

# *Forgotten Dreams*

**for double bass, max/msp, and digital audio**

**Jason Bolte**

*Forgotten Dreams* (duration 8:20) is an electroacoustic composition that integrates live acoustical performance with digital audio and live computer processing. The inspiration for the work came from the feeling of abruptly waking from a dream (or in my case usually a nightmare), and not knowing exactly what had transpired to force consciousness. The composition explores the possibilities of these dreams, elaborating on snippets of information that can be recalled.

The double bass part covers the gamut of emotions that could have been experienced during the dream. It incorporates lyrical melodies, ethereal extended-techniques, and raucous rhythmic and percussive passages. The digital audio uses samples of these passages, which have been digitally processed, for its basis. Along with the double bass samples, the work also incorporates other processed and natural sounds. These sounds, along with others, are employed to create musical gesture and texture that complements and exaggerates the double bass line.

The piece uses the real-time processing capabilities of MAX/MSP to manipulate the double bass part. This manipulation is designed to exaggerate structures in the digital audio and double bass parts, as well as integrate the double bass sonically into the electronic realm. The MAX/MSP performer has the ability to control several aspects of the processes, and bring a more “human” approach to their implementation. The piece exists in stereo and eight-channel versions, and can be modified for various other speaker configurations.

**Jason Bolte** (b.1976) is currently pursuing a D.M.A. in Music Composition at the Conservatory of Music, University of Missouri – Kansas City, where he is the assistant to the Director of the Intermedia Music Production and Computer Technology Center (iMpact). Along with his responsibilities at UMKC, he is also an Adjunct Instructor of Music at the Kansas City Kansas Community College. Jason holds a B.M. with an emphasis in Music Engineering Technology and a M.M. in Music Composition from Ball State University. His music has been performed at such events as the SEAMUS National Conference, SCI National and Regional Conferences, Electronic Music Midwest, Imagine2, Spark, NWEAMO, SFIFEM, LASO, and the International Summer Meeting of Electroacoustic Music – Hungary. His composition, *Forgotten Dreams* for double bass, max/msp, and eight-channel digital audio, was recently awarded First Prize at the 2004/05 International Society of Bassists Composition Competition - Electronic Division.

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**Technical Requirements**  
**Eight-Channel Version – (*Stereo Version*)**

Eight-channel surround playback system (*Stereo playback system*)  
Stage monitor(s)  
Macintosh G4/867MHz/512MB CD-ROM  
MAX/MSP 4.1 or higher  
Digital audio interface – 1 ADC, 8 DAC (*2 DAC*)  
Preamp – one channel  
Pickup or Microphone for amplification of double bass and input to MAX/MSP  
MIDI fader controller – 16 faders (Peavey PC1600x)  
MIDI interface

**Notes:** The signal flow can be somewhat confusing. The double bass microphone or pickup should be routed to the front-of-house mixer and sent to the left and right speakers. A direct-out or auxiliary send should then be sent to the digital audio interface. The eight outputs (stereo outputs) of the interface should be routed to the speakers as follows: (stereo version: 1-Left, 2-Right)

<u>Output</u>	<u>Speaker</u>
1	Left
2	Center
3	Right
4	Left Center
5	Right Center
6	Left Surround
7	Right Surround
8	Center Back

The MIDI fader controller should be connected to the input of the MIDI interface.

## Performance Notes

### Digital Audio

The eight-channel and stereo digital audio parts are located on the data CD. During performance, the digital audio is played in the MAX/MSP environment. A graphical representation of the digital audio can be found in the score. This score does not describe every sound and construction that appear in the digital audio, it does however describe several cues. The bassist and interactive electronics performer should use these cues in order to integrate the three parts.

### MAX/MSP

The digital audio and MAX/MSP files needed for performance are located on the data CD in the folder labeled *Forgotten Dreams*. It is a good idea to copy the entire folder to the computer's hard drive for faster data retrieval. This folder contains all files needed for the performance. In order for the program to work properly, place the file folder labeled *forgotten dreams externals* into the MAX/MSP *externals* folder. Clicking on the file labeled *Forgotten Dreams* will open the program. This control patch displays information concerning input and output levels, panning position, and fader movements. The virtual faders correspond to the faders on the MIDI controller (1-16). The MIDI controller should be configured so that the faders are set to send controller information. The controller number should correspond to the fader number (1-16). There is no need to worry about the MIDI channel number for the performance of this piece.

In the score, the MAX/MSP part is represented by graphics that display information essential to the performance of the piece. Numbers located inside boxes in the digital audio part are used to identify scenes. The piece has a total of five scenes. These scenes contain several different MAX/MSP sub-patches that the performer has control over via the MIDI controller. The patches, which are located in the scenes, are stated at the beginning of the scene in the score and correspond to the names given to the MIDI faders in the control patch. In order to change scenes, the scene numbers are to be depressed on the computer keyboard at the time notated in the score.

The score is also meant as a guide for the MAX/MSP performer to use in obtaining cues from the digital audio and double bass part. It does not however give specific instructions for the performance of the MAX/MSP part. The MAX/MSP performer is to improvise, and is given control over certain parameters of the individual patches (see *MAX/MSP Patches*). The performer should be concerned with integration and exaggeration of already conceived constructs of the piece.

### MAX/MSP Patches and Parameters

*Flanger1* – Delay time

Alters frequency characteristics, delay

*Flanger2* – Delay time

Alters frequency characteristics, delay

*Span* – Left/Right, Front/Back

Pans signal left and right, adds side and back speakers

*Expresverb* – Decay time, Bandwidth

An expressive reverb

*Gran.pitch* – Transposition

Granular Transposition

*Gran.chord* – Bandwidth

Outputs grains whose pitch corresponds to a predetermined chord, number of octaves can be controlled

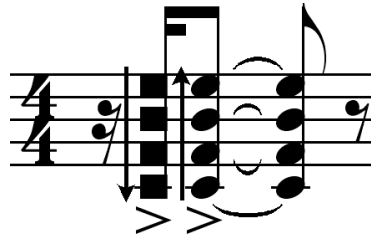
*Grain.pan* – Frequency

Separates the audio signal into grains of controllable random duration, and places the independently in the eight speakers

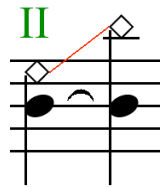
### Double Bass

Although the double bass part is notated exactly, given the organic nature of the digital audio and MAX/MSP processing, a certain “inaccuracy” is encouraged in order to create an overall flowing and organic performance. The bassist should pay close attention to the tape part in order to hear the cues that have been set up and notated to aid in the performance. The double bass part employs several extended techniques. The following are examples of notation and descriptions of the techniques employed.

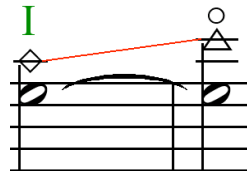
1. Arrows designate order of pitches to be bowed.



2. On the specified open string, slide the finger from one harmonic to the next.

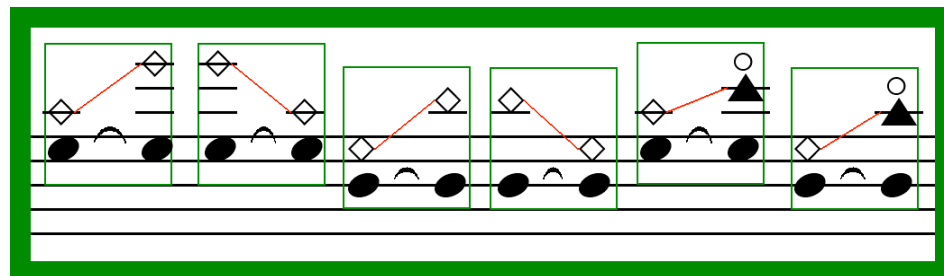


3. On the specified open string, slide the finger from one harmonic to the highest harmonic possible.



4. Play the given harmonic glissandi randomly at varying duration.

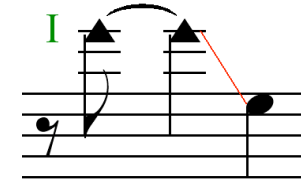
varied duration



5. An arrow placed between two bowing styles is used to indicate a transition from one to the other.

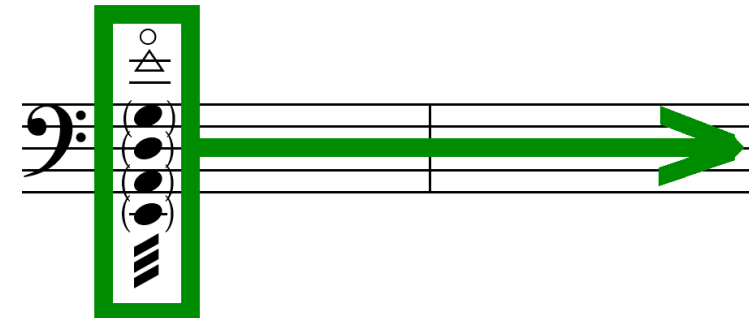


6. A triangle indicates highest pitch possible.

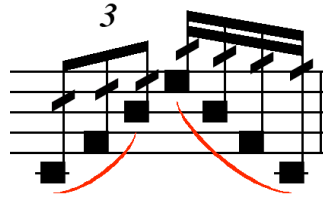


7. Play the highest harmonics possible randomly among the four strings with varied duration and tremolo.

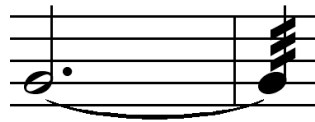
varied tremolo



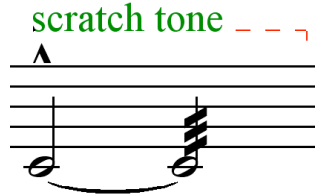
8. A square head indicates that the note is to be played behind the bridge on the string indicated.



9. A note tied to a note marked with a tremolo indicates a change of tremolo from straight to fast or vice versa.

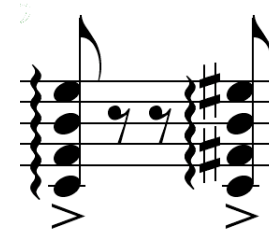


10. Bow the string with enough force to make a scratching sound.



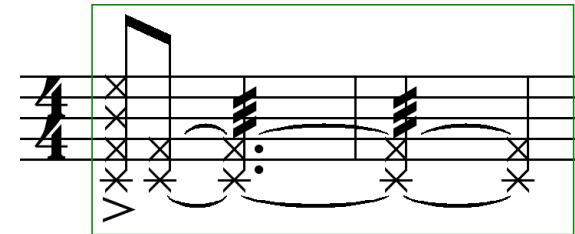
11. Strum the strings with the fingernail.

strum



12. Strike the strings with palm of the hand

strike strings with palm



# Forgotten Dreams

For Double Bass, MAX/MSP. and Digital Audio

Jason L. Bolte

Duration 8 :20

 = 60

MAX/MSP

**1**

Flanger1 Span  
Flanger2 Expresverb  
Gran.pitch

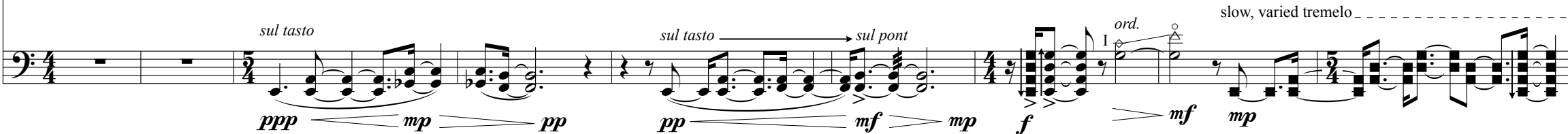
**2**

Flanger1 Span  
Gran.pitch  
Expresverb

Digital Audio



Double Bass



10

M/M

Flanger1 Span  
Gran.pitch  
Expresverb

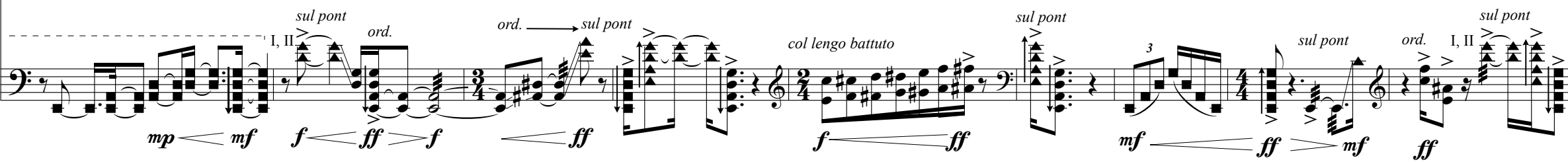
**5**

Flanger1 Grain.pan  
Flanger2 Expresverb  
Span

DA



DB



19

M/M

Flanger1

Grain.pan

Flanger2

Expresverb

Span

1

Flanger1

Span

Flanger2

Expresverb

G

Ran.pitch

3

Flanger1

Expresverb

Span

Flanger2

Grain.pan

Gran.pitch

Gran.chord

DA

gliss

granular noise

filtered wind

gliding harmonics

gliss

slap

wind, debris

thump

wind

DB

ord.

II

I

II

I

ord.

sul pont

sul tasto

sul tasto

sul pont

ord.

mp

mf

f

p

p

mf

p

29

M/M

Flanger1

Expresverb

Span

Flanger2

Grain.pan

Gran.pitch

Gran.chord

1

Flanger1

Span

Flanger2

Gran.pitch

Expresverb

2

Flanger1

Span

Gran.pitch

Expresverb

DA

swoosh

swoosh

hit

DB

ric.

ric.

ord.

sul pont

ord.

accel.

sul pont

ord.

1

rit.

a tempo

I, II

strike strings with palm

p

mp

p

mf

mp

mf

f

mf

f

ff

p

DA

DB

DA

DB



M/M

DA

DB

M/M

DA

DB

M/M

Flanger1 Span

Gran.pitch

Expresverb

5

Flanger1 Expresverb

Flanger2 Grain.pan

Gran.pitch

1

Flanger1 Gran.pitch

Flanger2 Span

Expresverb

DA

DB

M/M

Flanger1 Gran.pitch

Flanger2 Span

Expresverb

2

Flanger1 Span

Gran.pitch

Expresverb

1

Flanger1 Gran.pitch

Flanger2 Span

Expresverb

DA

DB

M/M

Flanger1 Gran.pitch  
Flanger2 Span  
Expresverb


4

Flanger1 Grain.pan  
Flanger2 Span

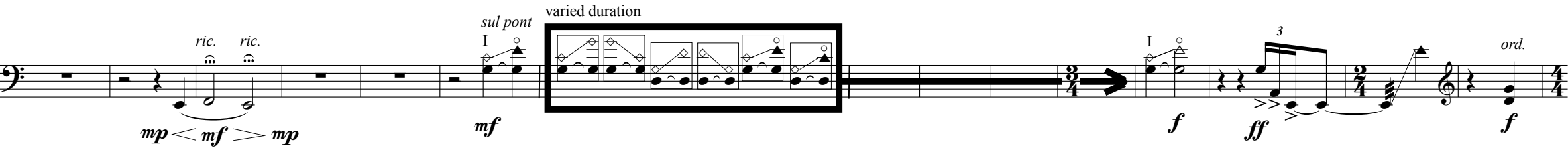
2

Flanger1 Span  
Gran.pitch  
Expresverb

DA



DB



M/M

Flanger1 Span  
Gran.pitch  
Expresverb

DA



DB

