of a CISAC Author Society - will query CIS-Net directly using a web browser connected to the Internet. All queries are handled by a Local Search Engine that sends the Queries to all the nodes and then retrieves and consolidates all the responses.

Network Security being of primary concern, a Node is dedicated to control user access, and monitor network traffic behavior. All transactions are encrypted.

CIS-net currently holds more than 42 million Works supplied by 73 Societies around the world. More than 96 Societies use CIS-net as part of their regular business process.

Common sub-systems

The CIS-net sub-systems comprise both Documentation databases and common tools.

The major common tools are:

- The IPI (Interested Party Information) database providing real time authoritative information on all the Rights Holders. The IPI holds over 4.4 million IPI numbers for 2.8 million interested Parties. The IPI is administered

by the Swiss Author Society, SUISA, on behalf of CISAC.

- The CSI (Common Search Index) is the central repository of all ISWC codes. In addition the CSI provides a centralized ISWC code allocation mechanism thus ensuring the uniqueness of the codes. The CSI currently holds 26 million Work references with a unique ISWC code.

National, Regional nodes and the WID

Each Society's repertoire is made available to the network through a node; a database containing all their Works documentation. A Society node will contain the Society's Domestic repertoire (works created by its own members), and also a view of its international repertoire (works created by members of other societies).
Depending on their size and technical capability, Societies may chose to setup their own node, or contribute to a regional node.

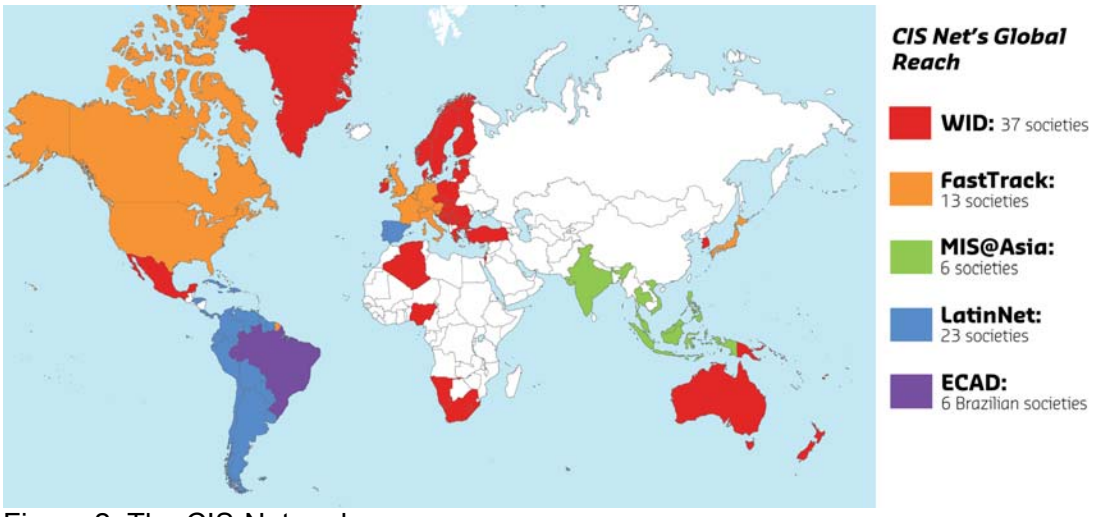


Figure 2: The CIS-Net nodes

National Nodes

National nodes are Musical Works databases connected to CIS-net. There are 13 National nodes on CIS-net, represented in dark grey in figure 2 above.
The Software providing the interface between the database and the network is developed by FastTrack and is made available to all the members. This process greatly reduces development costs and compatibility issues.

Regional Nodes

There are a number of Regional nodes on CIS-net. They are common nodes to all Societies or dedicated to a specific Geographical or linguistic Region.

LatinNet

LatinNet is a sub-network of CIS-net developed by the Spanish Society SGAE in partnership

with the South-American Societies.

LatinNet was originally a stand-alone network dedicated to the licensing and identification of Spanish language repertoire in Spain and throughout South America. It is currently used by 21 Societies.

ECAD

ECAD is the CIS-Net Brazilian node.

Brazil is an exception in South-America, as there are more than 12 Societies operating in

Brazil, covering not only Author's Rights but also Neighboring Rights.

ECAD is a joint entity in charge of documentation, licensing and collection of Rights throughout Brazil.

The ECAD node maintains approx. 1.5 million Works.

MIS@Asia

MIS@Asia is the South-East Asian node and is operated out of Singapore. It maintains the repertoire of 7 South-East Asian societies.

MIS@Asia provides support for regional character sets, allowing for the exchange of documentation in native languages amongst the contributing Societies. It also provides support for Latin character sets allowing foreign societies to interact with the MIS@Asia repertoire.

MIS@Asia maintains approx. 4.4 million Works.

DIVA

DIVA is a node dedicated to the region around China, although not exclusively. It is maintained by the Hong-Kong Society, CASH.
As for MIS@Asia, DIVA provides support for both Latin and non-Latin character sets.

The WID

The Works International Database (WID)[20] is not a Regional node but a common database accessible to all CISAC Societies.

Societies who do not want to operate their own National node or join a Regional node may make their repertoire available through the WID.

The WID is operated by a US based Society, ASCAP on behalf of CISAC.

[20] http://www.widb.com/

Development of the WID began in 1991, and through a process of refinement now offers powerful services for the disambiguation of Musical Works documentation, and the assignment of ISWC codes through the CSI.
The WID currently maintains over 12 million Musical Works. The WID repertoire is not only available to CIS-Net but also through a direct browser interface, and as a DVD-ROM application for Societies who have slow or unreliable Internet connectivity, or none.

CoSIS and WIPOCOS

Although not qualified as CIS certified tools, it is worth mentioning two other Rights Management software systems that interact with the CIS.

Copyright Society Information System (CoSIS) is a stand-alone PC system developed and distributed by the Swiss Society - Suisa.

CoSIS may be operated on a stand-alone computer with no specific requirements for network connectivity. It is well suited for less developed Societies. CoSIS may be used in conjunction with other CIS tools such as the IPI or the WID on DVD-ROM and supports most CISAC standards such the ISWC or CWR format.

WIPOCOS is also a stand-alone system for the management of Musical Rights. It is developed and maintained by WIPO and is made available for free to a number of Collective Rights Organization is Africa, Asia and Caribbean. Like CoSIS, WIPOCOs interacts with some CIS Standards.

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