

Knut Vaage:

multiMORF VI

for

amplified solo trumpet in C, 4 amplified brass instruments* and computer
(*Trumpet in C, Horn in F, Trombone, Tuba)

2020

(version 25th of March 2020)

to Erlend Aagaard-Nilsen and NyNorsk Messingkvintett

Programming and processing by Thorolf Thuestad. Visuals by Evelina Dembacke

ACKNOWLEDGMENT:

multiMORF VI is a part of the project multiMORF remix, started on initiative from NyNorsk Messingkvintett. The piece is a remix of multiMORF IV commissioned by Erlend Aagaard-Nilsen, premiered at BrassWind 2013 by Erlend Aagaard-Nilsen and 9 players from Manger Brass Band. multiMORF remix contents of multiMORF V, VI and VII

TECHNICAL NEEDS:

Full quadraphonic PA with sub, 6 microphones (1 mic. on each band instr., 2 mics on solo trumpet), a computer, and a multi-channel sound card is required
Extra: midi-pedal for Solo Trumpet, Egg slicer for Tuba, and optional small bells for Trombone (optional simulate bell sound by strokes on harmon-mute)

ABOUT THE NOTATION OF THE SCORE:

Score is transposed (Horn in F is the only transposing instrument). Accidentals apply for each note only
For detailed info: see Explanation on following pages

DURATION: ca 20 min

Commissioned by NyNorsk Messingkvintett

First performed at BrassWind 2020 by Erlend Aagaard-Nilsen and NyNorsk Messingkvintett

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EXPLANATION:

General instruction:

This piece gives all the involved performers freedom to improvise inside the “rules” given in score.

The score is structured into 10 pages. There are no parts available. All the players must get a copy of the score. The soloist will decide if some pages should be played more than one time, and if so, in what order, otherwise, follow page order. The duration of each page can be from 1 to 3 min, and should differ if played more than one time.

Inside each page there are senza misura bars. The soloist will give cues (following the score order). The length of each senza misura bar (between 5 sec. and 1 minute) is from choice of the soloist.

The duration of the whole piece may differ between 15 to 30 minutes adjusted to the performance situation.

SIGNS AND ABBREVIATIONS:

—————>	continuous sound (Brass: breath when needed, stagger breathing. Optional circular breath)
REP —————>	repeat the previous action
— GRAD. TO —>	gradually changed into (e.g. transform by little by little mixing next action more and more into previous action. The performer may vary the way of mixing or “morphing”)
—————>FADE	keep note until “FADE”, and fade from that point during next cue
KEEP ALL —————>	(electronics only) gradually making a chord by keeping all notes from given scale
—————	continuous sound no more than one breath per action
f(pp)	double dynamic (first one indicate how to play and how to sound in PA, next one (in bracket) sound level without amplification)
DM:0-AW:	distance to microphone from zero to away from mic, e.g:
DM:0	as close as poss. (brass: optional inside bell)
DM:2	distance to mic. 2 cm
DM:10	distance to mic. 10 cm
DM:AW	away from mic. (outside mic. range)

Very soft sounds can be rich and full because of microphones. It is important to follow the score instructions for distance to microphones.

The solo part is rhythmically free from the brass band. Even so it is necessary to keep track on what the band is doing to give cues

The given material indicates what and how to play. When GRAD. TO, arrow is used, change the material from the first to the second phrase - before and after the arrow (see above)

When repeating a notated cell, differ the length, and the start/stop point.

The technical informations are always connected to the notated cell, so that the player must switch back and forth the different settings while morphing.

Solo trumpet in C:

Follow instruction for brass ensemble below

Soloist will optionally handle a midi-pedal to control some effects explained in score

The soloist will have two mics; one for effects and one for amplification

ABBREVIATIONS (soloist only):

Sosu: soft sub sound (less vibration in lips, extremely slow air stream)

3,2,1... like 1,2,3... below, but start with the whole gesture, reduce according to instruction

ELECTRONICS:

It is possible to perform the piece without the soloist having an electronic solo part

If the soloist electronics is used, a midi-pedal with following programming will be needed:

I Delay (surround)

II Ring buffer

III Freq. shifter

IV Sustainer

Brass ensemble:

ABBREVIATIONS:

1,2,3... notated w. dotted bows, optional repeat of phrase according to bow instructions

Cm: cup mute

Cmc: cup mute closed

Hm: harmon mute (on Horn in F, opt. use a harmon for Bass Trombone)

Wah: harmon mute, tube in

T.O: remove tube from harmon mute

Fm: fibre mute

Fmc: fibre mute closed

Prm: practicing mute

Pm: paper mute: press a suitable paper w. hand firmly and flat on top of bell, optional stiffer on bigger instruments (paper mute is not used on Tuba)

sB: snap w. nail on bell or harmon mute to get bell sound (not used for soloist)

blA: blow air

Lscr: lip scratch: lips firmly pressed and slow air stream to make sound similar to Vln. scratch

LflzA: lip flutter w. air: flutter w. lips (softly pressed), small distance to mouthpiece to avoid tone

LflzH: lip flutter, harmon mute

LflzW: lip flutter, wah-wah mute

TflzA: tongue flutter w. air

TflzW: tongue flutter, wah-wah mute

LTflzA: combine lip and tongue flutter w. air
 LTflzW: combine lip and tongue flutter, wah-wah mute
 LTflz: Tuba only (hand muting not possible on Tuba)
 2off/2on: take off/put on valve slide on 2de valve
 PFs: blow as pan flute into tuning slide (if greasy, lips can have 1 mm distance)
 PFi: Solo Trumpet only: blow as pan flute into instrument, adjust instrument/microphone/body to make it possible: lower the mic, neck back, bell up
 vS: valve sound: the sound from pressing and lifting the valve, listen to both. The action must be firmly, but not too fast
 vCl: valve click: make perc-sound with valves (might be a given pitch; fingered as if played)
 tG: tuning gliss: gliss. by using 3. valve (tuning) slide trigger
 1/2: half valve gliss: press all valves half way down to make it poss. with full range gliss.
 Fp: finger pop: pop on mouthpiece (on instrument) w. flat fingertips
 Hp: hand pop: pop on mouthpiece (on instrument) w. inside of flat hand
 Tp: tongue pop: make "popping" sound by rapidly/firmly "releasing" tongue from palate (resonance into instr., but no normal sound)
 Lp: lip pop: make "popping" sound by rapidly/firmly "releasing" lips from each other (resonance into instr., but no normal sound)
 MP: mouthpiece only
 MP...hiH: mouthpiece only, highest possible, into "cave" made by muting hands
 lwoA: instrument without mouthpiece, blow air into instr.
 LSM: lip smack: make sharp, very short kissing sound 1mm from mouthpiece
 Msm: mouthpiece smack: make sharp, very short kissing sound directly on mouthpiece (possible with or without instrument connected)
 Kss: kissing sustained sound: very slow "kissing" of mouthpiece, slow air stream
 fund: fundamental tone: 1st partial of the harmonic row (varies when pressing valves)
 reach fund: (Trumpet only) try reaching the fundamental. Normally outside instr. range (removing valve slide on 2de valve can make it easier)
 hi.s. ad lib.: high spectrum ad lib: grip fundamental tone in bracket, play highest reachable partials ad lib. Don't compensate for intonation (partials intonation)
 S.R.: suono reale: actual sound, not transposed
 LWppl: listen to/wait for previous player

Technical:

The brass band is treated by a computer with a patch programmed specially for this piece by Thorolf Thuestad. The technician needs to follow the conductor and the instructions in the score. The conductor gives cue for what page, and what senza misura bar.

The patch must be able to run a frame work for each page and directly switch from one page to another. The score indicate what effects that may be used on each page. Between the pages it may be necessary to keep sound in delay, or morph/transform from the active page to the next (given by conductor).

The multi-channel sound card receives the instrument into 6 routings:

Routing 1: Solo Trumpet
 Routing 2: Trumpet 2
 Routing 3: Horn in F
 Routing 4: Trombone

Routing 5: Tuba

Routing 6: loops made by the Tuba-player

PROGRAMMED EFFECTS:

Spectrum generator (spectrum analyzer to noise resonators)

Pitch shifter (no time correction)

Auto tune

Frequenze shifter (distortion)*

Surround delay*

Sustainer*

Reverb

Granulation

Filter bank (equalizer etc.)

Harmonizer (with and without pitch glide)

Sampler (diff. types - e.g. loop samplers)

Morpher (FFT)

Automatized cross fader

Ring modulator

Bit reducer

Analog overdrive simulator (vst plug-in)

Ring buffer*

Concat synthesis (to construct percussive modules)

*also controlled by soloist via midi-pedal

VISUAL TECHNIC:

Visuals made by.....



multiMORF VI

(version 25th of March 2020)

Knut Vaage

ROUTING:
I

Solo C Tpt alt 1

D.M:10

Fmc
hi. s. ad lib.

improvise on highest partials (quasi "seljefløyte": trad. folk flute w. partials only)

pp

1

(b $\overline{\varnothing}$)

2

(b $\overline{\varnothing}$)

3

Fm
off

one long note
small notes: alt. pitches w. rep.
2 off reach fund.

REP

4

Solo C Trpt alt 2

D.M:0

Irr
vS

Lp

vS

Tp

vS

Lsm

f(mp)

GRAD. TO

D.M:5

LflzA

mf

TflzA

ossia

REP

Solo technic/Visual

SOLO ALT 1: DELAY AD LIB. (OPT. RING BUFFER)

SOLO ALT 1: GRAD. DISTURBED, FREQ. SHIFTER

Technical

SOLO ALT 2: RING BUFFER

SOLOIST ALT 2: CONCAT SYNTHESIS (CONSTRUCT PERC MODULE)

EFFECT 1: GENERATE HARMONIC SPECTRE FROM HN/TBN/TUBA FUNDAMENTALS

EFFECT 2: OUTPUT BRASS 8vb

EFFECT 3: SURROUND DELAY ON SMALL BELLS/HARMON-NAILS

LOOP FROM TUBA

GRAD. TO

FADE E. 2 (20 sec.)

SOLOIST ALT 1: GENERATE HARMONIC SPECTRE

HIGH SPECTRUM (high partials only)

fb10

BRASS INTO DELAY

BELLS INTO SUSTAINER

GRAD. TO

fb90

BELLS INTO SUSTAINER

LOOP GRAD. INTO GENERATOR

Trumpet 2

II

①

TUTTI BRASS:
D.M:5

2 off reach fund.

pp

②

bend

mp

③

REP

(TACET)

④

2 on

Fm

improvise on highest partials (quasi "seljefløyte": trad. folk flute w. partials only)

hi. s. ad lib.

D.M:10

Fm

off

(TACET)

Horn in F

III

fund.

8vb

pp

(TACET)

D.M:10

Fm

improvise on highest partials (quasi "seljefløyte": trad. folk flute w. partials only)

hi. s. ad lib.

Fm

off

(TACET)

Trombone

IV

sB

improvise w. soloist, silent meditation, long rests

pp

(TACET)

Tuba

V

loop

bend

REP

(TACET)

D.M:10

Fm

improvise on highest partials (quasi "seljefløyte": trad. folk flute w. partials only)

hi. s. ad lib.

Fm

off

(TACET)

Tuba loop

VI

PLAYBACK LOOP

pp

STOP LOOP

D.M.:5
 one long note
 small notes: alt. pitches w. rep.

Solo alt 1
 Solo alt 2
 S.tech./Vis.
 Techn.
 BRASS:
 D.M.:0
 Trpt 2
 Hn
 Tbn.
 Tu
 Loop

D.M.:5
 LTflzA
 LTflzAH
 LflzA
 TflzA
 D.M.:5
 Lscr
 ord.
 (continuing pitch from start of 2)
 D.M.:0
 Irr
 vS
 Lp
 vS
 Tp
 vS
 Lsm
 REP
 before next page
 SUSTAINER and
 SOLOIST ONLY

SOLO ALT 1: GRAD. DISTURBED, FREQ. SHIFTER
 SOLO ALT 2: RING BUFFER
 SOLO ALT 1: RING BUFFER
 SOLO ALT 2: GRAD. DISTURBED, FREQ. SHIFTER
 SOLOIST ALT 1: CONCAT SYNTHESIS
 E.1: HARMONIC SPECTR. ON TBN.(RAISE AD LIB)
 E.2: GRANULATION ON TBN. (+/- AD LIB)
 E.3: CONCAT SYNTHESIS FOR BRASS vS
 E.3: DELAY ON BRASS (- TBN)
 fb:10, t: fader
 E.3: INPUT OFF (FADE)
 E.1&2: TBN: ADD SUSTAINER soft dynamic level
 E.1&2: ADD GENERATOR & GRANULATOR

①
 ②
 ③
 ④
 LWppl
 vS
 SLOWLY
 Tp/Lp
 RAPIDLY
 (TACET)
 D.M.:3
 LTflzA
 LflzA
 TflzA
 ossia
 REP
 D.M.:3
 LTflzA
 LflzA
 TflzA
 ossia
 REP
 D.M.:3
 LTflzA
 LflzA
 TflzA
 ossia
 REP
 D.M.:3
 LTflzA
 LflzA
 TflzA
 ossia
 REP
 D.M.:3
 LTflzA
 LflzA
 TflzA
 ossia
 REP
 optional TACET if soloist choose
 save loop for later use

Solo alt 1

D.M.:5
1/2 Cmc

p

10 12 13

impro: gradually
less span of pitch
into microtonal bends
or microtonal pitch change

before next page
DELAY ONLY
(optional soloist)

REP

Solo alt 2

D.M.:5
Cmc
lento

1,2,3...

p

GRAD. TO

1/2

optional:
impro. by variate ad lib
or playing melody (cont. w 1/2)

S.tech./Vis.

SOLO: RING BUFFER

Techn.

E.1: HARMONIZER ON TRPT 2 AND TBN: SPLIT INTO MULTI.THIRDS

E.1&2: HARMONIZER FADE

E.3: LOOP FROMN TUBA: CONCAT SYNTH./INTO DELAY - TUNE

E.3: PLAYBACK/TRANPOSE LOOP AD LIB

TUBA.: CUT INPUT DELAY

BRASS INTO
DELAY

before next page
DELAY ONLY
(optional soloist)

pp

Trpt 2

①

D.M.:5
1/2 Wah

mf

②

Senza misura (individual gliss)

ad lib. gliss, lento

T.O

Hm

mf

GRAD. TO

tG

ppp

Hn

D.M.:5

Hm 1/2

ppp

ad lib. gliss, lento

mf

GRAD. TO

tG

ppp

Tbn.

D.M.:5

Wah

f

D.M.:10

T.O

ad lib. gliss, lento

Hm

mf

GRAD. TO

tG

ppp

Tu

D.M.:5

Cmc 1/2

ppp

ad lib. gliss, lento

mf

GRAD. TO

tG

ppp

Loop

6/4

vS Lp vS Tp vS Lsm

(loop continue)

(volum ped)

STOP
LOOP

Tbn. may use small gliss
instead of tuning gliss (tG)

optional octaves

D.M.:20 *secco*

Pm

ff

secco

D.M.:AW

Pm

fff

Solo alt 1

Solo alt 2

S.tech./Vis.

SOLO: SUSTAINER

SOLOIST: SUSTAINER (control output etc.)

Sep: 2 sec.

E1: GRAN. (HEAVY RHYTHM) ON BRASS

E2: DELAY INPUT (ADD DISTR.)

GRAD. TO

E1:GRAN. ON TUBA ONLY

E2: DELAY ON TRP/HN/TBN (ADD GRADUALLY)

Sep: 0 sec.

NO GRANULATION

E2: CUT INPUT

DELATED ACTION TRPT INTO DELAY (SPEAKERS BEHIND ONLY)

①

②

③

④

⑤

Trpt 2

Pm

Lscr

mp

GRAD. TO

GRAD. TO

D.M.:10

ppp

D.M.:AW 1,2,3

fff

(TACET)

ad lib. ind. rhythms

secco

REP

Pm off

TACET

Hn

Pm

Lscr

mp

GRAD. TO

GRAD. TO

D.M.:10

ppp

D.M.:AW 1,2,3...

fff

(TACET)

ad lib. ind. rhythms

ff secco

REP

Pm off

TACET

Tbn.

Pm

Lscr

mp

GRAD. TO

GRAD. TO

D.M.:10

ppp

D.M.:AW

Pm off

D.M.:5 MP.....hiH

f(mp)

(TACET)

(TACET)

Tu

Fm

Lscr

mp

GRAD. TO

Kss

GRAD. TO

D.M.:AW

fff

D.M.:5 MP.....hiH

f(mp)

(TACET)

Fm off

(TACET)

Loop

16

17

18

19

20

GRAD. TO

GRAD. TO

GRAD. TO

GRAD. TO

TACET

D.M.:10 lento

f espr.

Pm off

before next page
DELAY ONLY

before next page
DELAY ONLY

Sosu
D.M:2 1,2,3...

Solo alt 1

pppp

21 22 23 24

variate ad lib.

REP

D.M:5
one long note
small notes: alt. pitches w. rep.

Solo alt 2

pp

GRAD. TO

LflzA

ord.
(continuing pitch from start of 2)

GRAD. TO

D.M:0
vS Lp vS Tp vS Lsm

Irr

f(*mp*)

REP

SOLO: RING BUFFER

S.tech./Vis.

SOLO ALT 2: GRAD. DISTURBED, FREQ. SHIFTER - - - - -

Techn.

SAMPLE HN/BRASS (DIFFERENT BUFFERS)

Loop 1 Hn.

PLAYBACK HN.

LOOP FROM TUBA

MORPH

GRAD. TO

LOOP FROM TUBA

LOOP FROM TUBA
ADD TUBE DIST
./R.M./CONC. SYNTH.

SOLOIST ALT 2: CONCAT SYNTHESIS

DELAYED ACTION
REPEAT
MORPH
(Hn.-Loop Tuba)

① ② ③ ④

D.M:1
Trpt 2

D.M:1
Fp LWppl

Hp DM:3

TUTTI BRASS:
D.M:3

Prm

ppp

(TACET)

D.M:3
Hn

LTflzA

Prm

ppp

D.M:1
Fp

Hp

vS

REP

D.M:1
Tbn.

blA

D.M:1
Lp

Tp

Msm

REP

D.M:1
Tu

D.M:3
Tp LWppl Lp

Cmc or Prm

ppp

(TACET)

Loop

PLAYBACK LOOP

vS Lp vS Tp

STOP
LOOP

(volum ped)

1,2,3... Cmc (tight closed)
long notes (fermatas) may be done short in repetitions

before next page
SUST. ONLY

Solo alt 1

Solo alt 2

D.M:10

p

25

28

29

S.tech./Vis.

SOLO: RING BUFFER

Techn.

D.D: fb20
GRAN: high sep./slowly
EACH CHORD

GRAD. TO

DELAY GRANULATE (CONTINUE)

GRAD. TO

(TUNE GRAD. UP)

D.D: fb90
GRAN: low sep./fast/pitched
ORG. PITCHED TBN. SAMPL.

BRASS CHORD
INTO SUST.

before next page
SUST. ONLY

①

②

③

④

⑤

⑥

TUTTI BRASS:
D.M:AW

D.M:5
Trpt 2

Hm

ppp

Hm

ppp

Hm

ppp

D.M:5
Hn

Hm

ppp

D.M:5
Tbn.

Hm

ppp

D.M:2
Tu

loop

blA

Lp

REP

GRAD. TO

blA

Msm

D.M:5

GRAD. TO

LTflzH

Fm

off

ppp

fa

PLAYBACK LOOP

blA

Lp

STOP
LOOP

Cmc, combine alt 1&2 ad lib.
1,2,3...
Rapidly

Solo alt 1

Solo alt 2

lento
1,2,3...
pp

SOLO: DELAY AD LIB

REALTIME SAMPLING, PLAYBACK TRANSPOSED
ONE BY ONE INSTR, KEEP ALL UNTIL FADE
(TROMBONE, HORN, TRUMPET 2)

Techn.

(OPTIONAL)

all instr: 1 semi-tone up
Tbn Hn Trpt 2

KEEP ALL

FADE

SAMPLING OF NEW CHORD

all instr: 1 semi-tone up
Tbn Hn Trpt 2

KEEP ALL

D.M:10
Trpt 2

Cmc
pp

FADE

D.M:10
Hn

Cmc
pp

FADE

D.M:10
Tbn.

Cmc
pp

FADE

Tu

D.M:3
LTflzA

f(mp) Gliss

PLAYBACK LOOP
use loop from page 2

vS Lp Tp vS Lsm

Euph.

mp

GRAD. TO

GRAD. TO

Irr (not rapidly)

35 36 37

0

OPTIONAL: Wah (+=closed, o=open) 1/2
OR: Cm 1/2 w.out +/- (combining Alt 1 &2 is possible if Cm)

9

OPTIONAL: Wah (+=closed, o=open) 1/2
OR: Cm 1/2 w.out +/o (combining Alt 1 &2 is possible if Cm)

lento

Solo alt 1

pp

38

39

40

GRAD. TO

f

41

3,2,1...

Solo alt 2

1,2,3... Cmc (tight closed)

p

continue page 10

S.tech./Vis.

SOLO: RING BUFFER

Techn.

AUTO-TUNE (pre-programmed pitches triggered by Tbn-gliss)

Tbn/Hn

#2

#3

Tbn/Hn

pp

①

②

③

④

⑤

⑥

trigged from Tuba

Fm

variate rest

variate by changing tone into Lp and Tp, if so: D.M: 0

REP

Trpt 2

p secco

Hn

D.M:5

1/2

pp

Tbn.

D.M:5

pp

D.M:10

Fm

variate rest

trigged from Eb Cnt

variate by changing tone into Lp and Tp, if so: D.M: 0

REP

Tu

p secco

Loop

■

NB
noter
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The musical score is for 'The End of the World' by John Adams. It features several staves and technical instructions.

Staves:

- Solo alt 1:** Treble clef, starting with a forte (f) dynamic, marked 'Irr' (irregular) and 'rests ad lib' (ad libitum). It includes a 'GRAD. TO' (gradual transition) section.
- Solo alt 2:** Treble clef, starting with a piano (p) dynamic, marked 'p' (piano).
- S. tech./Vis.:** Technical and visual instructions, including 'SOLO ALT 1: DELAY AD LIB.', 'SOLO ALT 2: RING BUFFER', 'REALTIME SAMPLING, PLAYBACK TRANSPOSED', 'FADE IN/OUT, KEEP CHORD UNTIL FADE', and 'OPTIONAL: SOLO ALT 2: SUSTAINER'.
- Techn.:** Technical instructions for the brass section, including 'SAMPLE CHORD (without Tuba-loop)', 'PLAYBACK CHORD 1 SEMI-TONE UP', 'PLAYBACK CHORD 1 SEMI-TONE UP', 'PLAYBACK CHORD 2 SEMI-TONES DOWN', and 'BRASS CHORD INTO SUST. w. Tuba loop'.
- Trpt 2:** Treble clef, starting with a piano (pp) dynamic, marked 'Cmc' (C major).
- Hn:** Treble clef, starting with a piano (pp) dynamic, marked 'Cmc' (C major).
- Tbn:** Bass clef, starting with a piano (pp) dynamic, marked 'Cmc' (C major).
- Tu:** Bass clef, starting with a piano (pp) dynamic, marked 'Cmc' (C major), with a 'loop' instruction.
- Loop:** Bass clef, starting with a piano (pp) dynamic, marked 'PLAYBACK LOOP'.

Technical Instructions:

- SOLO ALT 1: DELAY AD LIB.**
- SOLO ALT 2: RING BUFFER**
- REALTIME SAMPLING, PLAYBACK TRANSPOSED**
- FADE IN/OUT, KEEP CHORD UNTIL FADE**
- OPTIONAL: SOLO ALT 2: SUSTAINER**
- PLAYBACK CHORD 1 SEMI-TONE UP**
- PLAYBACK CHORD 1 SEMI-TONE UP**
- PLAYBACK CHORD 2 SEMI-TONES DOWN**
- BRASS CHORD INTO SUST. w. Tuba loop**

Dynamic Markings: f, mp, p, pp.

Articulations: Accents, slurs, and various note values.

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