

Elody Sample Document

Chord Construction

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In this example, we will see a simple way to express chords and how we can build and manipulate chords progressions.

CHORDS

Like a lot of musical notions, a chord can be analyzed in different manners. Here we choose to build a set of 4 notes chords in their root position using the notation Jazz musicians usually use. Using the Chord constructor, we can build 7 concrete chords seen as a group of consecutive third on a C major scale:

```
CMaj7: C E G B
Dm7  : D F A C
Em7  : E G B D
FMaj7: F A C E
G7   : G B D F
Am7  : A C E G
Bm7b5: B D F A
```

By making the C note become variable in each chord, we obtain a set of *abstract chords* which keep their structure and type (min7, 7, min7/5b) but which root note (the tonic) is variable. Thus each abstract chord stands for the set of all chords of the same type. Each abstract chord can be played and behave as the prototype of the chord family it represent.

CHORDS SCORE

Abstracts chords can be manipulated like regular musical objects. In particular, they can be used to build chords progressions like the common II/V/I found in Jazz scores. In this example we build a 3 time repetition of this II/V/I structure.

Using for example the TimeLine editor, this sequence can be applied on a sequence of 3 notes : C, A, F#, to obtain the object *score* as result.

CHORDS SUBSTITUTION

A common manipulation on Jazz score is to substitute a chord by another equivalent chord.

In the first example, we can abstract the Imaj7 in the *score* object:

```
I=>score := lambda (Imaj7, score)
```

This function can now be applied on another chord, close to the Imaj7, for example a Imaj6 chord. We obtain a new score where all Imaj7 chords have been replaced by Imaj6 chords.

We can also abstract the IImin7 in the *score* object:

```
II=>score := lambda (IImin7, score)
```

This function can now be applied on another chord, close to the IImin7, for example a IImin7/9 chord. We obtain a new score where all IImin7 chords have been replaced by IImin7/9 chords.

We can also abstract the V7 in the *score* object:

```
V=>score := lambda (V7, score)
```

This function can now be applied on another chord, close to the V7, for example a V7/9 chord. We obtain a new score where all V7 chords have been replaced by V7/9 chords.