TROMPA: Towards Richer Online Music Public-domain Archives

Deliverable 7.2
Annual Dissemination Report

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Leader	GOLD
Contact Person	Tim Crawford (GOLD)
Authors	Tim Crawford (GOLD)
Reviewers	Emilia Gomez (UPF), Aggelos Gkiokas (UPF), Cynthia Liem (TUD)

Executive Summary

This document summarises the dissemination output of TROMPA in its second year. Dissemination has been addressed to specific audiences outlined in the following tasks defined in the TROMPA project proposal, as well as to the general public:

T7.1 Dissemination to music scholars

T7.2 Dissemination to music professionals

T7.3 Dissemination to non-professionals

T7.4 Dissemination to the R&D community

T7.5 Dissemination to industry

The first year's effort was largely concentrated in planning and infrastructural and other software development, and there was less opportunity for reporting research and other activities than there should be over years two and three. A number of accepted conference papers reported in the previous Annual Dissemination Report 2019 (D7.2) were presented during this second year (see A.2 Peer-reviewed conferences and workshops).

A significant amount of organisational work and planning for the annual ISMIR conference was undertaken by PI Cynthia Liem and her team at TUD; the resulting event (in November 2019) gave much prominence to the activities and goals of the TROMPA project.

However, the entirely unexpected effect of the COVID19 pandemic has been to severely limit the number of physical meetings, conferences and workshops taking place during 2020. This has seriously upset our plans for certain activities organised by TROMPA. In some cases it has been possible to replace these with 'virtual' events conducted online, but in some others the events have been postponed until conditions permit something nearer to the original intentions. We are hopeful that we shall be able to reschedule at least some of these events to the third year of TROMPA, but anticipate that travel restrictions are still likely to apply which will limit the scope and inevitably affect the attendance of these events.

See the Table of Contents, below.

Version Log		
#	Date	Description
v0.1	20 April 2020	Initial version submitted for internal review
v0.2	26 April 2020	Revised version after internal review
v1.0	30 April 2020	Final version submitted to EU

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1. Introduction

Dissemination has been addressed to specific audiences outlined in the following tasks defined in the TROMPA project proposal, as well as to the general public:

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> T7.5 Dissemination to industry

The Dissemination activities of TROMPA are diverse in nature, in keeping with the broad scope of the project's goals and its several community audiences. As well as producing standard academic papers, the project reaches a wider audience through invited talks, workshops and tutorials some of which involve formal teaching; these are more widely aimed at music professionals including those who are not academics. Another important strand of dissemination is through media outlets such as national or local broadcasters, or online forums and social media.

NB: All TROMPA project activities which involve physical gatherings of audiences, students or other participants from March 2020 have been severely impacted by the COVID-19 crisis, which has led to the cancelling or postponement of many meetings, workshops and conferences. This includes both those which TROMPA team members expected to attend as well as those organised by TROMPA. The report that follows indicates where such alterations have occurred and gives, where possible, an indication of alternative arrangements.

Our second Annual Exploitation Plan (deliverable D7.3-2) gives an analysis of outcomes and possible commercial exploitation possibilities of TROMPA and collaboration with industry representatives during the second year of the project.

Three principal communities are being targeted in TROMPA's dissemination efforts reported here: Music Scholars, Music Professionals and Non-professionals (including music enthusiasts). (Dissemination to the Music R&D community and the Music industry is reported in D7.3-2.)

2. Academic dissemination

Most of the dissemination activities reported in this section are reports on technical or infrastructural aspects of the TROMPA project which are being, or will be, developed or applied directly in the software framework on which the project depends.

2.1 Academic publications

A full list of publications and accepted papers in the second year of TROMPA is given in Appendix A.

2.2 Open science: datasets and code

Most TROMPA scientific publications are published in line with scientific reproducibility principles, and include complementary code and data.

TROMPA has two dedicated Github organisations: one containing code generated within the project, which currently houses a number of repositories related to the Contributor Environment[1]; and another containing all music encodings generated by project activities[2].

TROMPA is committed to reproducible and open science and to generating public-domain music archives. For this purpose we have created a zenodo repository in which our datasets and results will be lodged as they become available.[3]

❖ Material of the ISMIR 2019 Tutorial on Fairness, Accountability and Transparency in Music Information Research (FAT-MIR), https://zenodo.org/record/3546227
❖ TROMPA consortium members (Werner Goebl at mdw with assistance from Vladimir Viro at PN) have contributed a number of new features and improvements to Verovio, the open-source MEI renderer used in several of TROMPA's user pilots.

2.3 Invited academic talks

❖ Emilia Gómez - STEM in the City, La Scala, Milano, Italy, May 2-6 2019.
❖ Emilia Gómez. "Music information retrieval: a change in motivation", Barcelona music Tech Forum, June 2019.
❖ David M. Weigl. (2019). Requirements and use cases in the TROMPA project: Towards Richer Online Music Public-Domain Archives. Workshop on Requirements, Use Cases, and User Studies in Digital Music Libraries and Archives (RUCUS 2019), ACM/IEEE Joint Conference on Digital Libraries (JCDL), Urbana-Champaign, Illinois, USA
❖ Werner Goebl and David M. Weigl. (2019). Introducing the TROMPA Project: Towards Richer Online Music Public-domain Archives. Musikalische Interpretation bei Herbert von Karajan (International Karajan Symposium), Kunstuniversität Graz, Austria
❖ Cynthia Liem. "Data and human interpretation: music and beyond", DMRN+14: Digital Music Research Network One-day Workshop, London, UK, December 2019.
❖ Cynthia Liem. "Digitizing scores: unlocking the classics (and more)", Karajan Music Tech Conference, online, April 2020.

2.4 Academic service

❖ Emilia Gómez has continued to serve as president of the International Society for Music Information Retrieval (ISMIR) during 2020.
❖ Emilia Gómez also serves as a co-editor in chief of the journal Transactions of ISMIR.
❖ Julián Urbano is guest co-editor of the Transactions of ISMIR special issue on the 20 years of ISMIR.
❖ Cynthia Liem and Emilia Gómez have been co-chairs of the International Society for Music Information Retrieval Conference.
❖ Julián Urbano has been co-chair of the scientific program of the International Society for Music Information Retrieval Conference.

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[1] https://github.com/trompamusic
[2] https://github.com/trompamusic-encodings
[3] https://zenodo.org/communities/trompa/

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- ❖ Emilia Gómez was academic coordinator of the 2nd HUMAINT Winter School on Fairness, Accountability and Transparency of Artificial Intelligence, Seville, January 22-24th, 2020 https://ec.europa.eu/jrc/communities/en/community/humaint/event/2nd-humaint-winter-school-fairness-accountability-and-transparency
- ❖ TROMPA sponsored a session at the Digital Libraries for Musicology Conference, November 2019, Den Haag, Netherlands
- ❖ David M. Weigl chaired the Requirements, Use-Cases, and User Studies in Digital Music Libraries and Archives (RUCUS2019) Workshop, which took place as part of the IEEE/ACM Joint Conference on Digital Libraries, June 2019, Urbana-Champaign, Illinois, USA.
- ❖ David M. Weigl served as a member of the Programme Committee for the Music Encoding Conference 2020
- ❖ David M. Weigl organised and presented a full-day tutorial on Music Encodings and Linked Data (including a focus on TROMPA) at the Music Encoding Conference 2019 Vienna (29th May 2019), which was reprised in expanded form over two days at the Edirom Summer School (2nd & 3rd September 2019).

3. Professional outreach

A variety of dissemination activities have been aimed towards professional, non-academic communities such as music-librarians, software developers and choral singers. These range from invited presentations, participation in conferences and seminars, to workshops organised and funded by TROMPA.

3.1 Project presentations; participation and demonstrations at professional events

- ❖ The Music Enthusiasts Pilot was planned to be presented in the Artificial Intelligence, Affective Computing and Games Workshop, due to take place in 11-12 May 2020 in Gothenburg University, Sweden. The workshop aimed at promoting cross-talk between different disciplines that use games to study emotional and cognitive aspects of the human agent. Due to the covid-19 situation, this event has been postponed and it is expected to take place in April 2021.
- ❖ David M. Weigl, Carlos Cancino-Chacón, Martin Bonev, and Werner Goebl. (2019) Linking and Visualising Performance Data and Semantic Music Encodings in Real-Time. Late-breaking News and Demonstrations (LBD) session at the 20th International Society for Music Information Retrieval Conference. November 2019.

3.3 Invited talks for professional audiences

- ❖ Cynthia Liem was invited to speak at the general assembly of the Nederlandse Vereniging van Muziekbibliotheken, Muziekarchieven en Muziekdocumentatiecentra (Netherlands association of music libraries, music archives and music documentation centres) in April 2020. Due to the COVID-19 crisis, the meeting has been postponed to Fall 2020.

- ❖ Jordi Janer, from Voctro Labs, participated in winterLAB[4], a program of presentations, round tables and workshops organized by Laboral, an art and industrial creation center in Gijón (Spain). There, he gave a talk about Artificial Voices in the Musical Field, discussing issues about singing synthesis in the context of artistic production and other applications for the general public, including choir singing synthesis in the context of the TROMPA project.
- ❖ Voctro Labs also participated with an invited talk at the GAMELAB 2019[5] conference held in Barcelona in June 2019. This is a conference that targets videogame professionals, and the talk was about the use of expressive artificial voices in the creative industries, which included the work carried out in the context of TROMPA and how it can benefit the production of video game soundtracks with artificial choir synthesis.

3.4 Organization of outreach events

- ❖ Plans were advanced for a public TROMPA workshop in association with the 2020 Mahler Festival, due to take place in Amsterdam on 15 May 2020, co-organised as part of Task 7.1 by Tim Crawford (GOLD), Marcel van Tilburg (RCO) and others in the TROMPA team. This was to present work by a team of Mahler scholars who would comment in detail on the tempo and expression marks in the various early versions of the score of Gustav Mahler's 4th Symphony. These comments would be presented to 'ordinary' users of a pilot version of the Digital Score Edition software as annotations to the score, which would be linked as necessary with historical orchestral recordings made available exclusively by RCO from their private archive; users could then add their own comments, and/or complete a survey of their reactions to Mahler's own textual instructions, to the scholars' interpretations of these, and to their perception of the way in which conductors do or do not follow the composer's intentions in the recordings. Facilities were booked for the event at RCO's headquarters in Amsterdam and a team of world authorities on Mahler's music assembled under the leadership of Dr Paul Banks (London). Unfortunately, because of the lockdown regulations caused by the COVID19 pandemic, the Mahler Festival itself has been cancelled, and it was realised that the TROMPA event could not go forward in its original form. Plans are being made to mount a purely 'online' form of the event (or at least the survey of listeners' reactions) at a later date.
- ❖ UPF and Voctro Labs made a plan for doing onsite workshops for the Choir Singers Pilot in the area of Catalonia. Due to the COVID19 crisis, these workshops could not take place. However, we are running an evaluation workshop virtually in May 2020 with 19 choir singers, and plans are now are being made to run workshops remotely as well as to improve the tool with features that specifically support choir singers in the current situation.
- ❖ Several partners in the consortium were making plans to organize a TROMPA Challenge in the 2020 Sónar+D Innovation Challenge[6]. However, this event has been canceled due to the COVID19 crisis. Currently, we are waiting for updates from Sónar Festival in order to explore possibilities for organizing an outreach activity within the festival if it takes place before the end of the project.

[4] http://www.laboralcentrodearte.org/en/education/winterlab?set_language=en
[5] https://www.gamelab.es/en/technologies-that-expand-the-reach-of-videogames/
[6] https://sonarplusd.com/en/sonar-d-innovation-challenge-2020

4. Dissemination geared to the general audience

Here we report on non-academic events or media appearances specifically aimed at the general public.

❖ The first demonstrator of the TROMPA Companion for Long-term Analyses of Rehearsal Attempts (CLARA) was publicly released on September 13th, 2019, coinciding with Clara Schumann's 2nd centenary, alongside twitter activity and blog posts. This first release demonstrated core capabilities of the TROMPA instrumental performer prototype, using a purpose-generated musical encoding and three performance recordings of Clara Schumann's Romanze ohne Opuszahl, which were also released online under a public license.

❖ On October 5th and 6th 2019 UPF-TIDE organized a workshop in Maker Faire Barcelona, where a first version of the Music Enthusiasts (ME) prototype was presented as a tool to support research in emotion recognition in music. The workshop aimed to highlight the importance of massive involvement of persons in tasks such as collect training data and evaluate the results of designed algorithms. See: https://bit.ly/MakerFaireUPF (in Catalan)

❖ A second version of the ME prototype was presented during a workshop with highschool students in the context of the Barcelona Science Week on November 12th 2019. During the session, some features identified by science to objectively classify and identify emotions in music were presented, highlighting the importance of music enthusiasts involvement to improve current knowledge and technologies[7].:

These workshops highlighted the importance of having a good user management system to provide valuable feedback to the users as well as to provide better recommendations in future versions[8]. See:

❖ In April 2020, UPF and Voctro Labs organized a workshop for validation of the Choir Singers Pilot. Participants were recruited from choirs in Catalonia and Seville, and this was also a first contact for having these choirs using the application in future releases.

Press appearances

❖ Werner Goebl and David M. Weigl. (2019). Digitising and Enriching our Cultural Heritage Together / Die Digitalisierung und Anreicherung unseres musikalischen Erbes selbst gestalten. Article published in mdw-Webmagazin, University of Music and Performing Arts Vienna. September 2019[9]. See:

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[7] https://bit.ly/ScienceWeekUPF
[8] https://trompamusic.eu/node/107
[9] https://www.mdw.ac.at/magazin/index.php/2019/09/27/die-digitalisierung-und-anreicherung-unseres-musikalischen-erbes-selbst-gestalten/

Appendix A. List of peer-reviewed academic publications (including accepted papers) during TROMPA year 2

Álvaro Sarasúa, Jordi Janer, Oscar Mayor, Jordi Bonada and Merlijn Blaauw. (2020). Choir Singing Synthesis for Rehearsal Tools with Large-scale Multilingual Repertoires. Demo accepted at 2020 *IEEE International Conference on Acoustics, Speech, and Signal Processing* (ICASSP 2020)

David M. Weigl and Werner Goebl. (2020). Rehearsal Encodings with a Social Life. *Music Encoding Conference*, May 2020 (Accepted).

David M. Weigl and Werner Goebl. (2020). Using graph technologies to interconnect and enrich public-domain music resources. *Graph Technologies in the Humanities*. February 2020.

David M. Weigl, Werner Goebl, Tim Crawford, Aggelos Gkiokas, Nicolas F. Gutierrez, Alastair Porter, Patricia Santos, Casper Karreman, Ingmar Vroomen, Cynthia C. S. Liem, Álvaro Sarasúa and Marcel van Tilburg. (2019). Interweaving and Enriching Digital Music Collections for Scholarship, Performance, and Enjoyment. *6th International Conference on Digital Libraries for Musicology (DLfM)*. November 2019.

Weigl, D. M., Liem, C., Gómez, E., Crawford, T., Ahmed, R., Klerkx, W., & Goebl, W. (2019). Towards Richer Online Music Public-domain Archives: Providing enriched access to classical music encodings. Music Encoding Conference 2019, Vienna, Austria*.

Lorenzo Porcaro and Emilia Gómez. (2019) 20 Years of Playlists: A Statistical Analysis on Popularity and Diversity. *20th Conference of the International Society for Music Information Retrieval (ISMIR 2019).* TU Delft, Delft, 4th-8th November.

Lorenzo Porcaro, Carlos Castillo, and Emilia Gómez. (2019). Music Recommendation Diversity: A Tentative Framework and Preliminary Results. *1st Workshop on Designing Human-Centric MIR Systems (wsHCMIR19), co-located at International Society for Music Information Retrieval (ISMIR 2019).* TU Delft, Delft, 4th-8th November.

Lorenzo Porcaro and Emilia Gómez. (2019) A Model for Evaluating Popularity and Semantic Information Variations in Radio Listening Sessions. *1st Workshop on the Impact of Recommender Systems (ImpactRS), at the 13th ACM Conference on Recommender Systems (RecSys 2019).* Copenhagen, 16th-20th September.

Dmitry Bogdanov, Alastair Porter, Hendrik Schreiber, Julián Urbano and Sergio Oramas (2019). The AcousticBrainz Genre Dataset: Multi-Source, Multi-Level, Multi-Label, and Large-Scale. *20th Conference of the International Society for Music Information Retrieval Conference (ISMIR 2019)*. November 2019.

de Valk, R., Ahmed, R.; Crawford, T.; Lewis, D. (2019). Josquintab: A Dataset for Content-Based Computational Analysis of Music in Lute Tablature. *20th Conference of the International Society for Music Information Retrieval Conference (ISMIR 2019).* November 2019.

Crawford, T. (2019), Full-Text search of Early Music Prints Online (F-TEMPO): a new approach to a finding aid for musicians and librarians. *IAML Congress 2019 (International Association of Music Libraries and Sound Archives).* July 2019

Crawford, T. (2019) A tool for exploring early printed music: F-TEMPO (Full-Text search of Early Music Prints Online). *MedRen 2019 (Medieval and Renaissance Music Conference).* July 2019

Ahmed, R. (2019) A Digital Toolbox for Exploring Lute Tablature. *MedRen 2019 (Medieval and Renaissance Music Conference).* July 2019

K. Roitero, A. Brunello, J. Urbano and S. Mizzaro (2019). Towards Stochastic Simulations of Relevance Profiles. *ACM International Conference on Information and Knowledge Management*, 2019.

Julián Urbano, Harlley Lima and Alan Hanjalic (2019). Statistical Significance Testing in Information Retrieval: An Empirical Analysis of Type I, Type II and Type III Errors. *International ACM SIGIR Conference on Research and Development in Information Retrieval.* July 2019

Julián Urbano, Harlley Lima and Alan Hanjalic (2019). A New Perspective on Score Standardization. *International ACM SIGIR Conference on Research and Development in Information Retrieval. July 2019*

Ahmed, R.; Crawford, T.; Lewis, D. (2019). Hundreds of Thousands of Pieces in MEI: Encoding Tablatures at Scale. *Music Encoding Conference (MEC).* June 2019.

David M. Weigl, Cynthia C.S. Liem, Emilia Gómez, Tim Crawford, Ahmed Ryaan, Wim Klerkx, Werner Goebl (2019). Towards Richer Online Music Public-domain Archives: Providing enriched access to classical music encodings. *Music Encoding Conference (MEC).* June 2019.

Olga Slizovskaia, Leo Kim, Gloria Haro, Emilia Gómez (2019). End-to-End Sound Source Separation Conditioned On Instrument Labels. *44th IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2019).* May 2019.

Chandna, P., Blaauw M., Bonada J., & Gomez E. (2019). A Vocoder Based Method For Singing Voice Extraction. *44th International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2019)..* May 2019.

Lorenzo Porcaro and Horacio Saggion (2019). Recognizing Musical Entities in User-generated Content. *International Conference on Computational Linguistics and Intelligent Text Processing (CICLing).* April 2019

Juan Sebastián Gómez-Cañón, Perfecto Herrera, Emilia Gómez, Estefanía Cano (2019). The emotions that we perceive in music: the influence of language and lyrics comprehension on agreement. *Workshop-symposium in Methods for Music and Emotion*. September 2019.

Ioannis Petros Samiotis and Alessandro Bozzon. Capturing Cognitive Bias in Human Agents Performing Music-related Tasks. *1st Symposium on Biases in Human Computation and Crowdsourcing*. *Best Abstract Award*.