

4 Weeks / 16 Minutes

Documentary actions for four performers

Samuel Vriezen
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Commissioned by Fonds Podiumkunsten

Written for Slagwerk Den Haag

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Players who wish to perform this piece are requested to contact the composer.

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INTRODUCTION

4 Weeks / 16 Minutes is a composition for four performers who document their surroundings during an extended period of their lives by means of sound and language samples, which are subsequently used for a short musical performance.

The composition comprises two parts. The first part, lasting four weeks, is structured like a very loose conversation among the quartet, in which performers contribute a sound sample or a word or short phrase every day and share these with one another. The second part, lasting sixteen minutes, is the public musical performance that uses the materials gathered in the first part.

The musical performance of the second part consists of four sections of four minutes. Each of the weeks of the first part is compressed into one such section. Every thirty second segment loosely corresponds to one day, with the materials of successive days cumulatively mixed together segment by segment, the last thirty seconds of a section summarizing the material of that week.

For this performance, the sound material recorded during the first part is mixed together into four times fifty-three tracks. CSound .orc- and .sco-files are provided for generating the tracks from the recordings. The tracks are played back using personal audio installations with separate sets of speakers for each performer, who change tracks, control volume and speak words according to the instructions in the performance score.

Though from the perspective of public musical performance, the first part is "merely" a preparation for the second part and not done in public, the composer considers both to be equally important modes of "performance" of the work. The first part is in fact a private performance that, in the second part, is extended into a public performance.

The score is organized into three parts:

- The section called Preparation describes the structure of the first part of the composition
- The section called Performance gives the structure of the second part of the composition
- A CSound program with documentation for mixing tracks

PREPARATION

The preparation process lasts four weeks exactly and involves the entire quartet. This four week period should be as close to the performance of the piece as possible.

The preparation takes the form of a very loose collaboration among the four performers. Every day (except on a few sundays) performers record either a short sound file, or a word or short phrase. Performers work independently from one another, but every day of the process they share what they have recorded with each other.

Technical requirements

The preparation requires that every performer have access to the following:

- one (or more) devices for making recordings of environmental sounds. These may range from simple consumer electronics to professional equipment.
- means of transferring sound recordings to a computer in .wav format
- means of sharing sound files with others through the internet, for example through the use of file-sharing services such as 4shared.com.

The process

Every Sunday, a time (hour & minute) is agreed upon by the performers. For that week, this will be the time at which sound recordings will be made. For each week the time should be a different one.

The Preparation Score gives the action of every performer (A, B, C, D) for every day of the four weeks.

S: indicates that the performer records a 30 second sound clip, using any recording device, of any type of environmental sound, wherever the performer may happen to find himself or herself at the agreed upon time that day. There is no limitation of the nature of the sound that can be recorded, though no attempt should be made to "perform" sounds specifically for the recording. After recording, the sound is transferred onto a computer and saved in .wav-format with filename "soundXX", XX being the two-digit number given in the score. At the end of the day the file is then uploaded to a file-sharing service, or otherwise shared with the other performers.

W: indicates that at the agreed upon time, the performer writes down a word, or perhaps a simple 2 or 3-word phrase that came up recently, something that the performer has read or heard. The recorded word or phrase is assigned the letter-plus-two-digit label given in the score. At the end of the day, the recorded text is shared with the other performers, through email or using other means.

During performance, the recorded sound material will be shared between the four performers. The recorded language materials will remain unique to individual parts.

PREPARATION SCORE

Week 1

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Perf.							
A	S: 11	W: A11	W: A12	W: A13	W: A14	W: A15	W: A16
B	-	S: 12	W: B11	W: B12	S: 15	W: B13	W: B14
C	-	W: C11	S: 13	W: C12	W: C13	S: 16	W: C14
D	-	W: D11	W: D12	S: 14	W: D13	W: D14	S: 17

Week 2

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Perf.							
A	-	W: A21	W: A22	S: 24	W: A23	W: A24	S: 27
B	S: 21	W: B21	W: B22	W: B23	W: B24	W: B25	W: B26
C	-	S: 22	W: C21	W: C22	S: 25	W: C23	W: C24
D	-	W: D21	S: 23	W: D22	W: D23	S: 26	W: D24

Week 3

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Perf.							
A	-	W: A31	S: 33	W: A32	W: A33	S: 36	W: A34
B	-	W: B31	W: B32	S: 34	W: B33	W: B34	S: 37
C	S: 31	W: C31	W: C32	W: C33	W: C34	W: C35	W: C36
D	-	S: 32	W: D31	W: D32	S: 35	W: D33	W: D34

Week 4

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Perf.							
A	-	S: 42	W: A41	W: A42	S: 45	W: A43	W: A44
B	-	W: B41	S: 43	W: B42	W: B43	S: 46	W: B44
C	-	W: C41	W: C42	S: 44	W: C43	W: C44	S: 47
D	S: 41	W: D41	W: D42	W: D43	W: D44	W: D45	W: D46

PERFORMANCE

Form

A performance lasts 16 minutes, and consists of a structured collage of the material collected over the four week period. Every section of 4 minutes corresponds to one week. Each of the first 30 second segments corresponds to one day and presents the material collected during the week up to that day. The last 30 second segment summarizes the material of the entire week.

Preparing the performance

For each performer a playlist of 53 audio tracks are generated using a CSound program (see the CSound files, below). Each performer then prepares his or her part by writing the words or short phrases collected over the course of the four weeks into the part at the appropriate location, following the codes given in the last column of the part.

Performance set-up

Performers are positioned each at a separate table, spaced out across the performance area in a half-circle arrangement.

Each performer is equipped with a personal play-back device such as a CD player or iPod, loaded with the correct track list. Performers must be able to advance tracks quickly and to manipulate the dynamic level of the playback.

Each audio device is connected to a separate set of speakers, positioned on the performer's table itself. Play-back of the pre-generated tracks is not centrally mixed through the hall's sound system.

The voices of the performers must be clearly audible. If necessary, clip-on microphones can be used. In contrast with the playback audio, the signal from these microphones may be mixed through the sound system of the hall.

Performers use stopwatches or a central clock to coordinate their parts.

Performance

During performance, two kinds of activity take place: performers operate their playback devices, and they speak words.

The parts are organized into four columns. These indicate timing, track, dynamics and text respectively.

The timing column gives the starting time for that segment. Timings are given either as fixed or as flexible time points. A flexible time point consists of two times with a double arrow in between ($\Leftarrow\Rightarrow$). These indicate that the segment can start at any time between the two times given, as decided by the performer.

The track column gives the track to be played in that segment. When the segment starts, the performer advances the track list to the next track, and tracks keep playing until the start of the next segment. Certain segments have a fixed length of 30 seconds; these will correspond to tracks of exactly 30 seconds in the track list. Other segments have a flexible length due to flexible starting or ending timings. The corresponding tracks have a duration of 45 seconds, but will generally take far less time during performance (the average length for playback of a "flexible" track will be 15 seconds).

The dynamics column gives the dynamic level at which the track is played back during that segment. "Medium" and "Very soft" indicate a stable level of playback, not to be manipulated during playback. "<", "< >" and ">" indicate crescendo, crescendo/decrescendo and decrescendo respectively. Dynamic playback levels are to be interpreted freely, and may be very soft at their softest, mostly a little louder than medium at their loudest, loud only occasionally, and the loudest points only last very briefly.

In the text column, ANNOUNCE indicates that during the bracket, the performer announces the week during which the samples and text of that segment were recorded and the time at which they were recorded. E.g. "Sounds and words recorded between February 6, 2011 and February 12, 2011 at 12:00".

A code in the text column indicates pre-recorded text to be spoken once during the segment. All codes appear twice.

HOCKET appears during the final fixed length segments of a 4-minute section. During Hocket, performers alternate speaking their text material at a tempo of Text code = 96, alternating their text in the given order. Each performer will speak 12 times, repeating the cycle of words or short phrases twice or three times, as indicated. The Hocket lasts 30 seconds and starts and ends exactly at the notated time points. The Hocket is spoken very softly, in balance with the playback.

Performer A

0'00"	Track 1	medium	ANNOUNCE
0'30"	Track 2	<	A11
0'35" <==> 1'00"	Track 3	<	A11
0'45" <==> 1'15"	Track 4	>	A12
1'00" <==> 1'30"	Track 5	>	A12
1'15" <==> 1'45"	Track 6	<	A13
1'30" <==> 2'00"	Track 7	<	A13
1'45" <==> 2'15"	Track 8	<>	A14
2'00" <==> 2'30"	Track 9	<>	A14
2'15" <==> 2'45"	Tack 10	<	A15
2'30" <==> 3'00"	Track 11	>	A15
2'45" <==> 3'15"	Track 12	<>	A16
3'00" <==> 3'25"	Track 13	>	A16
3'30"	Track 14	very soft	HOCKET, order: ABCD, 2x A11 A12 A13 A14 A15 A16

4'00"	Track 15	<	
4'05" <==> 4'30"	Track 16	<>	
4'15" <==> 4'45"	Track 17	>	A21
4'30" <==> 5'00"	Track 18	<	A21
4'45" <==> 5'15"	Track 19	<>	A22
5'00" <==> 5'25"	Track 20	<>	A22
5'30"	Track 21	medium	
6'00"	Track 22	>	A23
6'05" <==> 6'30"	Track 23	<	A23
6'15" <==> 6'45"	Track 24	<	A24
6'30" <==> 6'55"	Track 25	<>	A24
7'00"	Track 26	medium	
7'30"	Track 27	very soft	HOCKET, order: BCDA, 3x A21 A22 A23 A24

8'00"	Track 28	<	
8'05" <==> 8'30	Track 29	<	
8'15" <==> 8'45"	Track 30	>	A31
8'30" <==> 8'55"	Track 31	<	A31
9'00"	Track 32	medium	
9'30"	Track 33	<	A32
9'35" <==> 10'00	Track 34	>	A32
9'45" <==> 10'15"	Track 35	<	A33
10'00" <==> 10'25"	Track 36	>	A33
10'30"	Track 37	medium	
11'00"	Track 38	>	A34
11'05" <==> 11'25"	Track 39	>	A34
11'30"	Track 40	very soft	HOCKET, order: CDAB, 3x A31 A32 A33 A34

12'00"	Track 41	>	
12'05" <==> 12'25"	Track 42	<	
12'30"	Track 43	medium	
13'00"	Track 44	<	A41
13'05" <==> 13'30"	Track 45	<>	A41
13'15" <==> 13'45"	Track 46	<>	A42
13'30" <==> 13'55"	Track 47	>	A42
14'00"	Track 48	medium	
14'30"	Track 49	>	A43
14'35" <==> 15'00"	Track 50	<	A43
14'45" <==> 15'15"	Track 51	<>	A44
15'00" <==> 15'25"	Track 52	<	A44
15'30"	Track 53	very soft	HOCKET, order: DABC, 3x A41 A42 A43 A44
16'00"	FINIS		

Performer B

0'00"	Track 1	>	
0'05" <==> 0'25"	Track 2	<	
0'30"	Track 3	medium	
1'00"	Track 4	>	B11
1'05" <==> 1'30"	Track 5	>	B11
1'15" <==> 1'45"	Track 6	<	B12
1'30" <==> 1'55"	Track 7	<	B12
2'00"	Track 8	medium	
2'30"	Track 9	>	B13
2'35" <==> 3'00"	Tack 10	<	B13
2'45" <==> 3'15"	Track 11	>	B14
3'00" <==> 3'25"	Track 12	<>	B14
3'30"	Track 13	very soft	HOCKET, order: ABCD, 3x B11 B12 B13 B14

4'00"	Track 14	medium	ANNOUNCE
4'30"	Track 15	<	B21
4'35" <==> 5'00"	Track 16	<	B21
4'45" <==> 5'15"	Track 17	<>	B22
5'00" <==> 5'30"	Track 18	<	B22
5'15" <==> 5'45"	Track 19	<>	B23
5'30" <==> 6'00"	Track 20	>	B23
5'45" <==> 6'15"	Track 21	>	B24
6'00" <==> 6'30"	Track 22	>	B24
6'15" <==> 6'45"	Track 23	<	B25
6'30" <==> 7'00"	Track 24	<>	B25
6'45" <==> 7'15"	Track 25	<	B26
7'00" <==> 7'25"	Track 26	>	B26
7'30"	Track 27	very soft	HOCKET, order: BCDA, 2x B21 B22 B23 B24 B25 B26

8'00"	Track 28	<	
8'05" <==> 8'30	Track 29	<>	
8'15" <==> 8'45"	Track 30	<	B31
8'30" <==> 9'00"	Track 31	<>	B31
8'45" <==> 9'15"	Track 32	<>	B32
9'00" <==> 9'25"	Track 33	>	B32
9'30"	Track 34	medium	
10'00"	Track 35	<	B33
10'05" <==> 10'25"	Track 36	<	B33
10'15" <==> 10'45"	Track 37	<	B34
10'30" <==> 10'55"	Track 38	>	B34
11'00"	Track 39	medium	
11'30"	Track 40	very soft	HOCKET, order: CDAB, 3x B31 B32 B33 B34

12'00"	Track 41	<	
12'05" <==> 12'30"	Track 42	>	
12'15" <==> 12'45"	Track 43	<>	B41
12'30" <==> 12'55"	Track 44	>	B41
13'00"	Track 45	medium	
13'30"	Track 46	<	B42
13'35" <==> 14'00"	Track 47	<	B42
13'45" <==> 14'15"	Track 48	>	B43
14'00" <==> 14'25"	Track 49	>	B43
14'30"	Track 50	medium	
15'00"	Track 51	>	B44
15'05" <==> 15'25"	Track 52	<	B44
15'30"	Track 53	very soft	HOCKET, order: DABC, 3x B41 B42 B43 B44
16'00"	FINIS		

Performer C

0'00"	Track 1	<>	
0'05" <==> 0'30"	Track 2	<>	
0'15" <==> 0'45"	Track 3	>	C11
0'30" <==> 0'55"	Track 4	<	C11
1'00"	Track 5	medium	
1'30"	Track 6	<>	C12
1'35" <==> 2'00"	Track 7	<>	C12
1'45" <==> 2'15"	Track 8	<>	C13
2'00" <==> 2'25"	Track 9	<>	C13
2'30"	Track 10	medium	
3'00"	Track 11	<	C14
3'05" <==> 3'25"	Track 12	<	C14
3'30"	Track 13	very soft	HOCKET, order: ABCD, 3x C11 C12 C13 C14

4'00"	Track 14	>	
4'05" <==> 4'25"	Track 15	<>	
4'30"	Track 16	medium	
5'00"	Track 17	<	C21
5'05" <==> 5'30"	Track 18	>	C21
5'15" <==> 5'45"	Track 19	<>	C22
5'30" <==> 5'55"	Track 20	<>	C22
6'00"	Track 21	medium	
6'30"	Track 22	>	C23
6'35" <==> 7'00"	Track 23	<	C23
6'45" <==> 7'15"	Track 24	<>	C24
7'00" <==> 7'25"	Track 25	<>	C24
7'30"	Track 26	very soft	HOCKET, order: BCDA, 3x C21 C22 C23 C24

8'00"	Track 27	medium	ANNOUNCE
8'30"	Track 28	>	C31
8'35" <==> 9'00"	Track 29	<>	C31
8'45" <==> 9'15"	Track 30	<	C32
9'00" <==> 9'30"	Track 31	<>	C32
9'15" <==> 9'45"	Track 32	>	C33
9'30" <==> 10'00"	Track 33	<>	C33
9'45" <==> 10'15"	Track 34	>	C34
10'00" <==> 10'30"	Track 35	<>	C34
10'15" <==> 10'45"	Track 36	<>	C35
10'30" <==> 11'00"	Track 37	<	C35
10'45" <==> 11'15"	Track 38	<>	C36
11'00" <==> 11'25"	Track 39	>	C36
11'30"	Track 40	very soft	HOCKET, order: CDAB, 2x C31 C32 C33 C34 C35 C36

12'00"	Track 41	<>	
12'05" <==> 12'30	Track 42	<	
12'15" <==> 12'45"	Track 43	>	C41
12'30" <==> 13'00"	Track 44	<>	C41
12'45" <==> 13'15"	Track 45	>	C42
13'00" <==> 13'25"	Track 46	<	C42
13'30"	Track 47	medium	
14'00"	Track 48	<	C43
14'05" <==> 14'25"	Track 49	<>	C43
14'15" <==> 14'45"	Track 50	<>	C44
14'30" <==> 14'55"	Track 51	<>	C44
15'00"	Track 52	medium	
15'30"	Track 53	very soft	HOCKET, order: DABC, 3x C41 C42 C43 C44
16'00"	FINIS		

Performer D

0'00"	Track 1	>	
0'05" <==> 0'30	Track 2	<>	
0'15" <==> 0'45"	Track 3	<>	D11
0'30" <==> 1'00"	Track 4	<>	D11
0'45" <==> 1'15"	Track 5	>	D12
1'00" <==> 1'25"	Track 6	>	D12
1'30"	Track 7	medium	
2'00"	Track 8	<>	D13
2'05" <==> 2'25"	Track 9	<	D13
2'15" <==> 2'45"	Track 10	>	D14
2'30" <==> 2'55"	Track 11	<	D14
3'00"	Track 12	medium	
3'30"	Track 13	very soft	HOCKET, order: ABCD, 3x D11 D12 D13 D14

4'00"	Track 14	<	
4'05" <==> 4'30"	Track 15	<>	
4'15" <==> 4'45"	Track 16	>	D21
4'30" <==> 4'55"	Track 17	<>	D21
5'00"	Track 18	medium	
5'30"	Track 19	>	D22
5'35" <==> 6'00"	Track 20	>	D22
5'45" <==> 6'15"	Track 21	>	D23
6'00" <==> 6'25"	Track 22	>	D23
6'30"	Track 23	medium	
7'00"	Track 24	<	D24
7'05" <==> 7'25"	Track 25	<	D24
7'30"	Track 26	very soft	HOCKET, order: BCDA, 3x D21 D22 D23 D24

8'00"	Track 27	<	
8'05" <==> 8'25"	Track 28	<	
8'30"	Track 29	medium	
9'00"	Track 30	<>	D31
9'05" <==> 9'30"	Track 31	<	D31
9'15" <==> 9'45"	Track 32	<>	D32
9'30" <==> 9'55"	Track 33	<>	D32
10'00"	Track 34	medium	
10'30"	Track 35	<>	D33
10'35" <==> 11'00"	Track 36	>	D33
10'45" <==> 11'15"	Track 37	<>	D34
11'00" <==> 11'25"	Track 38	>	D34
11'30"	Track 39	very soft	HOCKET, order: CDAB, 3x D31 D32 D33 D34

12'00"	Track 40	medium	ANNOUNCE
12'30"	Track 41	<	D41
12'35" <==> 13'00"	Track 42	>	D41
12'45" <==> 13'15"	Track 43	>	D42
13'00" <==> 13'30"	Track 44	<	D42
13'15" <==> 13'45"	Track 45	<>	D43
13'30" <==> 14'00"	Track 46	<>	D43
13'45" <==> 14'15"	Track 47	<>	D44
14'00" <==> 14'30"	Track 48	<>	D44
14'15" <==> 14'45"	Track 49	<>	D45
14'30" <==> 15'00"	Track 50	>	D45
14'45" <==> 15'15"	Track 51	>	D46
15'00" <==> 15'25"	Track 52	<	D46
15'30"	Track 53	very soft	HOCKET, order: DABC, 2x D41 D42 D43 D44 D45 D46
16'00"	FINIS		

THE CSOUND PROGRAM

The CSound .sco- and .orc-files presented below can be used to generate the audio tracks for performance from the samples recorded during preparation. If desired, the process could also be programmed in other formats, following the description of the structure of the algorithm, given below.

For each performer, 53 tracks are to be generated (total: 212 tracks). A track is generated by substituting the correct value for PERFORMER (1-4) and TRACK (1-53) into the macro definitions at the top of the .sco file, then running CSound while rendering the output to a sound file; this file will be the track to be used. The 28 pre-recorded sound files, labeled "sound11.wav" up to "sound47.wav", should be available in the appropriate library for the program to run.

Each track corresponds to one day/week of the preparation process. For each track, a number is given for the number of samples used in that track. These two values determine the structure of the track. See the Track Score, below for the numbers that are used.

There are 3 types of tracks: tracks of 1 sample, tracks of 7 samples, tracks of 2-4 samples.

Tracks of 1 sample are 30 seconds in length and correspond in performance to a fixed duration segment. The sample chosen is the sample recorded by the performer on the day that corresponds to the track.

Tracks of 7 samples are 30 seconds in length and correspond in performance to the last fixed duration segment of a four minute block. All seven of the week's samples are spliced together at a constant speed of 10, 10.25, 10.5 or 10.75 samples per second (these speeds differ from player to player and from week to week).

Tracks of 2 to 4 samples are 45 seconds in length and correspond in performance to a flexible duration segment. The samples are chosen randomly from the samples recorded during the week up to the day that the track corresponds to. The 2 to 4 samples are repeated cyclically in fixed order. The duration for the entire cycle is chosen to be between 1.5 seconds and 13.5 seconds and is allowed (again, by random choice) to accelerate or decelerate within that interval of durations over the course of 45 seconds.

The samples "interrupt" one another: a re-appearing sample starts at the point where its previous appearance stopped.

Track Score

Performer A

Track	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Week/Day	I/1	I/2	I/2	I/3	I/3	I/4	I/4	I/5	I/5	I/6	I/6	I/7	I/7	I/all
#Samples	1	3	3	2	4	4	2	2	4	3	3	3	3	7
Track	15	16	17	18	19	20	21	22	23	24	25	26	27	
Week/Day	II/1	II/1	II/2	II/2	II/3	II/3	II/4	II/5	II/5	II/6	II/6	II/7	II/all	
#Samples	2	4	4	2	3	3	1	2	4	3	3	1	7	
Track	28	29	30	31	32	33	34	35	36	37	38	39	40	
Week/Day	III/1	III/1	III/2	III/2	III/3	III/4	III/4	III/5	III/5	III/6	III/7	III/7	III/all	
#Samples	3	3	2	4	1	4	2	3	3	1	2	4	7	
Track	41	42	43	44	45	46	47	48	49	50	51	52	53	
Week/Day	IV/1	IV/1	IV/2	IV/3	IV/3	IV/4	IV/4	IV/5	IV/6	IV/6	IV/7	IV/7	IV/all	
#Samples	2	4	1	2	4	3	3	1	3	3	4	2	7	

Performer B

Track	1	2	3	4	5	6	7	8	9	10	11	12	13	
Week/Day	I/1	I/1	I/2	I/3	I/3	I/4	I/4	I/5	I/6	I/6	I/7	I/7	I/all	
#Samples	2	4	1	4	2	4	2	1	2	4	2	4	7	
Track	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Week/Day	II/1	II/2	II/2	II/3	II/3	II/4	II/4	II/5	II/5	II/6	II/6	II/7	II/7	II/all
#Samples	1	2	4	4	2	4	2	3	3	4	2	2	4	7

Track	28	29	30	31	32	33	34	35	36	37	38	39	40
Week/Day	III/1	III/1	III/2	III/2	III/3	III/3	III/4	III/5	III/5	III/6	III/6	III/7	III/all
#Samples	3	3	3	3	3	3	1	2	4	3	3	1	7

Track	41	42	43	44	45	46	47	48	49	50	51	52	53
Week/Day	IV/1	IV/1	IV/2	IV/2	IV/3	IV/4	IV/4	IV/5	IV/5	IV/6	IV/7	IV/7	IV/all
#Samples	4	2	2	4	1	3	3	2	4	1	3	3	7

Performer C

Track	1	2	3	4	5	6	7	8	9	10	11	12	13
Week/Day	I/1	I/1	I/2	I/2	I/3	I/4	I/4	I/5	I/5	I/6	I/7	I/7	I/all
#Samples	4	2	4	2	1	4	2	3	3	1	4	2	7

Track	14	15	16	17	18	19	20	21	22	23	24	25	26
Week/Day	II/1	II/1	II/2	II/3	II/3	II/4	II/4	II/5	II/6	II/6	II/7	II/7	II/all
#Samples	3	3	1	4	2	4	2	1	2	4	2	4	7

Track	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Week/Day	III/1	III/2	III/2	III/3	III/3	III/4	III/4	III/5	III/5	III/6	III/6	III/7	III/7	III/all
#Samples	1	4	2	3	3	2	4	4	2	2	4	2	4	7

Track	41	42	43	44	45	46	47	48	49	50	51	52	53
Week/Day	IV/1	IV/1	IV/2	IV/2	IV/3	IV/3	IV/4	IV/5	IV/5	IV/6	IV/6	IV/7	IV/all
#Samples	3	3	3	3	2	4	1	2	4	4	2	1	7

Performer D

Track	1	2	3	4	5	6	7	8	9	10	11	12	13	
Week/Day	I/1	I/1	I/2	I/2	I/3	I/3	I/4	I/5	I/5	I/6	I/6	I/7	I/all	
#Samples	3	3	2	4	2	4	1	3	3	3	3	1	7	
Track	14	15	16	17	18	19	20	21	22	23	24	25	26	
Week/Day	II/1	II/1	II/2	II/2	II/3	II/4	II/4	II/5	II/5	II/6	II/7	II/7	II/all	
#Samples	3	3	2	4	1	3	3	3	3	1	4	2	7	
Track	27	28	29	30	31	32	33	34	35	36	37	38	39	
Week/Day	III/1	III/1	III/2	III/3	III/3	III/4	III/4	III/5	III/6	III/6	III/7	III/7	III/all	
#Samples	4	2	1	4	2	4	2	1	2	4	4	2	7	
Track	40	41	42	43	44	45	46	47	48	49	50	51	52	53
Week/Day	IV/1	IV/2	IV/2	IV/3	IV/3	IV/4	IV/4	IV/5	IV/5	IV/6	IV/6	IV/7	IV/7	IV/all
#Samples	1	4	2	3	3	4	2	2	4	4	2	4	2	7

Number of samples per second in the final fixed length segments of each 4 minute section (by performer and week)

Week/Section:	1	2	3	4
Performer				
A	10	10.25	10.5	10.75
B	10.75	10	10.25	10.5
C	10.5	10.75	10	10.25
D	10.25	10.5	10.75	10

CSound .sco-file

; determine Performer (1-4) and Track (1-53) by substituting the correct values in the macro definitions

```
#define PERFORMER #1#  
#define TRACK #1#
```

; tables 1-12 are used by instr 3
; they constitute the "score" for generating the tracks by the performers
; tables 1-4 are used to determine the number of samples in the track
; tables 5-8 give the week (1-4) corresponding with the track
; tables 9-12 give the day (1-7: 1=Sunday, etc) corresponding with the track

```
f1 0 128 -2 0 1 3 3 2 4 4 2 2 4 3 3 3 3 7 2 4 4 2 3 3 1 2 4 3 3 1 7 3 3 2 4 1 4 2 3 3 1 2 4 7 2 4 1 2 4 3 3 1 3 3 4 2 7  
f5 0 128 -2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4  
f9 0 128 -2 0 1 2 2 3 3 4 4 5 5 6 6 7 7 7 1 1 2 2 3 3 4 4 5 5 6 6 7 7 1 1 2 2 3 4 4 5 5 6 6 7 7 7 1 1 2 3 3 4 4 5 6 6 7 7 7
```

```
f2 0 128 -2 0 2 4 1 4 2 4 2 1 2 4 2 4 7 1 2 4 4 2 4 2 3 3 4 2 2 4 7 3 3 3 3 3 3 1 2 4 3 3 1 7 4 2 2 4 1 3 3 2 4 1 3 3 7  
f6 0 128 -2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4  
f10 0 128 -2 0 1 1 2 3 3 4 4 5 6 6 7 7 7 1 2 2 3 3 4 4 5 5 6 6 7 7 7 1 1 2 2 3 3 4 4 5 5 6 6 7 7 1 1 2 2 3 4 4 5 5 6 7 7 7
```

```
f3 0 128 -2 0 4 2 4 2 1 4 2 3 3 1 4 2 7 3 3 1 4 2 4 2 1 2 4 2 4 7 1 4 2 3 3 2 4 4 2 2 4 2 4 7 3 3 3 3 2 4 1 2 4 4 2 1 7  
f7 0 128 -2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4  
f11 0 128 -2 0 1 1 2 2 3 4 4 5 5 6 6 7 7 7 1 1 2 3 3 4 4 5 5 6 6 7 7 7 1 2 2 3 3 4 4 5 5 6 6 7 7 7 1 1 2 2 3 3 4 4 5 5 6 6 7 7
```

```
f4 0 128 -2 0 3 3 2 4 2 4 1 3 3 3 3 1 7 3 3 2 4 1 3 3 3 3 1 4 2 7 4 2 1 4 2 4 2 1 2 4 4 2 7 1 4 2 3 3 4 2 2 4 4 2 4 2 7  
f8 0 128 -2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4  
f12 0 128 -2 0 1 1 2 2 3 3 4 4 5 5 6 6 7 7 1 1 2 2 3 4 4 5 5 6 6 7 7 7 1 1 2 3 3 4 4 5 5 6 6 7 7 7 1 2 2 3 3 4 4 5 5 6 6 7 7 7
```

; tables 1011-2047 are used to store the sound files
; table nr. A0BC stores channel A of the Cth sound recorded in week B
; make sure the 28 stereo sound files, "sound11.wav" - "sound47.wav",
; are in the appropriate location on the computer

```
f1011 0 2097152 1 "sound11.wav" 0 0 1
```

f1012 0 2097152 1 "sound12.wav" 0 0 1
f1013 0 2097152 1 "sound13.wav" 0 0 1
f1014 0 2097152 1 "sound14.wav" 0 0 1
f1015 0 2097152 1 "sound15.wav" 0 0 1
f1016 0 2097152 1 "sound16.wav" 0 0 1
f1017 0 2097152 1 "sound17.wav" 0 0 1

f1021 0 2097152 1 "sound21.wav" 0 0 1
f1022 0 2097152 1 "sound22.wav" 0 0 1
f1023 0 2097152 1 "sound23.wav" 0 0 1
f1024 0 2097152 1 "sound24.wav" 0 0 1
f1025 0 2097152 1 "sound25.wav" 0 0 1
f1026 0 2097152 1 "sound26.wav" 0 0 1
f1027 0 2097152 1 "sound27.wav" 0 0 1

f1031 0 2097152 1 "sound31.wav" 0 0 1
f1032 0 2097152 1 "sound32.wav" 0 0 1
f1033 0 2097152 1 "sound33.wav" 0 0 1
f1034 0 2097152 1 "sound34.wav" 0 0 1
f1035 0 2097152 1 "sound35.wav" 0 0 1
f1036 0 2097152 1 "sound36.wav" 0 0 1
f1037 0 2097152 1 "sound37.wav" 0 0 1

f1041 0 2097152 1 "sound41.wav" 0 0 1
f1042 0 2097152 1 "sound42.wav" 0 0 1
f1043 0 2097152 1 "sound43.wav" 0 0 1
f1044 0 2097152 1 "sound44.wav" 0 0 1
f1045 0 2097152 1 "sound45.wav" 0 0 1
f1046 0 2097152 1 "sound46.wav" 0 0 1
f1047 0 2097152 1 "sound47.wav" 0 0 1

f2011 0 2097152 1 "sound11.wav" 0 0 2
f2012 0 2097152 1 "sound12.wav" 0 0 2
f2013 0 2097152 1 "sound13.wav" 0 0 2
f2014 0 2097152 1 "sound14.wav" 0 0 2
f2015 0 2097152 1 "sound15.wav" 0 0 2
f2016 0 2097152 1 "sound16.wav" 0 0 2
f2017 0 2097152 1 "sound17.wav" 0 0 2

f2021 0 2097152 1 "sound21.wav" 0 0 2
f2022 0 2097152 1 "sound22.wav" 0 0 2

f2023 0 2097152 1 "sound23.wav" 0 0 2
f2024 0 2097152 1 "sound24.wav" 0 0 2
f2025 0 2097152 1 "sound25.wav" 0 0 2
f2026 0 2097152 1 "sound26.wav" 0 0 2
f2027 0 2097152 1 "sound27.wav" 0 0 2

f2031 0 2097152 1 "sound31.wav" 0 0 2
f2032 0 2097152 1 "sound32.wav" 0 0 2
f2033 0 2097152 1 "sound33.wav" 0 0 2
f2034 0 2097152 1 "sound34.wav" 0 0 2
f2035 0 2097152 1 "sound35.wav" 0 0 2
f2036 0 2097152 1 "sound36.wav" 0 0 2
f2037 0 2097152 1 "sound37.wav" 0 0 2

f2041 0 2097152 1 "sound41.wav" 0 0 2
f2042 0 2097152 1 "sound42.wav" 0 0 2
f2043 0 2097152 1 "sound43.wav" 0 0 2
f2044 0 2097152 1 "sound44.wav" 0 0 2
f2045 0 2097152 1 "sound45.wav" 0 0 2
f2046 0 2097152 1 "sound46.wav" 0 0 2
f2047 0 2097152 1 "sound47.wav" 0 0 2

; generate the track

i 3 0 5 \$PERFORMER \$TRACK

CSound .orc-file

```
#define MAXAMP #30000#
#define OVERLAP #0.005#
#define STANDARDOFFSET #0#
#define MINLEN #1.5#           ; minimum length of a sample cycle during flexible brackets
#define MAXLEN #13.5#         ; max length
#define SUMMARY #10#          ; last bracket of each week:
                               ; $SUMMARY samples per second (basic slowest speed)
#define FACTOR #.025#         ; sample speed differences between performers (in last bracket)
#define FIXBRACKLEN #30#      ; length in seconds of fixed time brackets
#define FLEXBRACKLEN #45#     ; maximum length in seconds of flexible time brackets
#define SAMPLEN #30#         ; length in seconds of all samples
```

```
sr = 44100
kr = 44100
ksmps = 1
nchnls = 2
```

```
instr 1
; play back sample p4, starting p5 seconds into the sample, with p6 overlap time
```

```
; initializations
```

```
isample      =      p4
istart       =      p5           ; starting point of playback, in seconds
ioverlap     =      p6           ; overlap time
imaxamp      =      $MAXAMP
inormal      =      p3 - p6 * 2
ichannel1    =      isample + 1000
ichannel2    =      isample + 2000
ilength      =      $SAMPLEN * sr
ifirstsample =      ( p5 - ioverlap ) * sr
```

```
kpoint init ifirstsample
```

```
kamp      init  imaxamp
```

```
; read sample from the proper tables and play it back
```

```
k1  tablei kpoint, ichannel1  
k2  tablei kpoint, ichannel2
```

```
if ( ioverlap > 0) then  
    kamp linseg 0, ioverlap, imaxamp, inormal, imaxamp, ioverlap, 0  
endif
```

```
aout1      =    k1 * kamp  
aout2      =    k2 * kamp
```

```
outs  aout1, aout2
```

```
kpoint      =    kpoint + 1  
if (kpoint >= ilength) then  
    kpoint =    0  
endif
```

```
endin
```

```
instr 2
```

```
; splices together at most 4 samples in a loop  
; p4 - length of 1st fragment, p5 - length of last fragment  
;      (fragment size develops exponentially from p4 to p5)  
; p6 - table containing at index 0 the number of samples  
;      & at subsequent indices the sample-numbers themselves  
; p7 seed for the pseudo-random number sequences to be used  
; p8 table number for sample time array
```

```
; initializations
```

```
inumsamp      table 0, p6
```

```

ifirstlength = p4 / inunsamp
ilastlength  = p5 / inunsamp
ifactor      = (ilastlength - ifirstlength) / p3 + 1
irandseed    = p7
iarray       = p8
ioverlap     = $OVERLAP

kduration    init ifirstlength
ktimepoint   init 0
ksamplenum   init 1

```

```
; generate the string of samples as i1-events
```

```
if (ktimepoint < p3) then
```

```
    ; find sample number and starting time
```

```
    ksample    table ksamplenum, p6
    kstarttime table ksamplenum, iarray
    ksamplength = $SAMPLEN

```

```
    if (kstarttime < 0) then
        kmaxstart = ksamplength - (p3 / inunsamp)
        krand      rand 0.5, irandseed
        kstarttime = (krand + .5) * kmaxstart
    endif

```

```
    ; schedule sample fragment
```

```
    event      "i", 1, ktimepoint, kduration + ioverlap * 2, ksample, kstarttime, ioverlap

```

```
    ; store new starting time for sample
```

```
    kendtime   = kstarttime + kduration
    if (kendtime > ksamplength) then
        kendtime = kendtime - ksamplength
    endif

```

```
endif  
tablew kendtime, ksamplenum, iarray
```

```
; advance time, duration and sample number
```

```
ktimepoint      =      ktimepoint + kduration  
kduration       =      kduration * ifactor  
ksamplenum      =      ksamplenum + 1  
if (ksamplenum > inumsamp) then  
    ksamplenum  =      1  
endif
```

```
endif
```

```
endin
```

```
instr 3
```

```
; generates the track for performer p4, track p5
```

```
iperformer      =      p4  
itrack         =      p5  
itable1        =      iperformer * 100  
itable2        =      itable1 + 1
```

```
; find num of samps, week, day in tables 1-12
```

```
isamps         table itrack, iperformer  
iweek          table itrack, iperformer + 4  
iday           table itrack, iperformer + 8
```

```

ktrigger      init  1          ; instr 3 has only a single action

if (ktrigger = 1) then

    ktrigger    =    0

    ; find out what type of track is to be generated,
    ; then pass on the right parameters to instr 1 or 2

    if  (isamps    =    1)    then

        ; fixed time bracket track with the full 30 second sample
        ; that was recorded by this performer

        ksample    =    iweek * 10 + iday
        event "i", 1, 0, $SAMPLEN, ksample, $STANDARDOFFSET, 0

    elseif (isamps    =    7)    then

        ; end of week fixed time bracket track
        ; featuring all 7 samples in quick succession

        ; initialize tables

        ksample    =    iweek * 10
        event "f", itable1, 0, 128, -7, -1, 128, -1
        event "f", itable2, 0, 128, -2, 7, ksample + 1, ksample + 2, ksample + 3, ksample + 4, ksample + 5, ksample + 6, ksample + 7

        ; randseed the same for all performers

        irandseed    =    iweek * .1

```

```
; determine sample length based on $SUMMARY with slight change per performer
```

```
kfactor      =      iweek - iperformer  
if (kfactor < 0) then  
    kfactor = kfactor + 4  
endif  
kfactor      =      kfactor * $FACTOR + 1  
klen         =      isamps / ($SUMMARY * kfactor)
```

```
; play the samples
```

```
event "i", 2, 0, $FIXBRACKLEN, klen, klen, itable2, irandseed, itable1
```

```
else
```

```
; flexible time bracket track, max. 45 seconds long  
; featuring between 2 and 4 samples, randomly chosen  
; among the week's samples up to the day of this bracket
```

```
; choose a seed for random values based on performer & track
```

```
irandseed    =      .1 * iperformer + .001 * itrack
```

```
; initialize tables
```

```
ksample1     rand   .5, irandseed + .0001  
ksample1     =      int ( (ksample1 + .5) * iday ) + 1 + iweek * 10  
ksample2     rand   .5, irandseed + .0002  
ksample2     =      int ( (ksample2 + .5) * iday ) + 1 + iweek * 10  
ksample3     rand   .5, irandseed + .0003  
ksample3     =      int ( (ksample3 + .5) * iday ) + 1 + iweek * 10  
ksample4     rand   .5, irandseed + .0004  
ksample4     =      int ( (ksample4 + .5) * iday ) + 1 + iweek * 10
```

```
event "f", itable1, 0, 128, -7, -1, 128, -1
```

```
event "f", itable2, 0, 128, -2, isamps, ksample1, ksample2, ksample3, ksample4
```

```
; starting and ending lengths of the cycle between $MINLEN and $MAXLEN
```

```
klenrange = sqrt ( $MAXLEN / $MINLEN )  
klenramid = klenrange * $MINLEN  
kstartlen = rand 1, irandseed + .0005  
kendlen = rand 1, irandseed + .0006  
kstartlen = klenrange ^ kstartlen * klenramid  
kendlen = klenrange ^ kendlen * klenramid
```

```
; play the samples
```

```
event "i", 2, 0, $FLEXBRACKLEN, kstartlen, kendlen, itable2, irandseed, itable1
```

```
endif
```

```
endif
```

```
endin
```