PHIL WINSOR'S

FORMOSAN ABORIGINAL LEGENDS:
Sky Gods of Tavarong
Sacred 100 Pace Snake
Ritual of Enemy Heads
A Technical and Aesthetic Consideration

Ken Paoli, DMA
College of DuPage
Glen Ellyn, IL USA

ABSTRACT

The Formosan Aboriginal Legends are early computer music videos of American composer Phil Winsor. They include three works: *Sky Gods of Tavarong, Sacred 100 Pace Snake*, and *Ritual of Enemy Heads*. Like many of Winsor's works, full realization involves an intermedia solution with video and audio components. Winsor's writings concerning these computer music videos reveal his technical and aesthetic approach. As an artist constantly involved with changes in technology, these works display a blending of techniques spanning over thirty years.

1. INTRODUCTION

Phil Winsor (b. 1938, Morris, IL USA d. 2012, Denton TX, USA) was a composer, music educator and visual artist. He was a composer of international renown with an impressive resume of compositional fellowships and prizes. He was a Fulbright Fellow, the winner of the Prix de Rome Fellowship, a Tanglewood and Ford Foundation Fellow. Among his teaching posts were professorships at DePaul University, the University of North Texas at Denton (UNT) and National Chiao-Tung University (NCTU). His catalog includes acoustic, orchestral and chamber works, electronic, electro-acoustic and intermedia works which often incorporate film, photography, and dance.

2. BACKGROUND

In 1988 Winsor was invited to Taiwan to help build a computer music studio at National Chiao-Tung University. Winsor recounts in a letter to Daniel Lentz, "So, from 1988-92 I spent about half of each year there and the other half in Texas. Since '92 I have been living there about 2 months of each year, teaching a compressed composition course…"[8]. Winsor eventually reduced his commitment to UNT and spent longer portions of the year at NCTU. Upon the procurement of a three-year contract from NCTU, Winsor retired from UNT.

At some point Winsor and his family visited the Formosan Aboriginal Cultural Village. Michele Winsor recollects visiting with Taiwanese composer Yu chung Tseng, a former student of Winsor's at UNT. The Formosan Aboriginal Cultural Village is an amusement park in Nantou County that features living dioramas of tribal lifestyles and aboriginal traditions. There are nine tribal cultures represented in villages that employ Taiwanese aborigines. The designs of the villages were reconstructed from anthropological sketches from late in the period of Japanese occupation (1930's and 40's) [5]. While at this park Winsor purchased a souvenir book for his daughter, Bethany.

With Winsor's interest in photography, it is likely that this book was purchased for the large number of color photo prints it contained. Eventually, Winsor read the book and the discussion of the various rites and rituals of the indigenous tribes piqued his interest. The book bears his markings and bookmarks that correspond to the legends the used for his computer music videos. Four bookmarks were placed but only three legends were used: the Ceremony of the Dwarfs of the Saisiat Tribe was not realized as a computer music work.

The total time of the three videos is almost 18 minutes. However, they existed as an audio work without video. In the same letter mentioned above Winsor states, "My most recent compositions are like digital musique concrete (what the techies call Acousmatic music). Did one last year (2000) based on Chinese instrument samples called "Formosan Aboriginal Legends" which is almost 25 minutes…"[8]. An examination of his hard drives does not contain the audio only version of the work. However, the author received a CD from Winsor with the original audio versions in 2000. The CD is entitled *Formosan Aboriginal Legends:* Choreographic Computer Music based on Chinese Instrument Samples. The total time of these four works is almost 21' and it includes all four of the legends that Winsor had bookmarked. It should be noted that of the four movements in this version of the work, only the *Sky Gods of Tavarong* is used in the computer music video of the same name.

Around this same time Winsor composed a work for Ku-ch'in and Erhu soloist with Chamber Ensemble and Computer Music entitled Formosan Mosaics: Concert Variations. This work represents a cross-cultural approach as Winsor explains in his program notes:

"The work's title conveys the duality of treatment of the musical material found in the five events of the

piece. On the global scale, I viewed each event as a collage of diverse types of cross-cultural material, ranging from segments of music composed in Euro-American historical period styles to hybrid, digitally cross-synthesized timbres based on traditional Asian and European instrument sources" [10].

This work revisits the quotation technique that Winsor used in the 60's in works like *Melted Ears*.

3. THE LEGENDS

3.1 Sky Gods of Tavarong

According to legend, the ancestors of Tavarong Village were all Sky Gods (the sun and the moon) living in the south. After several generations with migrations and the founding of several other villages, the Sky Gods told the villagers of Tavarong to build an ancestral shrine and institute a system of priests to facilitate the easy return of ancestors to protect the village. The villagers ignored these instructions. Later Ami tribesmen attacked the village and none of the Tavarong villagers had the courage to meet the Ami in battle. One villager, described as a layabout, led the villagers in worship of the ancestors and the Sky Gods and pled for their intercession. The Ami were then attacked and defeated and upon return to the village the shrine was built. The heads of the defeated enemy were used as a sacrifice with the hope for a successful harvest [5].

3.2 Sacred 100 Pace Snake

In one of the creation myths of the Rukai tribe, the Rukai ancestors originated from the hundred-pace snake Agkistrodon acutus. The distinctive diamond-shaped head of this highly poisonous snake, symbolizes the Rukai ancestors, and is a common feature of wood carvings on ancestral posts, doors, body tattoos, embroidery, and other daily utensils.

The "Hundred-Pacer" is one of the most easily recognizable Asian pit vipers. It is one of the more dangerous snakes in Taiwan, as its venom contains hemorrhagic toxins (toxic to blood cells and which thins the blood). The popular name "hundred pacer" refers to a local belief that, after being bitten, the victim will only be able to walk 100 paces before dying. This overstates the toxicity of the snake's venom, this species is dangerous, and fatalities do occur [2].

An ancient legend of the Rukai tells the story of Ho-ssu, the tribeswoman who cooked for her husband and his family. When she cooked the meal they noticed a strange flavor and they all noticed that they were getting thinner. It was discovered that Ho-ssu had been secretly serving them meat from the hundred pace snake, and they realized that she had violated the spirit of this holy snakes.

Ho-ssu was driven from the village, and as she wandered the countryside, she ate each hundred-pace snake she found. When she spat out the bones, each of bone turned into a live hundred-pace snake. Since live hundred-pace snakes sprang up wherever Ho-ssu spat out bones, the legend maintains that the route she followed marks the area where hundred-pace snakes are most plentiful, even today [5].

The Paiwan tribe also reveres the hundred-pacer and it figures into the creation myth of this tribe as well. The chief of this tribe was born from a ceramic vessel. The people of the tribe on the other hand are descendants of the hundred-pace snake.

3.3 Ritual of Enemy Heads

The Tsou were fierce warriors who regarded the hunting of enemy heads as a sign of bravery. This practice was discontinued during the Japanese period (1895-1945). With the conversion to Christianity (1940's) other traditions and ceremonies were eliminated, however, the Maysavi, the holiest of the Tsou ceremonies, survives [4].

The Mayasvi was held before a battle or hunt but today it is held annually in February and is organized by the communities in Chiayi County. The ceremony is held at the tribal gathering house for men, the kupa. This ceremony includes the rites of triumph, rites for the heads of the enemies, and welcoming rites for the gods[3].

A more elaborate War Ritual is celebrated annually by the Taibang and Tafuja Clans of the Tsou tribe. This ritual is also held at the kupa, the men's meeting house, which has been turned into an altar, with the goal of venerating the ancestors and the holy spirits of the Tsou tribe. The ritual consists of five parts: Inviting of the Holy Spirits, the Grouping Together Ritual, the Seeing Off of the Holy Spirits, and the Road Worship and Home Rituals.

The Inviting of the Spirits begins with a boar that is carried out and placed beside the sacred banyan tree. The boar represents the enemy heads. The tribespeople stab the boar and wipe the blood on the tree and chop off the branches leaving only three twigs to guide the holy spirits as they descend [6].

When not serving as an altar the kupa is the place where unmarried men of the tribe sleep and is also the training area for the young men of the tribe. Inside the kupa is the cage for the enemy heads and there is also a box which contains protective talismans for the warriors of the tribe. The talisman consists of a red-dyed bundle of hibiscus fiber. Additionally, there is an implement box that has fire-striking pouches which are used to start fires to clear the undergrowth in preparation for a new farming season [5]. In some tribal clans the heads themselves are invited to join the tribe as members, to watch over the tribe and keep the tribespeople safe.

4. THE VIDEOS

4.1 Video Techniques

In 2006 Winsor prepared a paper entitled "Hybrid Photographic Processes in Experimental Multimedia Art." This is a very detailed explanation of his video processes and it contains discussion of the video techniques as they apply specifically to several of his works. The *Sky Gods of Tavarong* and *Sacred 100-Pace Snake* are both discussed in this paper. These two works make use of the same basic material and technique: hand-built glass transparencies.

Winsor details the evolution of this technique: "During the early 1960s, Artist Milton Cohen of the University of Michigan was in residence at the Firehouse Theater in San Francisco, where he constructed a large scrim-covered icosahedron in an abandoned firehouse with high ceilings. The icosahedron seated about ten people, who watched projections on the inner surface. The center of the viewing area floor had a round platform fitted with small turntables that Cohen used as a projection station for his experimental slide projections. The small audience viewed his performance while a group of musicians around the outside of the icosahedron improvised music (they could view the projections through the translucent scrim)" [7].

Influenced by these techniques Winsor began experimenting with 2"x 2" hand-built slides to create abstract images that he intended to use for projections during multimedia concerts. Winsor details his process:

"I experimented with many different materials commonly found in the kitchen, including corn syrup, baking soda, salt, colored sugars, cotton fibers, pieces of colored plastic, and so on. I used plastic cement and other glues to prepare the surface of the glass plates and to form a boundary on the edges of the glass. Transparent colored inks, dyes, and viscous fluids were applied by eye dropper or cotton swab, and I observed the motion of the materials as the various colors flowed and interacted" [7].

Once the patterns are set pairs of plates were sandwiched together, manipulated by hand and then photographed. Replacing analog photographs with digital photographs Winsor would then extract segments from individual pictures. According to Winsor, *Sky Gods of Tavarong* makes use of 31 glass slides although in his paper he only lists 30 slides. For Sacred 100 Pace Snake Winsor states that he utilizes 35 slides, but later in the same paper he states that 31 slides were used for both works. The computer folder that contains the slides has 34 slides. If the number is 35 slides this would indicate that one slide is missing and it is difficult to ascertain which slide that might be. If instead the number is 31 then one slide from the additional four slides was used in the works.

In another folder Winsor has three sub-folders that contain 117 photos of glass slides exhibiting his deep involvement in this technique. The 2"x 2" glass plates that Winsor digitally photographed and included in his paper are displayed below along with the additional four slides from the same folder.
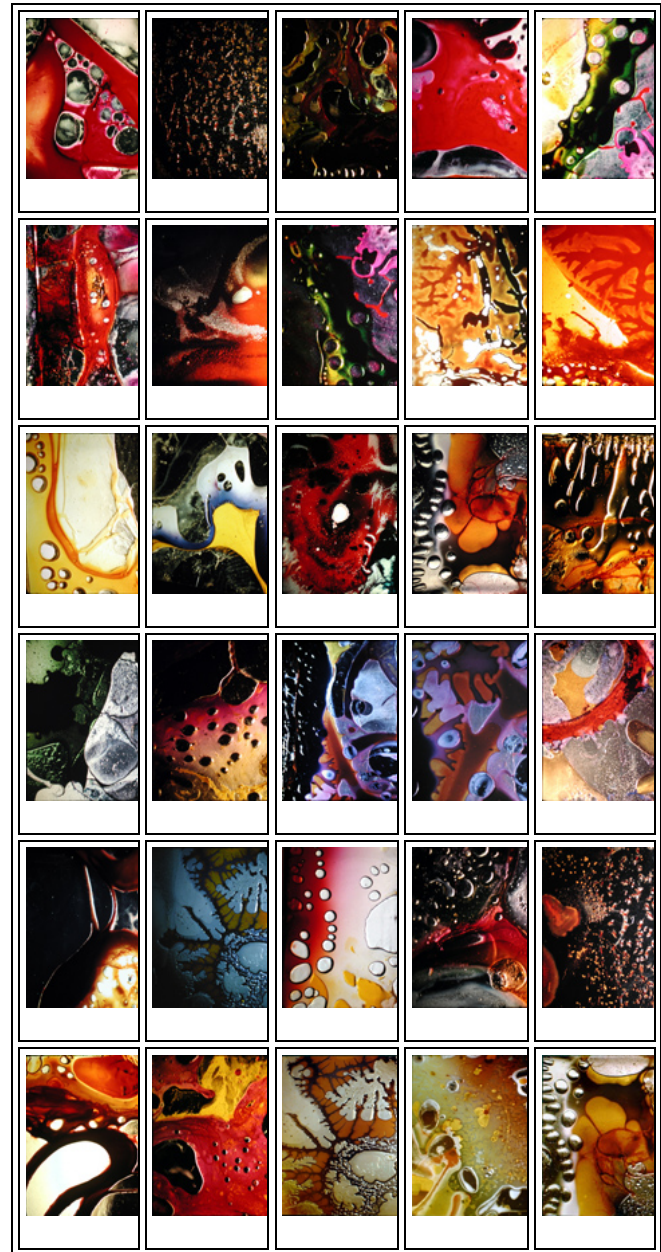

Fig 1 Photographs of thirty 2"x2" glass slides.

The additional four slides are displayed below:

Fig. 2 Additional four photographs of 2"x2" glass slides

4.2 Video Techniques in the *Sky Gods of Tavarong*

Sky Gods of Tavarong makes use of multiple layers of still images. Winsor used the video effects and transitions available in Adobe Premiere to render video segments. At this point Winsor applied an algorithm that "granulated" the video segments. Winsor describes the procedure:

"Video granulation procedures are similar, but not identical to, audio granulation, which involves chopping an audio signal into many tiny parts and then applying transformation effects to the atomized samples. The procedure I use most often follows:

• Re-import the finished video track to the video authoring program; this time export it in single-frame .BMP format, and place the constituent frames in a new folder.
• Load the independently prepared C language program, import the separate video frames, then apply a probability distribution function to the frame sequence, including the possibility of frame repetition.
• Distribute the re-ordered frames across multiple video tracks, and then re-render the composite result to hard disk.
•Repeat steps 4-6 as necessary to obtain the anticipated result [7].

Winsor felt that this process gave resulted in a sense of "textual directionality" for the video.

4.3 Video Techniques in *Sacred 100-Pace Snake*

Winsor acknowledges that this video has a technical relationship to other videos produced at this time. However, the mode of the final rendering was different for this work. Winsor once again sequenced digital stills and made several 2 to 3 minute video segments. After applying the granulation algorithm, Winsor rendered the nine copies at slightly different frame rates and placed the videos in a 9-screen matrix. This created a type of visual phasing that is mirrored by the accompanying audio. The speed listed as a percentage of the original video is displayed in figure 3.

97%	96%	95%
98%	99%	100%
103%	102%	101%

Fig. 3 Frame rate percentages in *Scared 100 Pace Snake*

Fig. 4 Photograph of screen shot from Sacred 100-Pace Snake

4.4 Video Techniques in *Ritual of Enemy Heads*

The original videos for the two works mentioned above were completed in 2001 and 2002 and both works are listed in a compilation entitled Six Music Videos on digital tape. These videos were eventually transferred to DVD with three additional videos. The disk was entitled "Nine Computer Music Videos" Phil Winsor, 2001-2003. While considered a part of the Formosan Aboriginal works, Ritual of Enemy Heads displays a completion date of 2008. This version is found in flies on Winsor's hard drives as Ritual of Enemy Heads 2 and Ritual of Enemy Heads Redux, both indicating a second version of the work. A first version with video is not found on any of his hard drives, however, the audio version mentioned earlier is most likely the original version Winsor was alluding to. However, another audio only version was found on Winsor's hard drive. It was used as an example in a workshop in 2005 is over 10 minutes long, which is almost double the size of the video version under consideration here. The examination of these audio files led to the discovery that Winsor had completely reworked the audio for two of the computer music videos.

In Taiwan, Winsor worked on laptops and used external hard drives for storage. Because of the size of the work files involved with the rendering of videos he often burned "work" disks that contain the component files for his videos. These disks have yet to be catalogued and an examination of these disks might yield the work files for both versions of these works. It would be interesting to compare and contrast the two audio versions for *Sacred 100-Pace Snake* and *Ritual of Enemy Heads.* I am fairly confident that the versions used in the videos are the ones that best realized his artistic intentions.

By 2005 Winsor had begun to use computer-generated video material in his multimedia works. Winsor became interested in fractal manipulation as the source for his later video works. He would combine both fractal stills and fractal animations that were generated in ChaosPro, a

popular fractal generating program. He would make extensive use of zoom, pan and rotational to "move" inside the fractal image. The fractal images would be imported into Abode Premiere where most of the video animation was accomplished. Unlike many fractal videos that often just present the unfolding of a fractal image, Winsor "layers" his images which present the fractals in a kaleidoscopic multi-level framework. This technique is found in this work and most of his late fractal-based videos.

5. The Audio

5.1 General Considerations

Winsor was quite at home with analog tape manipulation, tape loops, and analog synthesis. This can be said with confidence because he showed the author how to splice tape, provided an introduction to the music of Terry Riley, and instruction to program a Moog modular synthesizer. He easily transitioned to the digital medium and became a computer music expert, authoring several books and writing several software programs. He worked with the Kyma system and programmed in Basic, C++ and worked in programming environments such as Csound and MAX/MSP. When considering his use of audio in works that have no notational score one must first realize that he has a formidable command of a myriad number of techniques and his experience encompasses all of the trends and technologies of post-WWII music.

Of course, since there are no scores for the audio portion of these works Winsor's written descriptions concerning the techniques applied will be supplemented with aural observations of the author.

5.2 Audio Techniques in *Sky Gods of Tavarong*

The audio of this work is based on sample manipulation. (That is the technique that is used on the original audio CD for all four "*Legends.*") While Winsor made use of granulation of large portions of video Winsor makes use of a small melodic cell excerpted from a musical passage of a Chinese instrument. The harmonic material is a major triad with added ninth that forms what Winsor describes as a "nearly uniform textural montage" [7]. The material is used to form a drone that adds upper harmonic components across the 5":44" of the work. The sample manipulation can be viewed on two levels. On one hand the slicing of a musical passage into smaller segments is the digital equivalent of analog tape manipulation techniques. On the other hand, the time and pitch manipulations are the digital version of his earlier use of tape loops. In this work Winsor makes use of pitch–shifting to move the pitch sample into different octaves and time-stretching to increase the length of samples to

make them suitable for drones. Adobe Audition 3 was Winsor's usual audio editing program and it comes with a large number of digital effect processors including time stretching and pitch shifting. Winsor also had an extensive library of audio plug-ins in his editing arsenal and it is difficult to say which devices were used to affect the transformations in this work.

The rhythm and texture of the work is rather constant throughout. There is a sense of beat but no sense of meter. There is a regular pulsation often heard over a "tonic" drone. Other small groups of pitched material are slightly out of time producing a wind chime effect. Harmonically, one triad with an added ninth is the sole material. The work uses a wide stereo panning with very little material occupying the center of the stereo space.

5.3 Audio Techniques in *Sacred 100-Pace Snake*

Winsor's program notes for this work mostly detail the video processes with just a few words on the audio portion. As in the *Sky God of Tavarong*, uses a small amount of material to create the audio form a single sample. He submits the sample to the process of granulation (he often used the software program GranuLab for this purpose) and generates a small number of samples with different speed, pitch and timbre. Granulab allows for changes in grain density and grain pitch. It also allows for the manipulation of the length of the sample and the starting point of the sample. Manipulated material may be recorded in GranuLab and then imported into an audio editing program. Granular synthesis works best with samples that have a rich harmonic content and judging from the granulated samples that Winsor used this seems to the case.

Winsor makes use of only granulated samples in this work. The samples were transformed using time-stretching algorithms. According to his notes a final track was placed on several tracks in Adobe Audition 3. The tracks are slightly offset on the time line of the session. This time delay creates a phasing effect in the audio that mimics the phasing Winsor utilized in the video portion of the work. The tracks are faded in and out and the overall dynamic shape of the piece with its fade ins and fade outs resembles the undulating movement of a snake. A high pitch granulated sample fades in to begin the work and has a stylized hiss-like quality. This same sample is used to end the work. In between this material, tracks are faded in and out that change the timbre and length of the granulated material.

Once again the panning is very wide for most of the material in this work. It allows the listener to hear the time-stretching and phasing of the material. The final sample section (circa 5') a low pitched drone is heard panned far left, a middle range sample is heard time-stretching on the far right and the high pitch granulated

sample is in the center of the stereo image. As the audio in the far left and right stereo spaces are faded out they are replaced with the high sample from the center, which is then heard left, center and right while fading out.

"Pebbles" on Winsor's hard drive from another work, *8th Degree of the Yang-Chin*), granulated samples, and complete and segmented audio "quotes" of a Chinese
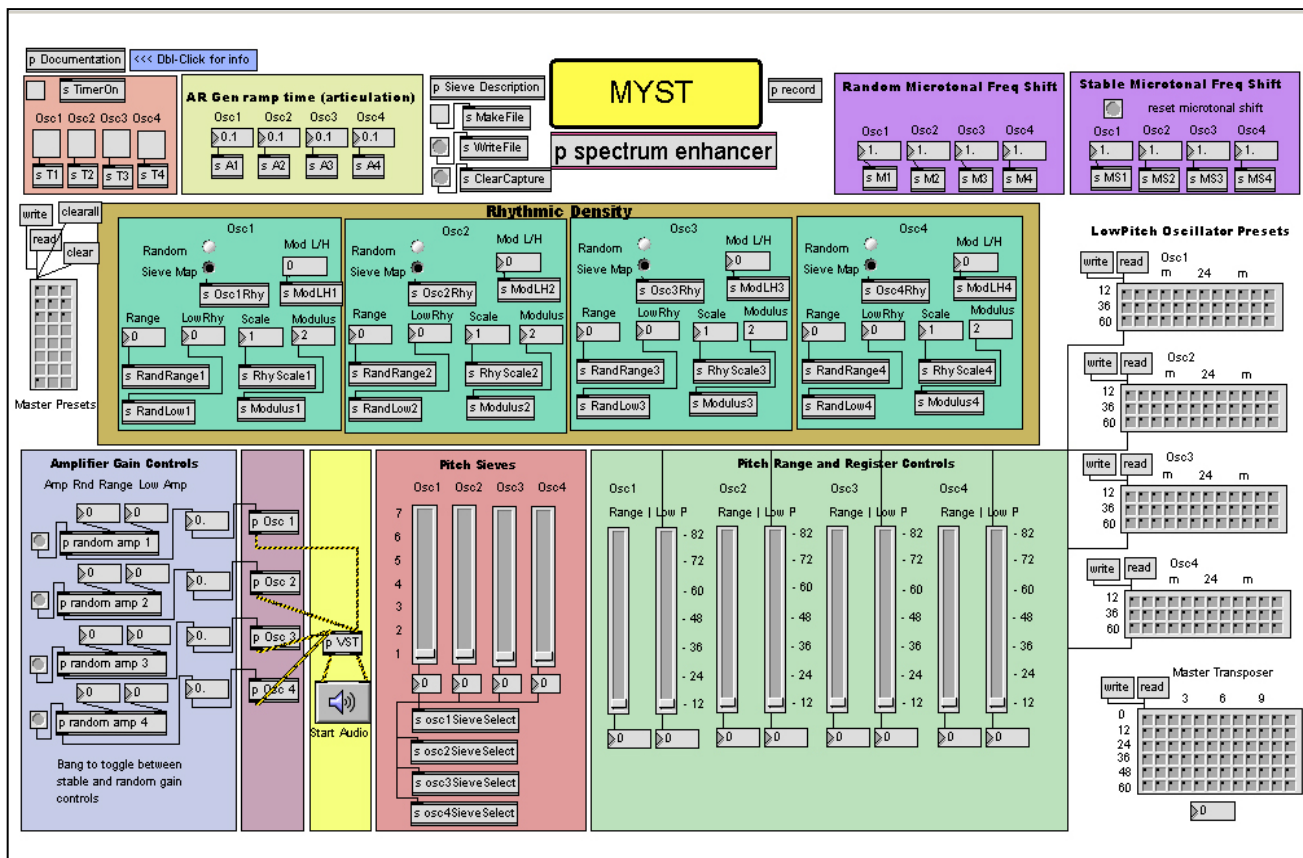

Fig. 5 Screenshot of *Myst* patch in MAX/MSP

5.4 Audio Techniques in *Ritual of Enemy Heads*

There is no mention of the compositional process for the audio portion of this work. Winsor does describe the design of a software synthesizer in the MAX/MSP programming environment in 2006. He states,

"Prior to that time I had used audio samples (transformed in various software environments) to compose audio tracks for multimedia compositions." This instrument was used in the video entitled *Myst*. The software instrument itself, bears this title as well. This instrument uses four oscillators with various control functions for each which can be manipulated in real time. It is notable that Winsor makes use of logical sieves to control pitch content in this instrument (See Fig. 5).

Listening to the audio portion of *Ritual of Enemy Heads* it is logical to assume that the background drones were supplied by this software instrument. However, it is also obvious that there are samples (one listed as

ensemble, drum and flute. Winsor, not surprisingly, combines techniques that he used in earlier works giving the audio portion an eclectic sound blending western post-minimal techniques merged with Asian instrumental quotes.

Of the three works this is the most texturally complex. It begins in a fashion reminiscent of the *Sky Gods of Tavarong*, with a drone, this time synthesized, that pulsates at the octave that fades in from the right side and moves through the center to the left side of the image. This drone slowly increases harmonic content over the course of the work becoming quite cluster-like. Many of the samples take the same path through the stereo image, entering on the right and moving across the stereo space.. As the piece unfolds there is a much greater layering of material and upon several listenings one can recognize samples and their granulated versions. The "pebble" sample, granulation of drum, Chinese flute, and Yang-chin samples are juxtaposed and moved through the stereo space. The Chinese ensemble quotes begin circa 2' 30" and are combined with the Chinese flute. The flute continues as the drone crescendos circa 3' 35". Not

surprisingly, this would correspond to the placement of the climax using the Golden Mean that is apparent in several of Winsor's works. The remainder of the work feature recaps of previously heard material, including the Chinese ensemble, and with a long decrescendo the work ends with a single drum strike.

6. Conclusions

6.1 Video Conclusions

Winsor would consider himself as both a composer and visual artist. He brought to his visual arts endeavors the same type of innovative and experimental attitude that he brought to his musical works. The video portion of two of these works show his use of hand-built glass slides combined with digital photography and video software manipulation. Old techniques and materials are given new life because of his ongoing involvement with technology and technological change. The third video, completed seven years after the first, uses fractal art as the basis of the video material. Using one program as a way to generate the material, limitations of the program led Winsor to use video editing software to realize the layering and motion to fulfill his vision.

Only *Sky Gods of Tavarong* is titled "from Formosan Aboriginal Legends" and Winsor was not entirely consistent in his naming conventions regarding these three works. It is also called a music video whereas the *Sacred 100-Pace Snake* and *Ritual of Enemy Heads* are labelled "Computer Music Video" but neither mentions the aboriginal legends that were the inspiration for the work.

The time span between the three works has no known explanation. In 2002 Winsor filed a final report for a Small Grant Award that he was given form UNT. In it he lists the two earlier videos under consideration here, as well as *Flos Harmonicus VI, TekToniks I, Sensuian Fields,* and *Santuarium*. Later these six videos are combined with three others in a compilation entitled "Nine Computer Music Videos," Phil Winsor, 2001-2003. During the subsequent six years Winsor's attention turned to fractal-based videos and it may be assumed that, while still interested in the aboriginal legends he felt no need to revisit the technique of the earlier videos.

6.2 Audio Conclusions

The method of sample manipulation that was utilized by Winsor in the first two videos was the logical digital extension of older analog tape techniques. Of course, the digital manipulation is much faster, less frustrating and yields superb results when compared to the older technique. While he refers to it as "digital musique concrete," he generally makes more use of musical instrument samples as opposed to "real world" recordings.

These two works also show his interest in granular synthesis which is used extensively in *Sacred 100-Pace Snake*. While featured almost continually in this video, it is combined with other techniques in *Ritual of Enemy Heads*. It could mean that the novelty of granulated samples had worn off, but more likely it was seen as just one of several manipulation techniques at his disposal. Winsor made use time-stretching and pitch-shifting to transform material. It seems that he preferred to use multiple copies of audio slightly offset to create the phasing effect found in these works.

The audio portion of *Sacred 100-Pace Snake* and *Ritual of Enemy Heads* exists in two versions. The audio only version from 2000 uses sample manipulation of instrument samples. The computer music versions abandon this exclusive use of samples and combine a number of sample and synthesis techniques. It is merely conjecture, but it would seem that the original audio did not match the more abstract video. The subtitle of the original work displays Winsor's intention that the audio version may have been used with dance. The vison of the original music being used for dance and the vision for the computer music videos were probably not the same in Winsor's mind. This would explain his desire to compose an audio track that was better integrated with the video.

Ritual of Enemy Heads also makes use of software synthesis and while there were "plug-in" instruments that could have been used. Winsor preferred to build his own constructs. This allowed him to build into an instrument the functions and controls that were useful to his works. The advantage of using your own instrument is that you can modify and expand the structure. Winsor was not above using useful software tools such as GranuLab but once in a conversation with me he said that "the problem with a piece of software is that is good for one piece." A revealing comment that can, in part, explains his interest in programming in MAX/MSP, since this programming environment allows a programmer free rein for all types of audio/MIDI constructs.

As stated earlier in this paper, the audio track for *Sky Gods of Tavarong* is the same track as the CD audio version of the work. In the remaining videos Winsor replaced the audio with newly composed tracks. It seems that the original version of the work was composed with the intention of dance being used as the complementary media addition. The original audio tracks used digital samples of Chinese instruments and were remarkable for their linearity and chamber-like transparency. However, while these tracks may have suited Winsor's choreographic vison they may have been too sonically explicit in their evocative nature. The author is of the opinion that the gestures and timbres of the instrument samples could become cartoonish and create the necessity

for coordination to video events. The abstract nature of the videos created a need for a music track that was more generalized in nature, not needing audio events to be attached to specific video cues. In this fashion Winsor insured equality for the intermedia components. Music would not be an accompaniment to the video but an equal partner in the projection of a concept. At this time there is no evidence that the techniques applied to these works required exact coordination. The mere fact that Winsor used the original track for the video of *SkyGods of Tavarong* would indicate that no real need for explicit coordination of events was intended. Yet this does not detract from the integration of concept and content.

The audio portions show, as does the video portions, that Winsor used the digital version of earlier analog techniques. Again, his inquisitive character is displayed not just in the use of new technology but the immersive involvement with technology that allowed him to expand his creative endeavors. His last creative period is marked by his creating videos for most of his older audio works. Many of these works where originally conceived and realized with analog devices and tape machines. Multimedia works were an important portion of his output throughout his career. It would seem that the intermedia approach, aided by digital technologies, was the true fulfillment of his final artistic vision.

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