



## W3C Music Notation Community Group

- Founded in July 2015
- Develops and maintains format and language specifications for notated music used by web, mobile, and desktop applications
- Maintains and updates the MusicXML and Standard Music Font Layout (SMuFL) specifications
- Developing new MNX spec to handle new use cases and technologies
- Community group membership is free of charge and does not require W3C membership
- <https://www.w3.org/community/music-notation/>



## Progress in 2017

- MusicXML 3.1 released in December 2017
- First report published by the Music Notation Community Group and first MusicXML release since August 2011
- Addressed 80 issues from GitHub issue list
- Major emphasis on better support for SMuFL
- Also documentation improvements, packaging improvements, and fixes for better representation of appearance and semantics
- <https://www.w3.org/2017/12/musicxml31/>



## Plans for 2018

- Primary focus is on MNX, a next-generation project for music notation representation
- Goals are to improve interoperability and to address new use cases compared to MusicXML
- Initial draft specification at <https://w3c.github.io/mnx/specification/>
- Also plan to release SMuFL update as a Community Report in 2018

# MNX Update and Discussion

The NAMM Show, Anaheim CA  
26 January 2018

Joe Berkovitz, Risible LLC  
Co-chair W3C Music Notation CG

# What is MNX?

- A proposed worldwide standard for encoding music notation
- Under the aegis of the World Wide Web Consortium (W3C)
- Includes 3 key components at present:
  - **MNX container**: score packaging, organization, metadata, encoding modules
  - **CWMNX**: semantic format for Western music notation: "MusicXML evolved"
  - **GMNX**: new "literal" format linking vector graphics and audio/performance media
- Created by the W3C Music Notation Community Group
  - Browse or join up at <https://www.w3.org/community/music-notation/>
  - All materials online on Github at <https://github.com/w3c/mnx/>

# Why do we need it?

- MusicXML's creation predates the direct digital delivery of notated music
- Many new use cases have been recognized since then; not all are well served
- Multiple decades of notation development offer ideas on structural improvements to encoding notation
- Music publishers today are more involved in and affected by encoding standards, and have an important role to play in their design

# How far along is it?

- A draft specification has just been published
- A small number of examples are available
- No reference implementations exist yet
- Many major issues remain open
- Many features in MusicXML are not yet addressed
- Timeline to an initial Community Report with a fully reviewed and complete specification: forecasting end of 2018, perhaps optimistically...

# MNX Container Format highlights

- Supports a hierarchy of related documents, packaged in a bundle
- Hierarchy may represent any or all of...
  - a single work
  - multi-movement or multi-section work
  - a folio or anthology of works
  - alternative renditions of the same work
- Disciplined, bibliographically solid approach to metadata
- Allows an extensible set of encoding formats, with CWMNX and GMNX available first



# CWMNX Highlights

- New element structure simplifies parsing compared to MusicXML
- Clear separation between:
  - **semantic markup** relating to CWMN concepts
  - **presentation** describing layout and appearance
  - **interpretation** describing musical performance
- Multiple profiles ranging from **standard** (99+% of CWMN) to more specialized (e.g. **multi-metric**)
- The **standard** profile includes constraints that enhance interoperability through "straight-edge" compliance and validation
- Support for "house styles" that can be altered without other changes to score
- Simpler, more direct approach to custom performance data

# CWMNX Examples

- Examples at <https://github.com/w3c/mnx/tree/master/examples>
- Fauré Requiem: MNX sample encoding  
(<https://github.com/w3c/mnx/blob/master/examples/FaurReveSample-cwmnx.xml>)
- Discussion of key elements:
  - `<mnx>`, `<head>`, `<score>`
  - `<cwmnx>`, `<global>`, `<part>`, `<measure>`
  - `<sequence>`, `<event>`, `<note>`, `<tied>`
  - `<directions>`, `<tempo>`, `<time>`, `<key>`
  - `<instruction>`, `<dynamics>`, `<wedge>`

# GMNX Highlights

- Accommodates virtually any type of notation, by treating as pure graphics
- Accommodates virtually any type of musical performance, by treating as either pure audio media or lists of timed MIDI-like events
- A musical timeline links notation graphics and visual regions to performance data
- Multiple performances and multiple graphical renditions may be bundled together
- Leverages SVG vector graphics standard
- Appropriate for applications that present notation and audio, but don't edit it (e.g. practice, performance apps)
- Semantic encodings like CWMNX or MusicXML can be "published" as GMNX for consumption by presentation apps

# GMNX Examples

- Examples at: <https://joeberkovitz.github.io/gmnx-viewer/>
- Key elements:
  - `<gmnx>`
  - `<score-view>`
  - `<performance-data>`, `<performance-audio>`
  - `<performance-region>`
  - `<performance-event>`

# Après un rêve

Op. 7, No. 1

Romain Bussine

Gabriel Fauré

**Andantino** *dolce*

Voice

Piano *pp*


ma - - - ge Je rê - vais le bon - heur ar - dent mi - ra - - - -

ge, Tes yeux é - taient plus doux, — ta voix pure et so - no - - re,

Tu ray - on - nais comme un ciel — é - clair - é par l'au - ro - - - re;

Branch: master ▾ mnx / examples / FaurReveSample-cwmnx.xml

Find file Copy path

 joeberkovitz Fix value syntax with missing leading "/".

fbd55bc 8 days ago

1 contributor

609 lines (595 sloc) 19.9 KB

```

1  <?xml version="1.0" encoding="UTF-8"?>
2  <!-- Note: page-layout-related information and implied stem directions have been removed from this example -->
3  <mnx>
4    <head>
5      <title>Après un rêve</title>
6      <subtitle>Op. 7, No. 1 (measures 1-8)</subtitle>
7      <creator type="composer">Gabriel Fauré</creator>
8      <creator type="lyricist">Romain Bussine</creator>
9      <rights>Copyright © 2002 Recordare LLC</rights>
10     <style-selector rule="score" style="staff-distance: 80px; staff-line-spacing: 18px; font-family: Times New Roman; font-size
11     <style-class name="tempo-indication" style="font-weight: bold;"/>
12   </head>
13
14   <score>
15     <cwmnx profile="standard">
16       <!-- Global score structure and directions -->
17       <global>
18         <measure number="1">
19           <directions>
20             <tempo bpm="60" value="/4"/>
21             <time signature="3/4"/>
22             <key fifths="-3" mode="major"/>
23             <instruction class="tempo-indication">Andantino</instruction>
24           </directions>
25         </measure>
26         <measure number="2"/>
27         <measure number="3"/>
28         <measure number="4"/>
29       </global>
30       <!-- Part 1 =====>
31       <part style="y: above;">
32         <part-name>Voice</part-name>
33         <instrument-sound>voice.aa</instrument-sound>
34         <measure number="1">
35           <directions>
36             <staves number="1"/>
37             <clef line="2" sign="G"/>
38           </directions>
39           <sequence>
40             <event measure="yes">
41               <rest/>
42             </event>
43           </sequence>
44         </measure>
45         <measure number="2">
46           <directions>
47             <wedge end="5/8" start="1/8" type="crescendo"/>
48           </directions>
49           <sequence>
50             <expression>dolce</expression>
51             <event value="/4">
52               <note pitch="G4"/>
53               <lyric syllabic="single">Dans</lyric>
54             </event>

```

```

55     <event value="/4">
56         <note pitch="C5"/>
57         <lyric syllabic="single">un</lyric>
58     </event>
59     <event value="/4">
60         <note pitch="D5"/>
61         <lyric syllabic="begin">som</lyric>
62     </event>
63 </sequence>
64 </measure>
65 <measure number="3">
66     <sequence>
67         <event value="/4">
68             <note pitch="Eb5">
69                 <tied target="p1m3n2"/>
70             </note>
71             <lyric syllabic="end" extend="yes">meil</lyric>
72         </event>
73         <tuplet actual="3/8" normal="2/8" style="tuplet-bracket: none;">
74             <beamed>
75                 <event value="/8">
76                     <note id="p1m3n2" pitch="Eb5"/>
77                 </event>
78                 <event value="/8">
79                     <note pitch="D5"/>
80                     <lyric syllabic="single">que</lyric>
81                 </event>
82                 <event value="/8">
83                     <note pitch="C5"/>
84                     <lyric syllabic="begin">char</lyric>
85                 </event>
86             </beamed>
87         </tuplet>
88         <tuplet actual="3/8" normal="2/8" style="tuplet-bracket: none;">
89             <beamed>
90                 <event value="/8">
91                     <note pitch="Eb5"/>
92                     <lyric syllabic="end">maït</lyric>
93                 </event>
94                 <event value="/8">
95                     <note pitch="D5"/>
96                     <lyric syllabic="single">ton</lyric>
97                 </event>
98                 <event value="/8">
99                     <note pitch="C5"/>
100                    <lyric syllabic="begin">i</lyric>
101                </event>
102            </beamed>
103        </tuplet>
104    </sequence>
105 </measure>
106
107 <measure number="4">
108     <sequence>
109         <wedge end="#p1m4n2" style="start-offset: 1.2; end-offset: 1.2;" type="diminuendo"/>
110         <event value="/2">
111             <note pitch="C5"/>
112             <lyric syllabic="middle">ma</lyric>
113         </event>
114         <event id="p1m4n2" value="/4">
115             <note pitch="Bb4"/>
116             <lyric syllabic="end">ge</lyric>
117         </event>
118     </sequence>
119 </measure>
120
121 <measure number="5">

```

```

122     <sequence>
123       <beamed>
124         <event value="/8">
125           <note pitch="Db5" accidental="flat"/>
126           <lyric syllabic="single">Je</lyric>
127         </event>
128         <event value="/8">
129           <note pitch="F4"/>
130           <lyric syllabic="begin">rê</lyric>
131         </event>
132       </beamed>
133     <event value="/4">
134       <note pitch="Db5"/>
135       <lyric syllabic="end">vais</lyric>
136     </event>
137     <beamed>
138       <event value="/8">
139         <note pitch="C5"/>
140         <lyric syllabic="single">le</lyric>
141       </event>
142       <event value="/8">
143         <note pitch="B4" accidental="natural"/>
144         <lyric syllabic="begin">bon</lyric>
145       </event>
146     </beamed>
147   </sequence>
148 </measure>
149
150 <measure number="6">
151   <directions>
152     <wedge type="crescendo" location="0" end="0.625"/>
153   </directions>
154   <sequence>
155     <event value="/4d">
156       <note pitch="C5"/>
157       <lyric syllabic="end">heur</lyric>
158     </event>
159     <event value="/8">
160       <note pitch="C5"/>
161       <lyric syllabic="begin">ar</lyric>
162     </event>
163     <beamed>
164       <event value="/8d">
165         <note pitch="Bb4" accidental="flat"/>
166         <lyric syllabic="end">dent</lyric>
167       </event>
168       <event value="/16">
169         <note pitch="Ab4"/>
170         <lyric syllabic="begin">mi</lyric>
171       </event>
172     </beamed>
173   </sequence>
174 </measure>
175
176 <measure number="7">
177   <directions>
178     <wedge type="diminuendo" location="0.125" end="0.667"/>
179   </directions>
180   <sequence>
181     <event value="/4">
182       <note pitch="G4">
183         <slur target="p1m7n2"/>
184       </note>
185       <lyric syllabic="middle">ra</lyric>
186     </event>
187     <tuplet actual="3/8" normal="2/8" style="tuplet-bracket: none;">
188       <slur end="#p1m7e7"/>

```



```

189     <event value="/8">
190         <note id="p1m7n2" pitch="G4"/>
191     </event>
192     <event value="/8">
193         <note pitch="Ab4"/>
194     </event>
195     <event value="/8">
196         <note pitch="Bb4" accidental="flat"/>
197     </event>
198 </tuplet>
199 <tuplet actual="3/8" normal="2/8" style="tuplet-bracket: none;">
200     <event id="p1m7e7" value="/8">
201         <note pitch="Ab4"/>
202     </event>
203     <event value="/8">
204         <note pitch="Bb4"/>
205     </event>
206     <event value="/8">
207         <note pitch="C5"/>
208     </event>
209 </tuplet>
210 </sequence>
211 </measure>
212
213 <measure number="8">
214     <sequence>
215         <event value="/2d">
216             <note pitch="G4"/>
217             <lyric syllabic="end">ge</lyric>
218         </event>
219     </sequence>
220 </measure>
221 </part>
222
223 <!-- Part 2 =====>
224 <part style="measure-numbering: none;">
225     <part-name>Piano</part-name>
226     <instrument-sound>keyboard.piano</instrument-sound>
227     <measure number="1">
228         <directions>
229             <staves number="2"/>
230             <clef line="2" sign="G" staff="1"/>
231             <clef line="4" sign="F" staff="2"/>
232         </directions>
233         <sequence staff="1">
234             <dynamics style="y: below; horizontal-align: center;" type="pp"/>
235             <beamed>
236                 <event value="/8">
237                     <note pitch="C4"/>
238                     <note pitch="Eb4"/>
239                     <note pitch="G4"/>
240                 </event>
241                 <event value="/8">
242                     <note pitch="C4"/>
243                     <note pitch="Eb4"/>
244                     <note pitch="G4"/>
245                 </event>
246                 <event value="/8">
247                     <note pitch="C4"/>
248                     <note pitch="Eb4"/>
249                     <note pitch="G4"/>
250                 </event>
251                 <event value="/8">
252                     <note pitch="C4"/>
253                     <note pitch="Eb4"/>
254                     <note pitch="G4"/>
255                 </event>

```

```
256     <event value="/8">
257         <note pitch="C4"/>
258         <note pitch="Eb4"/>
259         <note pitch="G4"/>
260     </event>
261     <event value="/8">
262         <note pitch="C4"/>
263         <note pitch="Eb4"/>
264         <note pitch="G4"/>
265     </event>
266 </beamed>
267 </sequence>
268 <sequence staff="2">
269     <event measure="yes">
270         <rest/>
271     </event>
272 </sequence>
273 </measure>
274
275 <measure number="2">
276     <sequence staff="1">
277         <beamed>
278             <event value="/8">
279                 <note pitch="C4"/>
280                 <note pitch="Eb4"/>
281                 <note pitch="G4"/>
282             </event>
283             <event value="/8">
284                 <note pitch="C4"/>
285                 <note pitch="Eb4"/>
286                 <note pitch="G4"/>
287             </event>
288             <event value="/8">
289                 <note pitch="C4"/>
290                 <note pitch="Eb4"/>
291                 <note pitch="G4"/>
292             </event>
293             <event value="/8">
294                 <note pitch="C4"/>
295                 <note pitch="Eb4"/>
296                 <note pitch="G4"/>
297             </event>
298             <event value="/8">
299                 <note pitch="C4"/>
300                 <note pitch="Eb4"/>
301                 <note pitch="G4"/>
302             </event>
303             <event value="/8">
304                 <note pitch="C4"/>
305                 <note pitch="Eb4"/>
306                 <note pitch="G4"/>
307             </event>
308         </beamed>
309     </sequence>
310 <sequence staff="2">
311     <event measure="yes">
312         <rest/>
313     </event>
314 </sequence>
315 </measure>
316
317 <measure number="3">
318     <sequence orient="up" staff="1">
319         <beamed>
320             <event value="/8">
321                 <note accidental="natural" pitch="A3" staff="2"/>
322                 <note pitch="C4" staff="2"/>
```

```
323         <note pitch="Eb4"/>
324         <note pitch="G4"/>
325     </event>
326     <event value="/8">
327         <note pitch="A3" staff="2"/>
328         <note pitch="C4" staff="2"/>
329         <note pitch="Eb4"/>
330         <note pitch="G4"/>
331     </event>
332     <event value="/8">
333         <note pitch="A3" staff="2"/>
334         <note pitch="C4" staff="2"/>
335         <note pitch="Eb4"/>
336         <note pitch="G4"/>
337     </event>
338     <event value="/8">
339         <note pitch="A3" staff="2"/>
340         <note pitch="C4" staff="2"/>
341         <note pitch="Eb4"/>
342         <note pitch="G4"/>
343     </event>
344     <event value="/8">
345         <note pitch="A3" staff="2"/>
346         <note pitch="C4" staff="2"/>
347         <note pitch="Eb4"/>
348         <note pitch="F4"/>
349     </event>
350     <event value="/8">
351         <note pitch="A3" staff="2"/>
352         <note pitch="C4" staff="2"/>
353         <note pitch="Eb4"/>
354         <note pitch="F4"/>
355     </event>
356 </beamed>
357 </sequence>
358 <sequence orient="down" staff="2">
359     <event value="/2d">
360         <note pitch="F1"/>
361         <note pitch="F2"/>
362     </event>
363 </sequence>
364 </measure>
365
366 <measure number="4">
367     <sequence orient="up" staff="1">
368         <beamed>
369             <event value="/8">
370                 <note accidental="flat" pitch="Ab3" staff="2"/>
371                 <note pitch="C4" staff="2"/>
372                 <note pitch="D4" staff="2"/>
373                 <note pitch="F4"/>
374             </event>
375             <event value="/8">
376                 <note pitch="Ab3" staff="2"/>
377                 <note pitch="C4" staff="2"/>
378                 <note pitch="D4" staff="2"/>
379                 <note pitch="F4"/>
380             </event>
381             <event value="/8">
382                 <note pitch="Ab3" staff="2"/>
383                 <note pitch="C4" staff="2"/>
384                 <note pitch="D4" staff="2"/>
385                 <note pitch="F4"/>
386             </event>
387             <event value="/8">
388                 <note pitch="Ab3" staff="2"/>
389                 <note pitch="C4" staff="2"/>
```

```
390         <note pitch="D4" staff="2"/>
391         <note pitch="F4"/>
392     </event>
393     <event value="/8">
394         <note pitch="Ab3" staff="2"/>
395         <note pitch="C4" staff="2"/>
396         <note pitch="D4" staff="2"/>
397         <note pitch="F4"/>
398     </event>
399     <event value="/8">
400         <note pitch="Ab3" staff="2"/>
401         <note pitch="C4" staff="2"/>
402         <note pitch="D4" staff="2"/>
403         <note pitch="F4"/>
404     </event>
405 </beamed>
406 </sequence>
407 <sequence orient="down" staff="2">
408     <event value="/2d">
409         <note pitch="Bb1"/>
410         <note pitch="Bb2"/>
411     </event>
412 </sequence>
413 </measure>
414
415 <measure number="5">
416     <sequence orient="up" staff="1">
417         <beamed>
418             <event value="/8">
419                 <note pitch="Ab3" staff="2"/>
420                 <note pitch="Db4" accidental="flat"/>
421                 <note pitch="F4"/>
422             </event>
423             <event value="/8">
424                 <note pitch="Ab3" staff="2"/>
425                 <note pitch="Db4"/>
426                 <note pitch="F4"/>
427             </event>
428             <event value="/8">
429                 <note pitch="Ab3" staff="2"/>
430                 <note pitch="Db4"/>
431                 <note pitch="F4"/>
432             </event>
433             <event value="/8">
434                 <note pitch="Ab3" staff="2"/>
435                 <note pitch="Db4"/>
436                 <note pitch="F4"/>
437             </event>
438             <event value="/8">
439                 <note pitch="G3" staff="2"/>
440                 <note pitch="Db4"/>
441                 <note pitch="Fb4" accidental="flat"/>
442             </event>
443             <event value="/8">
444                 <note pitch="G3" staff="2"/>
445                 <note pitch="Db4"/>
446                 <note pitch="Fb4"/>
447             </event>
448         </beamed>
449     </sequence>
450     <sequence orient="down" staff="2">
451         <event value="/2d">
452             <note pitch="Eb1"/>
453             <note pitch="Eb2"/>
454         </event>
455     </sequence>
456 </measure>
```

```
457
458 <measure number="6">
459   <sequence orient="up" staff="1">
460     <beamed>
461       <event value="/8">
462         <note pitch="Ab3" staff="2"/>
463         <note pitch="C4"/>
464         <note pitch="E4" accidental="natural"/>
465       </event>
466       <event value="/8">
467         <note pitch="Ab3" staff="2"/>
468         <note pitch="C4"/>
469         <note pitch="E4"/>
470       </event>
471       <event value="/8">
472         <note pitch="Ab3" staff="2"/>
473         <note pitch="C4"/>
474         <note pitch="E4"/>
475       </event>
476       <event value="/8">
477         <note pitch="Ab3" staff="2"/>
478         <note pitch="C4"/>
479         <note pitch="E4"/>
480       </event>
481       <event value="/8">
482         <note pitch="Ab3" staff="2"/>
483         <note pitch="C4"/>
484         <note pitch="F4"/>
485       </event>
486       <event value="/8">
487         <note pitch="Ab3" staff="2"/>
488         <note pitch="C4"/>
489         <note pitch="F4"/>
490       </event>
491     </beamed>
492   </sequence>
493   <sequence orient="down" staff="2">
494     <event value="/2">
495       <note pitch="Ab1"/>
496       <note pitch="Ab2"/>
497     </event>
498     <event value="/4">
499       <note pitch="D1" accidental="natural"/>
500       <note pitch="D2" accidental="natural"/>
501     </event>
502   </sequence>
503 </measure>
504
505 <measure number="7">
506   <sequence orient="up" staff="1">
507     <beamed>
508       <event value="/8">
509         <note pitch="F3" staff="2"/>
510         <note pitch="G3" staff="2"/>
511         <note pitch="B3" staff="2" accidental="natural"/>
512         <note pitch="D4"/>
513       </event>
514       <event value="/8">
515         <note pitch="F3" staff="2"/>
516         <note pitch="G3" staff="2"/>
517         <note pitch="B3" staff="2"/>
518         <note pitch="D4"/>
519       </event>
520       <event value="/8">
521         <note pitch="F3" staff="2"/>
522         <note pitch="G3" staff="2"/>
523         <note pitch="B3" staff="2"/>
```

```
524     <note pitch="D4"/>
525 </event>
526 <event value="/8">
527     <note pitch="F3" staff="2"/>
528     <note pitch="G3" staff="2"/>
529     <note pitch="B3" staff="2"/>
530     <note pitch="D4"/>
531 </event>
532 <event value="/8">
533     <note pitch="F3" staff="2"/>
534     <note pitch="Ab3" staff="2"/>
535     <note pitch="C4"/>
536     <note pitch="D4"/>
537 </event>
538 <event value="/8">
539     <note pitch="F3" staff="2"/>
540     <note pitch="Ab3" staff="2"/>
541     <note pitch="C4"/>
542     <note pitch="D4"/>
543 </event>
544 </beamed>
545 </sequence>
546 <sequence orient="down" staff="2">
547     <event value="/2d">
548         <note pitch="G1">
549             <tied target="p2m8n1"/>
550         </note>
551         <note pitch="G2">
552             <tied target="p2m8n2"/>
553         </note>
554     </event>
555 </sequence>
556 </measure>
557
558 <measure number="8">
559     <sequence orient="up" staff="1">
560         <beamed>
561             <event value="/8">
562                 <note pitch="F3" staff="2"/>
563                 <note pitch="G3" staff="2"/>
564                 <note pitch="B3" staff="2" accidental="natural"/>
565                 <note pitch="D4"/>
566             </event>
567             <event value="/8">
568                 <note pitch="F3" staff="2"/>
569                 <note pitch="G3" staff="2"/>
570                 <note pitch="B3" staff="2"/>
571                 <note pitch="D4"/>
572             </event>
573             <event value="/8">
574                 <note pitch="F3" staff="2"/>
575                 <note pitch="G3" staff="2"/>
576                 <note pitch="B3" staff="2"/>
577                 <note pitch="D4"/>
578             </event>
579             <event value="/8">
580                 <note pitch="F3" staff="2"/>
581                 <note pitch="G3" staff="2"/>
582                 <note pitch="B3" staff="2"/>
583                 <note pitch="D4"/>
584             </event>
585             <event value="/8">
586                 <note pitch="F3" staff="2"/>
587                 <note pitch="G3" staff="2"/>
588                 <note pitch="B3" staff="2"/>
589                 <note pitch="D4"/>
590             </event>
```

```
591     <event value="/8">
592         <note pitch="F3" staff="2"/>
593         <note pitch="G3" staff="2"/>
594         <note pitch="B3" staff="2"/>
595         <note pitch="D4"/>
596     </event>
597 </beamed>
598 </sequence>
599 <sequence orient="down" staff="2">
600     <event value="/2d">
601         <note id="p2m8n1" pitch="G1"/>
602         <note id="p2m8n2" pitch="G2"/>
603     </event>
604 </sequence>
605 </measure>
606 </part>
607 </cwmnx>
608 </score>
609 </mnx>
```

Branch: master ▾ gmnx-viewer / examples / ApresUnReve / ApresUnReve-gmnx.xml

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joeberkovitz Fix initialization of viewer

3faca31 14 days ago

1 contributor

245 lines (241 sloc) 21.3 KB

```

1  <?xml version="1.0"?>
2  <mnx>
3    <head>
4      <title>Apres Un Reve, Op. 7, No. 1</title>
5    </head>
6    <score>
7      <gmnx>
8        <score-view id="page1" view="ApresUnReve.svg"/>
9
10       <performance-data>
11         <performance-tempo beat="/4" bpm="60"/>
12
13         <performance-mapping>
14           <performance-region start="0" end="0.75" view="page1" region="m1" cursor-start="left" cursor-end="right"/>
15           <performance-region start="0.75" end="1.5" view="page1" region="m2" cursor-start="left" cursor-end="right"/>
16           <performance-region start="1.5" end="2.25" view="page1" region="m3" cursor-start="left" cursor-end="right"/>
17           <performance-region start="2.25" end="3" view="page1" region="m4" cursor-start="left" cursor-end="right"/>
18           <performance-region start="3" end="3.75" view="page1" region="m5" cursor-start="left" cursor-end="right"/>
19           <performance-region start="3.75" end="4.5" view="page1" region="m6" cursor-start="left" cursor-end="right"/>
20           <performance-region start="4.5" end="5.25" view="page1" region="m7" cursor-start="left" cursor-end="right"/>
21           <performance-region start="5.25" end="6" view="page1" region="m8" cursor-start="left" cursor-end="right"/>
22         </performance-mapping>
23
24         <performance-part>
25           <performance-event id="e1" pitch="391.9954" start="0.7500" duration="0.2250" dynamics="95" view="page1" graphics="n1"
26           <performance-event id="e2" pitch="523.2511" start="1.0000" duration="0.2250" dynamics="101" view="page1" graphics="n2"
27           <performance-event id="e3" pitch="587.3295" start="1.2500" duration="0.2250" dynamics="118" view="page1" graphics="n3"
28           <performance-event id="e4" pitch="622.2540" start="1.5000" duration="0.3083" dynamics="127" view="page1" graphics="n4"
29           <performance-event id="e5" pitch="587.3295" start="1.8333" duration="0.0750" dynamics="127" view="page1" graphics="n5"
30           <performance-event id="e6" pitch="523.2511" start="1.9167" duration="0.0750" dynamics="127" view="page1" graphics="n6"
31           <performance-event id="e7" pitch="622.2540" start="2.0000" duration="0.0750" dynamics="127" view="page1" graphics="n7"
32           <performance-event id="e8" pitch="587.3295" start="2.0833" duration="0.0750" dynamics="127" view="page1" graphics="n8"
33           <performance-event id="e9" pitch="523.2511" start="2.1667" duration="0.0750" dynamics="127" view="page1" graphics="n9"
34           <performance-event id="e10" pitch="523.2511" start="2.2500" duration="0.4750" dynamics="127" view="page1" graphics="n10"
35           <performance-event id="e11" pitch="466.1638" start="2.7500" duration="0.2250" dynamics="98" view="page1" graphics="n11"
36           <performance-event pitch="554.3653" start="3.0000" duration="0.1125" dynamics="95"/>
37           <performance-event pitch="349.2282" start="3.1250" duration="0.1125" dynamics="95"/>
38           <performance-event pitch="554.3653" start="3.2500" duration="0.2250" dynamics="95"/>
39           <performance-event pitch="523.2511" start="3.5000" duration="0.1125" dynamics="95"/>
40           <performance-event pitch="493.8833" start="3.6250" duration="0.1125" dynamics="95"/>
41           <performance-event pitch="523.2511" start="3.7500" duration="0.3500" dynamics="95"/>
42           <performance-event pitch="523.2511" start="4.1250" duration="0.1125" dynamics="113"/>
43           <performance-event pitch="466.1638" start="4.2500" duration="0.1688" dynamics="119"/>
44           <performance-event pitch="415.3047" start="4.4375" duration="0.0563" dynamics="127"/>
45           <performance-event pitch="391.9954" start="4.5000" duration="0.3333" dynamics="127"/>
46           <performance-event pitch="415.3047" start="4.8333" duration="0.0833" dynamics="116"/>
47           <performance-event pitch="466.1638" start="4.9167" duration="0.0833" dynamics="111"/>
48           <performance-event pitch="415.3047" start="5.0000" duration="0.0833" dynamics="106"/>
49           <performance-event pitch="466.1638" start="5.0833" duration="0.0833" dynamics="101"/>
50           <performance-event pitch="523.2511" start="5.1667" duration="0.0750" dynamics="96"/>
51           <performance-event pitch="391.9954" start="5.2500" duration="0.7250" dynamics="95"/>
52         </performance-part>
53       </performance-part>
54     </gmnx>

```







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189 <performance-event pitch="174.6141" start="4.7500" duration="0.1125" dynamics="31"/>
190 <performance-event pitch="195.9977" start="4.8750" duration="0.1125" dynamics="31"/>
191 <performance-event pitch="293.6648" start="4.8750" duration="0.1125" dynamics="31"/>
192 <performance-event pitch="246.9417" start="4.8750" duration="0.1125" dynamics="31"/>
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195 <performance-event pitch="293.6648" start="5.0000" duration="0.1125" dynamics="31"/>
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197 <performance-event pitch="174.6141" start="5.0000" duration="0.1125" dynamics="31"/>
198 <performance-event pitch="174.6141" start="5.1250" duration="0.1125" dynamics="31"/>
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203 <performance-event pitch="174.6141" start="5.2500" duration="0.1125" dynamics="31"/>
204 <performance-event pitch="293.6648" start="5.2500" duration="0.1125" dynamics="31"/>
205 <performance-event pitch="246.9417" start="5.2500" duration="0.1125" dynamics="31"/>
206 <performance-event pitch="174.6141" start="5.3750" duration="0.1125" dynamics="31"/>
207 <performance-event pitch="195.9977" start="5.3750" duration="0.1125" dynamics="31"/>
208 <performance-event pitch="246.9417" start="5.3750" duration="0.1125" dynamics="31"/>
209 <performance-event pitch="293.6648" start="5.3750" duration="0.1125" dynamics="31"/>
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211 <performance-event pitch="293.6648" start="5.5000" duration="0.1125" dynamics="31"/>
212 <performance-event pitch="174.6141" start="5.5000" duration="0.1125" dynamics="31"/>
213 <performance-event pitch="246.9417" start="5.5000" duration="0.1125" dynamics="31"/>
214 <performance-event pitch="174.6141" start="5.6250" duration="0.1125" dynamics="31"/>
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219 <performance-event pitch="174.6141" start="5.7500" duration="0.1125" dynamics="31"/>
220 <performance-event pitch="195.9977" start="5.7500" duration="0.1125" dynamics="31"/>
221 <performance-event pitch="246.9417" start="5.7500" duration="0.1125" dynamics="31"/>
222 <performance-event pitch="174.6141" start="5.8750" duration="0.1125" dynamics="31"/>
223 <performance-event pitch="246.9417" start="5.8750" duration="0.1125" dynamics="31"/>
224 <performance-event pitch="195.9977" start="5.8750" duration="0.1125" dynamics="31"/>
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226 </performance-part>
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228 <performance-event pitch="43.6535" start="1.5000" duration="0.7250" dynamics="95"/>
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230 <performance-event pitch="58.2705" start="2.2500" duration="0.7250" dynamics="95"/>
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232 <performance-event pitch="77.7817" start="3.0000" duration="0.7250" dynamics="95"/>
233 <performance-event pitch="38.8909" start="3.0000" duration="0.7250" dynamics="95"/>
234 <performance-event pitch="51.9131" start="3.7500" duration="0.4750" dynamics="95"/>
235 <performance-event pitch="103.8262" start="3.7500" duration="0.4750" dynamics="95"/>
236 <performance-event pitch="73.4162" start="4.2500" duration="0.2250" dynamics="95"/>
237 <performance-event pitch="36.7081" start="4.2500" duration="0.2250" dynamics="95"/>
238 <performance-event pitch="48.9994" start="4.5000" duration="1.4750" dynamics="95"/>
239 <performance-event pitch="97.9989" start="4.5000" duration="1.4750" dynamics="95"/>
240 </performance-part>
241 </performance-data>
242 </gmnx>
243 </score>
244 </mnx>
```