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THE SWORD OF TRUTH, TRIBUTE SYNTHESIZER SUITE

A Thesis

Submitted To The Mary Pappert School Of Music

Duquesne University

In partial fulfillment of the requirements for

The degree of Master of Music in Music Technology

By

Jay Pellis

May 2008

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Jay Pellis

2008

THE SWORD OF TRUTH, TRIBUTE SYNTHESIZER SUITE

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ABSTRACT

THE SWORD OF TRUTH, TRIBUTE SYNTHESIZER SUITE

By

Jay Pellis

May 2008

Thesis supervised by Professor William E. Purse

This thesis is by graduate electronic composer Jay Pellis and provides an in depth discussion of composition techniques, music technology processes and notation examples for an original musical work based on Terry Goodkind's epic fantasy "The Sword of Truth." Various characters in the text are set to music similar to the "leitmotif" technique used by operatic and film composers such as Wagner and John Williams. Blind since birth, Jay Pellis used advanced computer software to create this work on a Windows PC. The thesis details the processes used to develop and perform his major work such as: musical computer techniques, sequencing software usage, keyboard synthesizers and an electronic wind controller. This electronic composition was performed live at his graduate recital and submitted as a major composition for a master's degree in music technology/electronic composition. Jay Pellis in addition discusses the expressive freedom music technology provides to a visually impaired musician.

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THE SWORD OF TRUTH, TRIBUTE SYNTHESIZER SUITE By Jay Pellis

Introduction

Tributes by fans of author's works have increased in complexity over the years, thanks to the Internet. The early days had written fan fiction. Now however, artists are producing such things as videos as well as musical tributes. I chose to do the latter for performance in a recital, required for my master's degree in music technology/electronic composition.

When deciding what to compose, I knew I wanted it to be a tribute to a written fantasy series of novels as well as a programmatic suite. Do to time requirements within the recital, the performance was recommended to be between 20 and 30 minutes in length. While considering what to base this music on, I was reading the final book in Terry Goodkind's epic fantasy series "The Sword of Truth." I wondered what various characters set to music would perhaps sound like, thus I decided to create such music in a "Sword of Truth" tribute.

The Story Synopsis

The series of stories features a wide array of very detailed characters and their struggle to rid the land of an evil imposing empire. The suite depicts the labors of three mainstay characters that are considered to be the main protagonists in all novels. These are the warrior Richard Cypher, the magic user Kahlan Amnell, and a wizard named Zeddicus

Zu'l Zorander. These novels do include stereotypical fantasy characters but they also depict the struggle of not only good against evil but of man against himself. Richard Cypher starts out as a simple woodsman but later becomes a king like ruler who must make life-altering decisions that not only affect him and those around him but sometimes the entire world in which he lives.

The Composition Software And Related Technology

I have been blind since birth but that has not stopped me from accomplishing whatever I may set out to do, especially when music is concerned. From an early age, I was able to memorize anything heard and play it back almost instantly. I also discovered that I had perfect pitch. This memorization ability lead me to play in a high school marching band and later in various jazz bands. Melodies of pieces were memorized from original recordings, recordings that were made for me by someone or even at rehearsals.

Thanks to today's technology, I am able to do almost everything that a sighted person could do using a Windows PC, including using music oriented applications. This is done through the use of a program called a Screen Reader, which can start when Windows starts and runs in the background. It lets a blind or visually impaired person use the keyboard to navigate such things as the Windows desktop, the start menu and other Windows applications. It gives feedback via synthesized speech through the computers soundcard or through an externally or internally installed speech synthesizer. The various voices that can be chosen can sound robotic or realistic, with the realistic selections requiring a good amount of hard drive space, RAM and a faster processor in order to respond quickly to user input. Screen readers cost between \$900 and \$1100 and

software updates can be free but are typically sold for between \$100 and \$200. My screen reader of choice is Jaws for Windows developed by Freedom Scientific. The Florida based company not only develops Jaws but other technologies for the visually impaired as well such as a talking PDA like device. Jaws has the ability for users to write configuration or what are called Script files that add support for applications that may not be supported from the factory. Dancing Dots, a company located in Philadelphia Pennsylvania have developed scripts for music applications, namely Cakewalk's Sonar digital workstation application and Twelve Tone System's Sibelius notation program. The scripts must be purchased along with a copy of one of the above applications in order to give a user access to them. That being said, the user is given a fully keyboard driven interface to the applications, as well as tutorials in order to learn the keyboard commands required. Cakewalks Sonar was used in the composition of this suite, using Sonar version 7 along with the related dancing dots scripts entitled Cake Talking 7. The keyboard access includes such features as the editing of notes if an unwanted note is entered, information on the current measure, time signature and over all information on the piece being written. Other features include access to a metronome for playing along with while recording, as well as the ability to change said metronome's tempo.

I have learned music theory and music terminology over the years and doing this has greatly enhanced my memorization skills. I am not just memorizing what I am hearing but analyzing it as well. When composing however, I tend to favor listening to what chords and melodies will sound like together instead of relying completely on aspects of theory. This suite was recorded using the real time recording feature of Sonar which works similar to the way in which a tape recorder records. When recording with a

metronome click turned on, whatever is played on an electronic keyboard is what will get recorded. If not playing for two measures for example, then rests will get recorded into a piece. While not being a keyboard player, I find it easier to input parts such as percussion and chords in to apiece following a metronome in real time, instead of inputting such things one note at a time. If a fast passage is required for a piece that is not playable for me on keyboard, the tempo can be slowed down to accommodate such passages.

The Following Equipment Was Used In Composing This Suite:

- Computer running Windows XP Home Edition
- Jaws for Windows version 9
- Cake Walk sonar version 7 along with the related Cake Talking 7 jaws scripts
- Installed computer components included SoundBlaster Audigy 2 soundcard for outputting Windows sounds
- M-Audio delta 2496 soundcard for music recording
- Triple talk PCI internal speech synthesizer card for outputting jaws speech
- Mackie 1402VLZ mixer
- M-Audio MIDI sport 4x4 MIDI interface
- Yamaha Motif XS 61 workstation MIDI keyboard
- Yamaha WX5 MIDI wind controller
- Roland XV5050 MIDI sound module with Patchman music volume 1 Wind controller soundbank installed

When all of this equipment is configured properly, I am able to select the various instruments of the Yamaha Motif and Roland XV5050 such as strings, piano etc through Sonar with jaws speaking the instrument names. Thus I am able to assign different instruments to different tracks, french horn track 01, piano track 02 etc. This then lets me move between instruments, recording each instrument separately from one another as well as doing tasks such as editing notes.

The Yamaha WX5

Since I am not primarily a keyboard player, I at first found it daunting as to how I would compose certain parts of this suite. My main instrument has always been saxophone, thus I was drawn to the Yamaha WX5 wind controller when first seeing it in 2001. This clarinet like device translates a user's breath and lip pressure as well as other sensors in to MIDI data, which then can be sent to a connected synthesizer. This enables a wind player to emulate other instruments such as guitar or flute in both composing and live performance situations.

Soon after seeing it demonstrated, I purchased the wx5 along with it's related Yamaha sound module, the Yamaha VL70M. This module was specifically made to be used with a Yamaha WX series wind controller and uses a form of synthesis called physical modeling, which purports to realistically emulate acoustic wind instruments through computer processing. While pursuing my master's degree, I joined an electronic ensemble group, which heavily exposed me to the various uses and techniques of this unique electronic instrument. I soon learned that not only could this instrument be used in live performance but also in MIDI sequencing using a computer. Since the Yamaha

VL70M was not made for that kind of use, I sought an alternative. The company Patchman Music produces sets of sounds called soundbanks that can be loaded in to various synthesizers and after purchasing such a bank for the Roland xv5050 module, I was ready to start using the WX5 for composition purposes.

The Pieces

This suite consists of seven movements, each representing a different character, collection of characters or thing in the "Sword of Truth" series. I had two goals in mind when composing this suite, to try to put the epic essence of this series to music as well as to write a programmatic score that included minimalist atmosphere. Since the recital was an electronic performance recital, the parts were written for wind controller, two keyboard players and electronic drums.

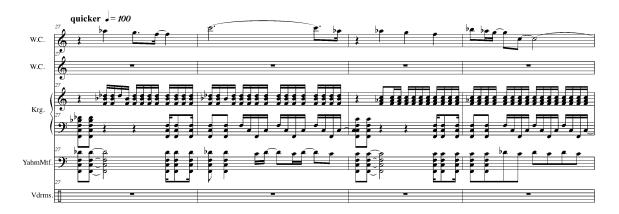
You will find below a brief explanation and analysis of each piece, with emphasis especially placed on the passages composed with the WX5 wind controller. The use of this device let me input passages requiring one note be played at a time such as melodies much easier then playing them on a keyboard. The WX also let me use features such as de crescendos, crescendos and other expressive techniques that are simply impossible to play on a keyboard.

Richard Cypher & Richard Rahl's Theme

This piece is written for one of the main protagonists in the series, a young man named Richard Cypher. Like parts of other pieces in this suite, the beginning passages include written measures but I instructed the players to play some of the rhythms freely. This

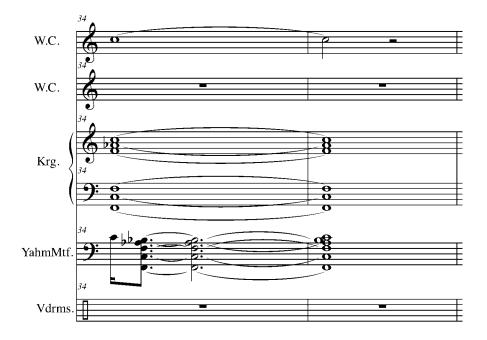
was done to introduce the character of Richard Cypher, a simple woods guide who at the beginning of the series is found alone in the woods, grieving after his father's death. A melody using a flugel horn is introduced soon in to the piece, with accompaniment from a piano layered with strings, as well as a warm synthesized pad instrument to symbolize the calm of the woods and how Richard is slowly healing his grief. A danger lurks in Richard's location however, and this starts to be reflected in the increased sixteenth note movement of the piano as each repeating passage is played slowly, then gradually increases in speed.

Figure 1. (Measure 27 Through 30)



This danger is thwarted however by Richard and a young woman who he saves from assassins pursuing her. This is demonstrated with the melody and accompaniment eventually playing and holding an F chord, with fifths prevalent in the piano.

Figure 2. (Measure 34)



The warm sound of the synth pad is meant to state that the danger is over and the calm of the woods has returned. Richard soon finds that he is the heir to and eventually is ruler of a vast empire and his name is changed to Richard Rahl to reflect this. He then must make haste to not only stop an evil empire bent on slavery and world domination but must also show the people of the land he rules as well as lands beyond that freedom is not only worth fighting for but worth any sacrifice in order to keep. This is demonstrated not only in the french horn introduction to Richard Rahl but also in the middle section of the piece. The main melody is played and the militaristic accompaniment shows the determination of Richard to fight on no matter what he must face.

Figure 3. (Measure 42 To 46)



Figure 4. (Measure 48 To The End Of 51)



Kahlan Amnell the Mother Confessor's Theme

This piece is written for another main character of the series who is just as significant as Richard. Kahlan Amnell, the woman who Richard befriends after saving her from assassins decides to join him in his quest. The beginning of the series sees her as a very distant person, not wanting to tell Richard or others who she is and of the power she has. This is shown in a lone G-minor flute passage, see Figure 5.

Figure 5. (Measure 12 To Middle Of Measure 15)



She is a Confessor, one in an order of magic users created centuries ago when wizards started using people as weapons in a great war. If she is in contact with someone and releases her held in power, it enters said person and reduces them to someone with no thought but to please the confessor in any way possible, including dying on command. Kahlan is not only feared but ridiculed through out the land and is thus a very lonely person. Richard befriends her and eventually marries and loves her for who and what she is, giving her even more reason to fight for the side of good. This is represented in the main melody of the piece, which is in a major key, is played by the flute and a bell like instrument and includes emulative strumming nylon string guitar accompaniment.

Figure 6. (Measure 19 With Pickup, To Measure 24)



Kahlan must help the forces of good later in the series by commanding an army against the forces of the evil empire and this is shown towards the end of the piece. It changes to g-minor with triplet snare drum and guitar accompaniment with the flute slowly moving up a G-minor scale using thirds.

Figure 7. (Measure 28 To Middle Of Measure 30)



Zeddicus Zu'l Zorander the Wizard's Theme

In writing a piece for the wizard of this series, I wanted to invoke a magical atmosphere. This piece thus uses a specific synthesized sound found in the Yamaha Motif XS which mostly holds chords as the melody is played on top of it but also has a short melody of it's own. It is made up of a few sounds layered together. When one note is held, what is heard is for example an A, which sounds like someone is humming it. On top of that is what sounds as if it is a xylophone played in reverse moving up and down randomly through an A arpeggio. What finishes this fascinating sound is a little bit of a phase affect included in the humming. When this sound is played in lower octaves with a low A and E held for a period of time, it invokes if not a magical then a mysterious atmosphere. Zeddicus Zu'l Zorander, usually referred to as Zed, is a mysterious person throughout the entire series, seemingly only revealing what he needs to others in order to

accomplish his tasks. Like Richard and Kahlan before him, he will sacrifice anything to see justice and good prevail. The melody played by a vibraphone crossed with an analog synth sound reflects this in its major key.

Figure 8. (Measure 3 With Pickup, To Middle Of Measure 6)



This continues until the piece is filled out with a warm synth pad playing double octave chords over an eighth note melody. Eventually, to show the stress Zed is under knowing he must use people to get things done, the atmospheric synth comes in with a short melody. This also demonstrates the different sound that is generated when playing different octaves of the Motif.

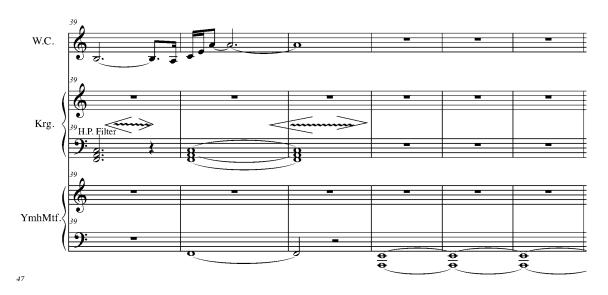
Figure 9. (Measure 33 To 37)



Zed must also use magic to defend himself and others dear to him. One of his offenses is Wizards Fire, a liquid ball of flame that he can cast at enemies. The books describe it as sounding alive, howling and waling as it moves implacably towards a foe. I

wanted that description to be reflected in this piece and luckily the synth pad that holds chords had a way of manipulating its sound to get that affect of something howling and moving forward. That is shown with it holding an F-major chord, with the melody moving in thirds on top of it.

Figure 10. (Measure 39 To 43)



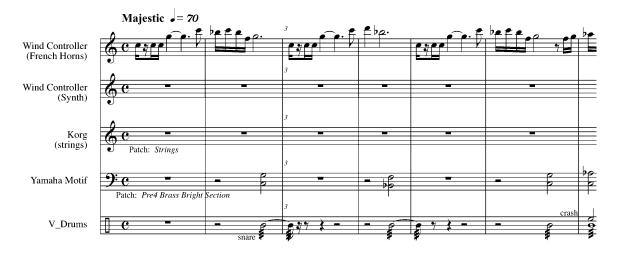
Zed's determination and mysteriousness is again shown in the ending, with the atmospheric synth again holding fifths along with a short vibraphone melody and then eventually softly fading to nothing.

The D'Haran Army

D'Hara is part of the land that Richard rules and their army became his to lead after he brought down the previous ruling dictator. He did not miss the opportunity to start using his army to campaign against the evil empire, the Imperial Order. The soldiers are bonded to whoever rules their land, thus they will serve Richard, even more gladly now

that they aren't under a dictatorship. The soldier's reputation is also legendary, they will fall to the last man if need be and they pride themselves on their prowess in battle. That pride is demonstrated in the introduction. It is separated into a call and response section with french horn playing a phrase and brass and percussion answering.

Figure 11. (Measure 3 To Middle Of Measure 6)



In the next section, the tempo increases with snare drum keeping rhythm while brass plays eighth note chords with the brass playing fifths, sixths and diminished sixths. A minor french horn melody is then introduced, demonstrating the armies resolve to continue through battle after battle until the war is ended. Strings first play an octave higher along with the french horn but then play counterpoint to it.

Figure 12. (Measure 22 With Pickup, To Measure 26)



This continues with some melody changes in strings and french horn and a lone passage containing an analog synth and snare drum accompaniment. This section finally ends with a lone minor decrescendoing and crescendoing french horn passage leading in to the final section of the piece, which is in a major key. This again has a french horn melody with strings that eventually play counterpoint. This still features the resolve of the army but also the glimmer of hope that the final battle is near and the soldiers can finally go back to their homeland.

Figure 13. (Measure 60 to measure 63)

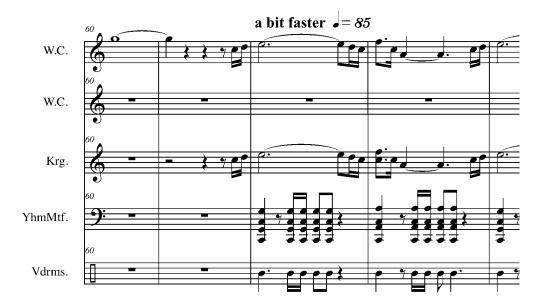


Figure 14. (Measure 75 With Pickup, To Measure 82)



The Imperial Order

With the Imperial Order being the villains of this series, I wanted this piece to be similar in atmosphere to Zed's theme but with an evil undertone. For the beginning section melody, I found a sound on the XV5050 which plays in fourths but has a harsh, sharp synthesized bass sound to it plus it also enables making the sound brighter by blowing harder in to the wx5. In between phrases, a soft reverbed snare drum plays, indicating the unrelenting Imperial army off in the distance, perhaps approaching, perhaps not.

Figure 15. (Measure 22 To Measure 27)



The next section uses another distinctive Yamaha motif synth sound, which uses a strange pitch shifting to give it the evil atmosphere I was looking for. It also is a monophonic sound, which means only one note at a time could be played, thus facilitating easier trill passages. Underneath this melody, the fourths sound plays phrases made up of thirds, repeated twelve times each.

Figure 16. (Measure 33 To 36)



This synth melody continues, finally giving way to a free form section with eighth and sixteenth note random symbol crashes as well as changes in the synth sound. Using the pitch bend and modulation wheel of the Yamaha changes the sound from a straight note to a pitch shifting sound with wide vibrato, which does not have a distinctive note to it at all. These sounds show the pure evil of the Order and the lengths they might go to achieve their goal. The piece then ends with a concert bass drum playing each beat of

each measure with some snare mixed in, simulating the marching of the army, moving through anything in their path.

Figure 17. (Measure 46 To 48)



The Sword Of Truth

Richard not only becomes a ruler of lands in this series but also is named the Seeker of truth by Zed. This naming includes a sword, which Richard can use in any way he sees fit in order to save his friends or perhaps sleigh his enemies. This sword not only is a helpful tool but it can also hinder Richard by causing him pain every time he must resort to killing someone, especially someone human. He therefore tries to resolve conflicts as diplomatically as possible but he will kill if he must. He learns to eventually control the pain and master the skills of the sword.

Since the sword is part of the series title, I wanted to give this piece a few sections that were completely separated from each other and that detailed Richard developing from an unsure fighter in to a skilled warrior. This piece is also in 3/4, unlike the others, which are in 4/4. The first section is in the key of D-minor and revolves around strings, an atmospheric ride symbol and a Celtic flute carrying the melody. This flute melody is stated twice, with the repeat being an octave higher then the first.

Figure 18. (Measure 20 To 36)



The flute then plays in the next higher two octaves, a 12 measure phrase that leads in to the next section which moves up a half step.

Figure 19. (Measure 44 To 56)



Section 2 using a flugel horn demonstrates the mounting intensity as Richard slowly learns what the sword is capable of. The tom rhythm indicates that he is learning to like the battle fever that comes over him almost every time he uses the sword to fight.

Figure 20. (Measure 56 To 64)



The string melody at the end of this section signifies that Richard is ready to use the sword in any way he must to achieve his goal.

Figure 21. (Measure 88 To 96)



Richard's rage at the Imperial order and other evils of the world finally shows itself in the last section piece, which moves up another half step. The forte french horn and toms tell us that he is in battle, fighting for justice and making every attack count.

Figure 22. (Measure 96 To 111)



The piece ends with similar string and tom rhythms as played earlier but with a complex horn rhythm showing that Richard is finally master of the sword of truth.

Figure 23. (Measure 136 With Pickup, To 140)



Richard, Kahlan, The Army Reprise

This final piece is a melding of melodies from previous themes. The wind controller lead is a double octave trumpet and trombone sound which tells the listener that victory is either near or has been accomplished and that the heroes have won. The introduction includes two measure portions of melodies derived from Richard's theme, Kahlan's, Richard's again and finally the D'Haran army, which leads in to the climax of the main section of the piece.

Figure 24. (Measure 3 To Measure 13)



The first part of the main section includes a bit of Kahlan's theme played by brass and bell with snare accompanying. This sounds similar to the D'Haran army theme rhythms and shows how Kahlan has turned from an unsure person into a fighter for justice as well as a person who accepts what and who she is.

Figure 25. (Measure 21 With Pickup, To Middle of 25)



The next few measures have a measure of Richard's theme played by brass, followed by a measure of Kahlan's theme played by bell and snare. This shows both Richard's and Kahlan's love for each other but also that they still will fight when evil appears, even though peace has been restored.

Figure 26. (Measure 30 To 34)



Next is a 4-1-5 chord progression, which states to the listener that even though peace has been restored, evil may still appear in the future.

Figure 27. (Measure 37 With Pickup, To Middle of 41)



Finally there is a militaristic repeat of the Rahl portion of Richard's theme, with the beginning portion of the D'Haran army theme leading in to a bombastic ending.

Figure 28. (Measure 62 To 73)



Performance And Conclusion

As stated above, while recording this suite, I used the Yamaha Motif for the keyboard parts for both players. In preparation for the performance of this at my Master's Recital, I was able to use the Motif for one of the keyboard parts that featured the specific motif

sounds that were desired. For sounds such as strings and guitar, the second player used his own Korg M3 workstation. Using a purchasable Yamaha Motif software editor and also purchasable Jaws scripts, I was able to align sounds in a specific order. This was done so that the player could move from one sound to another by just pressing a button, instead of having to search through the many preset sounds found on the Motif. The editor also let me name the sounds using Jaws and those names would appear on the Motif's screen. I was thus able to name each sound specific to each piece, for example Kahlan's theme bell. I also was able to put in order, with some sighted assistance the sounds needed for most melodies, which were again played on the wind controller using the Roland XV5050. Sounds could then be switched from one to the next directly from the instrument, eliminating the need to remove my hands from the instrument while playing. The Roland electronic drum set used included an orchestral drum kit setting, which featured all the drum sounds I needed such as concert bass drum and snare

The release of various products by Dancing Dots finally allows blind musicians to become equals with their sighted peers in aspects of composition and notation. Though I was given sighted assistance with printing out the scores for performers, the composition itself was done completely independently and I was very enthusiastic to be able to do such a thing. Using the Yamaha WX5 wind controller also gave me much more expressive freedom then I otherwise would have had if trying to compose using a keyboard alone.

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