

# Animated Image, Animated Music

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*Introduction*

*Collaborative Process*

*Ideas and Concepts*

*Structural Design*

*Image Process*

*Music Process*

*Conclusion*

## INTRODUCTION

In this article we will discuss a multimedia genre we have explored over the past seven years that might be termed *collaborative image/music composition* or, perhaps more simply, *film/music composition*. In six such compositions that we have created jointly, and in additional works that both of us have created with other collaborating artists, structural design, textural patterns and expressive gestures and nuances unfold simultaneously, but not always synchronously, in aural and visual form.

These works have been performed on hundreds of film festivals, concerts, multimedia shows and other venues throughout the world. Each was premiered on programs of the *ImageMovementSound (IMS)* festival, a Rochester, New York-based festival that we founded nine years ago and have co-directed along with choreographer Susannah Newman and filmmaker Jack Beck. *IMS* (<http://www.imsrochester.org/>) supports the creation and exhibition of innovative multimedia works by collaborative teams of two or more filmmakers, musicians, choreographers, dancers and other artists. Many of the hundred or so works premiered on these shows have incorporated procedures related to those that we will examine here.

The source materials from which our compositions derive unite direct-on-film visual animation techniques (e.g., painting, etching, and layering images directly on 35 mm film, then digitally processing, filtering, transforming and editing this footage) and computer-generated musical procedures in which both acoustic and synthetically generated sound sources are sculpted, transformed (sometimes beyond easy recognition), granulated, recombined and interwoven. The visual imagery and music contribute equally to an aggregate, multi-threaded structural and expressive design. The visual animation has its own self-contained formal and expressive components, and so does the music. The music could be (and on a few occasions has been) played independently, as a standalone concert piece. Similarly, the screen imagery could "work" as a silent short work, or could be fitted to a complimentary musical score in post-production. However, the most

important element we seek to achieve lies precisely in the interaction, or "dance," between visual and aural threads.

The structure of these compositions might be likened metaphorically and somewhat fancifully (if not completely accurately, scientifically) to a double helix — separate but intertwining, complimentary strands in shifting roles as point and counterpoint, reciprocal and simultaneous, focus and periphery -- a unique, dynamic, hybrid visual and sonic expression. One's experience and understanding of the music is colored and influenced by one's simultaneous experience and perception of the imagery, and vice versa. The works do not lie on a continuum between being either music or moving image nor are they based on a shallow structure of eye and ear accoutrements. Rather the works acquire behaviors that simultaneously draw both visual and aural senses into subjective and refreshing inter-penetrations.

### *COLLABORATIVE PROCESS*

During the creation of these works animated imagery and music are realized simultaneously, sometimes in leap-frog fashion. The creative energy and working methodology that brings these works to fruition is a concerted, interactive process. We admire such contemporary artists as Reynold Weidenaar, Ron Pelligrino, Joran Rudi and others who are skilled at both moving image and music composition and are able to produce provocative multimedia works in which visual imagery and music issue from a single fertile artistic imagination. Neither of us possesses such dual expertise or cross-media breadth of conception. While creating our works we remain a filmmaker and a composer, applying our individual technical crafts and, more importantly, our individual artistic imaginations. And this is the most challenging and ultimately most rewarding aspect of our left-hand/right-hand working procedures: to exercise our full creative freedom in devising patterns of sound and visual imagery and color, but also to play off of each other's ideas, to extend, comment upon, reinterpret and enrich these ideas, and ultimately to develop and shape them into a richly textured fabric that represents her work, his work and our composition.

For both practical and aesthetic reasons our works are fairly short — typically between four or six minutes in duration. Many of the techniques we employ are time-consuming — for example, experimentation with art media and techniques for creating the three dimensional spaces in *terra incognita* and *Time Streams*; the creation of multiple hand-cut mattes for the characters in *passe-partout*; and, the process of deconstructing acoustic sounds and then reconstructing them with alterations. Also, we can rarely free up more than two or three months of concentrated time, sandwiched between our other professional and family commitments, in which to realize these compositions. (Fortunately, we both tend to work best in concentrated bursts anyway.) More importantly, however, our compositions tend to be diverse in content but also highly concentrated and condensed in the presentation, development and eventual integration of these materials. (If you blink or cough you may miss something important.)

## *IDEAS AND CONCEPTS*

The ideas for our works emerge spontaneously rather than through conferencing. Some ideas are abstracted from real experience (the dangling pendants of an aerial mobile abstracted in *passee-partout*) while others are conceptually more formal and almost approach structural experimentation (the persistence of vision forms elicited in *Outermost*). Often during the creation of the work our initial idea will shift to a better understanding and focus. The idea is unscripted and each of us interprets and responds to it through the creation of the imagery and the music.

The basic concepts for each of the six works we have produced together are briefly described below:

**Outermost** : At the edge of a continuum.

**Somewhere** : The limited view; the view through a periscope; off-screen worlds.

**terra incognita** : voyage to an unknown, dynamic and uncharted space.

**passee-partout** : Pendants of an aerial mobile each reveal a unique universe of motion, color, light and sound.

**Time Streams** : The unpredictable and infinite interplay of segments and ribbons of time.

**Second Sight** ( a collaboration with painter/graphic artist Peter Byrne) : A passage through a mist in which perception is ultimately clarified and sharpened rather than obscured.

## *STRUCTURAL DESIGN*

The structural designs of these works are non-narrative, non-linear, abstract, continuous rather than sectional, and have been variously likened in their construction to tapestries, mobiles, spider webs and networks. The works are dramatic, poetic, transparent, multi threaded, rhythmical, coloristic, textural, and mutable in their affect. Often within a work images or musical segments suggest an unlimited universe, in which the passage of the audience through the work is but a brief encounter with that universe.

### **Image Process** (by Stephanie)

My imagery emerges out of very strong affinity for the physicality and tangibility of simple art materials and substrates and their translations into manifestations of motion and light energies and plays of color within a three-dimensional space. In a subjective relationship with the raw materials, I am able to conjure ways to translate my 'lived' experience and make it available for others to experience through abstraction.

My techniques involve creating images directly on 35mm film (direct animation technique), the manipulation of objects, copier art, and the 're-animation' of live action footage sequences. I have discovered how to create 'believable' three dimensional spaces and unusual atmospheres on 35mm film. Since most of the time one's life is spent in a dynamic, abstract, multi-sensory relationship to the 'real world' it is my goal to tap into the ebb and flow of this living abstraction in my art, and to create inviting and intriguing fictitious settings and events suggestive of, connected to and in a discourse with our 'real'

abstract experience of life. It is also the sheer love of abstraction that fuels me, as well as an uncompromising individual interest in discovery and experimentation (I have also been a marine ecologist and spent countless hours underwater) so that my techniques and skills are uniquely and unquestionably my own.

The concept and the music are my guiding forces during experimentation. I constantly try to invent and discover ways to articulate or enhance the concept and to create that unique visual dance with the music. The concept creates a focus. "How can I make it look like .....? How can I create the illusion of the space? What is the atmosphere like, and how big is the space? How do things move in this space? What are the physics of this new world?"....and so on. This process of understanding and creating the filmic illusion is mostly intuitive. The substance and the orchestration of the imagery is a sculpting in time, an act of choreography that manifests itself in rhythmical, dancing, dramatic, and "musical" affects. I endeavor to open a gate into a passage, to transport the viewer into an alternative reality that unfolds through the continual interplay of the images and the music. Through the abstractions I can articulate the idea in many different subtle, playful and expressive ways. I enjoy the fact that the image and the music can evoke different kinesthetic sensations: tension, exhilaration, dread, release, interest, stirring, and so on. And, I simply enjoy the many different and unusual articulations of light, motion and color, and the opportunity to create an illusion.

My tools, art materials and media are very simple, and some are very unusual: gravure tools, sponges, bandage gauze and tapes, masking tapes, clear and glitter nail polishes, sand paper and rasping tools, an 'eyelash separator', wine bottle corks, prefab drawing stencils, jeweler's tools, salt and pepper, nitric and phosphoric acids, bleach, toothbrushes, airbrush, droppers and pipettes, probes, burnishers, adhesive transfer graphics, and rubber bands.

The 35mm film imagery is prepared in my studio at home on a 6-foot-long light table with rewinds at each end. On top of the light table sit my tools and media so that they are close at hand as I (sometimes feverishly) work. I am very happy working with the small 35mm film frames. (Super8 and 16mm are too small, 70mm and IMAX just take more paint.) I mostly work without magnification as I have learned the precision of working small, and I also let the pressure and motion of both my hands and my body direct my painting and other manipulations across the frame 'canvas'. My approach is both free and precise (and sometimes scientific). I experiment and experiment and experiment to establish the visual design and look of the work and the visual expression of the concept and as it integrates with the music.

The handcrafted imagery usually will go through a series of transmutations before the work is finished. The original handmade 35mm footage is 'rephotographed' using a small feed camera that points downwards to a small light box. During rephotography of the handmade 35mm frames I can bend, flip and flop, twist and rotate the film in incremental movements that I record frame by frame with a frame-grabbing device. I will also animate small mattes using the feed camera/light box set up. The mattes are made of black-painted paper and they will be used later in post production for compositing images

together.

In addition to the handmade 35mm film I will also animate small objects (the sponges in *Time Streams* and the speckled translucent crab carapaces in *Second Sight*, for instance), and graphic materials (such as copier art work, drawings, or patterned or textured papers and plastics). The feed camera allows me to shoot in positive or negative, and to manipulate exposure and color. The camera also features a zoom lens so I can achieve zoom effects and super close-ups (to about the size of approximately one square centimeter). The moving and bending three-dimensional spaces in *terra incognita* were created by recording frames of alternating zoomed-in and zoomed-out positions of progressive frames of 35mm handmade film; the golden electricity sequence was shot in the negative using the same zoom-in/zoom-out technique using a small, greatly wrinkled piece of wax paper.

While typically post production is the stage that shots are put together and tweaked to form the coherent, linear plot of a film, for me it becomes another phase in which experimentation takes place. During post, I am still animating, or *reanimating* as I like to call it. I recombine frames of imagery. I *activate* the imagery in motion manipulations. And, I create layered compositions that merge patterns of imagery in spatial expressions within the moving image/music composition. The reanimation process is an active *mosaicing* of imagery that involves a tight and responsive interplay with the music, and it is an important opportunity to hone in on the concept and give it a powerful presence and a unique twist.

### **Music Process** (by Allan)

The computer-generated music for our most recent works has been realized in my personal home studio on a \$2000 stock Pentium 4 desktop computer modified with quiet fans and other tweaks to reduce obnoxious computer noise. The software base is all open source —Linux and *GPL* (General Public License) music applications such as Csound. All of the specific sound generating, signal processing, mixing and sound spatialization software algorithms used to generate the music are written by me with the use of highly extensible and customizable *GPL* software libraries.

After the basic concepts and design of one of our works has been determined, one of the first steps is to begin to assemble a particular "orchestra" to play the music. Most of our works feature *defining sounds*, which may include unique or memorable timbres, melodic fragments performed with a particular type of phrasing, rhythmic patterns, textures (combinations of tonal colors in rhythmic patterns), harmonies, and more abstract types of musical gestures, such as pulsating, ringing or cascading sound sources. These *defining sounds* are the structural pillars of the music. They may recur cyclically throughout the piece, or may emerge at key moments, perhaps in conjunction with a particular visual image or sequence of images. The interplay of these sounds, and their changing interrelationships with the imagery, largely determines the qualities of movement and expression, the energy levels, the kinesthetic qualities and the suggestive musical colors, shadings or "moods" of various passages in the work. Most of our works feature four or

more of these *defining sounds* ("principal musical characters"), as well as a "cast" of secondary musical ideas (similar types of sound sources that are used less prominently or less extensively), and finally a "chorus" of other sounds that are used only briefly, as "stepping-stones" or to enrich some of the textures.

In *Second Sight* some of the principal *defining sounds* include

- a swishing, high-pitched gong-like sonority (perhaps reminiscent of vibraphone bars stroked vigorously and simultaneously with seven or eight cello bows);
- synthetic bagpipes, which become associated with a succession of companion tone colors that include a hurdy gurdy and a duduk;
- a "metallic harp"
- widely spaced chords of long, pulsating vocal tones that surge and recede in wave-like ripples, and
- an assemblage of rapid shaking, hissing and stuttering or "throat-clearing" types of percussive sounds.

The source of these sounds may be purely synthetic (groups of software oscillators, filters and so on) or else acoustic (digital recordings of isolated tones of orchestral or ethnic instruments, or of environmental sounds such as the pop of a cork or the hum of a refrigerator). However, sampled acoustic sounds are rarely used in their original form, because such recordings "are what they are," and can be difficult to sculpt into convincing phrases or gestures with musically alive note-to-note, event-to-event articulations and connections. Paradoxically, although the music of our works is created largely by typing in code and numbers at a QWERTY keyboard, it is important to us that our imagery and music create a strong illusion of physicality. I want the music to sound and feel as though it is produced by scraping, bowing and breathing, and by the excitation of wood, metal, glass and air.

Often, recorded samples are subjected to digital analysis-and-resynthesis procedures: a sound is deconstructed into data that represents its noise and pitch components, and then resynthesized from this data, but with some of the components altered or eliminated, or combined with components from another sound. Sometimes only fragments of recorded samples are used and then reshaped; in *passe-partout*, spitting sounds were created from just the attack (first fifty milliseconds or so) of wood flute samples; in *Second Sight* isolated vocal consonant and vowel phonemes ("p", "t", "oo" and so on) spliced out of vocal narrations of poetry are rhythmically combined into a digital form of scat singing.

Another play-like element in the development and manipulation of the musical material involves the use of algorithmic compositional procedures. Deterministic procedures are used to generate extensions, variations and permutations, while weighted distribution or randomizing procedures can create more substantive transformations. Subjecting source material to such manipulative procedures often suggests possibilities that otherwise might never occur to me. The spitting sounds in *passe-partout* are not always effusive; at times, with some massaging and a few loops through the transformative algorithmic machine, they can reveal a more reflective, even elegiac quality, at least to my ears.

Working with these *defining sounds* —developing and extending them, varying their articulations, transforming and combining them and, most importantly, pairing, associating or counterpoising them with Stephanie's images begins to suggest larger patterns of movement, articulations of thirty or forty second segments, paradigms for motility and balance, and, finally, definition for the music and the work as a whole. Like the characters of a prose work whose personalities become almost "real" to the author, these *defining sounds and images* begin to become collaborators in their own right. We often sense an intuitive affinity (or else work hard to develop such an affinity) between particular visual and aural elements and textures. As noted earlier, however, we generally do not strive for a direct, moment-by-moment correspondence between the visual and aural animation. Sometimes these patterns do "arrive" together. But at other times they may overlap, or the visual imagery may surge as the music "relaxes." These constantly evolving and shifting interconnections comprise the dance-like element within our film/music compositions, and for us are perhaps the most fascinating and rewarding aspect of our collaborative work on these compositions.

### CONCLUSION

The ultimate goal of the all processes discussed above is to transport our viewers/listeners, briefly but memorably and meaningfully, into imaginary (but seemingly, while you are "there," very tangible and "real") inner and outer worlds that burst with possibilities, associations and connections; where ideas, events and arrival points often occur simultaneously or overlap, lighting up and then receding, recurring or recombining; but also a realm in which distillation, transparency and a focus that defines or clarifies how and why all of these little mosaic puzzle pieces fit together gradually emerges.

Audio/video clips from our works can be viewed on Stephanie's web site at  
[www.rit.edu/~sampph/Works.html](http://www.rit.edu/~sampph/Works.html)

Audio samples can be found on Allan's web site  
<http://www.esm.rochester.edu/allan/compositions/>  
under the category of *Film/musical compositions*.

### BIOGRAPHIES

Stephanie Maxwell is Professor in the School of Film and Animation at the Rochester Institute of Technology (Rochester, New York). She earned her M.F.A. in Film at the San Francisco Art Institute. Her unusual animated works are exhibited in international film and television programs and festivals, and collected by museums as works of art. More information is available on Stephanie's web site at  
[www.rit.edu/~sampph/](http://www.rit.edu/~sampph/)

Allan Schindler is Professor of Composition and Director of the Computer Music Center at Eastman. Several of his works are available on commercial compact disc recordings, and scores of several of his works are available in published editions. Schindler also has served as Music Editor and consultant for several publishing houses, including McGraw-Hill, Random House and Alfred A. Knopf. More information is available on his web site at

<http://www.esm.rochester.edu/allan/>

