Aiming for an Open Live Music Repository: with special reference to MIFOH 1976-89

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*With special reference to MIFOH 1976-89*

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1. Introduction

MIFOH ran from 1973 to the late 1990s, latterly under a slightly different name (Autumn Festival). It was started in 1973 by Sergio di Pieri, the organist, and it played a major role in transforming the early music scene in Melbourne, creating a critical mass of support, and making the transition to the modern style of organs.

The nature of the Festival, was one of engagement of all parties. All performers were expected to (and did) meet the audience at a Festival Centre after each concert, and these links helped to build a range of strong networks locally and internationally.

The MIFOH official sound recorders were Peter Lord (reel to reel tape and cassette decks) and Marcus Wigan (audio cassette deck), with Jim Sosnin (reel to reel deck) on several occasions deputising for Peter Lord. The ABC broadcast a few of the concerts.

These original recordings are all now held by Marcus Wigan as a private collection, who is now undertaking a research project on the following themes:

1. Technical recovery and digitising processes for such early magnetic media
2. The Intellectual Property and system design requirements for a genuinely Open live music repository system
3. The Musicology, with oral history collection, for MIFOH 1976-86
4. The indexing and full metadata of the original tapes

These will provide a solid foundation for the redigitising and transfer of this collection to the Repository, as the key task after the Masters thesis has been submitted.

Of the 40 Cassettes recorded by Marcus Wigan, all have been digitised to AIFF using the original Nakamichi 550 three channel cassette recorder used (with a set of three Nakamichi CM300 Microphones), using mercury cells and with cardioid cells facing forward and a shotgun cell facing the rear) to make these recordings into a Macintosh computer in 2002. While these are generally of adequate quality, he has purchased a very recent good quality Apogee A/D Converter and will re-digitise the original tapes, and will retain both the directly captured raw sound as well as a processed version with click and hiss reduction processing using Logic Pro X.

An example of the early raw AIFF capture is the concert by Halina Niecarz in 1976, accompanied by Graham Cox, after she won the Sun Aria contest. It still needs some basic cleaning up before it is a completely recovered but was provided for public audition at the 14th November Monash Music Repository relaunch and the subsequent exhibition.

Two LPs were created by Move records (MCP001 and 006) for MIFOH from some of the Lord and Sosnin tapes. These are the public releases date, plus some cassettes made for Friends (all Rights retained to MIFOH), so an Open Public Repository is still possible.

The final objective of the overall project is to create an Open Music Repository to hold this music with as few constraints as possible on the access, use and downloading of the materials. This final stage will follow the completion of a musicological study of the MIFOH Festival over a core period 1976-89 with some coverage of the 1973-76 and post 1989 years. The significance of the core years

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1 Part was played at the ASRA 2013 Conference on 25 October 2013
is that the Australian Copyright Act (1968)(Revised) defines the authorised
recorders of such concerts are the unique Copyright holders, who are thereby
permitted to place such recordings in the public domain. The subtle
qualifications surrounding this action are discussed in this paper, together with
the appropriate metadata and audit trail requirements involved.

The treatment of the cultural IP aspects of international agreements on cultural
issues that may affect ethnographic performance recordings are specifically
excluded from this paper, as they are not appropriate for MIFOH, although may
well justify some assessment wider uses of an Open Music Repository.

As the long term aim is to make an Open Repository for this material, the
complexities of the interactions between international Copyright and Public
Domain declarations in the US and Australia are outlined, as what I legally public
domain in on country may well not be in the other, and this needs to be
appreciated when a global access regime via the internet is the final objective of
the present program.

The present paper brings these issues together in a single document.

1.2. Issues

The two major issues in the overall project currently being addressed are

1. The physical recovery of the sound recordings from magnetic tape reels
   and audio cassettes
2. The clarification of the Intellectual Property Rights (IPR) issues involved

The indexing and assembly of the metadata involved in properly documenting
the recordings is also necessary before the IPR issues can be fully addressed, due
to the complexity of the rights issues in the Australian 1968 Act and its several
Revisions since 1968, and the effects of various changes and retrospective
alterations that have occurred over the last 35 years.
The overall project is structured into four segments.

1. An analysis of the IP issues and current open music repository functions and constraints. This includes a small survey of the issues as seen by University and State libraries, through a survey instrument attached as Appendix 1 and directly accessible via the web. It is directed in the first instance towards the Australian Members of the Association of Music Librarians, and subsequently to University Copyright advisors.

2. A systematic review of the detailed procedures and problems encountered in recovery of old and damaged magnetic media.

3. Oral history and integration of reviews, programs and performers over the target period.

4. (After thesis submission) transfer to digital, and creation of a suitable open music repository.

Originally the objective was to do the transfers first, but the funding was not possible after the recent cuts to University libraries took effect. The University of Melbourne was then forced to withdraw its initial tentative offer to pay the ~$15,000 required to recover the 100+ reel to reel tapes. All of the ~100 Audio cassette Tapes will be digitised and the digital audio signals cleaned by the author using personal equipment purchased for the purpose.

The implications of mounting an Open Live Music repository, and the precursor conditions required to secure the necessary provenance and clear IP conditions, was then made the first stage goal.

There is little information available about such repositories in Australia, as almost all University and State Library holdings are held behind a registration process to ensure that the statutory licences may be used – which of course also restricts the uses that can be made of the materials. In many cases only streaming access is then made available, as an additional constraint or
precaution, and this is in accord with commercial streaming services, so that the unique university holdings appear in the same access control and processes.

The focus of the present paper is therefore on the conditions required to hold and be able to deliver music in an open repository.

It is clear that there are a complex mix of organisational, legal and risk management constraints on official libraries and archives that limit what can be done at present.

Not all of these constraints are insuperable, but their complexity in aggregate has created barriers to movements toward wider and more open access.

Once we have explored these issues further, recommendations can be made for a live open music repository taking into account the additional complexities of international access, which is intrinsic to the internet, but not to IP law!

1.3. Establishing the current situation in Australia

After initial informal discussions with music librarians, it became clear that live music recordings were often presented to libraries in a form that had insufficient, or unclear, but usually inadequate provenance and detail to be certain of the IP status.

While this may have been acceptable in the past, legal cases (into which both Monash and Melbourne Universities became involved) has led such submissions being regarded to be as intrinsically ‘High Risk’ potential acquisitions, and the resulting processing delayed or rationed for the limited resources available to negotiate the IP issues in particular, and the provenance issues in general.

Even when the provenance is well documented, the IP issues remain complex. A simple survey was drafted to find out the extent of live music and (reasonably) open digital music holdings in the major University and State libraries within
Australia, but as soon as this draft was discussed with people involved it became quite clear that any reliance on a single group of functions within a library would be inadequate. In every case in the skirmish stage of the survey design, reference was made to the IP advisors, before any consideration of library-specific issues would be entered into.

A survey of Australian Music Libraries using Qualtrics has been mounted with the cooperation of the Australian Association of Music Librarians. This is restricted to Australian bodies and librarians, as the international variations in applicable laws are of less interest that the Australian practice was then restructured to meet this guidance, and was launched at the end of the first Masters Semester with the data collection for a later report. The survey format is shown in Appendix 1 (although a direct URL is provided here as a footnote, this would be accessible in any paper version of this text), making clear that subsequent discussions with specialists will be necessary in many cases.

Further informal discussions with Australian University Copyright officers confirmed that taking on live musical recordings was a problematic process due to the complexity of the IPR involved, and as a result such offerings are normally designated a High Risk item when being assessed for inclusion in a library collection.

Understandably the best way of limiting these potential legal risks is to ensure that only University members (students or staff) can access the digitised music, frequently limiting access to streaming only, and thus comply both with the statutory licence conditions and safeguarding any further uses beyond educational or research use.

This wariness is well founded, as the complexity of overlapping and varying rights requires extensive audit trail for the original recording as well as

3 https://www.qualtrics.com: our thanks are due to Professor Yoshisha Kashima of the University of Melbourne Psychology Department for agreeing to allow the use of his group licence for this project
4 https://melbpsych.co1.qualtrics.com/SE/?SID=SV_4HCvSBwSSV9uiVf
extensive metadata to ensure that all this is properly recorded. Unsurprisingly a major University\(^5\) advised that both the metadata and the repository processes were currently still in a state of flux, and would be under development for some time yet.

Given these factors, it would indeed be surprising if many Australian libraries were to be fully confident in making live music recordings readily, publicly discoverable and accessible - fully and download-ably available!

Small areas of Universities may have ethnographic collections, where all these necessary IPR and auditable provenance conditions listed are all satisfied: but are they sufficient? – The IP inherent in cultural collections remains a largely unaddressed issue.

Given this complexity, it is useful to compare the situation with that of open access to publications about music. Anderson et al. (2012) discuss the self-archiving of publications by scholars of music, and ironically even there the same types of complex IP barriers arise. Copyright complexities are repeatedly raised, although to be fair to those creating IP law, the reasons are due largely to the inconsistent rear-guard actions of the publishing industry.

Constructing a suitable survey to gain an overview of the current status of live music repositories in Australia was originally thought to be a simple matter of asking a few questions of the universities with music departments, and the State libraries.

Early informal discussions with several of these bodies quickly made it clear that this would be inadequate. The sample frame selected was the Association of Music Librarians, Australian chapter\(^6\) and formal agreement was secured. The Copyright office at Monash advised that the organisation of University Copyright Officers would also be appropriate, as they would in most cases be the people to

\(^5\) Personal communication: requested to be kept informal at this stage by the informant

\(^6\) http://www.iamlaustralia.org.au
whom the more difficult IP issues would be referred. The survey makes provision for such referrals.

2 Intellectual Property Rights and sound recordings

2.1 Relevant IPR issues in Australia

There is a rapidly narrowing window for the recovery of a wide range of audio oral and musical recordings made up to 1989 time as the underlying media age. The Australian Copyright Act (1968) (Revised) instigated performers rights for the first time from 1989, so that the IPR issues are considerably simpler to handle for any plans to make Open access to recordings made prior to that date.

The period up to the early 1990s also saw a massive amount of audio and musical live recordings made using magnetic tape, in cassette or reel-to-reel formats. These media have a finite life, and are in general are degrading quite quickly, especially the substrate materials from the late 1970's and before when not stored in suitable environments.

The dual tasks of recovery and preservation of aging audio recordings has become critical as early magnetic tapes become unreadable, shellac and vinyl records require capture into digital form, and early CD and DVD ROMs are showing uncertainties in their survival and reliability as archival media. The first of the laser disc variants (12” LaserVision (LV) Analogue Laser discs) displayed 'laser rot' from as early as 1980 (Iraki, 2008), with various forms of failure under the lacquer layer. Laser rot was sufficiently prevalent in Sony DADSC-pressed laser discs that they led the league tables of factories and titles reported with laser rot.

The CD and DVD formats that follow are already of some concern as neither were designed for archival use, although some specialised blanks were designated as such they generally were little used due to their high cost and limited availability.

7 http://www.lddb.com/laserrot.php
In each of these types of sound recording formats the general view has emerged that digitisation is a necessary step in conservation – and this places growing time pressure on the time window for much of this material to be captured.

While the technical issues of digitisation and recovery are of rising concern in library and archiving circles as material not captured is beginning to vanish if not conserved, and considerable care is needed as tapes can get mouldy. Print-through, tape delayering and other malfunctions can also occur during unskilled recovery processes, they will the subject of a later report.

The present paper focuses on access and availability issues, covering the ways that digitised music is held in collections, repositories, and the types of steps that might enhance their value and accessibility, with special reference to Open Music Repository possibilities and constraints, especially the complex hurdles presented by the mix of Intellectual Property factors that arise in media transfers, performers rights, transmission, sheet music, arrangements of ancient music, extemporaneous performances and recording dates. These are traced through as part of the labyrinth at the end of which is to emerge the specifications and requirements for genuinely _Open_ Music Repositories, where material can be freely accessed, and freely downloaded and used in many different ways without constraints

There is a strict provenance trail required for the intellectual property aspects of such recordings and the recovery processes, and this may or may not be stored in the final repository as an audit trail. At each stage of the capture and processing of a sound recording different parties have different rights. Even the transfer of the original recording to an archival format triggers a further need for a formal record as it fixes a copyright date (‘fixation’). The precise arrangement of any sheet music used – even annotations and selective arrangements- also trigger further intellectual property rights by the parties involved.

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8 A number of the MIFOH original tapes held by Marcus Wigan are already heavily covered in mould
A less than obvious issue to trace is the possible Membership the Australasian Performing Rights Association (APRA) of any of the musicians involved, as the conditions of APRA membership can also constrain their ability to place recording rights into the public domain. It is rare that such detail is ever captured or kept, and certainly presents a potential provenance problem for many of the recordings made in the pre-1989 era.

The need for audit trials (provenance) for derived data of many kinds is not always recognised but always important. The same unrecognised need to trap and record the provenance details in IP issues is also reflected by a similar need to trace the histories of actions and events in even apparently unaffected areas such as simple data estimation processes. Creating full metadata for documents, data or multimedia objects is an unpopular time consuming imposition on many involved in active research and study\(^9\) and often requires careful explanations to secure good quality inputs from authors. A paper by Westlake and Wigan (2007) which covered the technical (as distinct from a purely archival) necessity of securing and holding a full audit trail when doing Bayesian modelling had to be written because analysts indicated that the importance of such provenance requirements were not always appreciated. Music is not the only domain where this is the case!

This under recognition and lack of appreciation of the critical role of metadata by authors and creators is common to a wide range of fields. Provenance and audit trail are terms covering the same need to track and record historical connections and influences in a wide swathe of fields and methodologies.

Details of appropriate systems and those in current use for open repositories are discussed later, suffice to say that metadata sought for archival collections (including audio) (RLG, 2005) barely mention intellectual property issues –

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\(^9\) A few years ago when I was Chair of the US TRB Metadata subcommittee, and publishing on repositories of various types, I was invited to Georgia Tech to "talk about any topic I liked—other than Metadata "as this always made my inviter feel guilty" (Frank Southworth; Distinguished Staff: Oak Ridge National Labs USA, and Georgia Tech. Personal communication
while the processes recommended make a major point of it at acquisition stage (RLG and OCLC, 2002): yet no suggestion is made in these authoritative guidelines that the IP data form part of the metadata for the collection items themselves!

For archival sound formal recommendations from many bodies exist that advocate that throughout the capture and digitising processes as much audit trail and metadata as possible should be captured and held, but this admirable intent is not always possible to implement or the data even sought. However it is clear that solid audit trail from original recorded media, though digitisation, to processed versions (and the parties and techniques involved) would be highly desirable metadata in music repositories - as a counsel of perfection at least, and as a risk assessment process at best.

The Intellectual Property complications are substantial at every stage, even for live recordings of music centuries out of copyright as a complex web of issues arise at each stage of recovery and repository placement and subsequent access. These are now considered in some detail.

The legal constraints and access capacities differ for formal Archival bodies (such as the Australian National Film and Sound Archive (NSFA)) and educational bodies (such as universities). If an educational organisation wishes to induct live recordings into their collections, Statutory Licenses under the Act allow this to be done for educational and research purposes, provided that access to this material is then appropriately limited to ensure this\textsuperscript{10}. Even so, Universities must take careful steps to ensure the provenance of such deposits, from original media to digital submission. There are further special provisions for archival bodies in the Act.

\textsuperscript{10} The subsequent usage under other terms of the act (parody etc) are less easy to manage through access control limited to students or researchers of a University
The research program covered in the present paper is examining how Open Access might be made possible in cases when the appropriate conditions can be satisfied – and exactly what those conditions might be.

While constraints would appear to be less onerous for live recordings made up to 1989 when Performers Rights become part of the Australian Copyright Act. There are retroactive provisions introduced for sound recordings made prior to 2005. From the beginning of 2005 both the maker and the performer are defined as ‘makers’ and so own copyright in recordings of performances\(^\text{10}\) an update of the Australian Copyright Act required as part of the Australia-US Free Trade Agreement, as Australia then was required to recognise an economic right for performers in their works\(^\text{11}\) by signing the World Intellectual Property Organisation (WIPO) Performances and Phonograms Treaty (WPPT).

Consequently even for live recordings undertaken before 1989 of performances of sheet music and arrangements well out of copyright, a significant element of uncertainty has been reintroduced.

Unfortunately this affects most strongly exactly those recordings made using fragile magnetic media, and now becoming harder and harder to recover. It is all too likely that any such further barriers to the accessibility and use of such recovered recordings will be even less attractive or the expense justifiable for archives and universities to invest in, given the additional uncertain constraints on utilisation that might now be added.

A further complication is any retroactive change in the status of live recordings made available under the pre 1989 conditions. Some retroactive changes made in the 2005 Copyright Amendment act that were required by the terms of the AUSFTA Free Trade agreement, and some retroactive moral rights provisions for performers were enacted from 2007.

\(^{10}\) Articles 7-10 of the World Intellectual Property Organisation (WIPO) Performances and Phonograms Treaty (WPPT).
There is a very high probability that if Australia signs the US-led TPP (Trans Pacific Partnership) further constraints inimical to open access will be reintroduced, possibly even over riding the missing Fair Use provisions now being assessed by the ALRC, given the few leaks from the secretive handing of this huge Free Trade Agreement\(^\text{12}\). It would be unwise to assume that retrospective revisions to the Australian Copyright Acts would not occur.

2.2. Sound Recordings made in Australia before 1989

A substantial body of recordings before 1989 made in Australia, if recovered, putatively present fewer problems in the IP provenance as the recoders (not the performers) hold all the IP and copyrights, as long as the music itself is out of copyright\(^\text{13}\). This changed from 1989 with the updates to the Australian Copyright Act but the exemption provisions for Archival collections remained unaffected by the retroactive measures in the 2005 Act. Consequently even if the retroactive aspects of the 2005 Act are accounted for, recovery of live oral and music of pre-1989 era are still well worth examining in terms of how best to make them accessible under the continuing 1968 Act (Amended) Archival Copyright exemptions.

The ability and methods by which live open access is possible for Archival Body collections is clear for ancient music\(^\text{14}\) recordings and performances (such as the Irish national traditional music archive\(^\text{15}\)), but less clear for more recent materials. The interaction of the rights in the music itself are not involved for classical and ancient music, although extended extempore performances on an ancient these bring this into currency again. Field and ethnological recordings can also invoke a further set of intellectual property rights issues, mainly to do with moral and cultural property rights.


\(^{13}\) A variety of terms apply, but typically 70 years after the death of the author

\(^{14}\) A term we will use for music composed over 100 years after the death of the composer

Untangling these interwoven thickets of IPR complications is a material step towards Open Music repository creation, as the risk-averse approach to IPR complications presents a major barrier to many major bodies being prepared to induct important live recordings.

In the case of recordings made on fragile (and fading) magnetic media up to 1989, there is also a recovery stage, where IPR rights come into play: not for archival Collections, but for others. As so much material exists in this interregnum area of magnetic media recording, not yet in repositories for either archival or educational bodies, this is a further complication that increases not only the recovery and capture costs in terms of complexity and the fees to undertake the necessary media transfer actions.

2.3 Application of Intellectual Property Issues to the MIFOH project

The IPR issues that need to be considered include:

1. Who is the copyright holder?
2. What music was used?
3. Who can hold music under exemptions under the Act?

Copyright of the primary project target collection of MIFOH-authorised live recordings made by Marcus Wigan, Peter Lord, and Jim Sosnin is established as all the MIFOH live recordings are originals on the sole original copies in existence of these particular recordings, and all were authorised recordings by MIFOH, there being no performers rights at the time these recordings were made. However, there are further intellectual property rights (IPR) issues affecting the music being recorded.

The sheet music used at the recorded performance is the first area needing more detailed examination. If this sheet music was out of copyright, as it would be for most of the early music pieces played and sung, then there is still a further hurdle to address. If a significant degree of skill, creativity and integration of
different sources had been added to create the arrangement used in the performance, then copyright may also obtain in this music – however old the music itself.

Libraries and Archives are permitted make a single copy for preservation, but the process of recovery from magnetic media to a digital recording by the copyright holder. In MIFOH case this is the person making the recording of the live performance. There is a technically necessary intermediate step \textit{en route} to the archival version in digital form, whether or not the Library or Archive does it themselves or has it done by an agent. In the latter case it is a second copy, as the digital recovery is done by the agent, and then transferred to the Library or Archive. It is arguable that a copyright holder authorising such a recovery from magnetic tape can retain a master digital copy of the recovered recording in addition to one being donated to one to one or more Libraries or Archives, who may retain a single copy for preservation purposes\textsuperscript{16}.

Once this first copy has been made, any number of copies can be made of this recording by archives and libraries – but only if such copies are made only for special cases, and as long as they do not conflict with the legal interests of the copyright holder\textsuperscript{17}.

The first complication arises from the reproduction, transfer and communication rights aspects. The commercial aspects are strictly defined, but the non-commercial (personal use) rights are not. Online access is clearly communication, as is downloading: these are both permitted for the exempt non-commercial purposes of research and study, but any repository would need to verify this, usually by requiring a registration. This would usually by an educational or archival body, and to ensure a specific confirmation that the access was provided solely for the purposes of education or research. This process safeguards the library by verifiably complying with the conditions of their Statutory Licence.

\textsuperscript{16} Copyright Act S110B(1)A
\textsuperscript{17} Copyright Act (1968) Rev 2008 Cwlth 200AB
It is important to distinguish between *communication* (in this case by putting online), and *copying* the recordings either for format translation (e.g. recovery from old magnetic tapes, 12” laser discs with the start of laser rot, or fading early CD-Roms) or preservation – which is often the purpose of such format shifting. The communication rights for performances lasts for 20 years, the copyright for format shifting or preservation copies is 50 years.

However, had Performer’s Rights been deemed to be applicable to pre-1989 live recordings, then there would have been a 50 year right from the date of the performance. In the case of MIFOH, were that to have been the case, then the 1976 recordings would become free of this aspect of Intellectual Property Rights in 2016, and the others up to 1989 progressively from 2017 to 2028. For the MIFOH recordings made after 1989 these are unambiguously the applicable terms.

However, up until 1989\(^{18}\) performers rights did not subsist in these live recordings. A number of pieces (two LPs by MOVE Records (all rights reserved to MIFOH), and rather more audio cassette versions) were released for limited sale, and others made available to the Friends of the Festival\(^{19}\). In all these cases the rights were reserved to MIFOH, and though that provision on the covers to the original recording parties.

A notable complication is that from 2005, some retrospective rights were given to performers, which affects recordings made prior to 2005. While the performers rights then applicable to performances made (or rather, fixated) before 1995 came into play, they are very limited in their application, and apply solely to commercial uses. This would clearly not apply to an open music archive making such pieces available. However the status of the many pieces legally made widely available prior to 2005 is far from straightforward, and this legal ambiguity has been heavily criticised (Weatherall, 2005).

\(^{18}\) Copyright Act Section 248F

\(^{19}\) from recordings by Marcus Wigan, Peter Lord and Jim Sosnin during this period.
The Moral Rights of performers should in any case be respected: within formal copyright requirements or outside them, as a matter of simple integrity. While this does not apply to the Oral History aspects of the MIFOH project, the metadata associated with any digital transcription from magnetic tape should be as complete as possible, arguably more than the basic Dublin Core or MARC requirements widely used for digital holdings of various kinds for cataloguing and there is more detailed discussion in the later section on metadata issues.

However performers had no legal moral rights until July 2007, so no recognition of the performers in the metadata or citations of pre-2007 recordings is legally required – but would be very poor practice not to include their names as the performers in such metadata or citations where appropriate. Ethically and professionally as information professionals, every reasonable effort should be made to include such details in the metadata for pre-2007 recordings, irrespective of the lack of any legal compulsion to do so.

In the case of musical recoveries of the type in question, it is unlikely that the raw recovered digital records will be of an even and acceptable quality throughout. The digital processing to remove background and tape noise, clicks and other recovery artefacts – and indeed performance artefacts – are normal current practice for recordings of music, and widely regarded as essential to create a product of adequate quality to represent the performance. Consequently such processing would be fully defensible under moral rights grounds, whether or not they were legally applicable to the recordings in question.

In my personal view, and as implemented for other forms of digital data when I had the responsibility, both raw recovered digital records and processed records should be submitted to any Archival holders, as good data practice. Online access

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20 The Oral History collection is not scheduled until 2014
21 Extensions to the Dublin Core are common: for example with widely used extended version termed the Darwin core has an established place in biology. There is none such for music as yet
22 Section 195AZR of the 1968 Copyright Act as Amended: NB this has no retrospective provisions
would normally be (without special requests) to the processed versions. This would ensure that a faithful copy of the recovered records was retained, as later expertise and technologies might well be able to improve on what was done to provide a usable online version in the first instance.

None of these considerations cover the actual music being performed. This has a separate copyright, which applies until 70 years after the composer died. However if the composer died before the beginning of 1955, then all his/her works are out of copyright.

MIFOH recordings were usually of performances of early music, composed well before this date. Areas of uncertainty exist if there had been any major rearrangements of the works, and in particular for extempore performances. One such case of the latter is a long extempore performed in 1979 by the Austrian, Professor Peter Planyavsky. Such performances could well be deemed to fall under a composers right, and thus be protected for 70 years after the death of the performer. The communication of an authorised recording of the performance itself would be free of copyright after 20 years. This is typical of the complexities involved in the IPR aspects of sound recordings.

The music itself is not quite clear of IP complications, even if by 17th Century composers. A good example of the barriers imposed by copyright is the case where major arrangements had been made by Lionel Sawkins of works by Lalande (1657-1726). On appeal, Swakins prevailed both in asserting copyright in any performance of his arrangement of this piece, but also in requiring his moral rights as an author to be respected.

A concise summary of this important (and still controversial) case is as follows:

"The case involved music by Lalande who was the principal court composer at courts of Louis XIV and XV. Dr Lionel Sawkins developed three performing editions of grands motets. The first was for Te Deum Laudamus and Dr Sawkins added a figured bass line and made 1,139

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23 808 Sawkins v Hyperion Records Ltd [2005] EWC Civ 565 and the Court of Appeal (Mummery, Mance and Jacob L JJ) May 19, 2005 [FN1]
"corrections & additions to the notation necessary to make the music playable". The second piece was La Grande Pièce Royale and Dr Sawkins "re-created missing viola parts in respect of 153 of Lalande’s 268 bars". The third was Venite, Exultemus in which Dr Sawkins corrected 27 wrong notes and made changes or additions to the figured bass, there was a fourth one, but Dr Sawkins had limited editorial input in that. In total there were "3,000 editorial interventions". Dr Sawkins had placed his name on the front of each of the scores.

Hyperion Records Ltd paid a hire fee of £1,350 to Dr Sawkins in respect of providing the scores for orchestra and vocalists.

Hyperion then made sound recordings of scores of the 4 performing editions and called it "Music for the Sun King". It was accepted that these performances could not have been undertaken with the original Lalande scores.

Dr Sawkins claimed copyright in the "material form of musical scores embodying performing editions of 3 pieces of music by Lalande". He also claimed the moral right to be identified as the author.

It was held by the Court of Appeal that Dr Sawkins had copyright in the performing editions and that he had a right to be identified as the author.

The Court of Appeal agreed with the court of first instance that the phrase "With thanks to Dr Lionel Sawkins for his preparation of performance materials for this recording" did not fulfil the requirement under section 77 CDPA 1988 to identify the author of the copyright work.24

These rulings, which involve both arrangements of old works, and the implications of extempore performances (where the performer is the author) require considerable care even when transferring recordings of performances, to ensure that the provenance of music even up to the end of 19th Century embodied in the arrangements used are determined where this is possible to ascertain. They present further barriers to creating Open Repositories of ancient music, and are illustrative of the common decision of Universities and Archives to depend on the statutory licences and closed access solely to verifiably research and educational applicants.

This is an excellent example of where the audit trail (a component of metadata) of both a performance and the sheet music requires verification.

This does not entirely debar Open Music repositories from being built for early music, but certainly explains why the most prevalent Open Access Musical

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24 http://www2.derby.ac.uk/ostrich/The_law_of_the_music_industry/Moral%20rights/page_09.htm [Accessed 29-10-13]
Repositories accessible on line are in the main of recent recordings specifically cleared (and often performed) specifically or such purposes, although the use of Creative Commons licences ensure that the downloaded Materials can only be used for personal and non-commercial purposes, as specified by the copyright holders. There is a range of Creative Commons licences that copyright holders may choose to use, the least restrictive of which (Creative Commons C00) is a formal statement that the work is transferred in full to the public domain. In view of its importance it is reproduced as Appendix 2.

However Creative Commons licences used may vary very substantially in what is permitted, as it is up to the copyright holders to decide what to permit and what to debar in each case, buy specifying exactly what terms appear in the Creative Commons licence that they choose to use. The freemusic archive is a good example of a repository where the Creative Commons conditions chosen are far from uniform. Arguably only a repositories requiring Creative Commons C00 could be a true Open Repository for musical recordings.

So what would be? And what would be the criteria?

An initial step would be to determine how live recordings are accepted, handled, and access provided in libraries, Universities and archives.

3. What is currently available in repositories around the world for ‘free’ music?

Two examples of Open Music Repositories are now discussed as practical illustrations of currently systems in this fresh tradition. These are all based outside Australia, and thus have different IPR regimes to contend with. In some cases this may be an advantage, a good example being the way in which transfers of copyright to the public domain of copyright have been handled by the USA.

[Accessed 29-10-13]
3.1 MUSOPEN.org

MusOpen is one of this new generation Live Open Music Repositories. This website was set up specifically to fund, commission, record and make widely and openly available high quality music in digital formats without constraints.

This objective has been constrained by the now familiar litany of Intellectual “property” issues.

At this point the issue of Intellectual Property needs to be carefully re-examined, as IP has few if any of the excludability or other aspects that apply to physical property, and indeed there is a solid and legally heavily tested an reaffirmed principle that IP is actually a limited monopoly awarded by and specifically and artefact of Parliament (and not natural law or any of the other implied aspects of physical property). This is argued elegantly and thoroughly by the eminent international IP lawyer William Patry\(^{26}\) (2009) reminding us that IPR is specifically based on a reviewable balance between social benefits and the monopoly powers accorded to holder of IP.

In this regard the issue is rarely the creators of the IP, and almost exclusively the holders of IP rights. This will be explored further a little later, but Patry’s key issue is the over reach of the rights holders into domains that arguably are no longer in social interest, and are a barrier to innovation rather then the reverse, which is the basis of the governmental-set balance between monopoly and community benefits. Consequently the ever extended and ever more restrictive business monopolies of IPR are at continuous risk of substantial reductions or wholesale revision as this becomes more widely appreciated.

MUSOPEN (www.musopen.org) aims to alleviate the current constraints on social benefit as far as possible. MusOpen’s objective and business model is to be able to make their recordings to as widely available as possible, while still being able to generate some revenue to operate the service.

\(^{26}\) Currently the senior attorney for Google, a capacity he takes care to separate from his stance in this book.
MUSOPEN uses a subscription model, for all but small-scale users (for whom no charge is made), where services are scaled by the level of subscription fee to the service.

MUSOPEN is an example of the freemium model, but is distinctively different in that no limitations on use or access are made for uncharged users other than the small number of pieces that they can download in a specified time period, and the quality (i.e. degree of compression) of the digital recordings downloaded. The scaling up of the product with membership fees is via unlimited quantity of downloads, the quality of these downloads and the degree of priority in terms of access to fresh materials.

Fig 3.1.1 The MUSOPEN offer

### By Composer

<table>
<thead>
<tr>
<th>Composer</th>
<th>Composer</th>
<th>Composer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anonymous</td>
<td>Gruber, Franz Xaver</td>
<td>Regondi, Giulio</td>
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<td>Verlouw</td>
<td>Handel, George Frideric</td>
<td>Reicha, Anton</td>
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<td>Albéniz, Isaac</td>
<td>Haydn, Joseph</td>
<td>Richards, Goff</td>
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<td>Albéniz, Tomaso</td>
<td>Hofst, Gustav</td>
<td>Rimsky-Korsakov, Nikolai</td>
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<td>Albini, Giovanni</td>
<td>Hütte, Georges</td>
<td>Robin, Made</td>
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<td>Arden-Taylor, Paul</td>
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<td>Rossini, Gioachino</td>
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<td>Arslanov, Emil</td>
<td>Janáèek, Leoš</td>
<td>Rubinstein, Anton</td>
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<td>Bach, Johann Sebastian</td>
<td>Jr., Johann Strauss</td>
<td>Russell, Alexander</td>
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<td>Bartòk, Bela</td>
<td>Juan, Arriaga</td>
<td>Saint-Saëns, Camille</td>
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<td>Beethoven, Ludwig van</td>
<td>Kreutzer, Conradin</td>
<td>Satie, Erik</td>
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<td>Berlioz, Hector</td>
<td>Lalo, Edouard</td>
<td>Scarlatti, Domenico</td>
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<td>Bettinelli, Bruno</td>
<td>Lauri Volpi, Giacomo</td>
<td>Schubert, Franz</td>
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<td>Bizet, Georges</td>
<td>Lavalle, Calix</td>
<td>Schuman, William</td>
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<td>Locatello, Ernesto</td>
<td>Schumann, Clara</td>
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<td>Leoncavallo, Ruggero</td>
<td>Schumann, Robert</td>
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<td>Licit, Franz</td>
<td>Schulz, Heinrich</td>
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<td>Bruch, Max</td>
<td>Lotti, Antonio</td>
<td>Scriabin, Alexander</td>
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<td>Bruckner, Anton</td>
<td>Lübbeck, Vincent</td>
<td>Shelley, Harry Rowe</td>
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<td>Buxtehude, Dietrich</td>
<td>Mahar, Justin</td>
<td>Smetana, Bedrich</td>
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<td>Byrd, William</td>
<td>Mahler, Gustav</td>
<td>Souza, John Philip</td>
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<td>Chaliapin, Feodor</td>
<td>Mangore, Agustin Barrios</td>
<td>Spoerl, Ludwig</td>
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<td>Charpentier, Marc Antoine</td>
<td>Martinon, Jean</td>
<td>Sr., Johann Strauss</td>
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<td>Chausson, Ernest</td>
<td>Massenet, Jules</td>
<td>Stainer, John</td>
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<td>Chopin, Frédéric</td>
<td>McCormack, John</td>
<td>斯坦, Karl</td>
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<td>Clementi, Muzio</td>
<td>McDowell, Edward</td>
<td>Sturt, John</td>
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<td>Mendelssohn, Felix</td>
<td>Süß, Josef</td>
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<td>Miguez, Leopoldo</td>
<td>Tárrega, Francisco</td>
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<td>Corelli, Arcangelo</td>
<td>Monteverdi, Claudio</td>
<td>Tauber, Richard</td>
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<td>Cornelius, Peter</td>
<td>Moretti, Alessandro</td>
<td>Tchaikovsky, Pyotr Ilyich</td>
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<td>Couperin, François</td>
<td>Mozart, Wolfgang Amadeus</td>
<td>Tolomanni, Georg Philipp</td>
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<td>Croce, Giovanni</td>
<td>Mussorgsky, Modest</td>
<td>Ticheli, Frank</td>
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<td>Cubbroth, Charles</td>
<td>Nedbal, Osker</td>
<td>Torelli, Giuseppe</td>
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<td>de Machaut, Guillaume</td>
<td>Neuland, Wilhelm</td>
<td>Toscanini, Arturo</td>
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<td>Nicolai, Otto</td>
<td>Trimble, Lester</td>
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<td>Offenbach, Jacques</td>
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<td>Pachelbel, Johann</td>
<td>Victoria, Tomás Luis de</td>
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<td>Paganini, Niccolò</td>
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<td>Dunst, Aaron</td>
<td>Palestro, Giovanni</td>
<td>Vivaldi, Antonio</td>
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<td>Duparc, Henri</td>
<td>Puccini, Massimiliano</td>
<td>von Flotow, Friedrich</td>
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<td>Dupré, Marcel</td>
<td>Patschek, Julius</td>
<td>Wagner, Joseph</td>
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<td>Elgar, Edward</td>
<td>Pellegr, Frank</td>
<td>Wagner, Richard</td>
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<td>Enrico, Cloudi</td>
<td>Pergoles, G.B.</td>
<td>Walls, Lorenzo</td>
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<td>Ferras, Gabriello</td>
<td>Polnitz, Magister</td>
<td>Walther, Johann Gottfried</td>
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<td>Fauré, Gabriel</td>
<td>Piston, Walter</td>
<td>Weber, Carl Maria von</td>
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<td>Frances, César</td>
<td>Ponchielli, Amicicre</td>
<td>Wees, Sylvius Leopold</td>
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<td>Giordani, Tommaso</td>
<td>Prenti, Stanko</td>
<td>Widor, Charles</td>
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<td>Prokofiev, Sergei</td>
<td>Willibald Gluck, Christoph</td>
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<td>Glazunov, Alexander</td>
<td>Puccini, Henry</td>
<td>Wolf, Hugo</td>
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<td>Glück, Adolph</td>
<td>Rachmaninoff, Sergei</td>
<td>Wood, SB</td>
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<td>Goldmark, Karl</td>
<td>Ravel, Maurice</td>
<td>Yon, Pietro</td>
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<tr>
<td>Granados, Enrique</td>
<td>Reger, Max</td>
<td>Young, Gordon</td>
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Fig 3.1.2 the range of composers covered to date
**By Performer**

<table>
<thead>
<tr>
<th>Aaron Dunn</th>
<th>Emily Stark</th>
<th>Patricia Taylor</th>
</tr>
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<tbody>
<tr>
<td>Aaron Prillaman</td>
<td>Felipe Sarro</td>
<td>Paul Arden-Taylor</td>
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<tr>
<td>Academy Wind Trio</td>
<td>Glen W. Prillaman</td>
<td>Paul Pitman</td>
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<tr>
<td>Adolph Gluck</td>
<td>Gordon Rowland</td>
<td>Peter J</td>
</tr>
<tr>
<td>Agathe Laforge</td>
<td>L Aïdinyan, M. Arutyunyan</td>
<td>Raul Menjarrez</td>
</tr>
<tr>
<td>Alessio Cesaroni</td>
<td>Ian Dollins</td>
<td>Salma Mayrowitz</td>
</tr>
<tr>
<td>Alex Poullet</td>
<td>Jason Chiu</td>
<td>Shelley Katz</td>
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<tr>
<td>Anna Simboli</td>
<td>Jeff Carter</td>
<td>Skidmore College Orchestra</td>
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<tr>
<td>Anonymous</td>
<td>Jennifer Castellano</td>
<td>Skidmore Wind Ensemble</td>
</tr>
<tr>
<td>Barlow High School Singers, Gresham WA</td>
<td>Jim Greeninger</td>
<td>Slovenian Army Orchestra</td>
</tr>
<tr>
<td>Brendan Kinsella</td>
<td>Juan Diaz Porras</td>
<td>Telemann Trio</td>
</tr>
<tr>
<td>Canadian Culture</td>
<td>Justin Mehari</td>
<td>Uncredited in old Documents</td>
</tr>
<tr>
<td>Carlos Gardels</td>
<td>Karine Gilienyan</td>
<td>United States Marine Band</td>
</tr>
<tr>
<td>Chamber Philharmonic Taipei</td>
<td>Kimiko Ishizaka</td>
<td>US Air Force Band</td>
</tr>
<tr>
<td>Classical Guitar Study Group</td>
<td>Musopen String Quartet</td>
<td>US Army Band</td>
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<tr>
<td>Cross Seventh Station</td>
<td>Musopen Symphony Orchestra</td>
<td>US Military Academy Band</td>
</tr>
<tr>
<td>Daniel Blanch</td>
<td>Nathan Eckel</td>
<td>US Navy Band</td>
</tr>
<tr>
<td>David H. Porter</td>
<td>National Military Band</td>
<td>Vadim Chalminovich</td>
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<tr>
<td>Davis High School Symphony Orchestra</td>
<td>Oldham Music Centre Youth</td>
<td>Vox Altera Ensemble</td>
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<tr>
<td>Donald Betts</td>
<td>Oldham Music Centre Youth Wind Band</td>
<td>William Riley</td>
</tr>
<tr>
<td></td>
<td>Orchestra Gli Armonici</td>
<td>Young Zo</td>
</tr>
</tbody>
</table>

**By Instrument**

<table>
<thead>
<tr>
<th>Brass / Wind Group</th>
<th>N/A</th>
<th>Solo Instrument(s) and Orchestra</th>
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<tbody>
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<td>Chamber group</td>
<td>Open Instrumentation</td>
<td>Solo voice(s)</td>
</tr>
<tr>
<td>Choir</td>
<td>Orchestra</td>
<td>String Orchestra</td>
</tr>
<tr>
<td>Choir and Instrument</td>
<td>Organ</td>
<td>String Quartet</td>
</tr>
<tr>
<td>Choir and Orchestra</td>
<td>Piano</td>
<td>Voice(s) and Instruments</td>
</tr>
<tr>
<td>Concerto</td>
<td>Solo instrument</td>
<td>Voice(s) and Orchestra</td>
</tr>
<tr>
<td>Harp</td>
<td>Solo Instrument and Piano</td>
<td>Voice(s) and Piano</td>
</tr>
</tbody>
</table>

**By Period**

<table>
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<th>20th Century</th>
<th>Early 20th Century</th>
<th>N/A</th>
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</thead>
<tbody>
<tr>
<td>21st Century</td>
<td>Late Romantic</td>
<td>Renaissance</td>
</tr>
<tr>
<td>Baroque</td>
<td>Medieval</td>
<td>Romantic</td>
</tr>
<tr>
<td>Classical</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig 3.1.3 the range of performers, instruments and periods covered to date
The freemium business model is widely used in Apps to allow product to be freely distributed, with a variety of premium paid options, facilities or extensions are then made available. Usually only a small subset of users take these up. But the volumes are so great due to global internet access that this is frequently a profitable model.

MUSOPEN is an interesting model of a self-funding consumer based resource now entering an area where public or commercial provision has been the rule. The Benefactor subscription is similar to a Kickstarter contribution by anyone seriously interested, and offers a nice balance between the various creation and delivery costs. The music itself is carefully selected to be out of copyright, and
the clear accreditation of the performers ensures that they have their moral rights clearly respected.

![Fig 3.1.5 Search / browse by Composer: metadata displayed](image)

It is essential to note that the US copyright processes have been substantially different in the past, although there is now largely convergent with Australia due to the AUSFTA. A major issue is the current exclusion of the US Fair Use doctrine from Australian Copyright Act. This issue is covered later in more detail in view of its importance in repositories of all kinds. It is also an issue taken up the
Australian Law Reform Commission in its current inquiry\(^{28}\). The FAQs\(^{29}\) for MUSOPEN are clear, well expressed and cover the complexities of [US] copyright issues in the performance, the music and successor rights in a clear and succinct manner.

While MUSOPEN asks that all those performers or otherwise who upload material ensure that the material has been moved to the 'public domain', the subtleties of possible confusions between Creative Commons licences and the overlapping issues of music, arrangements, and performances still present a real risk if not fully covered. For the same reasons that University libraries designate donated materials as 'High Risk' and are careful and prudent in provenance verification, MUSOPEN endeavours to shift the compliance with rights responsibilities to the end users, even if the uploaders are also held responsible: a policy that is unacceptable for University libraries to risk.

\(^{28}\) [Accessed 29-10-13]

\(^{29}\) [Accessed 29-10-13]
It is notable how carefully MUSOPEN has been to ensure that the applicable [US] copyright provisions are as accessible as possible to all users of the website. Extensive links to US oriented copyright resources are provided to assist the users.

For example, from the FAQ:

"5. What content on Musopen can I use and reuse elsewhere?"

Musopen’s goal is to be the largest online repository of music in the public domain. Musopen respects the rights of copyrights owners and asks that its users do the same. Musopen requires all users who upload music to the site to represent that the uploaded musical composition and/or the sound recording is in the public domain. However, please note that Musopen cannot guarantee that any music uploaded by its users is, in fact, in the public domain. While Musopen seeks to prevent copyright infringement and complies as a service provider with the requirements of the Digital Millennium Copyright Act ("DMCA"), Musopen does not review music uploaded by users of the site to determine if the music is
in the public domain or subject to copyright. We strongly encourage anyone who wishes to use music found on Musopen to familiarize themselves with copyright law and the public domain and to independently assess whether any given musical work or sound recording is in the public domain and not otherwise subject to third party rights”.

(https://musopen.org/faq/).

Fig 3.1.8 The end user business model used by MusOpen.

Fig. 3.1.9 is an example of another effort to keep users well informed by linking to a good resource-- and at all points both MusOpen emphasises that other countries have different laws, and that even when using a US based resource, if in – say – Australia, the laws of Australia obtain when using MusOpen..
The key area illustrated in the excellent slider display shown in the slider setting shown in Fig. 3.1.9 is that [US] Copyrights had for a very long time to be registered to have effect, otherwise copyright did not apply (i.e. the © symbol was used to show that it had been registered applicable) and once registered, could then be renewed after a 23 year period. If this was not renewed reverted to the public domain.

The snapshot of the US Copyright dates summary pages in Fig.3.1.19 shows this is the reason that recordings made after 1977 and before March 1989 became public domain if the re-registration option was not taken up. It is significant that this covered about 90% of all such recordings, a factor which weights against the social benefit of the current commercial attitude of extremely long term automatic copyright extensions. Perhaps unsurprisingly this evidence is often neglected or ignored by US commercial interests in such debates.

It is essential to pay detailed attention to US IPR as they apply to the majority of the Open Music websites to date, and the US is the source of the globally

http://librarycopyright.net/resources/digitalslider/ [Accessed 29-10-13]
respected Creative Commons initiative. However, with the global access provided by the internet, the international IP agreements mean that the laws of the country you are actually in at the time when you access the net to look at these sites applies, which adds a fresh layer of complexity to the access and provision processes. Firman’s (2012) excellent book on access to the public domain in the USA is extremely careful to highlight this point. No equivalent volume exists for Australia.

We will now consider current examples from (near) Open Music Repositories in greater detail, to explore metadata issues.

3.2 FreeMusicArchive.com and OpenGoldbergVariations

The FreeMusicArchive is an initiative managed by the US radio station WFMU, to provide a library [repository] of free legal downloads, using a range of Creative Commons licences to enable artists to deliver their materials in a form and framework with curation support, and that also promotes them effectively. While the music is often free and unencumbered by constraints, a variety of licences are available for artists to choose that may limit the uses to which any downloads may be put. Consequently the FreeMusicArchive is not strictly a fully Open Archive in the sense of the present paper, although it contains, promotes and provides a number of genuinely open resources. The FreeMusic Archive business model allows revenues to flow directly to artists, and these might have a range of Creative Commons licence conditions, it requires a registration to manage and authorise uploading and downloading.
OpenGoldbergVariations.org provides a rare example of a truly free and open music resource. The group responsible has undertaken a series of projects aimed specifically at being able to deliver high quality Open Music. Having secured full funding, arranged for the performances and delivered the full Goldberg variations as an open resource in the public domain, their next project is an Open version of the J S Bach Well-Tempered Clavier.
The OpenGoldbergVariations group makes use of the increasingly popular Kickstarter\(^{31}\) crowd sourcing funding model to secure genuinely public domain materials, although this clarity is shaded to a degree by the allowing a range of Creative Commons\(^{32}\) licences to be used. The business model of the OpenGoldbergVariations group is to replicate their first success to create more fresh recordings funded via the Kickstarter crowd sourcing website.

Kickstarter is a website widely used to secure funding from the public via bids for different outcomes. Kickstarter projects may be for hardware, in which case different levels of bid secure different amounts of material of the target fundraising target is reached. Alternatively people can be asked simply to commit any level of support towards a specific target amount for a single product. This is the mode used by the OpenGoldbergVariations group.

Their Kickstarter targets are typically set at about $30,000USD to secure the recordings in the first place, and asks the performers to ensure and to undertake to place the results in the public domain. The CC0 Creative Commons C00\(^{33}\) licence “No Right Reserved” (Appendix 2) is their preferred option.

Creative Commons is not a single form of licence: it allows the rights holder to define exactly how they wish to permit their work to be used in a clear and well communicated online assistant Fig. 3.2.2. One or more variants of Creative Commons licences are increasingly being adopted by governments, as open information slowly becomes better established, and a growing stream of such announcements are to be found on the Australian Creative Commons website.\(^{34}\).

\(^{31}\) [http://www.kickstarter.com](http://www.kickstarter.com) [Accessed 29-10-13]
\(^{32}\) [http://creativecommons.org](http://creativecommons.org) [Accessed 29-10-13]
\(^{33}\) [http://creativecommons.org/about/cc0](http://creativecommons.org/about/cc0) [Accessed 29-10-13]
\(^{34}\) [http://creativecommons.org.au](http://creativecommons.org.au) [Accessed 29-10-13]
In view of its importance to Open Music Repositories, the key summary page is added as Appendix 2, but the full CC0 1.0 Universal Licence is the actual legal specification\(^{35}\), which includes references to the European Union database terms, permitting its use to be applied to a collection of materials, such as repository or database, as a whole (for which separate copyright might otherwise apply in a range of jurisdictions).

\(^{35}\) [http://creativecommons.org/publicdomain/zero/1.0/legalcode](http://creativecommons.org/publicdomain/zero/1.0/legalcode) [Accessed 29-10-13]
This model for creating Open Source Music has already achieved some fine musical outcomes. Quoting the FreeMusicArchive blog\textsuperscript{36}:

“After a wildly successful kickstarter campaign, the folks at the Open Goldberg Variations project have finally released their recordings of Bach's famous 1741 composition. Recorded in the Teldex Studio in Berlin (whose client list reads like a who's who of classical conductors and orchestras), producer Anne-Marie Sylvestre beautifully captures pianist Kimiko Ishizaka’s performance of Bach’s masterpiece. It is not every day that someone puts so much time and effort into a classical recording only to turn around and offer it up to the public domain free of charge. In fact, according to the project's creators, this is the first fan-funded, open source, and completely free recording ever produced. The recording is accompanied by a newly revised edition of the score open peer-reviewed and put together by musecore. The recording is licensed under Creative Commons Zero, which effectively allows the recording to be used by anyone, for anything, in any way. It's the most "open" license offered by Creative Commons and is designed to assist artists who wish to waive their creative rights and dedicate their works to the public domain”

The current Kickstarter project on the Well-tempered Clavier has secured more than the required $30000USD a full month before the closing date of 6 November 2013. Kickstarter also allows for over-reach goals, where the project proposers add fresh deliveries to attract further funds. In the case of the latest Kickstarter project these include, inter alia, Braille versions of the Open Well Tempered Clavier and the Open Goldberg variations, MIDI files, a free web service to convert MusicXML to Braille and 50,000 scores on MuseScore.org (see Appendix 3) made available in Braille.

These spinoffs from an Open Source Music initiative demonstrate that these business models not only work, but also offer things that are unlikely to be created otherwise.

These examples of Live Music Open Repositories show that it is both possible, and popular to create such archives, and that the knotty Intellectual Property issues can, and have already been, addressed successfully. This demonstrates

\textsuperscript{36} \url{http://freemusicarchive.org/curator/FMA/blog/JS_Bach_Open_Sourced_Crowd_Funded} [Accessed 29-10-13]
that the objective of a live recording Open Music Repository is feasible, but this
does not yet cover all the relevant issues.

The comments made on the FreeMusicArchive Blog about the Goldberg
Variations recording are significant. The sheet music arrangement of J.S.Bach
material - Bach being personally well out of any term of copyright as the author -
addresses the next, and in many cases probably more difficult question for early
music, of the sheet music used for the performance and the arrangements made
be other individuals based on the original work, both of which need to be
covered by either a verification of their being now in the public domain, or with a
specific declaration by the arrangers that this is to be the case.

The resources used for the FreeMusicArchive Goldberg variations performance
were provided by another recent Open Source resource, namely
MUSECORE.com. MUSECORE is an Open Source piece of software\textsuperscript{37} supported by
a community\textsuperscript{38}, which undertakes peer review in the same spirit. It can play the
music written, and print sheet music in a variety of formats including
MusicXML\textsuperscript{39} and MIDI: all of which allow high levels of interchange between
composers and arrangers.

The FreeMusicArchive business model is one of free donations of time and effort
in development of the software, but also has provision for direct monetary
donations. The IP that the arranger would hold is therefore substantially
simplified, and isolated from the other IP issues surrounding sheet music.

4 Types of records and metadata in library style Open Music retrieval

resources and Open Source code

\textsuperscript{38} A good example is the tutorial material at
\url{http://www.professional-mothering.com/2013/03/musescore-e-course.html} [Accessed 29-
10-13]

\textsuperscript{39} \url{http://www.musicxml.com} and \url{http://libmusicxml.sourceforge.net}, with scanner input to
MusicXML via \url{https://audiveris.kenai.com}
The variations in metadata inclusion in repositories or music holdings are substantial. Huck (2010) argues that this is on the nature of the wide variation of audio archives, but an equally likely explanation is the variations in choices made by musicians themselves (Anderson, Dwyer and Lehay, 2012). Our view is that the complexity of IPR, formal XML and DDI based metadata descriptions, repository design and computer science formalisations of ontologies and structures are not always part of the background of those in operational library acquisition and collection management hierarchies, and are generally contracted out to specialists.

Gaps inevitably arise when such a segmentation of discipline interests emerges, and this is becoming more and more common in many fields as the ability to phrase the appropriate questions and requirements in terms understood across the expanding number of disciplinary and professional boundaries is often lost - or issues are simply assumed to have been defined or handled by a different party in the network.

A divergent approach has been taken by the freesound project[^40], which is a collection of Creative Commons licensed sound effects and samples, and relies upon user tagging as the means of securing discoverability via metadata.

A rapidly growing direction for the role of metadata for discoverability is the use of signal processing and similarly analysis, Bayesian or otherwise, to identify audio (music, speech or sound) that is similar in some sense to a specific item or items found to be of interest (Gallagher et al., 2010). Shazam[^41] is a typical App that relies upon this replacement for conventional metadata for discoverability, expressed as the identification of a piece of music from analysis of a sample of the sound. This is familiar to many end users. The Gallagher et al. Interactive Music Archive System (IMAS) offers a new synthesis of technical extraction and discovery, and is not only a full music repository, but also the ability to extract

melodies, and rhythmic metadata from the music holdings— and then to manipulate the audio extracted in a range of ways.

These examples demonstrate that the concept of an archival repository of digitised music solely for conservation purposes is increasingly out of step with both user demands and technical capacities. However to realise these fresh and exciting potentials, the IP quagmires that debar truly open live music archives must be mapped, expressed and a better form of protection and availability worked out by the communities involved. Given the heavy demands on metadata that we have identified, it is appropriate to examine metadata as currently used in open, or effectively open, current music repositories

4.1 Open Live Music Source Examples identified through OaiSter

Searching through the OaiSter multi-library resource on worldcat for the term “reel to reel magnetic” located several items with very different levels and types of metadata recorded. The metadata brought together is the issue of interest here.

It is arguable that the images of the original reel to reel tape boxes and the handwritten content annotations might be unnecessary (Fig. 4.1.2;3).

However, the original reel to reel tapes in their boxes are undeniably Objects, and if the archive views their task as one of archiving Objects for preservation, then these are relevant items of metadata to create and hold. The contents are a quite separate entity, and require a broader view of the nature of an archive for preservation, to include and possible recoverable digital content.

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Just as we discovered earlier, the Intellectual Property provenance requirements involved in musical recordings are complex and have their own special cultural expectations, so too do museum conventions for describing artefacts and objects. The concentration on the digitised versions of the contents of the musical objects can lead one astray into thinking that such items are irrelevant. Indeed they might well be as far as the music is concerned. The more conventional list of items in Fig. 4.1.3 follow the normal conventions for digital object content metadata – but again, are these sufficient?
Fig. 4.1.2 Raw Images of the magnetic medium as metadata
Fig. 4.1.3 Conventional Metadata entries in OaiSter
Fig. 4.1.4 Individual item entry in OaiSter
Certainly the discoverability in OaiSter is quite good (metadata is used to permit searches to work effectively, as well as simply to describe the item), and a simple search for reel-to-reel tapes certainly located a reasonable range of appropriate items (Fig. 4.1.1). At the sub-item level, within the digital content of the reel to reel entity, direct access to individual tracks is also documented to the level shown in Fig. 4.1.5.

While OaiSter contains at least some examples of reasonably good music metadata, an at least similar structure and level of detail is clearly desirable for an Open Music Repository so that it can meet both archival and open access purposes. Greater detail on IP aspects are evidently needed to cover the provenance of the sheet music used, the arrangements, the dates and the rights holders and the agreements signed associated with the performances held in digital form. The complexity of the potential IPR issues take on rather greater importance when placement in an Open music repository (as distinct from a preservation archive, or repository for study or research) is intended.

There are no search terms that allow the relevant aspects of the associated IP to be discriminated for in OaiSter. Then of course these could be searched upon to determine the status and usability (and indeed access to) the materials located.
OaiSter was chosen for these examples as it spans a global scale and shows what can now be done now that we have explored what perhaps should be done in terms of metadata capture and recording.

**Conclusions**

The major strands required to assess and define the requirements for an Open Music Repository are brought together in this paper. These are a mix of metadata, intellectual property, provenance capture and technical capacities.

All these aspects have been examined in sufficient detail on present repositories and technical practices to point the way towards the kind of repository that will make the best use of the archival and new material created – but warns that the ever-growing and demanding complexities of the intellectual property requirements present a formidable barrier to any early and wide realisation of what can now be achieved.

The possibilities of an Open music repository from recordings made up to 1989 are promising. This covers the major part of the original MIFOH recordings held. Even for this period, there are a number of metadata items that should be sought to ensure that the recordings, once digitised, can indeed be placed in the public domain with full confidence.

Sadly it is abundantly clear that even for pre 1989 original recordings many complexities remain to be resolved. However, it is clear that the recordings made up to 1989 offers a sound prospect of an Australian Open Music Repository containing most of the MIFOH recordings held by the author.

This resource, in conjunction with the oral history and full documentation of the MIFOH period, looks promising, if difficult to bring all the necessary materials together.
The metadata requirements reviewed are substantially more than normally collected to date, - as is very clear from Huck's (2010) thesis, which was devoted to examining the metadata captured in half a dozen sound collections - but the full weight of the IP and provenance requirements identified in the present report will not be felt until the post 1989 MIIOH recordings are addressed.

Once all the performances in this substantial collection have been recovered into digital form, then the efforts to collate and record as much of the extended metadata discussed here will be put to the test.

The results of the survey, whose design is reported in Appendix 1, become available over the next few months it will be possible to frame the process and design requirements for an Australian Open music repository that will be an advance on what is currently available.

It is quite clear that more work on the library and IP aspects in terms of current practice, and what is now seen to be desirable, practicable and possible for the future is needed. This will require continuing library, legal and musicological cooperation and communication, as these issues become ever more closely interdependent.

However it is hoped that this paper might be of wider use in summarising the interacting IP and metadata issues that need to be considered when seeking to make sound recordings available.

**Acknowledgements**

Our thanks are due to Professor Yoshihisa Kashima, of the School of Psychology at the University of Melbourne, for agreeing to make his group licence for Qualtrics available for the survey design (and in future, collection and analysis) component of this work; and to Megan Deacon, the Monash University Copyright

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43 [www.qualtrics.com](http://www.qualtrics.com) [Accessed 29-10-13]
Advisor, and Jacqueline Waylen, Specialist Librarian at the Louis Matheson Library at Monash for their advice and cooperation

References


RLG (Research Library Group), and OCLC. Trusted Digital Repositories: Attributes and Responsibilities. 2002.


Appendix 1 On line Qualtrics Survey Design

https://melbpsych.co1.qualtrics.com/SE/?SID=SV_4HCvSBwSSV9uiVf
The following questions apply only to the incorporation of music into Organisational Holdings, and do not apply to commercial services such as Oxford Music.

These items will usually fall into two classes

1. Off-air recordings permitted under general educational purpose, archival and Statutory License terms and Intellectual Property exemptions.

2. Live recordings of local or field research, concerts and performances, which may or may not fall under the same exemptions.

Only the latter are the subject of this research.

Live recordings made, retained, or received and considered for holding in a Preservation Archive or an accessible Repository of some kind. Either will have a range of access constraints or provisions.

Solve recordings held will fall into these categories:

A. Recordings made by staff holding ARC projects as part of Music related projects as a requirement for the ERA.
B. Recordings made by Staff in field work in music and musicology.
C. Recordings made at public events, either by the organisation or donated by third parties.
D. Recordings of public events donated by third parties.

All these categories are of interest, and the numbered questions below apply to each. In many cases there will be candidates in just a single category (A, B, C, D).

What are the IP (Intellectual Property) procedures and processes used to permit such digital music to be held by your organisation?

Do you have any records of how much they are used? If so please give details.

Are all such digital music items held in your general organisational document repository?

What metadata (i.e. items of information describing the musical item or associated with it) are sought? And which items do you usually succeed in securing?

If your repository only holds metadata (i.e. descriptions of the musical item etc.), where do you hold the actual piece of digital music?
If your digital music collection is held in a special repository or streaming system, please describe it. Please include a URL to view it if this can be arranged.

Are all your digital music holdings accessible only behind an organisational login? If so who may have access and under what conditions?

Are any of digital music holdings accessible to all (Open Access)

If you do provide Open Access to some of your collections, what Intellectual Property (Copyright, Performers Rights etc) clearances do you require to be able to do so? If you do not yet do this, what would be required?

If you do have a specialised repository for digital music access, who administers it?
- Music Department
- Information Technology Services
- Central Library

If you do not have a specialised digital music repository, do you plan to create one?
- Yes
- No

If you have a specialised digital music repository, what metadata is provided for to describe the items?

A technical question for specialist Digital Repository managers only
Do you now use, or do you plan to use, OAI-PMH or ORE for wider discovery?
- Yes
- No
If you are considering, or might consider, a specialist digital music repository:

What are the key features that you think are needed?

What audiences or users do you see for such a system?

What accession and usage procedures would you see to be required?

Are you going to refer this survey to another person to discuss these issues in a semi structured interview format?

- Yes
- No

If you would like to discuss this survey, or refer it to another person in your organisation, please let us know via email to mrwig5@student.monash.edu.au with the appropriate contact details so that we can make arrangements to do so.

If you would like a summary of the results please provide your email details here

Thank you for participating in this survey. Your effort is greatly appreciated, and we hope that the results will be useful to you and others
Appendix 2 No Rights Reserved: The Creative Commons CC0 Licence

About CC0 — “No Rights Reserved”  (Source: http://creativecommons.org/about/cc0)

CC0 enables scientists, educators, artists and other creators and owners of copyright- or database-protected content to waive those interests in their works and thereby place them as completely as possible in the public domain, so that others may freely build upon, enhance and reuse the works for any purposes without restriction under copyright or database law.

In contrast to CC’s licenses that allow copyright holders to choose from a range of permissions while retaining their copyright, CC0 empowers yet another choice altogether – the choice to opt out of copyright and database protection, and the exclusive rights automatically granted to creators – the “no rights reserved” alternative to our licenses.

The Problem

Dedicating works to the public domain is difficult if not impossible for those wanting to contribute their works for public use before applicable copyright or database protection terms expire. Few if any jurisdictions have a process for doing so easily and reliably. Laws vary from jurisdiction to jurisdiction as to what rights are automatically granted and how and when they expire or may be voluntarily relinquished.

More challenging yet, many legal systems effectively prohibit any attempt by these owners to surrender rights automatically conferred by law, particularly moral rights, even when the author wishing to do so is well informed and resolute about doing so and contributing their work to the public domain.

A Solution

CC0 helps solve this problem by giving creators a way to waive all their copyright and related rights in their works to the fullest extent allowed by law. CC0 is a universal instrument that is not adapted to the laws of any particular legal jurisdiction, similar to many open source software licenses. And while no tool, not even CC0, can guarantee a complete relinquishment of all copyright and database rights in every jurisdiction, we believe it provides the best and most complete alternative for contributing a work to the public domain given the many complex and diverse copyright and database systems around the world.

Using CC0

Unlike the Public Domain Mark, CC0 should not be used to mark works already free of known copyright and database restrictions and in the public domain throughout the world. However, it can be used to waive copyright and database rights to the extent you may have these rights in your work under the laws of at least one jurisdiction, even if your work is free of restrictions in others. Doing so clarifies the status of your work unambiguously worldwide and facilitates reuse.

You should only apply CC0 to your own work, unless you have the necessary rights to apply CC0 to another person’s work.

a. Read the CC0 FAQ
b. Read the CC0 summary and legal text

Apply CC0 to your own work

The actual Legal text is as follows  
(Source: http://creativecommons.org/publicdomain/zero/1.0/legalcode)

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CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE USE OF THIS DOCUMENT OR THE INFORMATION OR WORKS PROVIDED HEREUNDER, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION OR WORKS PROVIDED HEREUNDER.

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an “owner”) of an original work of authorship and/or a database (each, a “Work”).

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works (“Commons”) that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

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iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;

iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;

v. rights protecting the extraction, dissemination, use and reuse of data in a Work;

vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and

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Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.
Appendix 3 MuseScore.org (Source: http://musescore.org/en/musescore-tour)

MuseScore Tour

Create beautiful sheet music for free using MuseScore, the free and open source notation program!

MuseScore runs on Windows, Mac OS, and Linux, and is available in over 40 different languages. Whether you are an experienced user of other notation programs like Finale or Sibelius, or a newcomer to the world of music notation programs, MuseScore has the tools you need to make your music look as good as it sounds. Check out the following links to take the tour and see what MuseScore can do for you!

- Create sheet music with WYSIWYG editor
- Listen to your score with computer playback
- Share & print your score
- Work the way you like
- Get help

Here's a quick overview of the features of MuseScore:

- Unlimited score length
- Unlimited number of staves per system
- Up to four independent voices per staff
- Score creation wizard and templates
- Automatic part extraction and transposition
- Repeats, including segnos, codas, and measure repeats
- Dynamics, articulations, and other expression markings, with playback support for most
- Custom text markings
- Lyrics
- Chord symbols
- Jazz notation, including lead sheets, slash notation and a “handwritten” font for text
- Swing and shuffle playback
- Mixer for instrument levels and effects
- Percussion notation
- Early music notation
- Cross-staff beaming
- Import of graphics
- Custom key signatures
- Additive time signatures
- User-defined score styles

Most elements in MuseScore are laid out automatically but can also be positioned manually. The capabilities of MuseScore can be extended via plugins, and the growing repository on musescore.org contains many plugins submitted by users.

MuseScore includes a set of sounds that reproduce common instruments (as defined by General MIDI) without taking up a lot of disk space or memory, but you can also substitute any SoundFont you prefer for a wider variety of sounds or for more realism.

MuseScore can import and export MIDI and MusicXML files, and it can also import from Capella and several other programs. MuseScore can export to PDF, PNG, and other graphic formats, to WAV and other audio formats, or to LilyPond for an alternative layout and print option.

MuseScore can upload scores directly to the score sharing site musescore.com. Program support is provided on musescore.org.