

# Lute tablature on the Web and What we can do with it

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# Lute tablature on the Web

Existing public resources mainly offer tablature of performing versions, usually as **PDFs**

- An example, among many, is Sarge Gerbode's 'Accessible lute music':

<https://www.lutemusic.org>

*“more than 8000 lute pieces (60,000 files) in French tablature in the following formats: fronimo (ft3), ... midi, TAB, and PDF”*

Also: a huge downloadable spreadsheet (**Excel**) giving details about the pieces, their sources and their difficulty (among much more info) – i.e. *Metadata*

- It is a user-friendly web site!

# Accessible Lute Music

## [Search this site](#)

Here you will find more than 8000 lute pieces (60,000 files) in French tablature in the following formats: [fronimo](#) (ft3), from [Francesco Tribioli](#), midi, TAB, and PDF (which you can read using [Acrobat Reader](#)). ([Why the different formats?](#)). I apologize to those who prefer other formats, such as Spanish or Italian, but I believe French is the most widely used format, though it is easy to change in fronimo to another format -- even German tab (not that anyone would really want to do this!). These pieces are mostly for renaissance lute, but quite a few are for baroque lute and archlute, and a very few for theorbo, cittern, bandora, guitar etc. Other pieces include songs and continuo pieces, listed by composer. Under [Lute ensemble](#) in the list of composers, you will find pieces for two or more lutes. The latest fronimo files (since December, 2015) were created with a new version of Fronimo, obtainable now at the [fronimo website](#).

## Mirror Sites

This website is now mirrored at the following sites:

<https://gerbode.dolcesfogato.com>, thanks to [David Smith](#),  
<https://lutemusic.lautenlust.de>, thanks to [Markus Lutz](#),  
<https://library.lutetutor.com>, thanks to [Alex McCartney](#).

## Site Structure

There are four main directories under <https://lutemusic.org>:

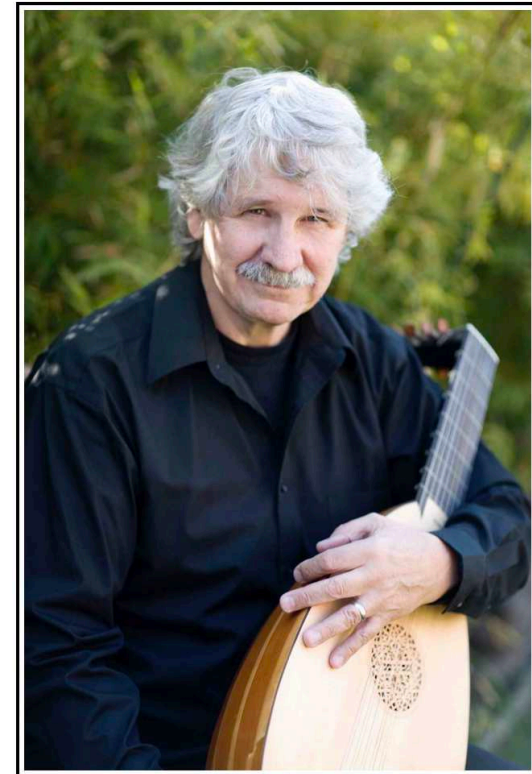
[/composers>](#)

This is a listing by composer, but some items that were under "composers" (like "Bésard") actually belong under "sources", because they are anthologies or compilations. The intention is to gradually pare down the contents of this directory and post as much as possible under "sources". Once the database is up and running, you will be able to search by composer (or any other parameters).

[/sources](#)

These are complete fronimo editions of sources, with midi and PDF versions of each.

[/facsimiles](#)



# Lute tablature on the Web

A new resource is the 'JHR\_repo'

- [https://github.com/TimCrawford/jhr\\_repo](https://github.com/TimCrawford/jhr_repo)
- A complete collection of tablature that John Robinson (Newcastle, UK) has encoded, mainly for UK Lute Society Tablature Supplements, but also more
- Includes **PDFs** of the final published pages
- Also the **full texts** of all the **commentaries** and **concordance lists** in Word format
- Also files in **TAB** format (Wayne Cripps) containing all of the pieces for each of JHR's publications
- Almost 7,000 pieces
- But, definitely for geeks only – though we hope to improve access soon with a proper web-site



Search or jump to...



[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)



[TimCrawford / jhr\\_repo](#) Public

[Pin](#) [Unwatch](#) 2 [Fork](#) 0 [Star](#) 0

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[main](#) 1 branch 0 tags

[Go to file](#) [Add file](#) [Code](#)

### About



Repository for John Robinson's files

[Readme](#)  
[0 stars](#)  
[2 watching](#)  
[0 forks](#)

### Releases

No releases published  
[Create a new release](#)

### Packages

No packages published  
[Publish your first package](#)

### Contributors 2

<b>Gilg8mesH</b> Add files via upload <span>...</span>	71403b2	29 days ago	<b>36</b> commits
114_easy_edition	MEI files converted		8 months ago
158_preludes_edition	MEI files converted		8 months ago
70_easy_edition	Update file_list.html		5 months ago
BLA Saremont	Add files via upload		29 days ago
Charles_Lespine_VT	Add files via upload		7 months ago
Fantasias_Recercars_Edition_vols1-3	MEI files converted		8 months ago
JHR TAB 1	MEI files converted		8 months ago
JHR TAB 2	MEI files converted		8 months ago
LN-LZ107	Add files via upload		8 months ago
LN-LZ110	MEI files converted		8 months ago
LN-LZ111	MEI files converted		8 months ago

# Lute tablature on the Web: ECOLM

Another kind of resource is more 'scholarly' in intention.

The project [ECOLM \(Electronic Corpus of Lute Music\)](#) ran from 1999 (at King's College, London) to around 2010 (at Goldsmiths, London).

While it is now in great need of updating, it contains a lot of interesting information which is held in a complex database developed by David Lewis.

- Sources
- Pieces
- People
- Clusters
- Queries
- Log In
- Go to Project Page
- Go to ISMS site

## Welcome to the ECOLM database

This database combines graphics, editions and metadata for pieces, sources and people relevant to music for the lute. From these pages, you can browse or search the metadata, view sources in facsimile and look at diplomatic copies of pieces or listen to them in computer-generated midi 'performances'.

As a *contributor* to this project you will see extra 'control panel' boxes with options enabling you to alter data. Contributors need to have cookies enabled on their browsers at all times when visiting the site. It is also recommended that those wishing to enter data run at a screen resolution of 1024x768 pixels or higher.

To navigate, click on the buttons in the left hand window or, to perform a quick search of the data, the form below may be used.

<p><b>Choose Search Type:</b></p> <input style="width: 90%;" type="text" value="Piece name"/>	<p><b>Enter search string:</b></p> <input style="width: 95%;" type="text"/>
<input type="button" value="Search"/>	

**ECOLM was a time-constrained project with two primary aims: to create a resource and to explore its potential for musicological and computational research. Thus the time available for the former was limited by the amount of time required in order to achieve the latter. Whilst we anticipate augmenting the resource as future opportunities present themselves, there is as yet no direct financial support for further work. Inevitably these factors impact upon the quantity of encodings and on the editorial standards by which they are presented.**

**In general, the versions of the music rendered to screen and MIDI on the website are diplomatic facsimiles, in the sense that they preserve (where possible) original scribal idiosyncracies, including system breaks, errors, changes of notation and so on. None of the editions stored in ECOLM has been sufficiently proofread and verified to be considered 'publication' quality in the normal sense, and those who use these editions are encouraged to check them against the original source or a facsimile where available. There are many encodings in ECOLM that have been checked thoroughly and of whose accuracy we are reasonably confident. However, since we have not yet employed a formal proofing procedure, we can guarantee no more than that at the present time.**

The database you are about to enter is a work in progress, with information being added and amended all the time. The current state of the database is shown below, but the numbers here are likely to increase as we upload music that we have in our files.

<b>Sources:</b>	116	
<b>Pieces (information):</b>	2830	
<b>Pieces (music):</b>	Raw, unedited:	542
	Being edited:	0
	Draft levels:	808
	Public draft:	40
	Public:	229

# Lute tablature on the Web

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The project [ECOLM \(Electronic Corpus of Lute Music\)](#) ran from 1999 (at King's College, London) to around 2010 (at Goldsmiths, London).

While it is now in great need of updating, it contains a lot of interesting information which is held in a complex database developed by David Lewis.

One innovation was the concept of '**Clusters**' of data, related according to the idea or knowledge of some user (with suitable permissions).

Let's look at the concept 'Lachrimae', whose ECOLM cluster actually contains 105 entries



Sources

Pieces

People

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## Cluster list from database

Please select a cluster from the list below.

Number of clusters in database: 78

Showing items 1 to 25

[<View entries 26-50>](#) [<View entries 51-75>](#) [<View entries 76-78>](#)

### Cluster type: Consort

#### 1. Kassel Partbooks

##### Cluster type: Generic

#### 2. Courante

Partially auto-generated cluster created by searching for similarly named pieces

#### 3. Galliard

Triple-time dance (partly auto-generated by title)

#### 4. Volta

Triple-time dance (partially auto-generated by title)

##### Cluster type: Project

#### 5. Lachrimae



John Dowland's most famous composition was the evocatively titled Lachrimae pavan. In addition to the several versions for which he was personally responsible, there are countless other settings for virtually every scoring of the time, testifying to the work's potent resonance in the atmosphere of Elizabethan and Jacobean melancholy. The piece was highly influential on German composers of the 17th century in particular, and spread quickly as part of a larger migration of the English pavan across Europe. Both at home in England and on the Continent, Lachrimae spawned a number of imitations and "paraphrases" that are often of much interest in their own right. As part of a pilot study for the ECOLM research project, encodings of as many versions as possible of the Lachrimae pavan, together with their cognates and imitations, have been assembled in order to carry out a comparative analysis of a type impossible before the advent of computers. (from the abstract of a paper given by Michael Gale and Tim Crawford at the IMS 17th International Congress (2002) in Leuven)

##### Cluster type: Work

6	<a href="#">Pavana a 5 voc. Dulandi Angli</a>	in <a href="#">Florum Musicae ... liber secundus</a>	<i>Location not known</i>
	Reasonable association		
7	<a href="#">Pavana Lachrime</a>	in <a href="#">Florida</a>	<i>Location not known</i>
	Reasonable association		
8	<a href="#">Reprinse sequitur</a>	in <a href="#">Florida</a>	<i>Location not known</i>
	Reasonable association		
9	<a href="#">Pauana/ Lachrimi</a>	in <a href="#">Michael Eysertt Noringbergensis Possidet hunc summo cum Jure [...] manus. C. D. S. W.</a>	[A-Lla 475]
	Reasonable association		
10	<a href="#">Untitled</a>	in <a href="#">Untitled Source</a>	[A-Wn Minoritenkonvent, Mus. MS XIV/714]
	Reasonable association		
11	<a href="#">Pavana Lachrymae</a>	in <a href="#">Untitled Source</a>	[B-Bc 26.369Z]
	Reasonable association		
12	<a href="#">Pavana sexta</a> 	in <a href="#">Testudo Gallo-Germanica: HOC EST: NOVAE ET NUNQUAM ANTEHAC EDITAE [...] Germanis, aliisq</a>	[B-Br Fétis 2.908 C (RP) (Magasin Réserve précieuse : Niv. -2)]
	Reasonable association		
13	<a href="#">Respondens Lachrimae T. K. /Pavana septima</a>	in <a href="#">Testudo Gallo-Germanica: HOC EST: NOVAE ET NUNQUAM ANTEHAC EDITAE [...] Germanis, aliisq</a>	[B-Br Fétis 2.908 C (RP) (Magasin Réserve précieuse : Niv. -2)]
	Reasonable association		
14	<a href="#">Fantasia Joannis Dulandi</a>	in <a href="#">Untitled Source</a>	[D-B 40141]
	Reasonable association		
15	<a href="#">Galliarda Lachrime</a>	in <a href="#">In Tauolatura de Liuto. Ausgeschriebenn ihnn Padoua Auss dess [...] Anno: 1602. E.</a>	[D-Hbusch]
	Reasonable association		

Sources

Pieces

Main

Bibliography

People

Clusters

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Log In

Go to Project Page

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Piece ID is

## Pavana sexta

in [Testudo Gallo-Germanica: HOC EST: NOVAE ET NUNQUAM ANTEHAC EDITAE \[...\] Germanis, aliisq](#)

*B-Br Fétis 2.908 C (RP) (Magasin Réserve précieuse : Niv. -2)*

G minor. Form: AA'BB'CC'.

Start: Page: 60 System: 1

Other names for piece: *Pavana Lachrimae V. S.*

Instrumentation: *Lute*

Clusters containing piece: [Lachrimae](#)

**Encoding submitted on 7th July, 2008.** This encoding has been edited, but is still considered draft quality (level: Candidate).

**Encoding submitted on 20th July, 2006.** This encoding has only received a limited amount of editing and is considered draft quality (level: Draft).

The first system of musical notation consists of four staves. Above the staves are rhythmic flags: a pair of vertical lines, a pair of slanted lines, a single vertical line, a pair of vertical lines, a pair of slanted lines, and a single vertical line. The notation includes various note heads (some with stems) and accidentals (sharps, flats, naturals) placed above and below the staves.

The second system of musical notation consists of four staves. Above the staves are rhythmic flags: a pair of slanted lines, a pair of vertical lines, a pair of slanted lines, a pair of vertical lines, a pair of slanted lines, a pair of vertical lines, a pair of slanted lines, a pair of vertical lines, a pair of slanted lines, and a pair of vertical lines. The notation includes various note heads (some with stems) and accidentals (sharps, flats, naturals) placed above and below the staves.

# Lute tablature on the Web : **ECOLM**

*Gerbode* and *JHRrepo* both present excellent **PDF** pages of the music

- For most players, this is enough ...
- But many of us want to do something a bit different, or go a little further
- For example, both collections are (almost) entirely in French tablature
- Some people prefer Italian tablature for Italian music (and maybe there are some who prefer German, likewise)
- The encoded tablature in *Gerbode* and *JHRrepo* is in two different formats: **Fronimo** (*Gerbode*) and **TAB** (*JHRrepo*)

# Converting between tablature formats

A new program called [luteconv](#) has been developed by Paul Overell (with the help of Luke Emmett of the UK Lute Society)

- Can convert between most digital tablature formats for lute tablature
  - Convert between lute tablature file formats.
  - Supported source formats: abc, ft2, ft3, jtxml, jtz, lsml, mei, mid, mnx, musicxml, mxl, tab, tc
  - Supported destination formats: abc, lsml, mei, mid, mnx, musicxml, mxl, tab, tc
- From some formats, it can preserve tuning in the conversion
- ... but not from Wayne Cripps's TAB ('tab', above)
- Knowledge of tuning is essential for any kind of transcription
- My own work uses TabCode ('tc'), but MEI format is far more useful

# Example

From John Robinson's *114 Early to Intermediate Pieces for Renaissance Lute*  
(London: UK Lute Society, 2010)  
*encoded and typeset in TAB*

4. Wir lieben sehr - 7F

The image shows a lute tablature for the piece 'Wir lieben sehr' (7F). It consists of a five-line staff with a C-clef on the first line. The tablature is divided into three measures. Above the staff, there are rhythmic symbols: a single eighth note, a dotted eighth note, a triplet of eighth notes, a half note, a quarter note, a half note, a dotted eighth note, a triplet of eighth notes, and a half note. The tablature itself uses letters 'a', 'b', 'c', 'd', 'e', and 'r' to indicate fret positions. The first measure starts with a C-clef and a 'c' on the first line. The second measure has 'a' on the first line, 'a' on the second line, 'a' on the third line, and 'a' on the fourth line. The third measure has 'a' on the first line, 'a' on the second line, 'a' on the third line, and 'a' on the fourth line. There are also some 'r' characters on the fifth line in the second and third measures.

abcTab	TAB	TabCode
<pre>X:1 C:D-D1 M 297, p. 57 T:4. Wir lieben sehr - 7F L:1 Z:Converted to abc .abc by luteconv 1.4.5 encoding-date 2022- 09-12 K:frenchtab  \ [M:C ]\ [cd,a/16] \  \ [acd,a3/32] \ [cd,a/32] \ [dab,,d/16]\ [cdd{a}/16] \  \ [acd,a/8] \ [a,,,a/16]\ [acd,a/16] \  \ [cd,a3/32] \ [a,d,e/32] \ [cd,a/16]\ [d,,,c/16] \  \</pre>	<pre>{4. Wir lieben sehr - 7F/D-D1 M 297, p. 70} BX bX Sc 2cd a b 2.acd-a 3cd a 2#dab- d xcdd - a b 1acd-a 2#a - a xacd a b 2.cd a 3a d-e 2#cd a xd - c b</pre>	<pre>{&lt;rules&gt; &lt;title&gt; 4. Wir lieben sehr - 7F &lt;/title&gt; &lt;notation&gt; French &lt;/notation&gt; &lt;pitch&gt; 67 &lt;/pitch&gt; &lt;tuning&gt; (-5 -5 -4 -5 -5 -2) &lt;/tuning&gt; &lt;/rules&gt;} { Converted to TabCode .tc by luteconv 1.4.5 } { encoding-date 2022-08-14 } { 4. Wir lieben sehr - 7F } { D-D1 M 297, p. 70 }    M(C/) Ec1d2a4   E.a1c2d3a5 Sc1d2a4 [[d1a2b3d6 ]]c1d2d3Xa   Qa1c2d3a5 [[a1a5 ]]a1c2d3a5   E.c1d2a4 Sa1d3e5 [[c1d2a4 ]]d1c5  </pre>

# MEI

```
<staffDef n="1" lines="6" notationtype="tab.lute.french">  
  <meterSig sym="cut" count="2" unit="2" />  
</staffDef>
```

....

```
  <measure n="1">  
    <tabGrp dur="8">  
      <note tab.course="1" tab.fret="2" />  
      <note tab.course="2" tab.fret="3" />  
      <note tab.course="4" tab.fret="0" />  
    </tabGrp>  
  </measure>  
  <measure n="2">  
    <tabGrp dur="8" dots="1">  
      <note tab.course="1" tab.fret="0" />  
      <note tab.course="2" tab.fret="2" />  
      <note tab.course="3" tab.fret="3" />  
      <note tab.course="5" tab.fret="0" />  
    </tabGrp>
```

..... *etc., etc.*





# What can we do with all this?

Once it's in a common standard format like MEI, we can do interesting things:

- Under the general heading of Music Information Retrieval (MIR)
- Under the general heading of Music Analysis
- But also, 'Publication', either personal or scholarly

# Music Information Retrieval and Tablature

Two main paradigms for searching a collection of pieces:

- Document-level retrieval: “Which pieces are matched by this query?”
  - Find duplicates (there are many in both *Gerbode* and *JHRrepo*!)
  - Find (close) concordances
  - Find ‘similar’ pieces (may be cognates, etc.)
- Passage-level retrieval: “Where does this occur in any/all of the pieces?”
  - Incipits, cadences ...
  - Quotations (e.g. ‘references’ to a vocal item within a fantasy or ricercar)
  - Repetitions (Division schemes, structural analysis)

# Music Analysis

Many, many possible applications, including (almost at random):

- With source/dating/composer info from metadata, trace stylistic change, variation by place of origin, individual styles of composers
- Compare division/elaboration styles and methods of different composers at different periods/places in their intabulations of vocal music
- In earlier work, David Lewis and I (with the help of Daniel Müllensiefen) showed that (in the tablature available to us in 2016) there was a definite difference between the way elaboration was done in intabulations of 16c *sacred* vocal music and of *secular* music (chansons, madrigals, etc.) – this needs to be followed up with more data!
- Structural/formal analysis of fantasies/ricercars (cf John Griffiths' pioneering work on vihuela music)

# Search across various resources

We can use collections of digitized/encoded scores/part-books of 16/17c vocal music to find arrangements

- CPDL (Choral Public Domain Library) contains much early music – we have several thousand scores, including many of the same pieces
- F-TEMPO is a search-engine for original printed sources (typeset part-books) of 16/17c music
- We can already search F-TEMPO for a score in CPDL, by finding part-books which correspond to each voice-part from the score in turn
- In principle, we could do the same with tablatures, looking for the note-sequences from the scores that are in the tablature, and vice versa
- But this is definitely not easy!

## Search using F-TEMPO (experimental)

Search this score on F-TEMPO: select a single voice from this list as query

- Soprano
- Alto
- Tenor
- Bass

Search

- > GB-Lbl\_A337b\_021\_1
- > D-Mbs\_bsb00091845\_00046
- > D-Mbs\_bsb00077376\_00003
- > D-Mbs\_bsb00089980\_00047
- > D-Mbs\_bsb00071988\_00003
- > D-Mbs\_bsb00092005\_00011
- > D-Mbs\_bsb00077374\_00023
- > D-Mbs\_bsb00084674\_00029
- > D-Mbs\_bsb00090338\_00155
- > D-Mbs\_bsb00093765\_00048
- > D-Mbs\_bsb00093750\_00047
- > D-Mbs\_bsb00077374\_00055

(In 2)

Soprano  
Bon - jour mon coeur, Bon - jour ma dou - ce vi - - e, Bon - jour

Alto  
Bon - jour mon coeur, Bon - jour ma dou - - ce vi - - e, Bon - jour

Tenor  
Bon - jour mon coeur, Bon - jour ma dou - ce vi - - e, Bon - jour

Bass  
Bon - jour mon coeur, Bon - jour ma dou - - ce vi - - e, Bon - jour

Piano

mon oeil, Bon - jour ma chè - re\_a mi - - e! Hè! bon - jour, ma tou - te bel - le, Ma

mon oeil, Bon - jour ma chè - - re\_a mi - e! Hè! bon - jour, ma tou - te bel - le, Ma

mon oeil, Bon - jour ma chè - re\_a mi - e! Hè! bon - jour, ma tou - te bel - le, Ma

mon oeil, Bon - jour ma chè - - re\_a mi - e! Hè! bon - jour, ma tou - te bel - le, Ma

mi - gnar - di - se, Bon - jour, mes dè - li - ces, mon a - \_mour, Mon doux prin - temps, ma dou - ce fleur nou - vel -

mi - gnar - di - se, Bon - jour, mes dè - li - ces, mon a - \_mour, Mon doux prin - temps, ma dou - ce fleur nou - vel -

mi - gnar - di - se, Bon - jour, mes dè - li - ces, mon a - \_mour, Mon doux prin - temps, ma dou - ce fleur nou - vel -

mi - gnar - di - se, Bon - jour, mes dè - li - ces, mon a - \_mour, Mon doux prin - temps, ma dou - ce fleur nou - vel -

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- Alto
- Tenor
- Bass

Search

> GB-Lbl\_A337b\_021\_1

✓ D-Mbs\_bsb00091845\_00046

ORLANDE.

**B** On jour mon cœur Bon jour ma douce vi- e Bon jour mô œil

Bon jour ma chertz ami- e, Hé bon jour ma tourterelle Ma

mignardife Bon jour mes delices mon amour Mon doux printems Ma

(In 2)

Soprano  
Bon - jour mon coeur, Bon - jour ma dou - ce vi - - e, Bon - jour

Alto  
Bon - jour mon coeur, Bon - jour ma dou - - ce vi - - e, Bon - jour

Tenor  
Bon - jour mon coeur, Bon - jour ma dou - ce vi - - e, Bon - jour

Bass  
Bon - jour mon coeur, Bon - jour ma dou - - ce vi - - e, Bon - jour

Piano

7

mon oeil, Bon - jour ma chère - a mi - - e! Hè! bon - jour, ma tou - te bel - le, Ma

mon oeil, Bon - jour ma chère - a mi - - e! Hè! bon - jour, ma tou - te bel - le, Ma

mon oeil, Bon - jour ma chère - a mi - - e! Hè! bon - jour, ma tou - te bel - le, Ma

mon oeil, Bon - jour ma chère - a mi - - e! Hè! bon - jour, ma tou - te bel - le, Ma

13

mi - gnar - di - se, Bon - jour, mes dè - li - ces, mon a - - mour, Mon doux prin - temps, ma dou - ce fleur nou - vel -

mi - gnar - di - se, Bon - jour, mes dè - li - ces, mon a - - mour, Mon doux prin - temps, ma dou - ce fleur nou - vel -

mi - gnar - di - se, Bon - jour, mes dè - li - ces, mon a - - mour, Mon doux prin - temps, ma dou - ce fleur nou - vel -

mi - gnar - di - se, Bon - jour, mes dè - li - ces, mon a - - mour, Mon doux prin - temps, ma dou - ce fleur nou - vel -

# 'Publication'

Publication may be private (or for a few friends) or scholarly

- We should enable both
- Publication can be on-screen presentation or in print
- Both are enabled by the use of PDF, but even better (in the on-screen case) by Verovio
- One new possibility is presenting parallel tablature/transcriptions as in the JosquinTAB resource Reinier will introduce now