

Colloquy

for two pianos and live electronics

Yongwoo Lee

2024

Program Note

Colloquy for two pianos and live electronics is a piece that depicts a conversation between two pianos. In Section A, the contrasting scales played by the two pianos represent the conflicting aspects of their interaction. The cadences, which end on the pitch "A," create an impression of the conversation gradually moving toward a shared point of agreement.

In Section B, a harmonious dialogue emerges through the use of timbres centered around the pitch "A." By employing the composite melody technique, the two melodies interweave organically, yet each piano alone does not produce a complete melody. Only when the two pianos' melodies combine does a unified monophonic sound materialize.

Overall, the electronic sounds in the piece are randomly generated within the scales used by the pianos, synthesized in real-time, and musically shaped to reflect the tonal structure of the pianos. These electronic sounds, guided by the implemented algorithm, also exhibit a progression toward the pitch "A," utilizing FM synthesis and piano sampling techniques.

*Colloquy*는 두 피아노 사이에 주고 받는 대화를 표현한 곡이다. 두 피아노의 서로 일치하지 않는 음계들이 주고 받는 Section A는 두 연주자의 갈등적 측면을 나타내며, 음악적 문장의 끝에서 A음으로 끝나는 종지는 대화가 점차 공통의 합의점으로 나아가는 듯한 인상을 주게 한다.

Section B에서는 음고 A를 중심으로 화합적인 음색을 활용하여 조화로운 대화를 표현하였다. 복합 멜로디 기법을 통해 두 멜로디가 유기적으로 어우러지며 연주되는데, 각각의 피아노만으로는 완전한 선율로 들리지 않는다. 그러나 두 피아노의 멜로디가 결합될 때 비로소 하나의 모노포닉한 사운드로 완성된다.

전체적으로, 곡에 쓰인 전자 사운드는 피아노가 사용하는 스케일에 따라 그 안에서 랜덤하게 만들어지며, 실시간으로 합성되며 피아노의 음조직에 따라 음악적으로 표현된다. 이 전자음향 역시, 구현된 알고리즘에 따라 A음으로 나아가는 형태의 소리를 보여주며, FM 기법과 피아노 샘플링 기법 등을 사용하였다.

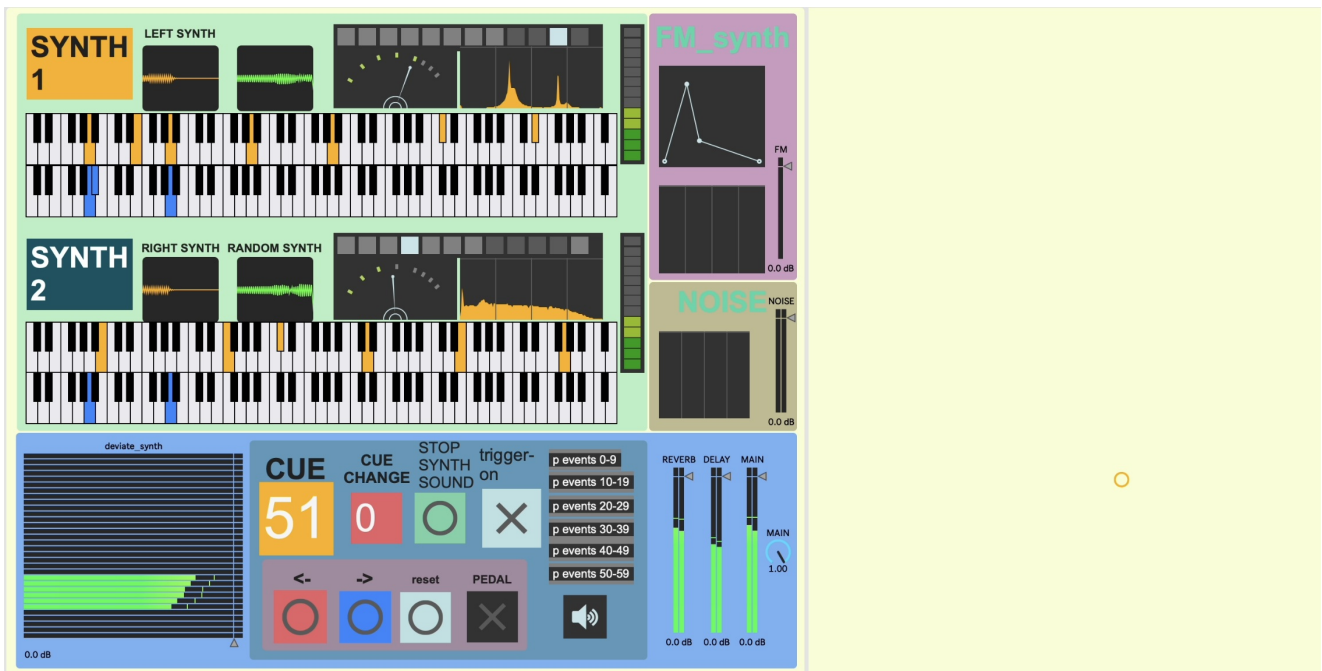


This piece uses rotational arrays that change an original pentachordal (first piano) and hexachordal (second piano) pitch set I created.

These pitch sets are designed to be symmetrical based on intervals, using the note "A" as the axis of symmetry. The note "A" serves as a pivotal point, functioning as the conclusion of each musical phrase, whether it is included in the pitch set or not. Each section, determined by the pitch set, uses only the pitches included in the respective pitch set, which are indicated above each staff.

이 곡은 회전형 배열 기법을 사용하며, 각 피아노에 배정된 5음 음계(first piano), 6음 음계(second piano)를 활용한다. 이 곡의 음계들은 A음을 대칭축으로 하여, 음정적으로 대칭을 이루는 방식으로 고안되었다. 변화된 각 순환 음계에 A음이 포함되어 있건 아니건, 주요 음으로서 음악적 프레이즈를 끝맺는 음으로서 중요한 역할을 한다. 피아노에 사용되는 음계에 따라 각 섹션은 구분되어 해당 음계의 음들이 사용되며, 각 보표 위에 사용되는 음계를 표기하였다.

Max Patch



Max cues are controlled by a right-arrow key or a midi pedal. Each cue note has a specific length to generate sound or trigger an action upon note-off.

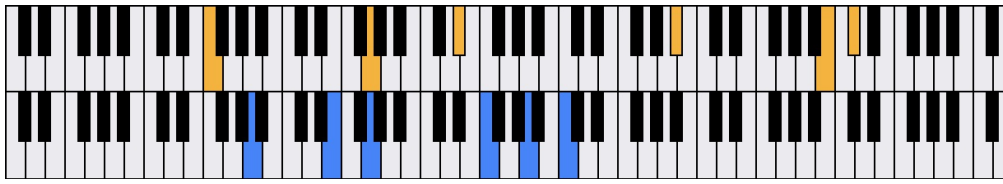


맥스 큐들은 오른쪽 화살표 키 혹은 미디 페달에 의해 작동된다. 각각의 큐를 나타내는 음표는 특정한 길이를 가지고 소리를 생성하거나, note-off에 의한 트리거를 작동시킨다.



From measure 137 (cue 37), mouse position data is used to control electronic sound. The vertical value of the mouse position data controls the volume of the electronic sound produced by synthesizers. The horizontal value of the mouse position data controls the interval of the sound produced by the synthesizers. (in contrary to general electronic sound, repetitive FM sound affects operate in reverse.)

마디 137(큐 37)부터, 마우스 위치에 따라 전자음향을 컨트롤한다. 수직값은 볼륨값을 수평적인 마우스의 위치는 생성되는 전자음의 주기를 결정하게 된다. (FM 사운드는 마우스 위치에 따른 일반적인 전자음향에 대한 변동과 거꾸로 작동하게 설계되었다.)

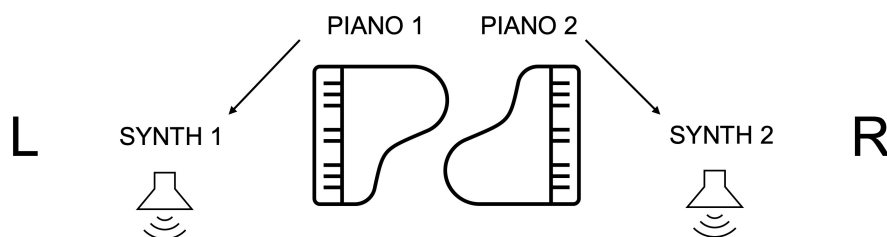


Based on the piano scale, the first and second synthesizers each have their own frequencies. The keys highlighted in orange at the top represent notes currently assigned to the piano, with their octaves randomly determined. These notes are synthesized into electronic sounds using sine waves and various other synthesized tones. The sounds are spatially divided into left and right channels through panning, reflecting the actual positions of the first and second pianos as if played by performers.

The blue keys at the bottom indicate the target notes for the sampled VST piano instruments. The piano notes transition from the positions of the orange keys to the blue keys, which represent random octaves of the "A" note, based on an algorithm. This transition demonstrates gliding at a speed impossible for human performance. The irregular gliding speed and variations in panning values aesthetically represent these movements in a stereo sound environment.

피아노의 음계에 따라, 제1 신시사이저와 제2 신시사이저는 각각의 주파수를 가지게 된다. 상단의 주황색으로 색이 되어 있는 건반 부분은 현재 피아노에 할당된 음계의 음들이 랜덤한 옥타브를 가지고 있는 것을 나타낸다. 이 음들의 소리를 사인파와 다양한 합성음을 사용하여 전자음으로 구현하며, 이것은 좌우 패닝을 통해 제1 피아노의 소리와 제2 피아노 소리를 실제 연주자의 위치와 동일하게 좌우로 나누어 구현하였다.

아래 건반인 파랑색은 VST 피아노 샘플링 된 악기들의 음들이 타겟으로 삼는 음을 보여준다. 피아노 음들은 주황색의 음으로부터 랜덤한 옥타브의 "A음"인 파랑색 건반으로 이동하는 알고리즘을 보여준다. 이것은 사람이 연주할 수 없는 속도의 글라이딩을 보여주며, 변칙적 글라이딩 속도와 패닝 값의 변화로 이러한 움직임을 스테레오 환경에서 미학적으로 보여준다.



The positions of the pianos and speakers are distinctly separated into left and right channels. To achieve a clearer division, each piano's sound is amplified through the corresponding left or right speaker.

피아노와 스피커의 위치는 좌우가 구별되게 나뉘어지고, 더욱 더 명확한 분할을 위해 각 피아노는 좌우 스피커로 증폭된다.

Approximately, 8 min

Colloquy

for two pianos and live electronics

Yongwoo Lee

1

Vigorously ♩ = 120

Conversationally ♩ = 96

Piano 1

f *Red.*

Piano 2

Vigorously ♩ = 120

Conversationally ♩ = 96

f *8ba.* *ff* *f* *ff* *ppp*

Cue



5

pppp *ppp* *p* *ppp* *p* *pp*

Red.

12

mp *pp* *pp* *mf* *p*

Meno mosso ♩ = 108

pp *mf* *p*

Red. *8va*

17

p *mp* *mp* *f*

mp *f* *f*

8va

21

f *mp* *p* *mp*

molto rit *a tempo* *accel* *rit* ...

molto rit *a tempo* *accel* *rit* ...

mp *p* *mp*

Red.

27

B

Allegretto ♩ = 132

f

Red.

B

Allegretto ♩ = 132

f

Red.

pp



The image displays a musical score for the song "The Rose Tree". It consists of two systems of music. The first system includes a vocal line and a piano accompaniment. The vocal line begins with a treble clef and a key signature of one flat (B-flat). The first measure of the vocal line is marked with a measure rest and a piano dynamic (*p*). The second measure contains the lyrics "The rose tree" and features a melody starting on a half note G4, followed by a quarter note A4, and a dotted quarter note B-flat4. The piano accompaniment for the first system starts with a bass clef and a key signature of one flat. The first measure is marked with a measure rest and a piano dynamic (*p*). The second measure contains the lyrics "The rose tree" and features a melody starting on a half note G3, followed by a quarter note A3, and a dotted quarter note B-flat3. The piano accompaniment continues with a melody starting on a half note G3, followed by a quarter note A3, and a dotted quarter note B-flat3. The second system of music continues the vocal and piano parts. The vocal line starts with a measure rest and a piano dynamic (*p*). The piano accompaniment starts with a measure rest and a piano dynamic (*p*). The second measure of the piano accompaniment contains the lyrics "The rose tree" and features a melody starting on a half note G3, followed by a quarter note A3, and a dotted quarter note B-flat3. The piano accompaniment continues with a melody starting on a half note G3, followed by a quarter note A3, and a dotted quarter note B-flat3. The piano accompaniment concludes with a melody starting on a half note G3, followed by a quarter note A3, and a dotted quarter note B-flat3.

4

C

34

f

ff

rit.....

4

C

f

ff

rit.....

(Led.)

==

5

1

D

rit..... Tempo I (♩ = 120)

39

pp sub. *ppp* *pp*

5

6

D

rit..... Tempo I (♩ = 120)

f *pp sub.* *ppp* *pp*

(Led.)

44

p *f* *mp* *mf*

Max cue: 1

2

3

press and hold the right arrow key
for the length of the written note



52

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

1

2

3

4

5

mf *f* *p sub.*

56

mp *mf* *p* *pp*

mp *mf* *pp* *sub.* *f*

6

60

pp *sub.* *f*

(pp) *3* *3* *3*

7 8

4

65

mf

mf *pp sub.* *mf*

3

9

10

11

*Piano gliding
(electronic sound)*

sim

5

69

E

ff

4

E

ff

12

13

14

ff

87

Suddenly $\text{♩} = 96$

8^{va}

f

p

(Red.)

(pizz.)

Suddenly $\text{♩} = 96$

f

p

(Red.)

17

18

19

93

f expr

f expr

(Red.)

(Red.)

20

21

3

97 **H** Allegretto ♩ = 132

p

Red.

1

H Allegretto ♩ = 132

p

Red.

22

23

104

f

8va

3 *3*

mp *pp*

f sub.

3 *3*

f

3 *3*

mp *pp*

f sub.

3 *3*

24

108 **I**

4 1

p cre - - - - -

Red.

5 2

3

I

p cre - - - - - *scen* - -

25



112

- - - - *scen* - - - - - *do* - - -

(*Red.*)

do

(*Red.*)

26

116

8^{va}

8^{ba}

(Red.)

3

3

f

ff *mp*

27

120

J

p cre - - - - - scen - - - - - do - - - - -

Red.

4

J

p cre - - - - - scen - - - - - do - - - - -

28

K 124 *mf* *expr* 3 *Meno mosso* ♩ = 112

K 5 *Meno mosso* ♩ = 112

mf *f* 8^{va}

29 30 31

L 128 *cre* 8^{va}

L 6 *f* *cre* 8^{va}

(8) 32 33 34

131 (8)

scen

(Red.)

rit

35

134 (8)

do

(Red.)

8va

do

36

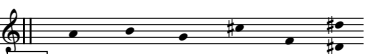
ff

Red.

ff

Colloquy

W.T.



M

Allegretto ♩ = 96

136

(8)

fff

p sub.

(Led.)

W.T.

Allegretto ♩ = 96

M

p sub.

(Led.)

fff

from measure 137,
synthesis sound control via mouse position

37

note-off
trigger

139

p

mf

L.H.

(Led.)

p

mf

38

note-off
trigger

142

f *ppp*

Red.

39

145

accel rit.

p *f* *p* *p sub.*

Red.

note-off trigger

p *f*

N

Andantino ♩ = 92

148

p expr

N

Andantino ♩ = 92

ppp

p expr

(Ced.)

40

ppp

accel.....rit.....

8va

p

f

p

ppp

accel.....rit.....

8va

mp

p

ppp

(Ced.)

p

f

p

154 a tempo ♩ = 92

accel.....rit.....accel.....rit.....

p *f* *p*

(*Reo.*) *mf*

41

note-off trigger

p *f* *p* *f*



157 a tempo ♩ = 92

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

a tempo ♩ = 92

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

42

note-off trigger

p *f* *p*

rita tempo ♩ = 92

f

mp

p

(Red.)

rita tempo ♩ = 92

f

mp

p

(Red.)

mp sub.

43

The image displays a musical score for the song "The Rose Tree". It is written for voice and piano. The score is divided into two systems, each containing a vocal line and a piano accompaniment. The key signature is one sharp (F#), and the time signature is 4/4. The first system begins at measure 163. The vocal line starts with a mezzo-piano (*mp*) dynamic. The piano accompaniment features a bass line with a mezzo-piano (*mp*) dynamic and a treble line with a piano (*p*) dynamic. The second system continues the melody and accompaniment, with the vocal line maintaining a mezzo-piano (*mp*) dynamic and the piano accompaniment featuring a mezzo-piano (*mp*) dynamic in the bass and a piano (*p*) dynamic in the treble. The score includes various musical notations such as notes, rests, accidentals, and dynamic markings.

165

mf *p*

mf *p* *mf sub.* *p*

note-off trigger

44

167

mf *pp* *mp* *f sub.* *mp* *f sub.*

(*Red.*)

45 46 47

170

8va

f

(Ped.)

(Ped.)

5

note-off trigger

48

172

mf

mf

49

174

mp

mp

(Red.)

(Red.)

177

8'

p sub.

(*Red.*)

50 51

180

pp

(*Red.*)

rit.....

Lento ♩ = 56 *molto rit.....*

183

pp

p

(*Red.*)

Lento ♩ = 56 *molto rit.....*

pp

pp

(*Red.*)

stop 52