

# The Music of Programming

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ACCU 2013 – Friday, April 12th

# Printemptation ►



# Critics

- ▶ **On the positive side:**

- ▶ Beautiful
- ▶ Easy to remember, hear it once, you got it!
- ▶ Whistled it all day long
- ▶ Feels like I've heard it before but. . .

- ▶ **On the negative side:**

- ▶ Easy listening
- ▶ Elevator music

## On the positive side

- ▶ **Beautiful:** your sense of aesthetics
- ▶ **Easy to remember:** simplicity, obviousness
- ▶ **Feels like I've heard it before:** universality
  
- ▶ **Why ?**
  - ▶ A simple melodic pattern
  - ▶ II V I's harmonic progression (99.999% of occidental music)
  
- ▶ **The music speaks your language, in simple terms**
  
- ▶ **Can we say as much about our programs ?**

## On the negative side

- ▶ **Easy listening:** simplicity, no surprise
- ▶ **Elevator music:** Easy is boring
- ▶ But is this song “simple” and “easy”, really ?
- ▶ **This song expresses a complex problem, in simple terms**
- ▶ **Can we say as much about our programs ?**

## Printemptation under the Hood ►

♩ = 200

Chord symbols:  $E_b-79$ ,  $B_b7(13)$ ,  $E_b-79$ ,  $F-7$ ,  $B_b7(13)$ ,  $E_b-79$ ,  $A_b7(13)$ ,  $D_b-7(11\ 9)$ ,  $F\#7(13)$ ,  $E-79$ ,  $A7(13)$ ,  $D\Delta$ ,  $G79/13$ ,  $D-79$ ,  $G7(13)$ ,  $C-79$ ,  $F713$ ,  $B_b-7$

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Measures and Chords:

- Measure 1 (Red):  $E_b-79$ ,  $B_b7(13)$
- Measure 2 (Yellow):  $F-7$ ,  $B_b7(13)$ ,  $E_b-79$ ,  $A_b7(13)$
- Measure 3 (Green):  $F\#7(13)$ ,  $E-79$ ,  $A7(13)$ ,  $D\Delta$
- Measure 4 (Purple):  $G79/13$ ,  $D-79$ ,  $G7(13)$ ,  $C-79$ ,  $F7(13)$ ,  $B$

**Bridge** (Walking)

[illegible]

**Bridge** (Walking)

16 20 24

$G^{7\flat/13}$   $E_b^{-7/5}$   $A_b^{7/13}$   $D_b^{-7/5}$   $F^{\sharp 7/13}$   $F^{7/13}$

( $F^{-7/5}$   $B_b^{7/13}$ )

## On the negative side

- ▶ **Easy listening:** simplicity, no surprise
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- ▶ **Can we say as much about our programs ?**

## Conclusion

- ▶ The purpose of a song is to be good
  - ▶ The purpose of a program is to be correct
  - ▶ **A bad program can still be correct**
- 
- ▶ **Keep the music of programming in mind**



**“Anyone can make the  
simple complicated.**

**Creativity is making  
the complicated  
simple.”**

**Charles Mingus**  
jazz icon

