

# Traceability Report for Project Score 1.1.0

Author	Jan Würthner
Date	09 Apr 2022

## Table of Contents

1. Project Definition.....	1
2. Scope.....	1
3. Model.....	1
4. Use Cases.....	2

## 1. Project Definition

This library converts music score, given in an abstract data tree-structure (made of arrangements, tracks, voices, events), into a music sheet with a set of coordinates. Based on this output, any simple drawing tool can be used to display a full music score.

## 2. Scope

The scope of this document is a description of system requirements in combination with the test cases and their traceability.

## 3. Model

This chapter describes the data model

Requirement	Testcase
<b>RQ-001</b> : The metric element defines the metric structure of a bar.	<b>TC-001</b> : Create a two-level metric '2*2/4'. The 1st level submetrixes (amount 2) are of duration 1. The 2nd level submetrixes (amount 2) are of duration 0.5. The 3rd level single events are of duration 0.25. <b>TC-002</b> : Create a metric '3+1/4'. The 1st level submetrixes (amount 2) are of duration 1. The 2nd level are of duration 0.75 (amount 3) and 0.25 (amount 1). <b>TC-003</b> : Create a two-level metric '3*3/4'. The 1st level submetrixes (amount 3) are of duration 2.25. The 2nd level submetrixes (amount 3) are of duration 0.75. The 3rd level single events are of duration 0.25. <b>TC-004</b> : Create a two-level metric '4/4'. The 1st level submetrixes (amount 2) are of duration 1. The 2nd level submetrixes (amount 2) are of duration 0.5. The 3rd level single events are of duration 0.25.

Requirement	Testcase
	<p><b>TC-005</b> : Create a composite metric '<math>3 \times 2 \times 3/16 + 1/8</math>'. The 1st level submetrics (amount 2) are of duration 1.25. The 2nd level (of <math>3 \times 2 \times 3/16</math>) are of duration 1.125 (amount 3) The 3rd level are of duration 0.375, 4th level of duration 0.1875 and last level 0.0625. The 2nd level of the <math>1/8</math> metric is of duration 0.125.</p> <p><b>TC-006</b> : Test the depth level of the submetrics for a metric '<math>3 \times 2 \times 3/16 + 1/8</math>'.</p> <p><b>TC-007</b> : Create a composite metric '<math>5/4</math>'. The 1st level submetrics (amount 2) are of duration 1.25. The 2nd level submetrics (amount 3 and 2) are of duration 0.75 and 0.5.</p> <p><b>TC-008</b> : Test invalid metrics regarding the pattern given.</p> <p><b>TC-009</b> : Test the validity of metrics regarding the pattern: <math>\backslash s^*(\backslash d+)(?:\backslash s^*(\backslash   \backslash *)\backslash s^*(\backslash d+))\backslash s^*\backslash s^*(\backslash d+)\backslash s^*(?:\backslash (+ \backslash -)\backslash s^*(\backslash d+)(?:\backslash s^*(\backslash + \backslash *)\backslash s^*(\backslash d+))\backslash s^*\backslash s^*(\backslash d+)\backslash s^*)^*\\$</math></p> <p><b>TC-010</b> : Create a two-level metric '<math>2 + 2/4</math>'. The 1st level submetrics (amount 2) are of duration 1. The 2nd level submetrics (amount 2) are of duration 0.5. The 3rd level single events are of duration 0.25.</p>

## 4. Use Cases

This chapter describes integration tests and use cases