# POP909: A POP-SONG DATASET FOR MUSIC ARRANGEMENT GENERATION

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Introduction

- POP909 is a new dataset with 909 pop songs with
  - Melody, harmony, rhythm transcription
  - piano re-orchestration
- Aimed tasks
  - Piano accompaniment generation
  - Re-orchestration from audio
  - unconditional symbolic music generation
 - expressive performance rendering
  - ...
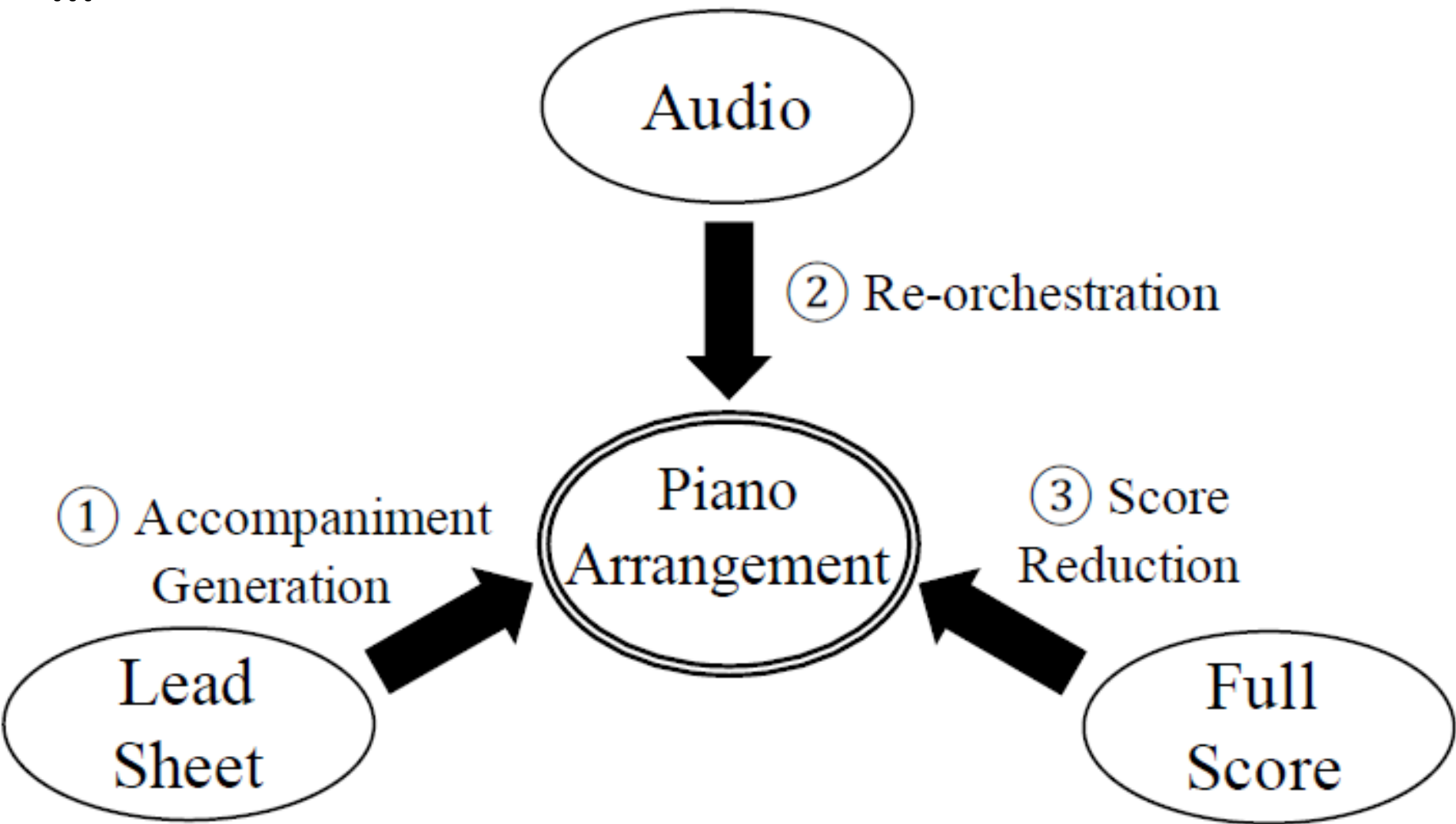
Dataset Collection Process

1. **Arrangement**: the arranger team creates an arrangement from scratch or revises the previous version of arrangement.
2. **Review**: the reviewer team decides whether the current version is qualified and comments on how to improve the arrangement in case further revisions are required.
3. **Discussion**: musicians from both teams catch up with the progress, discuss and improve details of arrangement standards.

Example MIDI File

3 MIDI Tracks
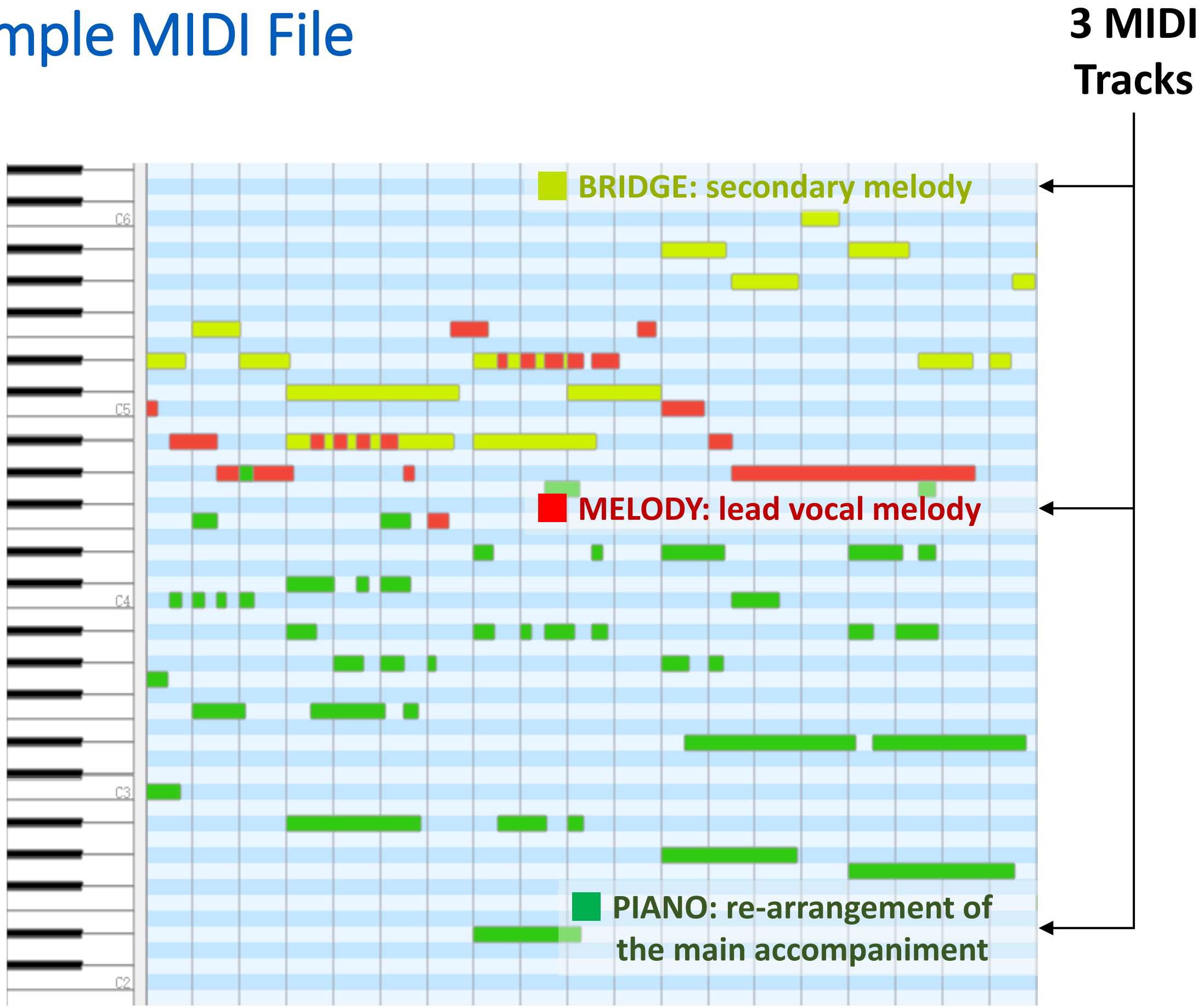
Folder Structure
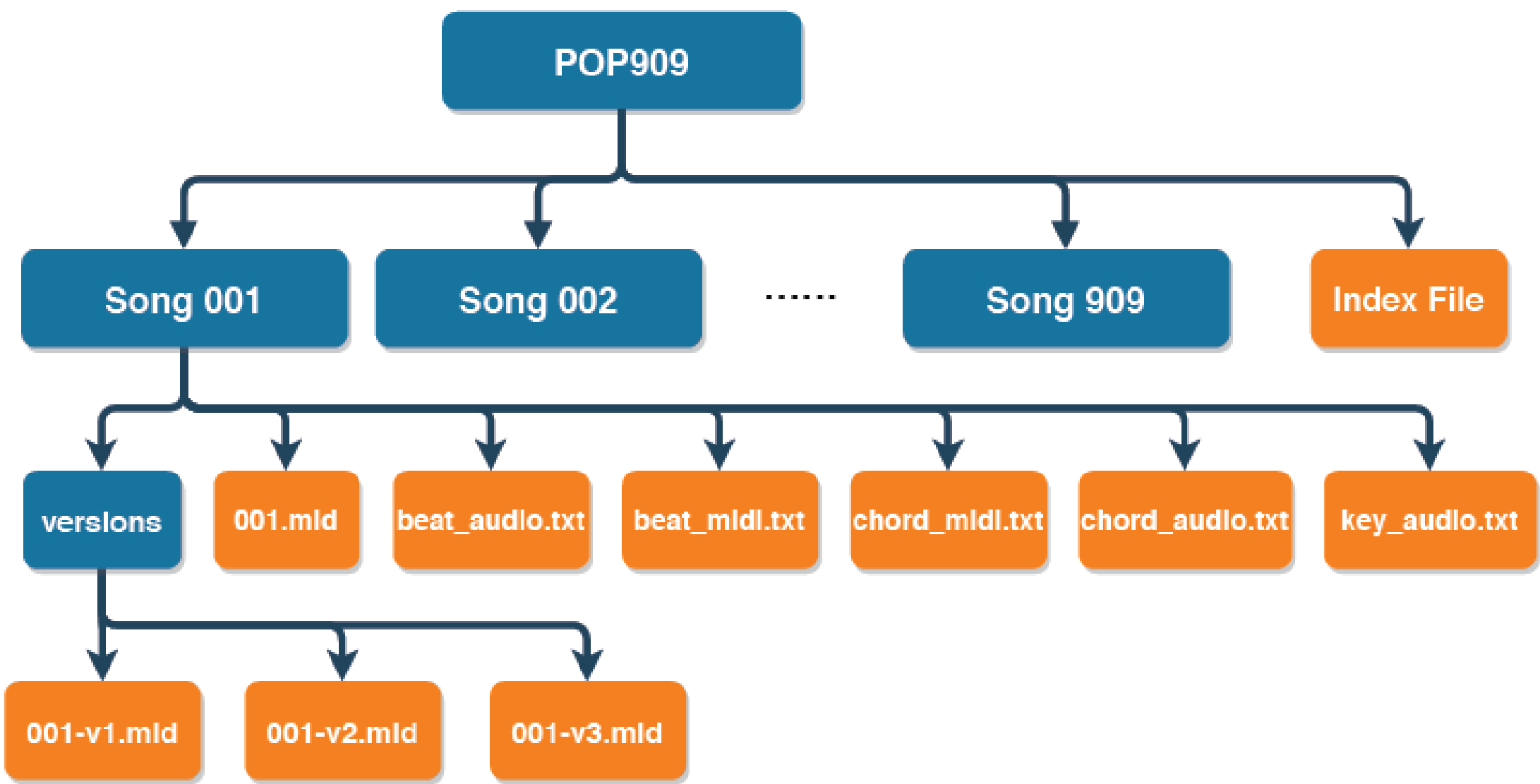
Download the dataset for free at:

https://github.com/music-x-lab/POP909-Dataset

Example Annotations

file	beat time	downbeat_1	downbeat_2
	0.02	1.0	0.0
	0.75	0.0	0.0
beat_midi	1.49	1.0	1.0
	2.22	0.0	0.0
	2.95	1.0	0.0
	3.68	0.0	0.0
	...	...	...

file	beat time	beat order
	1.46	1.0
	2.18	2.0
beat_audio	2.92	3.0
	3.66	4.0
	...	...

file	start time	end time	chord
	0.02	0.75	N
	0.75	1.49	N
chord_midi	1.49	4.41	G:min7
	4.41	7.34	Eb:sus2
	...	...	...

file	start time	end time	chord
	0.00	1.46	N
	2.46	4.39	G:min7
chord_audio	4.39	7.31	Eb:maj(9)
	...	...	...

file	start time	end time	key
key_audio	1.46	226.00	Bb:maj

Comparison with Other Datasets

Dataset	Size	Paired Property				Annotation			Modality
		Polyphony	Lead Melody	Audio	Time-alignment	Beat	Key	Chord	
Lakh MIDI [13]	170k	✓		✓	Δ	✓	Δ	Δ	score, perf
JSB Chorales [14]	350+	✓			N/A		✓		score
Maestro [15]	1k	✓		✓					perf
CrestMuse [16]	100	✓		✓	✓	✓	✓		score, perf
RWC-POP [17]	100	✓	✓	✓	Δ	✓	✓	✓	score, perf
Nottingham [18]	1k		N/A		N/A	✓	✓	✓	score
POP909	1k	✓	✓	✓	✓	✓	✓	✓	score, perf

Generation Experiment
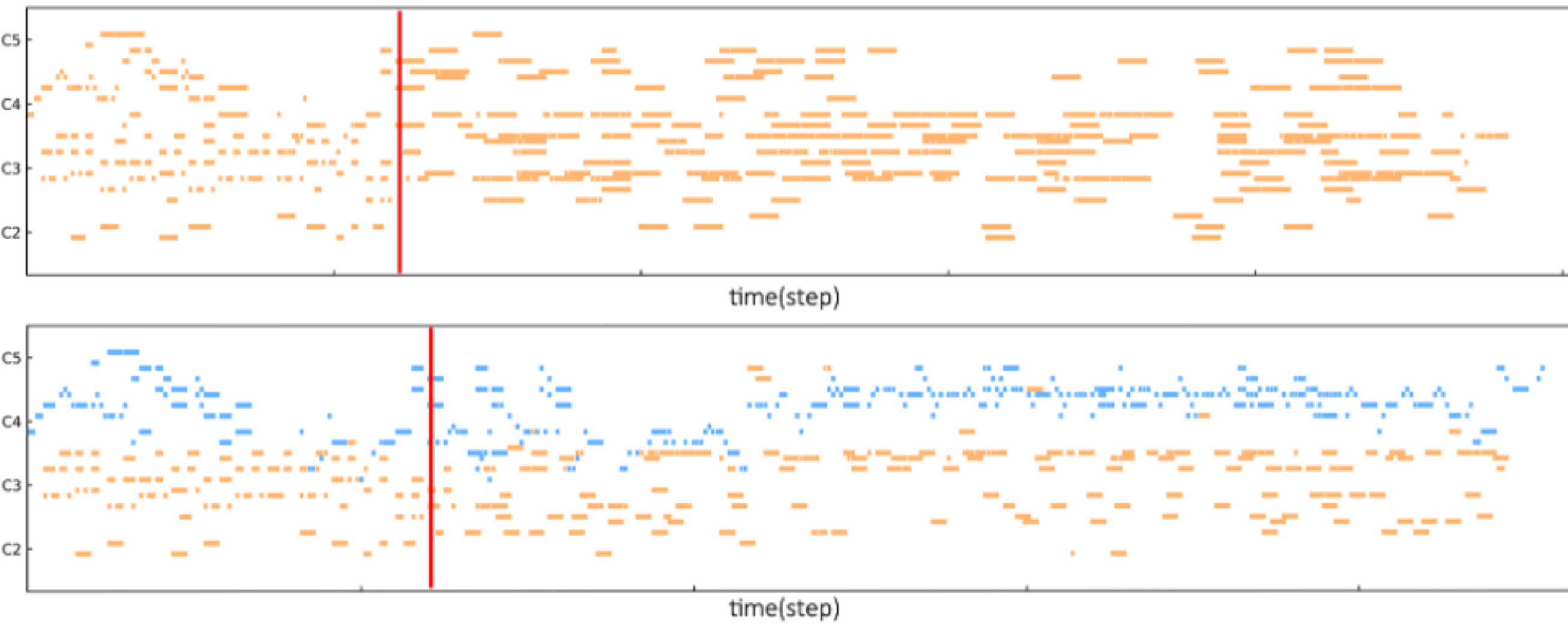
(a) Generation results of example a.

*Audio samples are available in the presentation video.