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A Sea Lament

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A SEA LAMENT

By

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ABSTRACT

This piece is composed for the Florida State University Electric Chamber Orchestra (EChO). Being an entirely electronic ensemble, it is an area very few composers are accustomed to. EChO is comprised of entirely electric instruments with no resonating bodies. The ensemble includes an electric string quintet (two violins, viola, cello, and bass), two electric wind instruments, or EWI's, a Kurzweil keyboard, and an electric percussion section that consists of a Xylosynth and an Octapad. All of the instruments are processed through a computer with various effects in real time and then played through a hexaphonic surround speaker system. However, the Kurzweil can be substituted for similar synthesizer's if unavailable; descriptions of the desired sounds are found within the appendix. Similarly, the Xylosynth may be substituted for similar midi capable percussion instruments such as the Malletcat, and the Octapad may be switched with other pad triggered devices if the primary is not available. The piece is best heard when played back through a 6 channel surround sound setup, however, playback in a 4 channel setup is acceptable. As far as plugins go, Sound Designer, which is used in all of the movements, is available in Apple's Logic 9 pro. However, for the first movement, Soundtoy's Crystallizer as well as Tremolator, are required and are highly integrated parts of the piece that cannot be performed without. The only movements that can be performed with default Logic plugins are movement two, Fade, and movement three, Something Rich and Strange.

Other technologies that are highly suggested for a successful performance are a minimum 16 channel mixer, preferably digital, an 8 channel stereo headphone amp, and iMac computer with a minimum of 2.0 ghz processing power as well as 4 gigabytes of DDR RAM. In the included diagram of the ensemble's setup there are two computers in the back as well. One used by the percussionist and one used by the keyboard player. These are not required but do help alleviate processing stress on the main computer. If you have other computers with Logic 9 on them, I suggest you use them as pictured in the setup in the appendix for ideal routing and processing.
INSTRUMENTATION

Electric Wind Instrument
- Xylosynth
- Octapad
- Handsonic
- Violin 1
- Violin 2
- Viola
- Cello
- Double Bass
- Keyboard

Duration ~ 13:00
MOVEMENT I: “CORAL WAVES”

The first movement is based upon the text from Shakespeare's *A Sea Dirge*, “Of his bones were coral made” and “Those are pearls that were his eyes” and like the rest of the work, is based on different sea imagery. These specific texts translated in the first movement into lots of uneven measures and ebb and flow within the ensemble. The entire first movement is narrated by the vibraphone, which weaves in and out of the measures with constant sixteenth notes, moving through the progressions similar to a jazz musician would do with changes during a solo. Around the soloist, the ensemble swells and sinks, twists and turns, just like the rhythm of the ocean. Lots of extended harmonies such as 9th's and 11th's are used to give an amorphous texture by moving away from triadic movement. It should also be noted that the ensemble is locked into a click track, allowing automated effects to happen alongside of them. One special use of this is the Tremolator in the strings in the opening measures. While they are holding whole notes, the Tremolator gives the impression that they are rippling in the current with it's synthesized tremolo effect.

Plugins used:
Logic's *Sound Designer*
Soundtoys' *Tremolator* and *Crystallizer*
Ford Heacock

A Sea Lament

I.

Coral Waves
Score

- EWI
  - \( \text{morph}^* \)
  - \( \text{morph} = \text{modulate parameters freely} \)

- Xylosynth

- Violin 1

- Violin 2

- Viola

- Violoncello

- Contrabass

- Piano

- \( \text{Rez.} \)

- \( \text{Rez.} \)

- \( \text{Rez.} \)
as short as possible

as short as possible

as short as possible

as short as possible
#1001, make talk!
EVI

X

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

Pno.

34
Handsonic, #P01, 06
keep 16th note pattern constant  simile

improv

A5  (A + P5 above)

Improv, any e-piano patch
EWI
X
Vln. 1
Vln. 2
Vla.
Vc.
Cb.
Pno.
MOVEMENT II: “FADE”

This movement is based around a "free-time" notation system with cues given by the conductor roughly every 10 seconds; with about 4 cues every measure this equals roughly 40 seconds per measure. Approximate time cues are given every 20 seconds at the top of the score and vertical dash marks are given to show these cues and to help players orient themselves in the music. Black bars in the first and second violin as well as viola parts indicate continuous playing of the actions indicated to them in their parts. The Kurzweil has similar black bars that indicate the knob position on the specified effects parameters from 0%, the bottom staff, to 100%, the top staff. The EWI player is continuously playing just like the rest of the ensemble but has indicated degrees of vibrato as well as short, bursts of sound, or swells. The double bass and cello are unique and are dictated to harmonic glissando between G's in different octaves. The first two tubular bell hits are cued by the conductor, however in the last measure, the percussionist is the only moving part and, as indicated in the score, should “take time” decrescendoing slowly to conclude the piece.

It should be noted that with all of the instruments, once they enter, they continually play throughout the rest of the movement. The premise of the movement is to create a snowballing effect of layering and forward movement which climaxes in the 'cross-fade' counter glissando at the end of measure 4 leading into measure 5.

Plugins used:
Logic's Sound Designer
II, FADE

PARAMETERS:
1: TIMBRE  4: EFFECT
2: MOD      5: REVERB
3: ENVELOPE 6: MOD. WHEEL
7: PITCH BEND

*NO MORE THAN TWO PARAMETERS AT A TIME WILL BE USED

Knobs and wheels are to be turned gradually over specified time lengths, player's discretion is to be used to
determine how fast or slow that should be. Charts are guidelines and players are encouraged to improvise within the
general parameters given.

Strings

String players are given several harmonics in a outlined box. As specified in the score, players are to
slowly alternate between each given harmonic at their own desired pace and rhythm. String players continue
playing throughout entire movement once they enter, as indicated by the horizontal black line.

Percussion

The percussionist will be playing tube bell or chime samples and will be cued by the conductor when to
strike. As the piece moves on however, the percussionist gains more freedom. In measure 4, just like the strings, the
percussionist is given a selection of notes to choose from. He may hit any of these notes at any desired pace and
rhythm, however, he should be conscious of the ensemble's own pace and make an educated decision.

EWI

For a majority of the movement, the EWI acts as a drone with occasional sudden bursts and swells. These
swells are indicated by the black sideways triangle in the score. Also notated in the EWI part is vibrato intensity.
The larger the jagged line, the more intense the vibrato and sound should be. Also notated are pitch bends up and
down with tails in either direction coming after the swells. Just like the other parts, in measure 3, the EWI is
allowed to freely choose between several notes and may also alternate between them with discretion.
Ford Heacock

A Sea Lament
II.
Fade
Score

FADE in

0"
(lowest octave)

20"
(short, loud swell)

40"

EWI

vibrato

mf

Tubular Bells

mf

FX

see key beforehand

Kurtz

hold for whole movement

Violin 1

slowly alternate between

Violin 2

slowly alternate between

Viola

slowly alternate between

Violoncello

Contrabass

(continue)
choose any note given

increase in intensity

3

1:20

1:40

(leave at 50%)
4
accel.
simile

use given notes, increase intensity at own rhythm

stop, let ring

improv w/parameters

slowly pitch bend 100% downward (e-flat to d-flat)
FADE out

2:28

3:00

EWI

Tub. B.

take time, FADE into darkness

FX

Kurtz

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

FADE out

FADE out

FADE out

FADE out
MOVEMENT III: “SOMETHING RICH AND STRANGE”

This movement is a culmination of both the first and the second. Starting off slow on a D-flat unison, *Something Rich and Strange* emerges from the same depths that *Fade* left and grows into something similar to yet different from the first movement, *Coral Waves*. Quick rhythmic patterns in the keyboard and Xylosynth drive the movement as it progresses harmonically downwards by major third from D-flat, to A to, F, and back to D-flat.

Plugins used:
Logic's *Sound Designer*
Ford Heacock

A Sea Lament

III.
Something Rich and Strange
Ob.  

Vib.  

driving force  

Kbd.  

Vln. 1  

Vln. 2  

Vla.  

Vc.  

Cb.  

mf  

#1014  

mp  

p  

arco  

4
Ob.  
```
\[ f \]
```

Vib.  
```
\[ f \]
```

Kbd.  
```
\[ f \]
```

Vln. 1  
```
\[ f \]
```

Vln. 2  
```
\[ mf \]
```

Vla.  
```
\[ mf \]
```

Vc.  
```
\[ mf \]
```

Cb.  
```
\[ f \]
```

---

`\( \text{rit.} \)\quad \text{double time} \quad \text{double time}`

---

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APPENDIX

**Automation:** The technique of making an apparatus, a process, or a system operate automatically. Used in DAWs such as Logic Pro 9 to control parameters such as volume and panning.

**Crystallizer:** A *Soundtoys* company plugin, Crystallizer combines granular reverse echo slicing and retro pitch processing to create a large range of sonic manipulations.

**DAW:** Digital Audio Workstation. i.e. Logic Pro 9, Digital Performer, Protools

**Delay:** Is an audio effect which records an input signal to an audio storage medium, and then plays it back after a period of time.

**Equalization:** Also known as EQ, is the process of boosting or cutting the level of certain audio frequencies or tones compared to other frequencies.

**EWI:** Electronic Wind Instrument

**Fader:** A vertical slider which is used to remotely set the level of a sound channel. Found on mixers and DAWS.

**Handsonic:** Is an electronic hand percussion multi-pad with MIDI triggering capabilities.

**Headphone amp:** An audio amplifier designed to power headphones instead of loud speakers. Used to set different mixes in players ears to help them play better with the ensemble.

**Kurtzweil:** Used in this piece specifically is the Kurtzweil PCLE8. This is a powerful synthesizer with hundreds of on-board sounds and is capable of altering and layering the sounds in many ways.

**Logic Pro 9:** LP9 is a DAW produced by Apple only available for use on Mac computers.

**MIDI:** Also known as Musical Instrument Digital Interface, MIDI is an industry standard digital language used by musical instruments and computers to communicate with one another. For example, with the use of MIDI you can use a keyboard to input notes into your computer.

**Mixer:** An electronic console that consists of faders, pot pans, and other parameters that is used to 'mix' many different audio tracks as well as apply effects and equalization.

**Mod Wheel:** Short for modulation wheel, this is a parameter found on many
synthesizers, such as the Kurzweil, and is used to alter sounds produced by the instrument. Typically, the mod-wheel will control something different for every patch on the synthesizer but common controls are vibrato and tempo rate of effects.

**Octapad:** An 8-pad electronic drum instrument used to either play internal sounds or trigger MIDI signals.

**Phaser:** An audio signal processing technique used to filter a signal by creating a series of peaks and troughs in the frequency spectrum. The position of the peaks and troughs is typically modulated so that they vary over time, creating a sweeping effect.

**Pitch Bend:** Usually located next to the mod wheel on synthesizers, this parameter can move up or down, causing the pitch to move up to a whole step in either direction.

**Reverb:** A series of tightly-spaced echoes. The number of echoes and the way that they decay play a major role in shaping the sound that you hear. Most DAWs have several Reverb plugins that allow you to change the parameters of the reverb such as decay time, pre-delay, and delay length.

**Soundtoys:** An audio company that produces plugins for use inside of DAWs.

**Space Designer:** Logic Pro 9's default Reverb plugin.

**Tremolator:** A Soundtoys company plugin, Tremolator emulates the tremolo effect of classic guitar amps such as the Fender, and even the great tremolo sound of the Wurlitzer electric piano. Through MIDI, can also lock to tempo maps in DAWs allowing the tremolo to occur in time with predetermined rhythms.

**Xylosynth:** An electric marimba that is cable of being played through loud speakers. It has several onboard sounds and is also capable of MIDI triggering.
INSTRUMENT PATCH DESCRIPTIONS

Movement 1, Coral Waves

EWI: #32, Saxophone/oboe sound
Xylosynth: Xylophone/vibrphone; Handsonic #P01, 06, Djembe, congos
Kurtzweil: #219, Warm Pad; #57, e-piano; #1001, square saw lead synth; #164, articulate pad; #217 warm pad with some movement

Movement 2, Fade

EWI: #69, very fat, warm, and bass heavy
Xylosynth: Tubular bells, lots of overtones
Kurtzweil: #91, dark pad, lots of ability to move and shift

Movement 3, Something Rich and Strange

EWI: #32, Saxophone/oboe sound
Xylosynth: Vibraphone
Kurtzweil: #1014, bright, articulate pad, bell-like
TREMOLATOR SETTINGS

CRystallizer SETTINGS

(for movement 1, coral waves)
ENSEMBLE SETUP

COMPUTER

PERCUSSION

KEYBOARD

EWI

VIOLIN2

CELLO

BASS

VIOLIN1

VIOLA

CONDUCTOR

MIXER

COMPUTER

HEADPHONE AMP/EQ
BIOGRAPHICAL SKETCH

Ford Heacock, a native of Lakeland, FL is a classically trained bassoonist and composer of acoustic and electronic music. Enrolling in Florida State University in fall of 2006, Ford pursued a B.M. in Music Composition and Theory studying with Dr. Richard Zarou and Dr. Mark Wingate and Mr. Keesecker in bassoon. Over the course of his undergraduate studies, Ford had several successful performances of his works including a commissioned work by faculty member, Norma Mastrogiacomo, for duo piano. Other works included small chamber pieces such as Traurigkeit, for Violin and Piano, as well as Traffic, for brass band. Continuing with his undergrad work, Ford also collaborated with the FSU Film School and completed several film scores. Graduating in spring 2010, Ford decided to continue his studies at Florida State and began his M.M. in Music Composition and Theory. During his masters studies, Ford completed a 5.1 surround media piece, Saigon, which was accepted into the SEAMUS international music festival at the University of Miami. That same semester Ford was also commissioned, along with two other composers, to rewrite a film score for one of three 1920’s silent movies. Currently, Ford primarily writes electro acoustic works, including several Stereo playback pieces for dance.