Orchestral Articulation Profile

Selecting Samples by MIDI 2.0 Note On Message

SoundTrack: Lucy vs The Butterfly by Peter Schwartz
The Sound Track is 100% Orchestral Sample Libraries
Current State Of Orchestral Sound Libraries

Sample Library Developers use Different MIDI Messages to Control Articulation Selection
MIDI 2.0 Profile For Orchestral Sound Libraries

MIDI 2.0 can provide a Unified Set of Messages for Articulation Selection using the added features in MIDI 2.0 Note On.

This will make orchestral libraries much easier to use
The Profile provides the overall guidelines for the most common articulations.

The sound designer/developer makes the decisions on what to include and exactly how to map it.
Goals

Change Libraries Articulations Remain Valid

Library A

Library B

Easier for Composers to Try Out or Substitute Sample Libraries
Goals

Change Instruments and Articulations Remain Valid

Instrument A

Instrument B

Easy to copy from one MIDI Track to another to layer, double or hocket a part
Orchestral Articulation Profile

MIDI Messages Used:
• Expanded Note-On in MIDI 2.0
• MIDI 2.0 Controllers
• MIDI 2.0 Per Note Controllers
Orchestral Articulation Profile

MIDI 2.0 Note On When The Orchestral Profile Is Enabled

10 Classifications

16 SubClasses in each Classification
**Orchestral Articulation Profile Attribute Type: Classification**

All sounds are sorted into Categories which are set by the Attribute Type value:

<table>
<thead>
<tr>
<th>Value</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x00</td>
<td>No Attribute Data (Note characteristics are determined by the Receiver.*)</td>
</tr>
<tr>
<td>0x10:</td>
<td>Core Sounds - Sustains and Strikes</td>
</tr>
<tr>
<td>0x11:</td>
<td>Additional Colors - Sustained</td>
</tr>
<tr>
<td>0x12:</td>
<td>Staccatos and Shorts</td>
</tr>
<tr>
<td>0x13:</td>
<td>Fast Tremolo and Same Note Trills/Repeats</td>
</tr>
<tr>
<td>0x14:</td>
<td>Intervalic Trills</td>
</tr>
<tr>
<td>0x15:</td>
<td>Pitch and Dynamic Gestures</td>
</tr>
<tr>
<td>0x16:</td>
<td>Scales, Runs, and Arpeggios</td>
</tr>
<tr>
<td>0x17:</td>
<td>Effects and Noises</td>
</tr>
<tr>
<td>0x18-1F:</td>
<td>Custom, manufacturer/device specific sounds.</td>
</tr>
</tbody>
</table>
### Orchestral Articulation Profile

#### 1 Classification as an Example

<table>
<thead>
<tr>
<th>Attribute Type</th>
<th>Staccatos and Shorts</th>
<th>Strings</th>
<th>Woodwinds</th>
<th>Brass</th>
<th>Non-Pitched Percussion</th>
<th>Tuned Percussion</th>
<th>Guitar/Plucked</th>
<th>Harp</th>
<th>Keyboard/Organ</th>
<th>Choir/Vocals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Normal Staccato Off String</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<td>•</td>
</tr>
<tr>
<td>2</td>
<td>Normal Staccato On String</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Slurred Staccato (single bow staccato)</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>4</td>
<td>Accented Staccato</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>5</td>
<td>Staccatissimo</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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</tr>
<tr>
<td>6</td>
<td>Spiccato</td>
<td>•</td>
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<tr>
<td>7</td>
<td>Sautillé</td>
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<td>•</td>
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<td>•</td>
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<tr>
<td>8</td>
<td>Martellato</td>
<td>•</td>
<td></td>
<td>•</td>
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<td>•</td>
<td>•</td>
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<td>•</td>
</tr>
<tr>
<td>9</td>
<td>Long Staccato or Mezzo Staccato or Louré</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>•</td>
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</tr>
<tr>
<td>10</td>
<td>Portato</td>
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<tr>
<td>11</td>
<td>Pizzicato</td>
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<td>•</td>
<td></td>
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<td>•</td>
<td>•</td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>Bartok Pizzicato (or Harsh, Hard, Noisy Notes)</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>13</td>
<td>Col Legno Battuto and Geschlagen</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>14</td>
<td>Col Legno Gestrichen</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>•</td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>15</td>
<td>String Hand Tap/Slap</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<td>•</td>
</tr>
<tr>
<td>16</td>
<td>Jete</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>•</td>
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</tr>
</tbody>
</table>
MIDI 1.0

Create MIDI 1.0 Notes plus Key Switch

MIDI 1.0 Controller

Record 1.0 Notes
Edit MIDI 1.0 Notes
Play MIDI 1.0 Notes

MIDI 1.0 DAW

Play MIDI 1.0 Notes
Certain Notes
Control Articulation

MIDI 1.0 Sample Player Plugin
Create MIDI 1.0 Notes plus Key Switch or CC

MIDI 1.0 Controller

Translate

MIDI 2.0 DAW

Record MIDI 2.0 Notes Edit Articulation Play MIDI 2.0 Note

Translating from MIDI 1.0 Notes plus Key Switch to MIDI 2.0 Notes with Articulation

MIDI 2.0 Sample Player Plugin

Play MIDI 2.0 Notes with Articulation

Translate

Translating from MIDI 1.0 Notes plus Key Switch to MIDI 2.0 Notes with Articulation
Translate from MIDI 2.0 Notes with Articulation to MIDI 1.0 Notes plus Key Switch

MIDI 2.0 Controller
Create MIDI 2.0 Note with Articulation

MIDI 2.0 DAW
Record MIDI 2.0 Notes
Edit Articulation
Play MIDI 2.0 Note

Translate

Play MIDI 1.0 Notes
Certain Notes
Control Articulation

MIDI 1.0 Sample Player Plugin
Contributors

Peter Schwartz- composer/orchestrator. Musical director for David Bowie, Pet Shop Boys, Enya, Madonna, and many others. Film and TV: Disneytoons, Warner Bros, Fox, and Mattel. Orchestral mockup instructor for the Film Scoring Academy of Europe (Sofia, Bulgaria).

Chris Stone- Owns Audio Impressions that creates high definition sample libraries backed by groundbreaking music technology for composers working under extreme deadlines. Works Stone has scored have been nominated for, or won, Emmy Awards, Clio Awards, a Cable/Ace Award and an Oscar.

Nikolas Jeroma- Principal Instrument Developer at Native Instruments.

Mike Kent- Principal Author/Editor of MIDI 2.0, Authored both the USB MIDI 1 and USB MIDI 2 specifications, worked for Roland R&D Japan for over 25 years and now consultants for Yamaha, Apple and others

Ben Israel- Manager of US Content Research and Development office for Yamaha

Athan Billias- Orchestral Articulation WG chair /Current President of The MIDI Association.

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