Constantin Basica

CONCERTO FOR CONDUCTOR AND ORCHESTRA

written for Cristian Lupeș
and the Sibiu Philharmonic Orchestra
for the 2019 George Enescu Festival

2019

Conductor (+ Kinect)

Orchestra:

2 Flutes (2nd also Piccolo)
2 Oboes (2nd also English Horn)
2 Clarinets in B♭ (2nd also Bass Clarinet in B♭)
2 Bassoons (2nd also Contrabassoon)

4 Horns in F
2 Trumpets in C
2 Trombones
Tuba

Percussion (4 players):
Timpani (C, G)
Concert Bass Drum / Tam-tam / Glockenspiel
Marimba (also Tam-tam)
Drum set (Bass Drum, Snare, 3 Tom-toms, Hi-hat, Ride Cymbal, Crash Cymbal)

12 Violins I
10 Violins II
8 Violas
6 Violoncellos
4 Double Basses (5-string)

Live electronics

Video projection

The score is written in C.

(no baton) **watch iPad for cues**

Conductor Right Hand	Kinect pose	→ pointing right	Kinect pose	→ pointing right	Kinect pose	→ pointing right
Conductor Left Hand	Kinect pose	← pointing left	Kinect pose		← pointing left	Kinect pose	↑ pointing up

8

Cond. R	pointing forward | return to right	repeat	pointing forward	up	Kinect	Kinect fwd | up	Kinect fwd	Kinect right
Cond. L	^ pointing forward | return to up	repeat		left | up | left	Kinect	Kinect fwd | up		Kinect fwd

16

Cond. R	Kinect left	Kinect up	drop down		fwd	draw 0 slow, then repeat, faster and faster	then, slow down and decrease size of gesture until you stop with hands forward
Cond. L	Kinect left			slowly all the way up	fwd		

23

A **8"** **7"** **10"**

Woodwinds

A **8"** **7"** **10"**

Cond. R: draw 7 from Vle. to Vc. — 7 — 5

Cond. L: draw 8 from Vl. I to Vl. II — 8 — 5 (mirror)

A **8"** **7"** **10"**

Strings

Vln. I blow air through the mouth — **Vln. II** — **Vla.** — **Vla.** **Vc.** — **Db.**

p *p* *p* *mf* *mf* *p* *f*

All strings breathe together with the conductor's gestures

air → half-whistle

ff *pp* *mp*

26

6" 1"

Woodwinds

All woodwinds
blow air without tone

TACET

♩ = 60

f *p* *f*

Ideea pentru acest proiect mi-a venit in urma cu 13
ani cand lucram la prima mea compozitie pentru orchestra.
Am visat atunci ca aveam un fel de...

...puteri

♩ = 60

supranaturale si puteam sa inspir direct orchestrei sonoritatile la care ma gandeam,
fara a mai fi nevoie sa scriu o partitura.

Video

6" 1"

TACET

♩ = 60

Slices of rectangular 6

close with fingers
and freeze

0 up there, small

1

up

Cond. R

close with fingers
and freeze

0 up there, small

1

up

Cond. L

Dr.

arco

6" 1"

Strings

whistle

gliss.

pp *f*

TACET

♩ = 60

Vc. Vln. II Db. Vln. I Vla.
half-whistle

mp

31

Woodwinds

TACET

mp *p* *mf* *p* *f* *mp* *mf* *ff*

...si... ...de-atunci am ramas obsedat de a gasi o cale sa fac acest vis realitate. Dupa multe incercari esuate...

Video

outwards

inflating balloon under your arms
front Z-axis

front Z-axis

pop ballon with both hands

TACET

Cond. R

Cond. L

rotate brush on Bass Drum slowly

B. D.

Dr.

f

Strings

half-whistle glisss. ad lib. (slow)

TACET

ff

35

Woodwinds

TACET

Brasswinds

blow air without tone; reverse mouthpiece to increase air flow
(play in sync with the conductor for the first three beats, then independently faster and faster)

mi-am dat seama ca, de fapt, dirijorul este cheia...

iar acum am in sfarsit mijloacele tehnologice necesare pentru a incepe procesul...

Numele meu este
Constantin Basica.

Video

Cond. R

Cond. L

Strings

whistle glissandi

mp

ff

TACET

39

B

Woodwinds

speak each word through the instrument in sync with conductor's gestures

Gesture Based Orchestral Control via Artificially quasi-Intelligent System

B

Brasswinds

Gesture Based Orchestral Control via Artificially quasi-Intelligent System

In prezent sunt cercetator postdoctoral la CCRMA, adica Center for Computer Research in Music and Acoustics de la Universitatea Stanford din California.

Aici desfasor diverse proiecte de cercetare creativa in compozitie audiovizuala experimentala si multimedia.

Impreuna cu colega mea Barbara Nerness, doctor in devenire in neurostiinta, am initiat proiectul GEsture-Based Orchestral Control via ARtificially quasi-Intelligent System, adica abreviat GEBOCAR(q)IS (q-ul este mut).

Video

B

Cond. R

Gesture Based Orchestral Control via Artificially quasi-Intelligent System

Cond. L

Gesture Based Orchestral Control via Artificially quasi-Intelligent System

freeze

B. D.

B

Strings

choose your own pitch; bow very slowly in a circular motion;
col legno tratto

ppp

44

Woodwinds

breathe air in through the instrument

f

Brasswinds

breathe air out through the instrument

f

Pe scurt, ipoteza noastra este ca gesturile dirijorale pot face mai mult decat sa conduca o orchestra.

Credem ca pot fi fi folosite eficient in tipare complexe pentru a controla orchestra ca pe un instrument organic, viu.

Video

Cond. R

Cond. L

freeze

B. D.

Strings

hum on any tone

mmm

p

p

bow on the tailpiece (low pitched sound)

15"

15"

(feel free to choose another multiphonic, as long as it can start *dal niente*)

49

Cl. 1

f

(feel free to choose another multiphonic, as long as it can start *dal niente*)

Cl. 2

f

In acest scop am dezvoltat cu doctor Nerness un sistem de cvasi-inteligenta artificiala, pe care l-am numit chiar GEBOCARIS. Acesta opereaza intr-un computer cuantic, care functioneaza pe baza de hidrogen si oxigen.

In prezent, acesta poate analiza si clasifica aproximativ 22 de milioane de gesturi distincte ale corpului, precum si 1375 de micro-expresii faciale pe secunda.

Video

15"

15"

+ ELECTRONICS

+ ELECTRONICS

Cond. R

Cond. L

freeze

B. D.

15"

15"

Strings

hum on previous tone

f

mmm

hum on previous tone

f

mmm

C

a2
jet whistle

slap tongue

Fl. 1 & 2

Ob. 1 & 2

(don't breathe at the same time with Cl. 2)

Cl. 1

(don't breathe at the same time with Cl. 1)

Cl. 2

Bsn. 1 & 2

C

1 & 2
Hn.
3 & 4

breathe slowly through the instrument at your own pace (not too fast)

stopped
+
open

a2
flutter-tongue

Tpt. 1 & 2

Tbn. 1

gliss.

Tbn. 2

Tba.

Objectivul principal al experimentului este sa expunem sistemul la o colectie larga de gesturi.

GEBOCARIS are nevoie de antrenament bazat pe experiente umane pentru a le putea apoi raporta in mediul digital la structuri sonore coerente. La sfarsitul proiectului, speram ca GEBOCARIS isi va crea un limbaj original si idiosincratic de gesturi sono-motorice.

Video

C

N NW W

Cond. R

arms extended, show the cardinal points

E NE N

Cond. L

Timp.

arco

Dr.

C

hum on a different tone than before

extremely slow glissando in the hum, either upwards or downwards (maximum a 5th)

extremely slow glissando either upwards or downwards (maximum a 5th)

Vln. I

Vln. II

Vln. II 10

Vla.

Vla. 8

behind the bridge

Vc.

Vc. 6

ricochet

Db.

Db. 4

snap pizz.

non div.

molto sul pont.

poco vibr.

molto vibr.

vibr.

non vibr.

10"

D

60

Fl. 1 & 2

Ob. 1 & 2

Cl. 1

Cl. 2

Bsn. 1 & 2

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1

Tbn. 2

Tba.

Fl. 1

Fl. 2

Ob. 2

Ob. 1

change to B. Cl.

Bsn. 1

Bsn. 2

stopped

open

Tpt. 2

Tpt. 1

p

mp

Tinta finala este de a folosi GEBOCARIS in viitor pentru controlul total al orchestrei in timp real. Odata ce sistemul va fi antrenat la un nivel suficient de avansat, credem ca va putea sa converteasca idei sonore si muzicale direct in gesturi cu care sa „cante" efectiv la aparatul orchestral. De-abia atunci visul meu va deveni realitate... insa avem inca mult de lucru pana acolo...

Video

10"

D

Draw Fig. 1

Cond. R

Cond. L

Draw Fig. 1

B. D.

10"

D

Vln. I 1

imitate the conductor by moving your finger up and down the neck on the A and E strings with light pressure (artificial harmonic gliss.), as well as by bowing up and down with frantic tremolo, but everything in soft dynamics

Vln. I

Vln. II

Vla.

Vc.

Db.

non div.
molto sul pont.

molto sul pont.

sul A
col legno tratto
fast
slow

sul A
sul pont.
slow tremolo
very fast

sul D
col legno tratto
fast
slow

sul D
sul pont.
slow tremolo
very fast

sul C
col legno tratto
fast
slow

sul C
sul pont.
slow tremolo
very fast

gliss.

pp

mf

67

E

10"

Fl. 1

watch the conductor and play the notes only on the cues indicated by the numbers (in the given order)

slap tongue
3. 6. 12. 15. 18.

f

Fl. 2

watch the conductor and play the notes only on the cues indicated by the numbers (in the given order)

slap tongue
1. 4. 10. 14. 17. 21.

f

Cl. 1

watch the conductor and play the notes only on the cues indicated by the numbers (in the given order)

slap tongue
2. 7. 11. 16. 20.

f

B. Cl.

watch the conductor and play the notes only on the cues indicated by the numbers (in the given order)

slap tongue
5. 8. 9. 13. 19. 22.

f

E

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tba.

mp *mp*

Experimentul nostru se va desfasura in
doua etape distincte, dar cu o metodologie similara.

In prima etapa, vom initia un studiu in laboratorul nostru pentru a calibra si a antrena sistemul de inteligenta artificiala.

Studiul va dura aproximativ 3 luni, in care vom recolta date motorice de la o serie de 22 de subiecti umani. Cativa dintre acestia vor fi chiar dirijori de profesie, insa majoritatea trebuie sa fie non-muzicieni pentru a extinde posibilitatile sistemului cu gesturi neconvenționale.

Video

10"

E

Cond. R

Cond. L

show 22 entrances for the woodwinds slap tongues

Timp.

p *mp* 3 *mf* *f*

B. D.

p *p*

Dr.

arco

f

10"

scratch tone
(muted string,
heavy pressure)

E

Vln. I

f *mp*

Vln. II

scratch tone
(muted string,
heavy pressure)

f *mp*

Vla.

scratch tone
(muted string,
heavy pressure)

f *mp*

Vc.

scratch tone
(muted string,
heavy pressure)

f *mp*

Db.

scratch tone
(muted string,
heavy pressure)

f *mp*

10" 5"

73

Fl. 1

Fl. 2

Cl. 1

B. Cl.

Video

10" 5"

Cond. R

Cond. L

Timp.

gliss.

10" 5"

Vln. I

Vln. I 2, 4, 6, 8
watch the conductor for the cue;
freeze after the ricochet until letter **F**

air noise
(muted string, light pressure)

ord.

flautando; molto sul pont.

Vln. II

air noise
(muted string, light pressure)

ord.

flautando; molto sul pont.

Vln. II 5, 6, 7, 8
watch the conductor for the cue;
freeze after the ricochet until letter **F**

Vla.

Vla. 5, 6, 7, 8
watch the conductor for the cue;
freeze after the ricochet until letter **F**

air noise
(muted string, light pressure)

ord.

flautando; molto sul pont.

Vc.

Vc. 2, 4, 6
watch the conductor for the cue;
freeze after the ricochet until letter **F**

air noise
(muted string, light pressure)

ord.

flautando; molto sul pont.

Db.

Db. 3, 4
watch the conductor for the cue;
freeze after the ricochet until letter **F**

air noise
(muted string, light pressure)

ord.

flautando; molto sul pont.

76

F

5" 5"

Fl. 1 & 2 — *f* — vibrato — *pp*

Ob. 1 & 2 — vibrato — *pp*

Cl. 1 — *f* — vibrato — *pp*

B. Cl. — *f* — vibrato — *pp*

Bsn. 1 & 2 — vibrato — *pp*

F

1 & 2 Hn. — con sord. — *sfp* — gliss.

3 & 4 — con sord. — *sfp* — gliss.

Tpt. 1 — con sord. — *sfp* — gliss.

Tpt. 2 — con sord. — *sfp* — gliss.

Tbn. 1 — con sord. — *sfp* — gliss.

Tbn. 2 — con sord. — *sfp* — gliss.

Tba. — con sord. — *sfp* — gliss.

Datele vor fi prelevate de doamna doctor Nerness prin doua tehnici: aceea de urmarire a miscarilor cu un sistem de motion tracking, precum si cea de electroencefalograma.
Cele doua tipuri de date culese in aceasta prima etapa vor fi digitizate si vor facilitata crearea de conexiuni neuronale in sistemul de cvasi-inteligenta artificiala.

Video

F

5" 5"

Cond. R

Cond. L

Timp. — gliss. — *pp*

T.-t. — *pp*

play these ricochets in any order, with plenty of pause in-between;
out of tempo, don't sync with the other player or the conductor on purpose;
repeat as you like, but not too often—the overall texture of the strings should be quite sparse

F

5" 5"

Vln. I — ricochet — *f*

play these ricochets in any order, with plenty of pause in-between;
out of tempo, don't sync with the other player or the conductor on purpose;
repeat as you like, but not too often—the overall texture of the strings should be quite sparse

Vln. II — ricochet — *f*

play these ricochets in any order, with plenty of pause in-between;
out of tempo, don't sync with the other player or the conductor on purpose;
repeat as you like, but not too often—the overall texture of the strings should be quite sparse

Vla. — ricochet — *f*

play these ricochets in any order, with plenty of pause in-between;
out of tempo, don't sync with the other player or the conductor on purpose;
repeat as you like, but not too often—the overall texture of the strings should be quite sparse

Vc. — ricochet — *f*

play these ricochets in any order, with plenty of pause in-between;
out of tempo, don't sync with the other player or the conductor on purpose;
repeat as you like, but not too often—the overall texture of the strings should be quite sparse

Db. — ricochet — *f*

83

Fl. 1 & 2
Ob. 1 & 2
Cl. 1
B. Cl.
Bsn. 1 & 2

molto vibrato

pp

G

1 & 2
Hn.
3 & 4
Tpt. 1 & 2
Tbn. 1 & 2
Tba.

Fiecare subiect uman va fi instruit sa efectueze miscari instinctive ale bratelor, ca raspuns la o serie de structuri sonore generate spontan in laboratorul nostru.
GEBOCARIS va prelua asadar nu numai datele despre miscarile unui subiect, ci si corelatia cu starile sale psihologice, si va face apoi o simulare completa a undelor de creier.

Video
Cond. R
Cond. L

vary dynamics (*pp* -*ff*) and speed of tremolo
according to the conductor's gesture

Timp.
T.-t.
Dr.

(*pp*)

Vln. I
Vln. II
Vla.
Vc.
Db.

91

H

~15"

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

H

1 & 2 Hn.

3 & 4 Hn.

Tpt. 1

Tpt. 2

Tbn. 1

Tbn. 2

Tba.

mouthpiece slap

A doua etapa a experimentului va fi cruciala

Pentru completarea antrenamentului GEBOCARIS, va trebui sa simulam exact conditiile unui concert. Doar asa vom putea sa ii oferim toate datele necesare pentru o modelare virtuala precisa a rolului dirijoral.

Video

H

~15"

Cond. R

Cond. L

H

~15"

Vln. I

Vln. I 1
vary freely between muted string, half-flageolet, and flageolet;
flautando; irregular tremolo (between very slow and very fast)

ALL

Vln. II

Vln. II 1
vary freely between muted string, half-flageolet, and flageolet;
flautando; irregular tremolo (between very slow and very fast)

ALL

Vla.

Vla. 1
vary freely between muted string, half-flageolet, and flageolet;
flautando; irregular tremolo (between very slow and very fast)

ALL

Vc.

Vc. 1
sul D
vary freely between muted string, half-flageolet, and flageolet;
flautando; irregular tremolo (between very slow and very fast)

ALL

Db.

Db. 1
sul D
vary freely between muted string, half-flageolet, and flageolet;
flautando; irregular tremolo (between very slow and very fast)

ALL

96

~10" 10"

Fl. 1 & 2
Ob. 1 & 2
Cl. 1
B. Cl.
Bsn. 1 & 2
1 & 2
Hn.
3 & 4
Tpt. 1
Tpt. 2
Tbn. 1
Tbn. 2
Tba.

Mai exact, vom lucra cu un dirijor de muzica simfonica pentru a integra sistemul intr-o situatie live.

Vom **angaja** o **orchestra** profesionala si vom **invita** un **public** select sa **participe** la experiment.

Video

~10" 10"

+ Live Electronics on material from previous bar

Cond. R

+ Live Electronics on material from previous bar

Cond. L

~10" 10"

Vln. I

arco gettato, poi sostenuto
(public)

pp

Vln. II

(angaja)
arco gettato, poi sostenuto

pp

Vla.

(invita)
arco gettato, poi sostenuto

pp

Vc.

(orchestra)
arco gettato, poi sostenuto

pp

Db.

(participe)
arco gettato, poi sostenuto

pp

100

I

Fl. 1 — slap; ord.; gliss.; mp p

Fl. 2 — slap; gliss.; mp p

Ob. 1 & 2 — Ob. 2; gliss.; mp p; Ob. 2 change to Eng. Hn.; Ob. 1; gliss.; mp p

Cl. 1 — slap; ord.; gliss.; mp p mf

B. Cl. — slap; ord.; gliss.; p mp

Bsn. 1 & 2 — Bsn. 2; gliss.; mp p; Bsn. 2 change to Cbsn.

I

1 & 2 Hn. — senza sord.; gliss.; p mp

3 & 4 Hn. — Hn. 3 senza sord.; gliss.; p mf

Tpt. 1 — senza sord.; gliss.; mp p; gliss.; p mp

Tpt. 2 — senza sord.; gliss.; (b); p mp

Tbn. 1 — senza sord.; gliss.; p mp p; gliss.; mp p

Tbn. 2 — senza sord.; gliss.; p mp; gliss.; p mf p

Tba. — senza sord.; gliss.; p mp

Etapa a doua va fi monitorizata cu senzori si aparate multiple, care vor fi instalate atat pe scena, cat si in public. Acestea vor include senzori de temperatura, miscare, si stare emotionala deasupra audientei, senzori de analiza sonica pe baza de frecvente si amplitudini montati in doverse puncte ale orchestrei, precum si sisteme de motion tracking, electroencefalograma, si senzori de tensiune musculara pe corpul dirijorului.

Video

I

Cond. R — traditional beating

Cond. L — free hand

Timp.

B. D.

Dr.

I

Vln. I — div.; pp - mf vary dynamics in response to conductor's gestures

Vln. II — div.; pp - mf vary dynamics in response to conductor's gestures

Vla. — div.; pp - mf vary dynamics in response to conductor's gestures

Vc. — div.; pp - mf vary dynamics in response to conductor's gestures

Db. — pp - mf vary dynamics in response to conductor's gestures

105

~10"

Fl. 1

Fl. 2

change to Picc.

Ob. 1 & 2

Cl. 1

B. Cl.

change to Cl.

Bsn. 1 & 2

Bsn. 1

1 & 2

Hn.

Hn. 4
senza sord.

3 & 4

Tpt. 1

Tpt. 2

Tbn. 1

breathe intermittently with Tbn. 2

Tbn. 2

breathe intermittently with Tbn. 1

Tba.

Toate acestea vor fi conectate la sistemul central GEBOCARIS, care credem ca va fi destul de avansat la acel stagiu incat sa isi preleve automat datele, insa eu voi monitoriza personal procesul.

Video

~10"

Vln. I

Vln. II

Vla.

Vc.

Db.

J ~20" ~10" ♩ = 50

109

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

J ♩ = 50

1 & 2 Hn. — con sord. ppp — molto mp

3 & 4 — con sord. ppp — molto mp

Tpt. 1 — con sord. ppp — molto mp

Tpt. 2 — con sord. ppp — molto mp

Tbn. 1 — molto mp

Tbn. 2 — molto mp

Tba. — con sord. ppp — molto mp

Ca si in prima etapa, vom folosi o serie de structuri sonore generate algoritmic. Ele nu vor avea in sine un rol muzical, ci vor fi utilizate ca sabloane pentru a stimula procesul de culegere de date EEG si motion tracking.

Video

J ~20" ~10" ♩ = 50

Cond. R

Cond. L

Timp. — f pp — molto

T.-t. — molto pp

Dr. — f pp — molto

~20" ~10"

J ♩ = 50

Vln. I — each player begins independently in the 20" time frame; choose your own tempo between ♩ = 40-60, then repeat in the same tempo (without group synchronization) flautando, molto sul pont. — sempre pp — molto

Vln. II — each player begins independently in the 20" time frame; choose your own tempo between ♩ = 40-60, then repeat in the same tempo (without group synchronization) flautando, molto sul pont. — sempre pp — molto

Vla. — each player begins independently in the 20" time frame; choose your own tempo between ♩ = 40-60, then repeat in the same tempo (without group synchronization) flautando, molto sul pont. — sempre pp — molto

Vc. — each player begins independently in the 20" time frame; choose your own tempo between ♩ = 40-60, then repeat in the same tempo (without group synchronization) flautando, molto sul pont. — sempre pp — molto

Db. — each player begins independently in the 20" time frame; choose your own tempo between ♩ = 40-60, then repeat in the same tempo (without group synchronization) flautando, molto sul pont. — sempre pp — molto

115

K (♩ = 50)

1 & 2 — Hn.
3 & 4
Tpt. 1 & 2
Tbn. 1 & 2
Tba.
Timp.
T.-t.
B. D.
Dr.
Vln. I 1-2
Vln. I 3-4
Vln. I 5-6
Vln. I 7-8
Vln. I 9-10
Vln. I 11-12
Vln. II 1-2
Vln. II 3-4
Vln. II 5-6
Vln. II 7-8
Vln. II 9-10
Vla. 1-2
Vla. 3-4
Vla. 5-6
Vla. 7-8
Vc. 1-2
Vc. 3-4
Vc. 5-6
Db. 1-2
Db. 3-4

snap pizz.
arco
flautando
ord.
sul pont.
ovpr.
arco ord.

119

Vln. I 1-2
Vln. I 3-4
Vln. I 5-6
Vln. I 7-8
Vln. I 9-10
Vln. I 11-12
Vln. II 1-2
Vln. II 3-4
Vln. II 5-6
Vln. II 7-8
Vln. II 9-10
Vla. 1-2
Vla. 3-4
Vla. 5-6
Vla. 7-8
Vc. 1-2
Vc. 3-4
Vc. 5-6
Db. 1-2
Db. 3-4

123

Vln. I 1-2

Vln. I 3-4

Vln. I 5-6

Vln. I 7-8

Vln. I 9-10

Vln. I 11-12

Vln. II 1-2

Vln. II 3-4

Vln. II 5-6

Vln. II 7-8

Vln. II 9-10

Vla. 1-2

Vla. 3-4

Vla. 5-6

Vc. 1-2

Vc. 3-4

Vc. 5-6

Db. 1-2

Db. 3-4

flautando

ord.

arco

sul pont.

molto sul pont.

ovpr.

arco flautando

L

~10"

♩ = 170

~13"

♩ = 85

128

Fl. 1

Picc.

Ob. 1

Eng. Hn.

change to Ob.

Cl. 1

flutter tongue

B. Cl.

change to Cl.

Cl.

flutter tongue

Bsn. 1

Cbsn.

change to Bsn.

L

~10"

♩ = 170

~13"

♩ = 85

1 & 2 Hn.

senza sord.

3 & 4

senza sord.

Tpt. 1 & 2

senza sord.

Tbn. 1 & 2

senza sord.

Tba.

senza sord.

L

~10"

~13"

Fiecare sesiune incepe cu o calibrare a sistemului de analiza si generare.

Aceasta implica o serie de miscari diverse ale mainilor subiectului uman pentru a ii da sansa sistemului GEBOCARIS sa isi optimizeze algoritmii.

Odata ce sistemul este calibrat, incepe culegerea si procesarea in timp real a datelor prin captura de miscare si electroencefalograma.

Video

♩ = 170

♩ = 85

Timp.

L

~10"

~13"

♩ = 170

♩ = 85

arco molto flautando

Vln. I

col legno tratto

Vln. I 7-8

flautando

Vln. I 11-12

arco molto flautando

Vln. II

molto sul pont.
flautando

Vln. II 1-2

arco molto flautando

Vla.

circular bowing

Vc. 1-2

sul pont.
(flautando)

Vc. 5-6

pizz. (no accents)

Db.

M

(♩ = 85)

136

Fl. 1

flutter tongue

mf 3 p

3 f 3 p

mp 3 f

slap

mf

Picc.

flutter tongue

mf 3 p

3 f 3 p

mp 3 f

slap

mf

Ob. 1 & 2

Cl. 1

p f

p f

p mf

mf p

Cl. 1 & 2

p f

f p

f p

1 & 2

Hn.

3 & 4

(senza sord.)

p pp

p pp

pp p

(senza sord.)

p pp

p pp

pp p

Tpt. 1 & 2

a2
senza sord.

p pp

p pp

pp p

Tbn. 1 & 2

senza sord.

p pp

p pp

pp p

Tba.

M

(♩ = 85)

Vln. I

arco molto flautando → ovperpressure

gliss.

pp mf

simile

gliss.

pp

simile

gliss.

pp f

Vln. II

arco molto flautando → ovperpressure

gliss.

pp mf

simile

gliss.

pp

gliss.

pp f

Vla.

arco molto flautando → ovperpressure

gliss.

pp mf

simile

gliss.

pp

gliss.

pp f

Vc.

arco molto flautando → ovperpressure

gliss.

pp mf

mf f

Db.

(pizz.)

142

Fl. 1

Picc.

Ob. 1 & 2

Ob. 2 change to Eng. Hn.

Cl. 1

Cl. 2

Bsn. 1 & 2

Cbsn.

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Timp.

Mar.

Vln. I

Vln. II

Vla.

Vc.

Db.

molto flautando

ord.

molto sul pont.

ovpr.

(pizz.)

149

N

8va

Fl. 1

Picc.

Ob. 1 & 2

Cl. 1

Cl. 1 & 2

Bsn. 2

Cbsn.

N

con sord.

1 & 2 Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Video

N

Timp.

Mar.

N

arco molto flautando

ovpr.

gliss.

simile

Vln. I

Vln. II

Vla.

Vc.

(pizz.)

Db. 3-4

154

(8)

Fl. 1

Picc.

Ob. 1 & 2

Cl. 1 & 2

Bsn. 2

Cbsn.

1 & 2 Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Video

Timp.

T.-t.

Mar.

Vln. I

Vln. I 11-12

Vln. II

Vln. II 9-10

Vla. 1

Vla. 2

Vla.

Vc.

Db.

♩ = 48

change to Fl.

Cl. 2 change to B. Cl.

except Vln. 11-12

except Vln. 9-10

except Vla. 1-2

ovpr.

(pizz.)

161

Fl. 1 & 2
Fl. 2
Fl. 1
Ob. 1
Eng. Hn.
Cl. 1
B. Cl.
Bsn. 1
Cbsn.

1 & 2
Hn.
3 & 4
Hn. 2
con sord.
Hn. 1
senza sord., stopped
Hn. 3
senza sord., stopped
Tpt. 1 & 2
Tpt. 1
senza sord.
Tpt. 2
con sord.
Tpt. 1
Tbn. 1 & 2
Tbn. 1
con sord.
Tbn. 2
senza sord.
Tba.
con sord.

Mar.

Vln. I
Vln. 2, 4, 6, 8
col legno battuto
Vln. 1, 3, 5, 7
col legno battuto
Vln. I 11-12
Vln. II
Vln. II 9-10
Vla. 1
sul pont.
ord.
ovpr.
col legno tratto
Vla. 2
Vla.
Vla. 3, 5, 7
col legno battuto
Vla. 4, 6, 8
col legno battuto
Vc.
Vc. 1, 3, 5
col legno battuto
Vc. 2, 4, 6
col legno battuto
Db.
Db. 2, 3
col legno battuto
Db. 1, 4
col legno battuto

168

Fl. 1 & 2
a2
P
Fl. 2 change to Picc.
Ob. 1
Eng. Hn.
Cl. 1
B. Cl.
Bsn. 1
Cbsn.

Hn. 2
(con sord.)
P
Hn. 1
(senza sord.)
1 & 2
Hn.
Hn. 4
con sord.
Hn. 4
Hn. 3
(senza sord.)
3 & 4
Tpt. 2
(con sord.)
Tpt. 1 & 2
Tbn. 2
senza sord.
Tbn. 1
(con sord.)
Tbn. 1 & 2
(con sord.)
Tba.

P
no accents
Mar.

P
Vln. 1, 3, 5, 7, 9
col legno battuto
ALL (except 11-12)
col legno battuto
Vln. I
Vln. I 11-12
ALL (except 9-10)
col legno battuto
Vln. II
Vln. II 9-10
molto sul pont.
ovpr.
ord.
flautando
Vla. 1
molto sul pont.
ovpr.
ord.
flautando
Vla. 2
Vla.
Vc. 1
Vc. 1
Vc. 2
Vc. 2
ovpr.
Db.

172

Q

♩ = 96

Fl. 1 & 2

Ob. 1

Eng. Hn.

change to Ob.

Cl. 1

B. Cl.

Bsn. 1

Cbsn.

Q

♩ = 96

1 & 2 Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Q

Suntem in a cincea zi a primei etapei din studiu.

Video

♩ = 96

Mar.

♩ = 96

Q

♩ = 96

Vln. I

Vln. II

Vla.

Vc. 1.

sul pont.

flautando

molto sul pont.

Vc. 2

sul pont.

flautando

Vc.

Db.

176

Fl. 1 & 2

Ob. 1 & 2

Cl. 1

B. Cl.

mf

Bsn. 1

Cbsn.

mf

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Video

Am avut pana acum 3 subiecti umani inregistrati si rezultatele initiale arata foarte bine.

Mar.

Vln. I

Vln. II

Vla.

Vc.

Db.

181

Fl. 1 & 2

Ob. 1 & 2

Cl. 1

B. Cl.

Bsn. 1

Cbsn.

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

GEBOCARIS a inceput deja sa foloseasca datele pentru a isi antrena reteaua neuronala cvasi-artificiala.

Astazi avem programat prima intalnire cu o dirijoare si suntem foarte curiosi sa vedem cum se va adapta sistemul.

Video

Mar.

Vln. I

Vln. II

Vla.

Vc.

Db.

186

R ♩ = 48

Fl. 1 & 2
Ob. 1 & 2
Cl. 1
B. Cl.
Bsn. 1
Cbsn.

R ♩ = 48

1 & 2
Hn.
3 & 4

pp mf p mp

pp mf p mp

Tpt. 1 & 2
Tbn. 1 & 2
Tba.

R ♩ = 48

T.-t.
Mar.
Dr.

pp

arco
f

R ♩ = 48

sul D
flautando

Vln. I

pp

ppp

sul G
flautando

Vln. II

pp

ppp

sul C
flautando

Vla.

pp

ppp

sul C
flautando

Vc.

pp

ppp

bow on the tailpiece

Db.

192

♩ = 96 ♩ = 48 ♩ = 96

Fl. 1 & 2

Ob. 1 & 2

Cl. 1

B. Cl. *mf*

Bsn. 1

Cbsn. *mf*

♩ = 96 ♩ = 48 ♩ = 96

1 & 2

Hn. *mf* *p* *mp* *mf*

3 & 4 *mf* *p* *mp* *mf*

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

♩ = 96 ♩ = 48 ♩ = 96

Cond. R half-tempo 1 2

Cond. L half-tempo 1 2

T.-t. *pp* *pp*

♩ = 96 ♩ = 48 ♩ = 96

Vln. I simile *pp* *pp*

simile *ppp* *ppp*

Vln. II simile *pp* *pp*

simile *ppp* *ppp*

Vla. simile *pp* *pp*

simile *ppp* *ppp*

Vc. simile *pp* *pp*

simile *ppp* *ppp*

Db. simile

197

Fl. 1 & 2

Ob. 1 & 2

Cl. 1

B. Cl.

sempre ***mf***

Bsn. 1

Cbsn.

sempre ***mf***

1 & 2

Hn.

3 & 4

mf ***f***

mf ***f***

Tpt. 1 & 2

con sord.

Tbn. 1 & 2

p

Tba.

Cond. R

Cond. L

T.-t.

pp

Vln. I

pp

ppp

Vln. II

pp

ppp

Vla.

pp

ppp

Vc.

pp

ppp

Db.

201 **S**

Fl. 1 & 2

Ob. 1 & 2

Cl. 1

B. Cl.

Bsn. 1

Cbsn.

S

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

p

Tba.

S

T.-t.

Mar.

sempre ***mp***

S

Vln. I

Vln. II

Vla.

Vc.

Db.

205

Fl. 1 & 2

Ob. 1 & 2

Cl. 1

B. Cl.

Bsn. 1

Cbsn.

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

T.-t.

Mar.

Vln. I

Vln. II

Vla.

Vc.

Db.

209

Fl. 1 & 2

Ob. 1 & 2

Cl. 1

B. Cl.

Bsn. 1

Cbsn.

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Timp.

Mar.

Dr.

Vln. I

Vln. II

Vla.

Vc.

Db.

T

213

Fl. 2

Picc.

Ob. 1 & 2

Cl. 1

change to Cl.

B. Cl.

Bsn. 1

Cbsn.

T

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

senza sord.

Tbn. 1 & 2

Tba.

con sord.

T

Beat to the outside, as if stuck in a digital glitch

Cond. R

Cond. L

Auftakt

Beat 1 (down and freeze)

Auftakt

Beat 3 (left and freeze)

Timp.

Glock.

Mar.

Dr.

T

Vln. I

non div.
scratch tone

Vln. II

non div.
scratch tone

Vla.

non div.
scratch tone

Vc.

non div.
scratch tone

Db.

scratch tone

217

U

(♩ = 96)

Fl. 1
Picc.
Ob. 1 & 2
Cl. 1
Cl. 2
Bsn. 1
Cbsn.
1 & 2
Hn.
3 & 4
Tpt. 1 & 2
Tbn. 1 & 2
Tba.
Cond. R
Cond. L
Timp.
Glock.
Mar.
Dr.
Vln. I
Vln. II
Vla.
Vc.
Db.

Auftakt
Beat 1
Beat 2
Beat 3

(con sord.)

non div.
div.
div.
pizz.

222

Fl. 1
Picc.
Ob. 1 & 2
Cl. 1
Cl. 2
Bsn. 1 & 2
Cbsn.
1 & 2 Hn.
3 & 4 Hn.
Tpt. 1 & 2
a2
Tbn. 1 & 2
senza sord.
Tba.
Timp.
Glock.
Mar.
Dr.
Vln. I
Vln. II
Vla.
Vc.
Db.
non div.
sul pont.
div.
pizz.
(pizz.)

227

Fl. 1

overblow

Picc.

overblow

Ob. 1 & 2

Ob. 2 change to Eng. Hn.

Cl. 1

Cl. 2

Bsn. 1

Cbsn.

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Timp.

Glock.

Mar.

Dr.

Vln. I

ovpr.

non div.

Vln. II

ovpr.

non div.

Vla.

ovpr.

non div.

Vc.

Db.

(pizz.)

232

Fl. 1
Picc.
Ob. 1
Eng. Hn.
Cl. 1
Cl. 2
Bsn. 2
Cbsn.
change to Bsn.
1 & 2
Hn.
3 & 4
Tpt. 1 & 2
Tbn. 1 & 2
Tba.
Beat to the outside, as if stuck in a digital glitch
Cond. R
Cond. L
Timp.
Glock.
Mar.
Dr.
Vln. I
Vln. II
Vla.
Vc.
Db.
arco

V ♩ = 64

237

Fl. 1
Fl. 2
Ob. 1
Eng. Hn.
Cl. 1
Cl. 2
Bsn. 1
Bsn. 2

no accents
change to Ob.
change to Cbsn.

V ♩ = 64

1 & 2 Hn.
3 & 4 Hn.
Tpt. 1
Tpt. 2
Tbn. 1
Tbn. 2
Tba.

Hn. 3
no accents

V ♩ = 64

Timp.
T.-t.
Glock.
Dr.

V ♩ = 64

Vln. I
Vln. II
Vla.
Vc.
Db. 1-2
Db. 3-4

div.
flautando
molto vibrato
sempre pp
non vibr.
snap pizz.
ff

~10"
TACET

241

Fl. 1
Fl. 2
Ob. 1
Ob. 2
Cl. 1
Cl. 2
Bsn. 1 & 2
1 & 2
Hn.
3 & 4
Tpt. 1 & 2
Tbn. 1
Tbn. 2
Tba.

change to Picc.

no accents

Hn. 4

~10"
TACET

Timp.
B. D.
Glock.
Dr.

~10"
TACET

Vln. I
Vln. II
Vla.
Vc.
Db. 1-2
Db. 3-4

non vibr.

246

Fl. 1 & 2

Ob. 1

Ob. 2

change to Eng. Hn.

Cl. 1

Cl. 2

Bsn. 1 & 2

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Video

Astazi am gasit in sfarsit persoana care va indeplini rolul dirijorului in etapa a doua a proiectului.

Cond. L

Timp.

B. D.

Mar.

Dr.

Vln. I

Vln. II

Vla.

Vc.

Db. 1-2

non vibr.

molto sul tasto

whisper the name ***Cristian Lupes***
a few times as if gossiping
(unsynchronized with the others)

252

Fl. 1
Picc.
Ob. 1
Eng. Hn.
Cl. 1
Cl. 2
B. Cl.
Bsn. 1
Cbsn.
1 & 2 Hn.
3 & 4 Hn.
Tpt. 1 & 2
Tbn. 1 & 2
Tba.

W ♩ = 174

change to B. Cl.

Este vorba de Cristian Lupes, un dirijor de succes din Romania. Doctor Nerness si cu mine il vom pregati pe Cristian pentru etapa a doua a studiului printr-o serie de intalniri video. Intre timp, studiul se desfasoara conform planului...

Video
Timp.
B. D.
Mar.
Dr.

Vln. I
Vln. II
Vla.
Vc.
Db.

sul D
flautando
sul G
flautando
sul C
flautando
sul C
flautando

bow on the tailpiece

259

♩ = 87

~10"

Cond. R — Live-electronics manipulation of previous bar (free)

Cond. L — Live-electronics manipulation of previous bar (free)

♩ = 87

~10"

Vln. I 1-2 — col legno battuto — hum on any pitch

Vln. I 3-4 — col legno battuto — hum on any pitch

Vln. I 5-6 — col legno battuto — hum on any pitch

Vln. I 7-8 — col legno battuto — hum on any pitch

Vln. I 9-10 — col legno battuto — hum on any pitch

Vln. I 11-12 — col legno battuto — hum on any pitch

Vln. II 1-2 — col legno battuto — hum on any pitch

Vln. II 3-4 — col legno battuto — hum on any pitch

Vln. II 5-6 — col legno battuto — hum on any pitch

Vln. II 7-8 — col legno battuto — hum on any pitch

Vln. II 9-10 — col legno battuto — hum on any pitch

Vla. 1-2 — col legno battuto — hum on any pitch

Vla. 3-4 — col legno battuto — hum on any pitch

Vla. 5-6 — col legno battuto — hum on any pitch

Vla. 7-8 — col legno battuto — hum on any pitch

Vc. 1-2 — col legno battuto — hum on any pitch

Vc. 3-4 — col legno battuto — hum on any pitch

Vc. 5-6 — col legno battuto — hum on any pitch

Db. — col legno battuto — hum on any pitch

mp *mmm* *f*

261

X

♩ = 116

Fl. 1 & 2 — pp — slap ff

Ob. 1 — pp — mf 3

Ob. 2 — pp — mf

Cl. 1 & 2 — pp — slap ff

Bsn. 1 — pp — mf 3

Bsn. 2 — pp — mf

X

♩ = 116

1 & 2 Hn. — con sord. p f — mp 3 3

3 & 4 — con sord. p f — mp

Tpt. 1 & 2 — Tpt. 2 con sord. f — Tpt. 1 con sord. mf f

Tbn. 1 & 2 — con sord. f

Tba. — con sord. f

X

♩ = 116

Timp. — f — f

Mar. — 3 f 3 — f

Dr. — f — 3 3

X

♩ = 116

Vln. I — div. p ff pp — div. f

Vln. II — div. p ff pp — div. f

Vla. — div. p ff pp — div. f

Vc. — p ff pp — f

Db. — p ff pp — f

267

Fl. 1 & 2

Fl. 2 change to Picc.

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Timp.

gliss.

B. D.

Dr.

Vln. I

div.
pizz.

Vln. II

div.
pizz.

Vla.

div.
pizz.

Vc.

pizz.

Db.

pizz.

273

Y

Fl. 1
Picc.
Ob. 1 & 2
Cl. 1 & 2
Bsn. 1 & 2
1 & 2 Hn.
3 & 4 Hn.
Tpt. 1 & 2
Tbn. 1 & 2
Tba.
Timp.
Mar.
Dr.
Vln. I
Vln. II
Vla.
Vc.
Db.

pp
f
mf
ff
p
div.
arco
non div.

279

Fl. 1 — slap — ff — p
Picc. — p
Ob. 1 & 2 — p
Cl. 1 & 2 — slap — ff — p
Bsn. 1 — mf 3 — p
Bsn. 2 — mf — p
1 & 2 — mp 3 3 — f
Hn. 3 & 4 — mp — f
Tpt. 2 — mf 3
Tpt. 1 & 2 — mf
Tbn. 1 & 2 — f
Tba. — f
Video
Cond. R
Cond. L
Timp.
B. D. — f
Mar. — f
Dr. — 3 3 3 3
Vln. I — div. — mf ff — div. pizz. — mp
Vln. II — div. — mf ff — div. pizz. — mp
Vla. — div. — mf ff — div. pizz. — mp
Vc. — mf ff — pizz. — mp
Db. — mf ff — pizz. — mp

285

Fl. 1

Picc.

change to Fl.

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Cond. R

slow down beating

stop

Auftakt

Cond. L

slow down beating

stop

Auftakt

Timp.

gliss.

gliss.

B. D.

Dr.

Vln. I

Vln. II

Vla.

Vc.

Db.

pizz.

mp

speak: *ten nine eight seven six five four three two*

p *f*

(pizz. sempre *mp*)

293

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Timp.

T.-t.

B. D.

Dr.

Vln. I

Vln. II

Vla.

Vc.

Db.

a2

div.

arco sul pont.

~7" 3"

speak any part of the following text:
Ca si in prima etapa, vom folosi o serie de structuri sonore generate algoritmic. Ele nu vor avea in sine un rol muzical, ci vor fi utilizate ca sabloane pentru a stimula procesul de culegere de date EEG si motion tracking. Dirijorul, la fel ca si subiectii umani din prima etapa, va fi instruit sa foloseasca gesturi si miscari cat mai naturale si spontane.

speak any part of the following text:
Tinta finala este de a folosi GEBOCARIS in viitor pentru controlul total al orchestrei in timp real. Odata ce sistemul va fi antrenat la un nivel suficient de avansat, credem ca va putea sa converteasca idei sonore si muzicale direct in gesturi cu care sa „cante" efectiv la aparatul orchestral. De-abia atunci visul meu va deveni realitate... insa avem inca mult de lucru pana acolo...

speak any part of the following text:
In acest scop am dezvoltat cu doctor Nerness un sistem de cvasi-inteligenta artificiala, pe care l-am numit chiar GEBOCARIS. Acesta opereaza intr-un computer cuantic, care functioneaza pe baza de hidrogen si oxigen. In prezent, acesta poate analiza si clasifica aproximativ 22 de milioane de gesturi distincte ale corpului, precum si 1375 de micro-expresii faciale pe secunda.

speak any part of the following text:
Pe scurt, ipoteza noastra este ca gesturile dirijorale pot face mai mult decat sa conduca o orchestra. Credem ca pot fi fi folosite eficient in tipare complexe pentru a controla orchestra ca pe un instrument organic, viu.

speak any part of the following text:
Ideea pentru acest proiect mi-a venit in urma cu 13 ani cand lucram la prima mea compozitie pentru orchestra. Am visat atunci ca aveam... un fel de puteri supranaturale si puteam sa inspir direct orchestrei sonoritatile la care ma gandeam, fara a mai fi nevoie sa scriu partitura.

speak any part of the following text:
De-atunci am ramas obsedat de a gasi o cale sa fac acest vis realitate. Mi-am dat seama ca, de fapt, dirijorul este cheia... si acum am in sfarsit mijloacele tehnologice necesare pentru a incepe procesul...

speak any part of the following text:
Numele meu este Constantin Basica. In prezent sunt cercetator postdoctoral la Center for Computer Research in Music and Acoustics de la Universitatea Stanford din California. Aici desfasor diverse proiecte de cercetare creativa in compozitie audiovizuala experimentala si multimedia.

speak any part of the following text:
Impreuna cu colega mea Barbara Nerness, doctor in devenire in neurostiinta, am initiat proiectul GEsture-Based Orchestral Control via ARtificially quasi-Intelligent System, adica abreviat GEBOCAR(q)IS (q-ul este mut).

speak any part of the following text:
Impreuna cu colega mea Barbara Nerness, doctor in devenire in neurostiinta, am initiat proiectul GEsture-Based Orchestral Control via ARtificially quasi-Intelligent System, adica abreviat GEBOCAR(q)IS (q-ul este mut).

~7" 3"

speak any part of the following text:
Etapa a doua va fi monitorizata cu senzori si aparate multiple, care vor fi instalate atat pe scena, cat si in public. Acestea vor include senzori de temperatura, miscare, si stare emotionala deasupra audientei, senzori de analiza sonica pe baza de frecvente si amplitudini montati in doverse puncte ale orchestrei, precum si sisteme de motion tracking, electroencefalograma, si senzori de tensiune musculara pe corpul dirijorului. Toate acestea vor fi conectate la sistemul central GEBOCARIS, care credem ca va fi destul de avansat la acel stagiu incat sa isi preleve automat datele, insa eu voi monitoriza personal procesul.

speak any part of the following text:
Datele vor fi prelevate de doamna doctor Nerness prin doua tehnici: aceea de urmarire a miscarilor cu un sistem de motion tracking, precum si cea de electroencefalograma. Cele doua tipuri de date culese in aceasta prima etapa vor fi digitizate si vor facilitata crearea de conexiuni neuronale in sistemul de inteligenta cvasi-artificiala.

speak any part of the following text:
Fiecare subiect uman va fi instruit sa efectueze miscari instinctive ale bratelor, ca raspuns la o serie de structuri sonore generate spontan in laboratorul nostru. GEBOCARIS va prelua asadar nu numai datele despre miscarile unui subiect, ci si corelatia cu starile sale psihologice, si va face apoi o simulare completa a undelor de creier.

speak any part of the following text:
A doua etapa a experimentului va fi cruciala. Pentru completarea antrenamentului GEBOCARIS, va trebui sa simulam exact conditiile unui concert. Doar asa vom putea sa ii oferim toate datele necesare pentru o modelare virtuala precisa a rolului dirijoral. Mai exact, vom lucra cu un dirijor de muzica simfonica pentru a integra sistemul intr-o situatie live. Vom angaja o orchestra profesionala si vom invita un public select sa participe la experiment.

speak any part of the following text:
In prima etapa, vom initia un studiu in laboratorul nostru pentru a calibra si a antrena sistemul de inteligenta artificiala. Studiul va dura aproximativ 3 luni, in care vom recolta date motorice de la o serie de 22 de subiecti umani. Cativa dintre acestia vor fi chiar dirijori de profesie, insa majoritatea trebuie sa fie non-muzicieni pentru a extinde posibilitatile sistemului cu gesturi neconventionale.

300

Z ♩ = 58 | ♩ = 116 | ♩ = 58

Fl. 1 & 2 — pp | slap ff

Ob. 1 — mf f

Ob. 2 — f

Cl. 1 & 2 — pp | slap ff

Bsn. 1 — pp | mf 3

Bsn. 2 — pp | mf

Z ♩ = 58 | ♩ = 116 | ♩ = 58

1 & 2 Hn. — p f | mp 3 3

3 & 4 — p f | mp

Tpt. 1 — pp | mf 3

Tpt. 2 — pp | mf

Tpt. 1 & 2

Tbn. 1 & 2 — f

Tba. — f

Z ♩ = 58 | ♩ = 116 | ♩ = 58

Timp. — f | f

Mar. — 3 f 3 | f

Dr. — f | 3 3 | 3 3

Z ♩ = 58 | ♩ = 116 | ♩ = 58

Vln. I — div. p | non div. ff | pp | div. f

Vln. II — div. p | non div. ff | pp | div. f

Vla. — div. p | non div. ff | pp | div. f

Vc. — p | non div. ff | pp | f

Db. — p | non div. ff | pp | f

306

♩ = 116 ♩ = 29 ♩ = 116 ♩ = 14.5 accel.

Fl. 1 & 2

Fl. 2 change to Picc.

Ob. 1 & 2

Ob. 2 change to Eng Hn.

Cl. 1 & 2

Cl. 2 change to B. Cl.

Bsn. 1 & 2

Bsn. 2 change to Cbsn.

1 & 2 Hn.

3 & 4 Hn.

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

♩ = 116 ♩ = 29 ♩ = 116 ♩ = 14.5 accel.

Cond. R

imitate slow-motion

imitate super-slow-motion

Cond. L

imitate slow-motion

imitate super-slow-motion

Timp.

gliss.

gliss.

B. D.

Dr.

♩ = 116 ♩ = 29 ♩ = 116 ♩ = 14.5 accel.

Vln. I

pizz.

Vln. II

pizz.

Vla.

pizz.

Vc.

pizz.

Db.

pizz.

311

AA

♩ = 116

♩ = 174

~7"

Fl. 1

Picc. — change to Fl.

Ob. 1

Eng. Hn. — change to Ob.

Cl. 1

B. Cl. — change to Cl.

Bsn. 1

Cbsn. — change to Bsn.

1 & 2 Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Video — Maine este ultima zi a studiului.

Timp.

T.-t.

B. D.

Dr.

Vln. I

Vln. II

Vla.

Vc.

Db.

ff *p* *pp* *f*

317

~5"

~15"

♩ = 92

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Am intampinat cateva dificultati saptamana trecuta...

GEBOCARIS a manifestat niste defectiuni in timpul procesului de captare. Dar, din fericire, am reusit sa depistam la timp problema si sa o reparam, asa ca ramanem optimisti. Suntem nerabdatori sa trecem la a doua etapa a proiectului. Orchestra este rezervata, iar concertul este programat peste o luna.

Video

Cond. R

Cond. L

Timp.

T.-t.

B. D.

arco

Dr.

Vln. I

arco; con sord.

div.

ppp

Vln. II

Vla.

Vc.

Db.

320

BB

(♩. = 92)

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

BB

(♩. = 92)

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

BB

(♩. = 92)

Timp.

B. D.

BB

(♩. = 92)

Vln. I

Vln. II

Vla.

Vc.

Db.

326

~7"

Fl. 1 & 2
Ob. 1 & 2
Cl. 1 & 2
Bsn. 1 & 2
1 & 2
Hn.
3 & 4
Tpt. 1 & 2
Tbn. 1 & 2
Tba.

~7"

ELECTRONICS
free range

Cond. R
Cond. L

ELECTRONICS
free range

Timp.
B. D.

~7"

Vln. I
Vln. II
Vla.
Vc.
Db.

330

Fl. 1 & 2
Ob. 1 & 2
Cl. 1 & 2
Bsn. 1 & 2
1 & 2
Hn.
3 & 4
Tpt. 1 & 2
Tbn. 1 & 2
Tba.
Timp.
B. D.
Vln. I
Vln. II
Vla.
Vc.
Db.

f
senza sord.
sfp
ff
p
div.
8va

334

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Timp.

B. D.

(8)

Vln. I

Vln. II

Vla.

Vc.

Db.

337

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

Timp.

B. D.

(8)

Vln. I

Vln. II

Vla.

Vc.

Db.

gliss.

~60"

343

CC

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

CC

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

~60"

CC

Cond. R

CONDUCTOR'S CADENZA WITH CONTACT MIC ON HAND AND KINECT-CONTROLLED LIVE ELECTRONICS

Cond. L

Timp.

B. D.

Mar.

Dr.

~60"

CC

Vln. I

Vln. II

Vla.

Vc.

Db.

CODA
approx. 3 min.

344

DD

Fl. 1 & 2

Ob. 1 & 2

Cl. 1 & 2

Bsn. 1 & 2

DD

1 & 2

Hn.

3 & 4

Tpt. 1 & 2

Tbn. 1 & 2

Tba.

CODA
approx. 3 min.

DD

Cond. R

Aceasta parte va fi filmata live si integrata in documentarul video in timpul concertului.
Cateva elemente muzicale din piesa vor fi reluate ca "exemple" in cadrul povestii din video.
Fragmentele vor fi dezasamblate ca scurte parti solo, apoi reasamblate in noi structuri simple, care vor fi inregistrate live si amplificate de efecte sonore electronice.
Elementele muzicale vor fi decise in functie de video. (De exemplu: Vln. I 1 interpreteaza masura 77 pentru 15 secunde, in timp ce Marimba interpreteaza masura 225 o singura data.)
Dirijorul va da semnele potrivite pentru numarul masurii si instrumentele active.
Gesturile muzicale vor fi insotite si de gesturi teatrale in concordanta cu textul din video.

Cond. L

Timp.

B. D.

Mar.

Dr.

CODA
approx. 3 min.

DD

Vln. I

Vln. II

Vla.

Vc.

Db.

EE

345

Woodwinds

sing on any pitch

aaa

EE

1 & 2

Brasswinds

EE

3 & 4

Point with full arm to Vln. I

Point with full arm to Woodwinds

Point with full arm to Vln. II

Cond. R

Point with full arm to Vc.

Point with full arm to Vla.

Cond. L

Pe:

EE

Strings

Vln. I
sing on any pitch

Vc.
sing on any pitch

Vla.
sing on any pitch

Vln. II
sing on any pitch

aaa
f

aaa
f

aaa
f

aaa
f

350

Woodwinds

All woodwind players stop

1 & 2

Brasswinds
sing on any pitch

All brasswind players stop

aaa

3 & 4

Point with full arm to Percussion

Turn around and point to audience. Repeat until the audience responds.
If more than 5 times, turn back to the orchestra. Closing gesture!

Cond. R

Point with full arm to Brasswinds

Point with full arm to Db.

Cond. L

Pe:

sing on any pitch

All percussion players stop

aaa
f

Strings

Db.
sing on any pitch

All string players stop

aaa
f