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Music in Motion: The Synthesis of Album Design and
Motion Graphics for Downloadable Music

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Abstract: But not *too* abstract

In an age when downloading media is increasing at an exponential rate, static album art has become obsolete. Current digital album artwork does not take advantage of the available technology. Nor does it provide the user with an integrated experience. Previous attempts at linking music to moving imagery have resulted in uninspiring "visualizer" plugins. These types of media player add-ons do not produce emotionally or narratively relevant imagery for the user. Furthermore, the limited selection of downloadable media that includes a digital booklet, separates the booklet contents from the album cover. More importantly, these disconnected elements do not compensate for their lack of tangible assets.

The objective of this thesis project was to create a hybrid of album design and motion graphics for downloadable music. By creating a prototype, this project demonstrates the concept that a library-style package of interchangeable moving images linked with audio media, can enhance the narrative and emotional elements of the user experience.

Introduction: A long time ago in a computer lab far, far away...

Originally, album covers were designed as a way to protect and promote vinyl records. Album cover design presented a unique way to bring together both artists and musicians. "They offer the opportunity to create a visual to represent a non-visual art (Angellynn 2001)." The musical and creative expressions of the 1960's began to push the artistic innovation of album cover design. The album covers began to not only feature fantastic artwork but also, things like lyrics or information about the musicians. These additions enhanced the listener's experience of the music by providing insights into the artists and their songs.

By examining the progression of music and audio technology; vinyl records to cassette tapes and then tapes to Compact Disc's, it becomes apparent that album art has played an albeit varying, yet significant role as both a niche to designers as well as an important part of the musical experience. This technological progression has given rise to an increasingly digital era. However, the digital evolution of music has also led to a disconnect between album art and its music. Antony Bruno's article on digital packaging summarizes much of the problem when he states that:

> Digital music files just don't provide the same amount of content that a CD
> package does. That includes liner notes, extended album art and lyrics. Buy a
> digital album today and all you get are a list of tracks and (maybe) a thumbnail
> image of the album cover that you can't even read (2008).

While digital packaging does provide several environmental and cost-saving benefits, it has resulted in a significant reduction in the rich musical experience. In other words, the elimination of jewel cases, booklets, inventive packaging, and frustrating labels and plastic, has endangered a important part of both the music and design industries.

In 2006, the International Federation of the Phonographic Industry (IFPI) reported that the music industry earned approximately 2 billion dollars from the sale of legally downloaded music and yet most designers have stated the opinion that album project work is on the decline (Borzykowski). With a booming downloadable industry in mind, take into account that all the leading MP3 players now feature video playback capabilities and it becomes clear that the digital stage is set for Hybrid Motion Albums (HMA) to fill the void left by static art. HMAs provide a way to reinvigorate a wavering niche in the design industry. This new format has the potential to recapture many of those lost elements from past album covers, in addition to giving birth to new elements inherent to the digital realm.

This thesis investigates the hybridization of motion graphics with downloadable audio media. The focus is on creating versatile, interesting, coherent, and relevant image sequences for implementation into a prototype branding and graphics package. Significant design factors involved with this project are versatility, image quality, file size, integration, animation, typographical presentation, style, editing, graphics standards, and green design. Each of the aforementioned design components needed to be addressed in order to create a successful and well executed thesis.

The Design Process: Conception, Production, and Revision

Similar to many projects in the broadcast design industry, this thesis followed a three-stage development process: pre-production, production, and revision. The first stage, pre-production, consisted of but was not limited to: acquiring music, brainstorming, interviews and musician research, sketching, and style choice. Each band presents a unique and distinct sound. Therefore, each band needed to have a signature style associated with it. The goal was to ensure that each band's sound would be as recognizable as each band's HMA.

The second stage, production, focuses on the creation and animation of a library of interchangeable elements. For this thesis, the essential library elements were derived from traditional broadcast design components such as: lower thirds, character biographies, loopable backgrounds, transitions, and flexible animations. Using these broadcast components as a basis for HMA structure provided several advantages.

The first significant advantage to this structure is the inherent versatility of the components. Each component was rendered at a high resolution and with the exception of the backgrounds, each one has an alpha channel. This provided a great deal of ease when it came to mixing and layering the various components for each HMA. By creating these elements at a high resolution, each can be scaled in order to accommodate various screen sizes or typographical requirements. Furthermore, it creates a flexible system whereby the artist or the designer contracted by the artist, could rapidly modify or update the HMA using relatively simple video-editing software. For example, if a designer using the HMA system needed to add a new band-member to the line-up, the designer could edit the content of an HMA by typing in new text and dropping in a new picture on the existing character biography. Another example of the system's versatility can be seen in the looping backgrounds. By creating a background that loops infinitely, the HMA can be shortened or

lengthened depending on the needs of the designer and artist. The loopable background maintains movement and interest in the piece without overshadowing the foreground information and animation. It should be noted that providing this level of flexibility in the HMA could lead to disastrous modifications of the work, especially by inexperienced or unskilled users. The solution to this problem was to create a graphics standards document tailored specifically to the corresponding HMA. This subject is examined, in great detail, later in this document. The second advantage of the library structure was the result of difficulties encountered early in the production stages of this thesis.

A major goal of this thesis was to create a system whereby the HMA could be created quickly and affordably. The first HMA demo, *I Don't Love No One* by Ben Morey, was originally developed in a linear format and it did not contain the variety of versatile library elements that it would later include. The most formidable problem with the original process was the excruciatingly long production time that was a result of the linear production method. A lengthy production time was not in keeping with one of the principle concerns of the project, that "time is money." By being relatively easy to create and easy to modify, the HMA was designed to be a far more affordable option than the oft production-heavy music video. Another critical aspect of the HMA that would be adversely affected by a costly production, is number of songs that could be featured in an HMA. In other words, if it was too expensive for a band to have multiple songs developed as an HMA it would be no better than a music video. Without reasonable production costs, the HMA would lose a substantial amount of appeal to both artists and labels. The solution to the aforementioned problem was surprisingly simple. Instead of concentrating on building an entire HMA demo, focus on developing smaller, more flexible elements. The disadvantage of switching from a linear production method, in which every scene is customized to the specific song, is that the design of the HMA loses some of its narrative and artistic depth. However, this loss was minimal in

comparison to the drastically reduced production times. The real-world end result of the library-style method prevents the HMA from becoming cost-prohibitive. The third notable advantage of using components in the design of the HMA lies in the framework from which it was derived.

The component nature of this thesis draws its roots from broadcast design. As is previously mentioned, each HMA features several classic broadcast elements like the lower third and the character biography. The website www.digitaljuice.com, provided a multitude of examples of these types of broadcast elements and was a valuable resource. The site features a vast array of loopable components as well as motion graphics packages. The HMA shares a common ground with tried and true broadcast motion graphics and this quality makes it far more marketable than a more exotic design. Businesses, agencies, and designers with a background in this field would understand the type of work that an HMA requires. Therefore, musicians or designers seeking to develop work in the HMA format are more able to market these types of projects to those already familiar with the broadcast design industry. Understanding the advantages and disadvantages of the production methods employed in the creation of this thesis is only one part of what shaped its design. The library construction method provided a sound structure by which each HMA was crafted, but it did not dictate the design choices and style of each demo.

The design of each HMA was inspired by a variety of sources; some of which, are discussed on a per HMA basis. However, there were several influences that had an impact on the project in a more general sense. Television series, music videos, and bumpers, from networks like: MTV, MTV2, Vh1, Palladia, and Fuse, played a significant role in determining the design of each HMA. Many of the quirky animated bumpers from the MTV networks highlighted the power and importance of clever animation. Vh1 series like: *StoryTellers, Behind The Music, Best Week Ever* and *Pop Up Video,* heavily influenced the type of content exhibited in

each HMA. Along similar lines, a video for the song *Hollow Man* by R.E.M. provided a shining example of animated typography and layered motion graphics. Discussed in greater detail further on in this document, are several artistic and cinematic influences that played a part in the design as well. Drawing on a such a diverse selection of inspirational media augmented many of the synesthetic qualities that are exhibited by each the HMAs. Synesthesia, according to M.I.T., is "sensation produced at a point other than the point of stimulation, as of a color hearing from hearing a sound." In terms of this thesis, this combination of sight and sound was used to affect the viewer in a deliberate manner. In some cases that meant using a striking color to make information more memorable. In others, this experience was used to create a mood or atmosphere. Furthermore, synesthesia helped this designer in making visual decisions that often had no basis other than auditory perceptions. Prior to making any substantial and specific design choices, music had to be selected for each HMA. The first significant decision was whether or not to pick one artist and create several songs, or to pick several artists and a smaller selection of songs from each. Both ideas had merit. By picking one artist, the project could focus on presenting a chapter-like progression of demos throughout the HMA. Essentially, the Hybrid Motion Album would have an overall style and each song-demo would have its own unique elements, while still corresponding to the style of the album. The disadvantage to picking one artist instead of several was that it didn't showcase the variety and potential range for the HMA as a new format. It was feared that the viewer would assume an HMA was valid for only one type of music. Therefore, it was decided that choosing artists from three different genres of music would provide the most effective proof of concept.

Two song-clips, approximately twenty to thirty seconds in length, from three artists were built as HMA demos. In doing so, the design for each band maintained a consistent style on a per-song basis, without sacrificing the ability to present a variety of artists and music. The

logic behind using song-clips as opposed to full songs was based on two major considerations. First, limited production time meant that there would be far less of an opportunity to explore a range of styles and methods. The ability to construct a variety of HMA demos that highlighted the importance of being unique and distinct would have suffered greatly. Second, this thesis is a proof of concept not an actual product. So in many ways, the HMA demos serve as advertisements designed to entice the viewer. The idea is that each demo would represent the possibilities of the HMA as a format, not necessarily the final real-world product. Given the short attention span of most viewers and that current television advertisements fall somewhere between twenty and sixty seconds, it was decided that the presentation of this thesis should follow suit. The three HMAs are comprised of two song-clips each and run between forty and sixty seconds in length. As was first intended, the HMA demos would pull from the three genres: Rock, Jazz, and Hip-Hop. However, this selection of genres was changed to Indie Rock, Punk, and Techno. It was quickly discovered that making contact with any musician or label in any genre was exceedingly difficult.

The early efforts in acquiring music were resounding failures. As a student, it was hoped that attempts at contacting major-label artists would be given special consideration. Unfortunately, this was not the case. In fact, contacting artists or labels at almost any commercial level proved to be unsuccessful. Countless emails and phone calls to signed artists were essentially ignored. That led to the prospect of contacting unsigned artists in the Rochester area. Again, this process met with a similar level of failure. Most emails went unreturned and the phone numbers of unsigned bands were unavailable. Even more frustrating, were the few instances when an unsigned band did respond. In one such example, the artist was unwilling to share his music on any level, that included thirty second clips. Given the previous failed acquisition attempts, it seemed that the entire thesis was in jeopardy. However, help arrived in the form of local DJ named Sloan Kristy. An email was sent

to the local radio station 90.5 WBER and eventually that led to contacting DJ Sloan Kristy, aka:

Kristy Jett. As host of the *Local Show*, it was her responsibility to locate and promote

Rochester-region bands. This position provided her with a strong and trusted relationship

with many local acts. She happily agreed to help with this thesis project and immediately

reached out to several bands that she felt would be willing to not only release of some of their

music, but would also participate in the process of crafting the HMAs. Jett was instrumental in

the success of this thesis. She facilitated the process of making first-contact with each artist

and after a few more emails and phone calls, the final three artists selected were: Benjamin

Morey of The Instruments Band, The Noise, On Vinyl, and Alpha Centaur. By enlisting the music

of local unsigned artists, what was at first a near thesis-ending problem had become a

considerable advantage. Without labels or agents, there was no interference or censorship of

what the artists chose to communicate about their work. Furthermore, it allowed any notable

success of this thesis to double as a promotion for the aforementioned musicians.

HMA Design Specifics (by artist): Morey of what you want, Make some Noise, and

otherworldly adventures

Benjamin Morey

I Don't Love No One

Make Your Own Sunshine

The first HMA song-demos are built around music by Benjamin Morey. From the start of the

project, Morey showed a great deal of enthusiasm and interest. Originally, music was going to

be drawn from The Instruments Band, a group helmed by Morey. However, this changed

when Morey released a solo project around the time this thesis was being developed. An

arrangement was reached whereby Morey provided music from his solo project in exchange

for an album cover based on the corresponding HMA. This proved to have several

advantages. The most notable being that Morey was intimately familiar with his music, lyrics,

and underlying meanings of each song. Therefore, he was able to talk about his work clearly

and without the need to interpret ideas from other band mates. Given the folk rock

background of Morey's principle group, The Instruments Band, and the indie rock nature of his

solo album, it was decided that the corresponding HMA should echo those sensibilities.

Basing many of these style decisions on Morey's music provided a way to choose the

appropriate design methods. This was especially important when deciding whether or not to

use hand-drawn elements or three dimensional ones. The analog recording methods and the

instruments that Morey employed generate very natural sounds. Therefore, it was felt that a

more natural appearance was needed for the HMA. That is not to say 3D elements couldn't be

used, but they needed to be integrated seamlessly into a very organic environment. In the

same way that his music is layered and textured, so too are the visual components of the HMA.

Although each song in this HMA predominantly features assets created by hand, there are several instances in which 3D was the most potent and efficient way to produce the desired look. Several different techniques were applied to the 3D renders in order to make each blend with the other handcrafted constituents. The 3D components were designed in conjunction with the overall style of the HMA in mind. Appearance, color, and texture choices were all selected before construction began. This was done in an effort to minimize the disconnected appearance 3D elements often have in work that contains a 2D elements. That being said, many of the aforementioned attributes needed to be modified in order to meet the visual requirements of the HMA. Adjustments were first made during the compositing stage. Standard render passes were augmented with other types of renders like ambient occlusion, shadow, or highlight passes. Whenever possible, 3D renders were processed using the Mental Ray engine. Mental Ray provided extremely accurate and high-end results for the models used in this HMA. Another technique that was essential to 3D integration focused on the borders of each render. Weaving three dimensional artwork into a two dimensional world was done by careful use of light wraps and edge mattes. These techniques blur or soften the edges of the 3D renders allowing light and color from other objects to spill over the 3D renders. This has the unique effect of embedding renders into a scene without making it appear as if the 3D element was simply placed on top. Examples of this can be seen in both song-demos based on Morey's work. In *I Don't Love No One*, light wraps and edge mattes were used to incorporate the iron chain. These techniques allow greenish light from the background to seep through each link, creating the illusion that the chain is part of that environment. Similarly, in the demo for *Make Your Own Sunshine* the 3D sun animation is sewn into the scene by many of the same methods. Color from passing clouds and islands subtly

mixes with the edges of the glowing sun, tying all the pieces together. Maintaining the visually organic feel of Morey's sound was only one of several important design cues drawn from the artist and his music. Fortunately, Morey was very accessible and generous when it came to discussing his work.

   In fact, he was able to provide interesting details pertaining to his work through a series of interviews conducted during the making of each song-demo. A great example of this can be seen in the demo for his song titled: *Make Your Own Sunshine*. Information like "Ben's 10 year old sister sings at the end of the song" or "Singer-Songwriter Benjamin Morey has said that this song is told from a cloud's perspective," are presented to the viewer at different instances throughout the piece. This kind of information was available only from the Morey himself. The visual look of *Make Your Own Sunshine* was conceived based on careful exploration of the lyrics and the music. In essence, the concept of the song says that if one can change his or her perspective, then one can improve his or her life. In a discussion with Morey, it is clear that he imbues his lyrics with human qualities. In the aforementioned interview, Morey anthropomorphizes clouds by talking about their observations and thoughts when he says: "he can see everything and he's disappointed in people. People get mad at him every time he blocks out the sun or rain." Later in the discussion, he elaborates on this idea when he states that the cloud "...is telling people that you need to 'make your own sunshine.'" This discussion provided both insights and inspiration for the HMA. Morey stressed the importance of a change in perspective. On that note, the song segment that was chosen contains a dramatic upward shift in tempo and sound. This symbolizes the change in the viewer's perspective. Initially, the audience is shown a scene that is dark and filled with gritty textures. The off-white and greenish hues were meant to induce a sense of illness or unhealthiness. The aim was to present a dreary human perspective. The gears inside the human head represent the ability to alter one's perspective or, in a more literal sense, to

Figure 1. Mayan/Klimt influenced 3D Sun

manufacture happiness. As the song progresses, the gears rotate in the human head. Rectangular sun rays stream out of the head, representing one's ability to make their own happiness, or in this case, sunshine. This fact becomes more obvious when a sun, featuring the aforementioned rays, is revealed in the second scene. The rays and sun elements were modeled in Maya and are based on two sources of inspiration: Aztec mythology and Gustav Klimt. The Aztec inspiration gave the sun an ancient quality, while the jewel-like textures were designed to mimic Klimt's ornate style (*fig. 1*). When the music goes through its dramatic upward shift, the contrasting visuals matched the change by presenting the viewer with a vibrant transition featuring Morey, followed by an even brighter scene. The transition sequence provided a way to remind the viewer of who the artist is, as well as to pair the work with a recognizable face. The second segment of *Make Your Own Sunshine* presents the luminous perspective of the clouds as mentioned previously. The multicolored line segments that grow onscreen are angled diagonally upward, from left to right. Visually, their growth and color were meant to inspire uplifting and positive feelings. Metaphorically, they represent the diverse multitude of human beings who have the ability to alter their perspective and achieve this enlightened state of mind. Based on the input from Morey, the drifting clouds are portrayed as quiet observers. Woven in between the diagonal segments and clouds are floating land-masses. These islands serve several purposes. First, they give the scene a sense of cinematic scale and depth. Second, they subtly reveal text that enriches the history and meaning of the song. Lastly, they frame the message of the music in a fantasy-like

environment. The floating islands were designed to enhance the song by emphasizing the imaginative qualities of the human perspective. In the second song-demo based on Morey's music, *I Don't Love No One*, he tells a tale from a number of different perspectives.

By way of lyrical alchemy, Morey imbues the nonhuman subjects in his music with characteristics and opinions. In doing so, he provided a significant source of inspiration for the visual interpretation of his work. The challenges of creating *I Don't Love No One* were similar to the ones faced in the aforementioned *Make Your Own Sunshine*. That being said, the key objective in creating this piece was to maintain the established style of the overall HMA, without crafting something that looked too similar. Consequently, the look and feel of *I Don't Love No One* needed to include an organic texture and color palette, as well as a combination of hand drawn and 3D elements. It is a more upbeat and light-hearted song than *Make Your Own Sunshine* and therefore, it needed to reflect that to the viewer. Scrutiny of his music and lyrics, as well as numerous discussions, led to the creation of a principal character, the robin. The robin's perspective was the starting point for the song-demo. The lyrics in this song state: "...he said I flew into that great Big Blue and I sang to the Sun. I say robin tell me now, what is it that you love? He said those wires made by telephones but, I, don't, love no one." The song's "interview with a robin," is what gave birth to the idea that the viewer should see things the way the robin does. This informed many of the subsequent designs contained within the piece. The telephone poles were inspired by early-1900s forms of the technology and were made to resemble trees, the common perch of many birds. The visual elements in *I Don't Love No One* mirror the lyrics by giving the viewer an interpretation of how the robin might see the world. The clouds were created by blending photography and hand drawn outlines. The hand drawn portion of the clouds was added to help integrate the scene as well as to promote the fantasy-based perspective. Prior to adding the outlines, the clouds' photorealism detracted from the scene by making surrounding objects and animations look too unrealistic. This was

solved by adding the outlines and served as a way to remind the viewer, that this is an imagined point of view. The chain that links the tree-poles together played a special role in this piece. It was not actually inspired by the lyrics of *I Don't Love No* One. In keeping with the idea that an HMA could be applied to each in an album, the chain was inspired by another of Morey's songs titled: *Prison.* Even though *Prison* was not featured as a song-demo, it was important to incorporate small facets of other songs on the album. Mining inspiration from a variety songs on Morey's album helped maintain a sense of continuity. In other words, it was a way of referencing all of Morey's material, not just the featured examples, throughout the HMA. While the project serves as a proof-of-concept by using only song-clips, the HMAs were constructed as if all the songs it contained were to be given a motion graphics treatment. This methodology was employed for several reasons. First, it provided a more realistic sense of preproduction time limitations. Going over each song before building an HMA gives the designer a better understanding of what the project's requirement will be. Second, reviewing the album as a whole frames each song in the musical environment as well as providing the designer with a more complete understanding of the artists' message. Just as one's understanding of historical events can be altered given a different context or perspective, the same can be said of music. When music is examined within the context of album from which it came, it can take on new meaning. In the case of the designer, this is especially significant when one must interpret the complex meanings inherent to music and lyrics. Third, the designer has the freedom to draw inspiration from a broader musical landscape. While the chain used in *I Don't Love No One* is an example of inspiration that was pulled from another song, the robin comes directly from the song's lyrics. Drawn by hand, the bird was colored and animated digitally, using Painter IX and After Effects respectively. It's design is based on a local red-breasted variation of the species and that was a key factor in determining many of the color choices. As a primary character in this piece, it was essential that the robin grab the

viewers' eye. Accordingly, the background colors consist of blue and green tones in order to

highlight the red and orange tones of the robin. The intention was to use cool background

colors in order to focus the viewer's eye on the warm tones of the bird. This allows the robin to

guide the viewer to the chorus-text. This text was designed to be a more elegant solution

than the classic "bouncing karaoke ball." Instead of using an external cue like the "karaoke

ball," the text was animated in a specific sequence. A major influence of this animation came

from an odd source: a Ford 150 truck commercial. In the 2008 spot voiced by actor Dennis

Leary and created by the multi-agency Team Detroit, text is rifled on to the screen in an

exciting manner. The text enters and morphs in synchronization with Leary's voice over. This

memorable animation inspired this designer to use a similar technique in order to deliver

typographic information. By matching the chorus of the song to the text, the audience is

furnished with a visual reference to the lyrics. Tying the text sequence to the song bridged a

relationship between the lyrics and the music. With this pairing of site and sound, the

intention was to create an event that would be easy for the viewer to recall; thus, making the

album more memorable. The transitional element for *I Don't Love No One* represents the

theme of the song visually. The animation features an 'X' that crosses out a heart. It serves as a

reflection of the aforementioned "don't love no one" chorus-text, while leading the viewer into

a new scene. The rough 'X' shape was crafted in a way similar to the swirling clouds. Tape was

photographed and altered in photoshop, then a hand-drawn outline was added to the

artwork. The heart was illustrated and scanned into photoshop. Layers of color and grit were

then added in order to maintain the sophisticated and natural aesthetic. The design of the

heart is in many ways symbolic of the entire Ben Morey HMA. The iconographic nature of a

"Valentine's Day" red heart has been mated to a muscular, more medically accurate heart. In

essence, this was the direct pairing of something fun and almost cartoonish to something

darker and more realistic. A similar tactic was used for the mountains. Stone textures and

gradients were used as a foundation for the mountain characters. The mountain characters come from a line in the song where Morey sings: "I said mountain tell me now, what is it that you love? He said I love that snow that's on my head but I, don't, love no one." In order to add depth to the scene, a combination of blurs and and contrast adjustments were made to each mountain. As one looks further into the scene, the contrast of each mountain is lower, as one would expect from a realistic mountain vista. In addition, a blur was added to each mountain depending on its distant from the viewer. In other words, the further away the mountain, the blurry it appears. In order to maintain a sense of continuity from the first scene, many of the swirly clouds were laced in between the mountains. Another link to the first scene is the background. It maintains a cool turquoise color in order to bolster the warm transitional element, as well as the character bio and lower third that close out the piece. Furthermore, the same typography that was previously seen in the chorus-text animation, was included in these final elements. The wooden banners feature a picture of the artist as well as an upcoming tour-date. As per the project's objective, the text and picture can be easily swapped out or simply updated. Crafted in the same manner as the mountains, the wooden elements combine playful ink drawings with photorealistic textures. The fantasy aspect of the artwork symbolizes the light and upbeat side of Morey's music. Conversely, the gritty and realistic facets of the artwork represent the layered depth and sophistication of his music. For this designer, the aforementioned symbolic rationale played a major role in the decision to give the Ben Morey HMA a fantastical treatment. Moreover, It was the most effective way to represent and incorporate both sides of Morey's music in one visual style. For the next HMA, many of the construction methods remained the same but the style had to match the rambunctious persona of a garage-punk band.

The Noise, On Vinyl

The Pressure Leap

Living In The Sun

Chris B., Ben C., Atom Mac, and Cody Early make up The Noise, On Vinyl (TNOV). These teen-rockers hail from the Canandaigua area and like Ben Morey and Alpha Centaur, they too have been featured on the WBER Local Show. Communication with the band proved inconsistent. At times, band members were easy to contact and responded quickly. In early production phases, the band provided clips of their music and lyrics. However, as the project progressed band members often did not respond in a timely manner or, at all. Furthermore, several attempts at interviews by phone or in-person were unsuccessful. but the band's hectic and unpredictable schedule was prohibitive. As with all projects and of particular importance to this thesis, a production schedule needed to be maintained. With that in mind, it was decided that one could not rely on TNOV for consistent research, information, and opinions. The band was supportive in the endeavors of this thesis, but were not active participants like Ben Morey. As a result, interpretation of the music and production for TNOV HMA was mostly self-directed.

TNOV have a raw, aggressive, and energetic sound. It was determined that the band's visuals needed to not only match that audio sensation, but compliment it as well. One of the first concerns with TNOV's music was the production quality. As a young and aspiring local band, access to a professional recording studio is hard to come by. The unfortunate result is quality music, recorded using substandard methods and equipment. Given the concerns over sound quality, it was crucial that the HMA capture the energy of TNOV, but visually augment the audio. For these reasons, the look of each HMA song-demo sought to strike a balance between clean and grungy graphics. If the graphics were too clean it would not have captured the raw energy of the band. Conversely, if the graphics were too grungy, it would

Figure 2. Halftone textures in this Comic/ Pop Art influenced scene

have emphasized the unpolished nature of TNOV's sound in a negative way. Inspiration for the visual style of came from a chain of sources. To match the energy of TNOV's songs: *The Pressure Leap* and *Living in the Sun* a variety of stylistic methods were employed. In order to match the more playful nature and youth of the band, intense colors, strong graphics, and exciting animations were needed. Comic books and graphic novels present these types of color schemes and potent visual cues.

Modern graphic novels provided the inspiration but the wide array styles didn't seem entirely appropriate for the band. The darkness and complexity of modern day comic art represents only one part of TNOV's music. However, paired with classic retro comic art, the full range and style of TNOV could be expressed. The works of comic book legends Stan Lee and Jack Kirby led this designer to the Pop Art styles of Roy Lichtenstein (*fig. 2*). By referencing fine art in the TNOV HMA, the aim was to add layers of visual meaning. In other words, those viewers who recognize the influences of Lichtenstein's work could enjoy the HMA even more, while those who don't would still be privy to the vitality inspired by his work. The aforementioned vitality inherent to Lichtenstein's work and the high-contrast look of modern-day graphic art, provided the perfect base for this band's HMA. Neither style alone meets the necessary criteria and that is why the viewer is presented with a melding of the two. In the song-demo for *The Pressure Leap*, Pop Art style is more prevalent than its modern day graphic novel counterpart.

The Pressure Leap serves as the viewer's introduction to TNOV. The objective of this song-demo was to create interest in the band and their music more than to precisely

represent the lyrics in the song. This lead to a looser pairing of graphics and animation to the audio. In other words, the animations of this piece were designed more to mimic the feelings and sensations generated by the music. The thought process behind this idea was two-fold. The first reason addressed the fact that the lyrics were somewhat sparse in visual description or story-telling. That is not to say these lyrics were not interesting or relevant but rather, they were simply handled in a different style than the metaphorically rich music of an artist like Ben Morey. The second was to allow for larger amount of creative freedom in the development of each song-demo. It was important to demonstrate that the designer of the HMA is as much of a creative force as the musicians represented. This trait is especially vital in a situation such as this one, where the musicians were difficult to contact or unable to contribute to the design of the HMA. Some might view this a limiting factor regarding the development of TNOV's HMA. However, that was not the in case. In fact, it was quite a liberating experience. It allowed for work to progress as rapidly as was needed, without having to wait for a musician's opinion or contribution. As the song-demo for *The Pressure Leap* opens, the viewer is presented with a murky background, World War II-styled bomber aircraft, half-tone accents, the band name, and faint echo's of a burst element. The main idea in this sequence was to present interesting content while allowing for the flexibility of interchangeable text information in the center. In this case, the band's name was used as an example of information that could be displayed. This 3D text was created in Maya and composited in After Effects using several variations of Matte Chokers and alpha layer blending modes. Retrospectively, this type should have matched the group's branded text; American Dreams, a font which is used throughout the HMA. While it was originally an attempt at creating variations in the sequence, the end result seemed more like an error in continuity. The bomber aircraft were inspired by much of Lichtenstein's Pop Artwork and are meant to direct the viewers eye to the center text information. These bombers were designed after a

B-17 Flying Fortress, a highly recognizable airplane from the World War II era. In After Effects, each plane's silhouette supplied an alpha channel to an image layer of a nebula. Using the nebula image served two purposes. Firstly, its usage helped push the subject matter in a non-militaristic direction. Secondly, the image layer provided each silhouette with the necessary high levels of contrast and the nebular texture gave each enough detail to prevent the planes from looking too flat. The variation provided by the nebula image also helped the planes blend into the environment more effectively. In order to further offset the potentially political or war-like nature of the bomber silhouettes the bombs were designed to be more playful. The concept was to harness the intensity of TNOV's music via action and animation, not through violence. Therefore, the bombs were illustrated in a cartoon-like style. There are two types of bomb-faces: an angry face and a frightened face. The idea was to inject some humor and personality into the bombs. By looking at many of TNOV's promotional photos, one can see that this band is full of eccentric and humorous characters and that was a quality that needed to be conveyed in each song-demo. The bombs were illustrated by hand and scanned into Photoshop. Each bomb was then blended with color layers in Photoshop and imported into After Effects. In order to complete the looping background in this section, subtle usage of halftone and starburst artwork was layered into the background. The halftone shapes were created in Illustrator and matted by looping fractal noise. The fractal noise is easy to loop and provided the halftone artwork with a bit of energy. The rotating starburst is the final piece of this background and, like the bomber aircraft, guides the viewer's eye to the center of the screen. In addition to providing detail and polish, the halftone artwork and the starburst gave the background more life, without overpowering the foreground. Furthermore, these animations foreshadow the artwork used in the character biography section. Before the character biography, the viewer is transitioned by an explosion of color and contrast. Unleashing the vitality of *The Pressure Leap,* the viewer is struck by a smoldering meteor. As

Figure 3. Meteor transition scene

the green boulder hits the lower left edge of the screen, shock waves emanate outward in a burst of solid and halftone yellow, orange, brown, and white. The meteor was colored green as a way to emphasize its extraterrestrial origins. The variety of warm tones from the explosion represent the energy of the impact with earthen material. These bright colors echo the paler, more pastel, versions used in the first scene and background. The smoke clouds that trail the meteor are colored as both a precursor to the next scene but also, as complimentary to the yellow-orange explosion. This transition is a mirror representation of TNOV's musical style; a style, punctuated by energetic crescendos and driving riffs. The meteor and smoke clouds were illustrated by hand and scanned into Photoshop. Each of these assets, was colored by a solid and blended with a mixture of layers in After Effects. However, the meteor was given an added layer of detail by adding a multicolored ramp to the solid that provides its color. As both an artistic variation and given the proximity of the meteor to the viewer, it was felt the meteor required more attention. The starbursts that comprise the explosion were originally created in Illustrator and modified in After Effects, in order to create the color variations. The glowing meteor was inspired by vintage comic books, while the explosion and smoke were strongly influenced by Lichtenstein's *Small Explosion* sculpture (*fig. 3*). Using a time-reversed render of the explosion as an alpha matte, the transition reveals the second background and subsequent character biography. A derivative of the first background, this new visual features a bright paint-like spatter pattern. Given the complexity and importance of the information presented in the character bio, it was determined that this background should be visually ornate but not overwhelming. In other words, it needed to

compliment the foreground animations without using too many moving elements of its own. This was achieved through contrast and color usage. The light white-green texture and the tropical paint-spatter center the viewer's eye on the black halftone starbursts and provide a high-contrast background. The colors used in this scene, like that of the previous one, were drawn from a more contemporary graphic-novel palette. There were two significant reasons for the color selection. The first reason is because on-screen graphics are not limited to the vintage halftone palettes used in most of the older inspirational work. That freed this designer to explore non-traditional color palettes for this song-demo. The second reason was so that this work would differentiate itself from its sources of inspiration. Even though it was an undeniably strong influence, the work of: Lichtenstein, Kirby, and Lee, served as a jumping off point for the design, not a destination. As the boldest part of the color scheme, the black starbursts erupt onto the screen and meteors similar to the one used in the first transition coast across. The meteors provided continuity, a degree of movement in the mid-ground, and a way to further guide the viewer to the black starbursts. Laced with Lichtenstein-inspired halftones, the black starbursts serve as information bubbles. Each one features animation, band imagery, and band information. The content of each starburst can be easily replaced as needed. This versatility is part of what makes this project unique. For example, if the band's lineup ever changed, their image can be easily swapped out and it will still maintain the correct animation and starburst-edging. Animated in sync with the lead guitar, the black starbursts stem from the artwork used in the explosive-meteor transition. Created in Illustrator and modified in After Effects, they are a relatively simple combination of blended layers, alpha mattes, and halftone artwork. To give them an added sense of depth, the halftone starbursts were matted with crisscrossing grey and white stripes. In addition, each one was lit using After Effect's 3D lighting and layer system. These techniques provided the subtle layers of polish that aid in the enhancement of the viewer's experience, even though

Figure 4. Lower third featuring Sputtering Nik

they're not always the most noticeable aspects. The flames that encircle the image of the band are designed to draw extra attention. TNOV is a charismatic group of musicians and this photo highlights this quality. This type of charisma is vitally important to young bands like TNOV, and the flames draw the viewer's attention in order to augment the image's place in the visual hierarchy, already established by the size and location of this starburst.

The flames were created by hand and colored like the meteor and smoke clouds. In a style reminiscent of stop-motion, the flames appear to move and flicker because the opacity of each was animated in sequence. In the second largest starburst, the viewer is again presented with the band's name: The Noise, On Vinyl. By using the font American Dreams, this sequence matches the band's current branding. The reiteration of the name was a way to reinforce the pairing of the band's memorable image with its name. During the creation of the second starburst, several attempts at making the American Dreams font appear to be made of chrome were made. While it seemed appropriate for a typeface with automotive origins, the chrome-look made a font that was already difficult to read, illegible. In the last major starburst, there is a laughing skull. Paired with the flames, the skull is meant to bolster the bands edge in a playful manner, like the bombs in the first and last scenes. It also helps to incorporate the lower third element that follows the animation of the starbursts. The lower third is revealed by a character this designer dubbed: *Sputtering Nik* (fig. 4). Like many lower thirds in the Broadcast industry, this one moves in a right-to-left fashion. The reasoning for this stems from the fact that most viewers in the Western world read in a right-to-left direction. By therefore presenting the animation in the opposite direction of what the
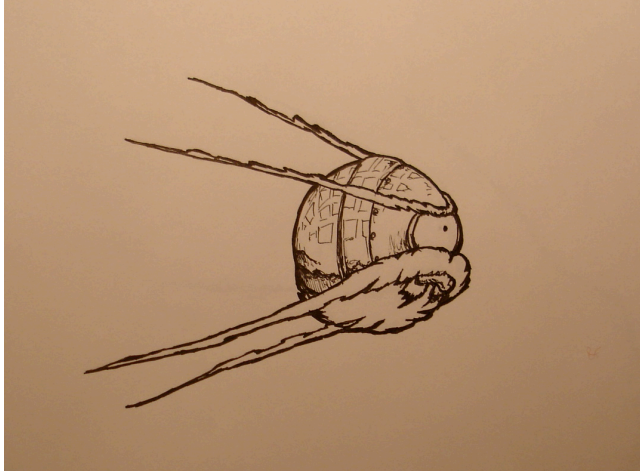
Figure 5. Russian Tzar-like sketch of Sputtering Nik

audience is accustomed to, they are jarred into paying attention to the information. In a much older form of entertainment, the theatre, this technique was used to unconsciously affect viewers by presenting villains or other significant movements stage-right to stage-left. As *Sputtering Nik* enters stage-right, the lower third element presents relevant album and promotional information for TNOV. *Sputtering Nik* was created in much the same way as the meteor; hand-drawn and scanned, the color information being added via gradients and layers in Photoshop. The design of this character helps tie many of the song-demo's elements together. *Sputtering Nik* is a combination of comic art, the cold-war era satellite *Sputnik,* and a classic Russian Tzar (*fig. 5)*. The character is illustrated and animated using contemporary methods in order to give it a modern look. However, the design of the character hails from the same time period as much of the Lichtenstein-influenced artwork; thus, allowing it to blend more effectively into the piece. Furthermore, continuity of the outer-space elements like the nebula and meteors, is maintained through this soviet-inspired character. Lastly, adding another bizarre character adds some eccentricity to this song-demo and links the character biography to the bombs in the opening scene. The smokey exhaust that emanates from *Sputtering Nik* are the smoke clouds, reused from the meteor transition. In keeping with TNOV's branding, the American Dreams typeface was employed in the lower third banner space. The interchangeable content of this lower third is placed on a grey and white halftone canvas. For the canvas and border, a derivative of the starbursts' color scheme was employed in order to encapsulate and highlight the information contained within. As a way of transitioning from the character biography to

the ending scene, the viewer is struck by lightening. Similar to the first meteor-transition, the lightening bolt-transition punctuates the action by paralleling the musical peaks and changes. The bolts represent the raw energy and excitement of the music. Each one is animated so that it appears to vibrate and give the viewer the sensation of charged static electricity. Having watched several videos of TNOV performing on stage gave this designer the idea to represent the band with this youthful burst. The bolts were inked by hand and put together in Photoshop and After Effects. As before, a hand-drawn and scanned method was utilized in order to maintain continuity of the look and style. Bright and vibrant colors were picked for each bolt in an effort to augment the band's youthful vitality. The second part of this transition are the layers behind the bolts. These layers peel outward in a fan-like motion. The concept behind this movement was to draw the viewer deeper into the scene, while simultaneously illustrating a visual metaphor for the layered nature of TNOV's sound and lyrics. Each layer echos elements used in the other scenes of this song-demo. One can see the halftone and intense nontraditional colors in many of the layers and well as the grey and white crisscross pattern. A combination of After Effect's solids and Illustrator assets, the layers in this transition were designed to contrast each other. To excite that audience and create a dramatic presentation, it was determined that the transitions for this piece needed to shock and awe the viewer. *The Pressure Leap* song-demo closes with a reiteration of the first scene elements. The 3D text, airplanes, bombers, and murky textures, make a return in order to accurately represent what the full song would look like in reality. In keeping with the objectives of this thesis: low production costs and versatility, designers would be able to reuse and revisit looping scenes and graphics as needed. While the graphics and animation created for *The Pressure Leap* sought to broadly promote the energy, depth, and vitality of TNOV, the visuals crafted for *Living in the Sun* were inspired by poignant lyrics.

The second song-demo in TNOV's HMA, *Living in the Sun*, takes the viewer on an interstellar road trip. The trip begins on the surface of the Sun. As the sun revolves, the viewer is introduced to the band members. In this character biography, individual photographs were used in order to showcase specific members of the group. The solar sojourn was inspired by the song's title and the following lyrics: "Tomorrows always blank. Let's drive to nowhere. It's a nice thought, but it's just a trick." The idea of driving to "nowhere" presented interesting visual opportunities. The Sun's ever-changing molten surface was the perfect environment for a journey that leads the viewer nowhere. The concept of "going nowhere," was triggered images of a wasteland or desert. In this vein, the surface of the sun is even more arid and desolate. However, the energy and brightness of the Sun's surface was also a more exciting and appropriate choice for this group. Modeled, procedurally textured, and animated in Maya, the Sun was then composited in After Effects. RealSmart motion blur was added, as well as a variety of radial and gaussian blurs. It was imperative that the pulsing heat of the sun was represented in this part of the song-demo, albeit in a stylized way. The solar surface provided a distinct and memorable environment while also, mirroring the power and movement of TNOV's lyrics. In keeping with the road trip theme of the lyrics, road signs were used as a platform for displaying information. Like the previous HMAs, the type and photographs on each sign can be easily updated or replaced. In order to maintain visual continuity within this HMA, the signs were crafted in the same comic book style that was first explored in *The Pressure Leap*. Again, the tried and true method of: pen to paper, scanned illustration to Photoshop, and color applied in Photoshop, was followed. Each road sign was designed to look distressed and heavily fatigued. The concept behind this design was to discretely reinforce the undertones of the lyrics. Lines like "It's a nice thought, but it's just a trick," and "The story's real nice, but it's spread too thin," give the listener a sense that appearances may be deceiving. The brightly colored road signs are indicative or this undertone. In order to

convey this sensation visually, each vibrant sign was counterbalanced by adding severe wear and tear. This type of duality is a recurring theme in the musical style of TNOV and it will be explored further, in the breakdown of the second scene. To sync the rotation of the Sun with the road signs, each sign layer was switched to After Effects' 3D mode. The pivot point of each sign was moved to the center of the Sun's axis and each sign's rotation was matched to the Sun's rotation. Similar to the previous song-demo for TNOV, the type and photos were added in After Effects. This was done in an effort to keep the process of updating the content of each sign, relatively simple. As the viewer approaches the final road sign on this journey, the band's name is displayed. The reasoning behind this decision was based on one of the important goals of this character biography. The goal was to present the distinct and jocular style of the individual musicians that make up TNOV, while maintaining their association to the group. There were two driving factors that led to the decision to repeat the band's name throughout each song-demo. The first, was a desire to promote viewer retention. One of the strengths of the HMA is the ability to promote a band or artist without seeming too much like a commercial advertisement. The second factor behind this design decision was to provide a standalone album design. For example, suppose the musician or band was releasing a single or could only afford to have one song created in the HMA format. In this case, it would be imperative to provide the artist with an HMA that best supported retention of the artist's name. Supplementing the foreground animation and character biography is the background. The background is layered with a wide range of animations and textures. Inspired by modern graphic novels, the background is much darker and more realistic than the foreground elements. It features a nebula and star field for two reasons. First and foremost, it was the most appropriate choice given the proximity and importance of the Sun animation. Second, the nebula and star field reference the some of the previous elements from *The Pressure Leap*. The road textures that churn across the upper third of the background serve to reinforce the

lyrical reference of "driving to nowhere." Although the road textures were used in an abstract manner, they have several effects. One of these effects being that the road sign animations were better integrated into the scene. By having road elements behind the road signs, neither asset feels too out of place. Another effect is the result of the animation of the road segments. Each segment is animated in a looping sequence to ensure the reusability of the background but also, to subconsciously create a feelings of uneasiness and unsettledness. Furthermore, the repetition of the road segments is in line with the song's theme of a journey that goes nowhere. The dark tones of the background serve two purposes: to provide contrast for the Sun and foreground elements, and to duality of TNOV's music. This duality can be seen in the structure and style of the artists' music. The lyrics and subject matter are heavier in nature but the music is upbeat and energetic. The duality provided this designer with many ways of expressing the concept visually; the strongest example being, the second part of this song-demo. However, the viewer could not be simply thrust into the next scene without a transition. In order to make this transition as seamless as possible, one final element was added to the first scene, the planetoid. The design is a stylized representation of the planet Mercury, the planet closest to the Sun. Mercury prepares the viewer for the upcoming transition because it features two of the transition's key style cues: comic book-style ink lines and gritty texture. In addition to providing the background with more movement, the barren surface of the planet adds to the atmosphere of this scene. As Mercury continues its orbit, the viewer is transitioned to the next scene by a vintage hotrod. The car's origins stem from two significant influences. The first is that if this song's focus is on the fantasy of driving to "nowhere," one needs a vehicle to get there; hence, the hotrod. The second is the *American Dreams* typography used in much of TNOV's promotional material. Seen in the aforementioned road signs, this typeface is similar to what one would expect to find on a vintage car. Given these influences, it was decided that some type of vintage car was needed

in the piece. The style and design of the car came from a variety of sources. While retro feel of vintage comic art and the vibrant colors employed in the hotrod's design matched the energy of the song, these aspects also inject excitement into this song-demo. The comic art-style of the hotrod further maintains the continuity of the overall HMA design. The textures used to silhouette the car echo the road textures used in the previous scene. The motion of the hotrod and the sequenced animation of the road textures reference the meteor transition from *The Pressure Leap*. The style of this transition balances gritty texture with eye-catching artwork, in the same way that the band balances weighty subject matter with pop-punk musical structure. The hand-drawn technique and the color scheme of the hotrod, were yet another aspect influenced by Lichtenstein's Pop Art. The second and final scene in for *Living in the Sun*, features more Lichtenstein-influenced assets. As the hotrod reveals the next scene, the viewer is met by rolling halftone-hills. As with all the hand-drawn elements of this song-demo, each was drawn, scanned, and composited in photoshop. The hills were melded with some of the halftone artwork from *The Pressure Leap* and blur-layers were added to each in order to create sense of depth. Behind the hills is a variation of the nebula background from the first scene. This version however, is much richer and layered with several other elements. Some of these elements are there to simply provide a fuller visual experience, like the white diagonal lines. These lines add some visual polish to the scene and echo the diagonal pattern of the road textures. The white lines are linked to a looping fractal noise animation and were added to the background of the first scene to maintain a sense of continuity. Another addition to this background are the light flashes. The flashes increase the turbulent nature of the environment, add energy to the piece, and further support the lyrical dynamic of this section. The lyrics that played a major part in the inspiration of this scene are: "Oh, I fell asleep. What a cruel illusion. Turning on the light. Morning comes at night..." The idea of sleep being a cruel illusion was the primary factor in the design of this scene. The background creates a

nightmarish atmosphere, while the brightly colored hills maintain the fun and youthful energy of TNOV's music. In an effort to avoid crafting a depressing scene, some humor was needed to offset any some of the negativity. Given the subject of sleep, the old method of counting sheep proved an invaluable addition to this section. TNOV are young musicians who place a great deal of importance on showmanship, humor, and character. Coupling that idea with the lyrics of *Living in the Sun*, made for the perfect combination of satire and meaningful content. The viewer is treated to a dream-turned-nightmare as sheep are ripped through the stormy atmosphere of this scene. The sheep swirl through the screen in a whirl of overlaid dust particles and pieces of the fence they might have been jumping over before things went horribly awry. This final scene sought to capture the aforementioned duality of TNOV's musical style. The music itself is upbeat and energetic, yet the subject matter of the lyrics is emotionally charged and tumultuous. That duality is a key part of TNOV's persona, which is why so many design decisions were based around it. The humorous nature of tumbling sheep parallels the playful side of TNOV while the tempestuous atmosphere presents the layered depth found in their song-writing. The third musician featured in this thesis delivers a very different sound than TNOV. Where TNOV offered a pop-punk sound, Alpha Centaur offers the complex and intriguing sound of electronic music.

Alpha Centaur

Ink & Disintegration

Neptune One

A prolific member of several different types of music groups, Jonathan Young is the solo artist behind Alpha Centaur. When first introduced to this thesis, he was very supportive, enthusiastic and helpful. Young generously provided this designer with a multitude of music

tracks that he had created under one of his monikers: Alpha Centaur. Furthermore, Young

expressed a strong interest in the design process of this thesis, as well as the technology that

would be used in its creation. Unfortunately, as the work on the Alpha Centaur HMA

progressed, Young became unreachable. Unlike The Noise, On Vinyl, a band that had a

plethora of information like lyrics and a substantial web presence, Alpha Centaur didn't

provide the same sources of inspiration. Being unable to contact Young and the lack of

inspirational media presented this designer with a daunting challenge for the design of the

Alpha Centaur HMA. The most difficult part of this HMA was something that most designers

crave: freedom. In the end this was not a bad thing, but it made finding a place to start the

design formidable. In order to overcome the aforementioned obstacles, several decisions

were made. First, it was determined that getting extremely familiar with the music was very

important. The reason for this was that this designer needed to know the music well enough

to be able to interpret the it. Furthermore, this designer had to rely more heavily his own skill

and experience for inspiration than the previous HMAs. The second method of overcoming a

lack of resources was to determine a starting point. Like any good book, the first place one

starts is the title. The same was true in the case of the Alpha Centaur HMA. Whether the title of

each song was arbitrary or intentional, the artist still provided this designer with a jumping off

point to start the design. The third way of contending with these obstacles was by examining

the previous HMAs. By studying the other HMAs, this designer was able to determine what

attributes and design cues this thesis project was lacking in or had in excess. One of the more

noticeable attributes was a lack of 3D animation and design. While each previous HMA was

designed purposefully, it appeared that the amount of 2D animation far outweighed the

amount of 3D animation. This aspect was detrimental to thesis because one of the project

goals was to showcase a staggering amount of design flexibility. Keeping in mind that each

HMA was a demonstration of the format's capabilities, it was decided that the Alpha Centaur

HMA needed to prominently display 3D animation and design. Thats not to say that the sole reason for using 3D in this HMA was based on an overall thesis need. The computerized esthetic of 3D design provided an excellent compliment to the electronic sound of Young's music. Like the well-produced music that it supports, the look of the 3D artwork needed to be sleek and well-rendered. In order to support the high-end rendering, it was determined that the 3D models and textures would need be simple, stylized, and elegant. As a result of this, the aforementioned artwork was mirrored the futuristic sensation of Young's electronic music. To further enhance this futuristic theme and to compliment the stylized 3D look, the typeface Sukato was selected for this HMA. This typeface's sleek combination of rounded and angular corners created a sense of interplay between the artwork and the text. Furthermore, it provided an excellent base for modeling 3D type in Maya. However, as both a sans serif and block typeface, Sukato presented legibility issues. It proved difficult to read at smaller font sizes. This problem was addressed in a variety of ways; each, to be discussed on a per song-demo basis in the following sections. The two songs selected from Young's library were *Neptune 1* and *Ink & Disintegration*. Although presented last in the thesis, the song-demo for *Ink & Disintegration* was the first song-demo created for this HMA.

With the decision to integrate more 3D assets in mind, more planning was needed for *Ink & Disintegration* than for the previous song-demos. (sketches). A variety of sketches were made before modeling and texturing began. This preproduction work helped to generate a clearer picture for what would be created. Given the increase in 3D design for this song-demo, another factor was considered, balance. The equity of slick 3D animation versus the organic sensation of film footage or assets created by hand, was of great importance. While it had been established that computer generated imagery (CGI) would suit many of the song-demo's needs, it was felt that too much would create an impersonal atmosphere. This side effect could alienate the viewer, and it is similar to the problem with other types of CGI, like

visualizer plugins. In an effort to counterbalance the CGI in this song-demo, film footage and blurring techniques were employed. The background is based on several colorized footage layers of ink footage. Using footage meant looping the background would be difficult. However, this was overcome by using multiple instances of the ink footage and blending them together. Gaussian blurs, animated masks, and transparency attributes, held the key to creating a background that would loop seamlessly. To provide each of the three scenes with contrast and variation, different versions of the background were created. In order to achieve this variation, each alternate was colorized and in some cases, dust particles and geometric grids were added. Each background was designed to provide contrast through color to the foreground elements. For example, in the first scene the background is primarily grey while the foreground elements are vibrant yellow, red, and green. In the second scene, the violet tones of the background accentuate the yellow bursts. The third iteration of the background is green and it contrasts the previous scene, as well as the light grey text information displayed in the foreground. Furthermore, the color arrangements of the backgrounds augment the building crescendo of the music. In each of the successive scenes, the background tone becomes brighter and more vibrant in order to match the musical progression. In front of the first background, the viewer is presented with Young's musical moniker, Alpha Centaur. The Alpha Centaur text was built, textured, and animated in Maya. Outlines for the Sukato text were constructed first in Illustrator and later imported into Maya. The bevel tool in Maya provided the basis for the 3D model. However, meticulous remodeling and expansion of this base model was necessary in order to accurately retain the look of the original Sukato text. The texture is meant to add an extra level of detail and futuristic polish. The diagonal pattern of the texture echoes several other diagonal elements included in this song-demo. The red and green colors of the text generated a striking contrast between "Alpha" and "Centaur." The purpose of this contrast is to draw attention to the artist's name and therefore, place it at the

top of the visual hierarchy. This hierarchy is interrupted only by the lower third element. The intentional disruption caused by the lower third catches the viewers eye in order to display important tour date information. The sliding and flipping animation of the lower third is what draws most of the attention, but the text color and the heavy outline of the asset's texture provided another way of adding significance to the information. The lower third is made up of a 3D model and text information that can be easily edited within after effects. The angular model follows a design similar to the Sukato text and a corresponding diagonal texture was added. Inside this model, a transparent glass texture was used in an effort to augment the high-tech aesthetic of this piece. It should be noted that many of the same 3D integration techniques used in the aforementioned HMAs, were used in the Alpha Centaur HMA. Edge mattes, light wraps, and blur layers were utilized with the each of the 3D animations and assets. Use of these techniques enabled colored light from background to seep through the edges of elements in the mid, and foreground. The blur layers further integrate the 3D elements with the background and add depth to each of the scenes. In addition, each 3D element was rendered in layers. Render passes like ambient occlusion and mental ray, were composited in After Effects. In some cases, the rendered 3D animations were treated using masking techniques in order to blend them into the scene. For example, the mechanized speaker-flowers in the second scene, were masked at the base in order to make them appear to grow out of the violet ink background. Before such a dramatic change in content can be brought to the viewer, a transition was needed. In the case of *Ink & Disintegration*, diagonal 3D planks were animated in a merging pattern. As a way of speeding up production time, only two types of planks were created in Maya. Modeled and textured to match the futuristic aesthetic of this song-demo, the layers were treated and composited in After Effects. Each 3D render comprised a layer in the transition composition. By rendering only two sequences and compositing each in After Effects, the render time of the transition was dramatically reduced.
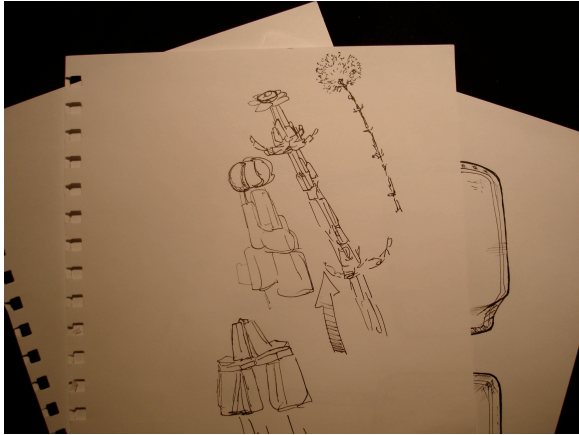
Figure 6. Sketches of mechanical flowers and animation

To add variation to this transitional sequence, the timing of each plank animation was staggered. A blur was added to an adjustment layer over the composition in an effort to blend some of the plank-layers together. The color scheme and high-tech look of the transition was designed to match each of the three scenes in this song-demo. When the transition parts, it reveals the second scene. This scene adds to the exciting and building nature of the music by presenting blossoming mechanical flowers. The inspiration for the flowers came from the layered feel of Young's music. Each plant blossoms into a visual burst of mechanical pollen. The growth and burst reveal a speaker-like flower. These blossoming plants represent the each of the building sounds within the music. The growth and pollen bursts occur in sync with the beat; thereby, emphasizing the crescendos of the music. The speaker-flower and plant sections were modeled, textured and animated in Maya. As with similar 3D assets in this project, RealSmart motion blur was added in post production. The stem was created and rendered in sections. These renders were composited and animated in After Effects in order to create the growth effect. Variation was added to the stem sections by rendering multiple camera angles of the same animation, or a slightly altered version. This production method, similar to the aforementioned transition, proved to be extremely useful and expeditious. Sketches created in the pre-production phase of the Alpha Centaur HMA were essential in planning out this workflow (*fig. 6*). By rendering in sections, the quality was increased and the render time was decreased. Despite the mechanized appearance, it was felt that the speaker-flowers would bring naturalistic and organic qualities to the song-demo, without violating the technological aesthetic. The speaker-flowers were modeled separately and assembled in the

same manner as the sections that comprise the stem. To capture the pulsing look of an actual speaker, the nCloth dynamic system was used. Fortunately, this animation was rendered separately and therefore, was not bogged down by the calculations of the nCloth simulation. The simulation was also designed to loop and would again reduce render times and demands. This also allowed for greater control over the speaker-flowers when it came to aligning them with the beat of Young's music. A second type of simulation was utilized to create the pollen bursts. After modeling and texturing the initial particle in Maya, it was linked to a dynamic simulation using the geometry replacement option. After all render layers were assembled in After Effects, the burst animation was nested as a composition. These compositions were then layered and timed with the corresponding speaker-flower animations. An early render revealed that the scene needed additional elements that would tie it to the scenes before, and after it. Therefore, high-tech type and "targeting" graphics were incorporated. These graphics were added in order to augment specific points of interest and to connect this scene with the others in this song-demo. Lastly, lens blurs and layers of dust particles were added to the scene; enhancing, the viewer's sensation of traveling in between the growing field of mechanical flowers. After revisiting the aforementioned transition, the audience is shown and intricate and technologically advanced character biography. The angled corners and glass panels of this broadcast element further enhance the exciting and futuristic feel of the piece. Furthermore, important information like: song title and artist, is displayed to the viewer. In this case, the idea was to make the viewer feel as if he or she is receiving a transmission from artist. This was in keeping with the futuristic aesthetic of the Alpha Centaur HMA as well as, this thesis's overreaching concept; that the visual experience, enhance the auditory one. The character bio was created using a mixture of Maya and After Effects. Modeled, textured, and animated in Maya, it's render layers were composited and treated in After Effects. In this instance, it was important that the ambient occlusion pass did not block the transparency of

the Mental Ray pass. After applying motion blurs and edge mattes, the text and image information was added. As with previous character biographies, the text and imagery are easy to edit, adjust, or replace. The concept that the audience is receiving a transmission was expressed through use of distortion effects that were applied to the image of Young. Effects like Warp, Venetian Blinds, and BadTV, were layered together in order to add fluctuations and to generate a garbled transmission look to the image. Coupled with transparency adjustments, these effects attract attention to the image. Given the electronic nature of Young's music, it was felt that emphasizing the human aspect of the work would help generate a connection to the viewer. Presenting the image of an artist like Young reminds the viewer that there was a real person behind the music. This scene was not without its difficulties. The textual information presented a variety of legibility issues in early renders. The ultra-modern Sukato typeface proved extraordinarily hard to read at font sizes less than sixty points. A combination of adjustments to the type and a series of design decisions ultimately provided a solution to this problem. The first problem was font size. Given the importance of the artist's name, it was paramount that the text be legible on a wide array of screen sizes. After several test renders, it was determined that instances of the Sukato typeface needed to be displayed at font size of at least sixty points. A larger font size greatly reduced the severity of this problem but did not completely eliminate it. The swirling and shifting tones of the background often caused the grey Jonathan Young text to seemingly disappear. This problem was solved by adding a dark outline stroke to the text. With the previously mentioned constraints in mind, it was decided that using Myriad Pro for the smaller song-title and artist text would be a more prudent course of action. Despite being less futuristic, this sans-serif typeface was more legible and it was still modern enough to suit the look of the song-demo. With the encounter of common design problems such as this, it became apparent that a guide would need to be created for any persons responsible for editing an HMA. This led to
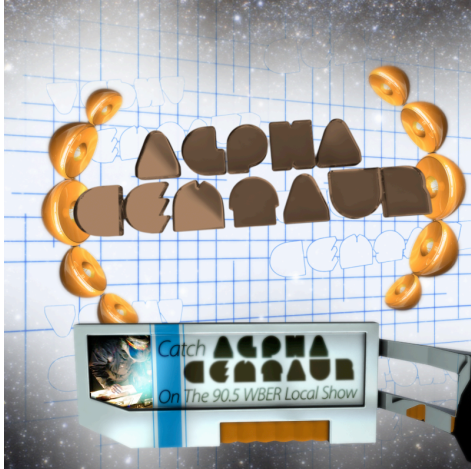
Figure 7. Scene from Neptune One with lower third element

the creation of a Motion Graphics Standards Guide. The guide, discussed at greater length in another section of this thesis, was developed as an example for the second Alpha Centaur song-demo, *Neptune One*.

The second song-demo inspired by Young's music takes the viewer to another world. The work for *Neptune One* drew its inspiration directly from its title. For this designer, the song title conjured images of the Roman mythological god and his namesake planet. Ushering the viewer on a stellar adventure set to the music of Alpha Centaur was an ideal way to continue the futuristic theme of this HMA. The look for this song-demo was further inspired by classic science fiction films like: *2001: A Space Odyssey* and *Alien* (*fig. 7*). The set design and color scheme of these films provided an excellent starting point. The color scheme was based on a combination of cool and warm tones. Blue and white tones comprised the cool palette, while warm tones like browns and oranges, completed the complimentary palette. The first background is made up primarily off white and blue tones. A mixture of star fields and masked solids, it also reemploys the grid element from *Ink & Disintegration*. Previously, this grid element served to ground the viewer in tumultuous space. However, in *Neptune One* its use invokes images of star charts or interstellar maps. Recycling and altering previously generated assets was a useful way of maintaining continuity, as well as speeding up production. Additionally, 3D text was integrated into the grid element. Following the aforementioned process, Alpha Centaur text models created for the previous song-demo were reworked and subtly incorporated into this new background. The goal for this secondary text element was to inject life into the background, while not overpowering the foreground objects. To achieve this, the model was textured using a white Toon shader and a blue outline

stroke. In addition to the typical gamut of edge mattes and blurs, these color aspects

effectively blended the 3D text into the white star field and the blue grid. To differentiate this

iteration even more, the text's animation and render camera angles were significantly altered

as well. To meet the project's standard, the 3D text was animated in a looping fashion. The

renders for this secondary text were last approximately one second. However, the looping

nature of each animation allowed for reduced render times, as well as making each one easy

to adjust within After Effects. In the foreground of this scene, the viewer is greeted by

prominent Alpha Centaur text and an array of orange speakers. The speakers are a revised

version of the speaker-flowers created for *Ink & Disintegration*. The original design was re-

textured, animated, and rendered from new camera angles, in order to best serve this new

composition. As before, nCloth dynamics were used to achieve the pulsing animation of the

speaker-flower. Limiting the number of rendered frames allowed for looping animations and

made it easy to edit the timing of the speaker-flowers in After Effects. Recycling these assets

proved extremely useful in reducing production times but also added a sense of continuity

between the two song-demos. As these speaker-flowers spring onto the screen, they form

parentheses around the glassy Alpha Centaur text. The concept behind this animation was to

attract the viewer's eye to artist's name. The Alpha Centaur text was textured with a Mia

Material X shader. The physical glass preset provided a great starting point and the texture

was then modified as needed, in order to get the desired look. It was felt that giving the text a

glassy appearance would make it appear more futuristic. The brown tint of the texture

matches the vintage sci-fi color scheme being used in this piece. It also helps to add contrast

and therefore, make the text more pronounced. Another method used to draw the viewers

attention was implemented in the text's alpha channel. Looping sound wave animations were

created and then incorporated into the text's alpha channel. This added movement,

excitement and energy to this scene, while not overpowering the audience's ability to read

Figure 8. A detailed close-up of the lower third from Neptune One

the text. As with previously mentioned song-demos, an array of techniques was used to integrate each of the 3D elements of *Neptune One*. Edge mattes, chokers, and light wraps, were among the most commonly used techniques. In this case, a lens blur was masked in a softened oval shape and placed over the entire composition. This blurring method was again instrumental, in visually binding these elements together. While still a part of this scene, the lower third composition was given its own blur adjustment layer. The reasoning for this was two-fold. One, legibility was a primary concern and it was essential that the blur layer not interfere with that. Two, the versatility of the lower third needed to be maintained. Based on the project's goals, this element had to be able to work in scene without needing any extensive adjustments. By crafting a separate blur layer appropriate to the lower third, this designer was able to ensure that the element would maintain legibility, blend into any scene, and function correctly. In keeping with the high-tech aesthetic of *Neptune One*, the lower third was modeled, animated, and textured in Maya. Angular corners and style cues inspired by the set design of classic science fiction movies, all played a key part in the design of this animation (*fig. 8*). In order to give it the blue striping, a special texture was created in Illustrator and it was mapped to the color attributes of the model's material. To keep the proportions and distribution of the texture correct, the planar mapping method was used and its UV's were adjusted. Several important factors augmented the visual appeal of this element: the variety of materials, the variety of colors, and the animation. To aid the realism of the animation, a wide array of render types were blended together and RealSmart motion blur was applied in After Effects. The orange plush material

serves two purposes in the lower third model. The first reason is that it adds some variety to the look of the piece. The idea for using a a softer material came from studying some of the furniture used in *2001: A Space Odyssey* and *Alien.* Like the ink backgrounds used in *Ink & Disintegration,* an organic material helped prevent the scene from becoming too inhuman. The second reason for using this orange material was more utilitarian. The placement of this section underneath the text was a way to underline the information presented inside the model's bounds; thereby adding, subtle emphasis and importance. Having resolved most of the legibility issues in the previous song-demo, careful planning was still needed for the lower third's typography. Continuing to brand Alpha Centaur with the Sukato type was important, but making sure it was legible was of greater importance. Specifically addressed in the Motion Graphics Standards Guide, an italicized variant of Myriad Pro was used for the informational text. Continuity of the HMA was ensured by staying within the Myriad Pro family, but the italicized variant brought a necessary deviation to the viewer's eye. Furthermore, this variant mirrored many of the design's angled architecture and it provided the most efficient use of text space, within the limited real estate of this 3D asset. Additionally, this design choice would prove to be beneficial to the 3D animations found in the second scene of this song-demo. Like the doors of a futuristic spacefaring vessel, the viewer moves through a transition into the second scene. The doors were built from the ground up, in Maya. The blue stripe texture used in the lower third was applied to the top door, while a new curved stripe was created for the other two. Using a texture map proved somewhat problematic for the Mental Ray render engine. Finding a file type that was consistently compatible with Mental Ray was difficult. For example, Targa or .png file types would function in one render, but not another. There was no discernible pattern inherent to the success or failure of using one type of file over the other. After consulting the Maya help documents and wide array of 3D forums, it was decided that .tiff format would be the most likely to succeed. In fact, .tiff seemed worked out

the best of any type used. However, .tiff files with an alpha channel caused significant

problems with the Mental Ray engine. In an effort to foster speedy production, this designer

sought to create a striped texture on a transparent background. In theory, the stripe would be

applied to the texture but the overall color of the material would still be adjustable in Maya.

The benefits of following this procedure would allow for faster material adjustments within

Maya, without having to switch programs. Unfortunately, the .tiff alpha channel turned out to

be the primary culprit of failed rendering attempts. Ultimately, the solution was to create a .tiff

file consisting of a colored texture and stripe in Photoshop, without an alpha channel. The

influences of 1970's sci-fi are evident in the doors' design and animation. The animation is

abrupt and it was carefully staggered in order to create a more interesting scene. Similar to

the plank transition in the previous song-demo, the orange sections add complexity and

variation to the element. Unlike the previous transition however, the door transition was

created entirely in Maya. Despite taking more time to render, it was necessary decision. In

addition to being rendered at a more interesting angle, the design of this sequence called for

the doors to fit together. The most effective way to achieve this desired look was to render the

entire sequence together. After the render layers were composited, a slight blur was added to

the composition in order to break up the rigidity of the computer-generated lines. As the

doors open, the viewer arrives that their destination: Neptune. The background for this scene

is a stylized representation of the icy blue planet. Built and animated in Maya, what makes this

3D asset unique is that it was procedurally textured. A series of fractal noise and ramp shaders

were applied to various attributes of the model's material. While often more render intensive,

procedural shading was a much more efficient alternative to creating and mapping a texture.

The model was deliberately lit from below. The reason for doing so, was because this lighting

technique makes the under lit object seem more massive and imposing. Making the planet

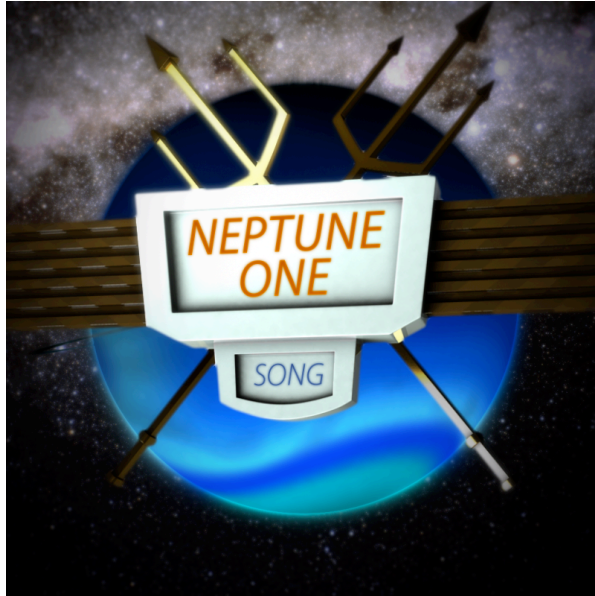seem gigantic added a cinematic quality to the piece. The thin ring around Neptune was

Figure 9. Tridents behind the crest/character bio element from Neptune One

created from pipe mesh. A translucent glass shader was then applied to the object to give it an icy appearance. A combination of matte chokers, gaussian blurs, blending modes, and radial blurs were implemented in order to give the planet the blueish haze of an atmosphere. Like many of the aforementioned 3D assets, the planet and its ring were animated and rendered so that they rotate 360 degrees and therefore, loop continuously. Although the speed of Neptune's rotation is obviously unrealistic, it was necessary to match the intensity of Young's music. The star field behind this giant planet is a modified version of the one used in the first scene. A blurred star field layer was overlaid to give the stars a hazy glow. A second layer of blur was added to the star field composition to create a sense of depth and distance. The final elements of this song-demo were an unorthodox take on the character bio. Each animation unfolds to reveal song and artist information. A blend of satellite and crest, these 3D objects were inspired by vintage sci-fi and the roman mythological god, Neptune. Of particular interest are the tridents. This ancient weapon is symbolically associated with Neptune, god of the sea (*fig. 9*). The tridents were designed to look angular in order to match the futuristic aesthetic of the satellites. The unfolding animation was only rendered from one angle and in one direction. This was an extremely expedient production method. The composited sequence was then time remapped in order to reverse it out. The second satellite was flipped across the Y-axis so that it would appear out of the opposite side. The brown wing sections of the model were textured using a diagonal reflectivity map, similar to the 3D text in *Ink &*

Disintegration. The 2D text was added to the satellites in After Effects. It was match moved using After Effects' 3D animation tools; thus, making it versatile and easily updatable. As was previously mentioned, the italicized Myriad Pro typeface proved to be the most legible and conducive to efficient spacial distribution. Several attempts at using Sukato for some of the larger text were unsuccessful, given the importance of the information being delivered to the viewer. Extra layers of the satellite composition were blurred, masked, and overlaid on the original in order to accentuate the highlights. The lighting used in the satellites' creation was designed to draw attention to the text areas. By blending and compositing additional layers, this designer was able to further emphasize that aspect. The final satellite presents one small inconsistency but with good reason. This satellite presents the artist's name. It should therefore, display the name using the Sukato typeface. However, after several test renders it was decided that each satellite's text should remain consistent. Switching between typefaces made the fast moving information hard to read and it looked out of place, even though Sukato had been consistently used for the Alpha Centaur text. The legibility issues inherent to Sukato ruled out using it in the first satellite, so the best course of action was to use Myriad Pro. This problem highlighted a significant project need, a standard or guide document. According the goals set by this thesis, these types of problems could be faced by anyone attempting to create or adjust an HMA. Any would-be editor therefore needed guidelines in order to maintain the quality of each HMA, as was originally intended by its designer. An example of the Motion Graphics Standards Guide was created with this in mind and is discussed in the following section.

Motion Graphics Standards Guide: Setting a standard

The basis for creating a Motion Graphics Standards Guide came from the print design

industry. In print design, the guide is incredibly useful and provides specific details on how to

handle things like: logos, branding, white space, colors, etc. In an article by Steve Heller, he

points out that "the space allotted to album art may be a fraction of what it once was, but that

just sets the bar higher. If musicians can continue to innovate in the digital age, then

designers must take up the challenge..." (Heller 2009). Faced with challenges like the ones

Heller describes, creating a Motion Graphics Standards Guide was deemed crucial to the

project's success. The HMA concept offers a great deal of versatility but the more freedom

offered to a designer or editor, the greater the potential for disaster. In an effort to maintain

the quality of an HMA as it was passed from one person to another, a guide needed to be

developed. However, finding a starting point for the development of this guide was not

without its challenges. With the ever changing digital and broadcast realms, finding a guide

specific to motion graphics was next to impossible. That was why documents created for print

design were used as the template for a motion graphics guide. While several guides were

reviewed, this designer was able to procure two Graphics Standards Guides from a local

design agency called Symbolic. The guides provided extremely detailed advice and

information for a company named Zero and the Northeastern Athletic Conference (NEAC).

Both were useful, but the guide for Zero was well written, humorous, detailed, and contained

a wider variety of guidelines. While the print guides contained some universally applicable

design concerns like font sizing, much of the information had to be interpreted for on-screen

graphics. For example, the Zero Guide detailed specific CMYK color guidelines. In order to

make these types of guidelines applicable to on-screen graphics, the colors had to be

described in RGB terms. Another example of the interpretation from print to screen can be

seen in the type of recommended formating. In print terms, this dealt with the printed output

of the artwork on physical media. However, in the motion graphics realm, this was interpreted

to screen sizing and compression settings. In creating an example guide for this thesis, Alpha Centaur's *Neptune One* was selected. The reason picking this song-demo was because it presented several common design issues like legibility and branding. Given that motion graphics is an incredibly broad and unique field, the guide had to present the most important design considerations but not cripple a designer's ability to be creative. In the example for *Neptune One,* the guide contains five essential sections: introduction, image size and quality, lower third element, fonts, and colors. Each section is self-explanatory and the guide is contained in this documentation for further examination. Even though each of the sections was deemed important, the most critical section is the introduction. The introduction provides the designer with the opportunity to explain his or her intent. Album design will always present challenges to its designers but in the case of the HMA, the primary goal is to enhance the listener's musical experience. That above all else, is what makes the HMA a viable advancement in album design and it needed to be communicated in the guide. Famed designer Saul Bass put it best when he stated that he "...saw the title as a way of conditioning the audience, so that when the film actually began, the viewer would already have an emotional resonance with it (Bass 2009)." While Bass was referring to film titles, he recognized the power of an emotional connection with his audience. It was important to convey that same principle in the Motion Graphics Standards Guide. The introduction also serves as an area where the original designer can provide some basic advice, specific to the HMA and its musical progenitor. Offering basic advice was another way of helping to ensure a good final output, regardless of the designer's skill level. This part of the introduction offered considerations like: informational hierarchy, album design objectives, and musician involvement. Employed in concert, each section provides advice and guidelines that will aid the designer in the development of an HMA.

Figure 11. Thesis Show Poster
Pixel Science 2: Resolution *2009*
by Ryan Mott

Summary & Conclusion: A long road

The first inception of this thesis was considerably different from its final form. However, its essence remained the same from start to finish. It was a project born out of love for music and visual design. In order to survive, this project had to evolve and that could not have happened without the considerable guidance of this designer's thesis committee. This work is a tribute to those who helped guide its construction. Professors: Dan Deluna, Shaun Foster, and Alex Bitterman, each provided invaluable guidance and input on this thesis. In particular, Chief Advisor Deluna's recommendations, dedicated interest in the project, and relentless encouragement, led to one of its most significant evolutions. The concept of creating a library of graphics was spawned from one of many conversations with Professor Deluna. The versatility that was added to this thesis when the library concept was integrated, is what became one of its strongest qualities. Furthermore, Professor Deluna's extensive knowledge of the broadcast design industry was an indispensable resource. In order to properly conclude this thesis one must examine its successes and failures.

In regards to presenting a proof of concept, this thesis was successful. In total, six song-demonstrations from three completely different artists were created and presented in R.I.T.'s Computer Graphics Design Thesis Show, *Pixel Science 2: Resolution* (*fig 11*.). However, one of the original goals of the project was to fully integrate each HMA with iTunes. Unfortunately, this goal was unattainable. Apple's polite and courteous support team did not have access to,

nor did they have knowledge of, a program called Producer. This program is Apple's exclusive software and it is used to prepare media for the iTunes Store and media player. Despite working with Tech Support and Customer Service representatives from a wide array of departments, this designer was unable to acquire Producer. The problem was that without Producer, it would be difficult to present this thesis within the iTunes environment. This obstacle was overcome by using render settings that were tailored to iTunes' specifications and by altering the video settings of the iTunes player. These adjustments allowed each HMA to be viewed and played within the iTunes environment. While it was not the ideal solution, it did accurately simulate the setting in which the project was designed for. One of the proposed goals of this thesis was to reconnect the album cover with the music. Presenting each HMA in iTunes was one of the reasons this thesis should be considered a success.

In order to determine the overall success of this thesis in conceptual terms, one must examine the some of most important objectives that were established in the proposal. One such objective was to create a combination of album cover design and motion graphics. The six fully functioning song-demos created for this thesis stand as evidence of this accomplishment. Simply creating interesting HMA graphics was a crucial objective. However it was essential that the design of each HMA convey meaning and enhance the narrative aspects of each artist and song. This became especially important when determining the value of this thesis as compared to the visualizer plugins commonly found in media players today. Visualizer plugins use software that analyzes music levels. The software interprets that information graphically via colorful bars, waves, and kaleidoscope-like effects. Visualizers exist in various forms and iterations but most run based on these essential concepts. They are precise, energetic, and at times, hypnotic. Unfortunately, visualizers have no real connection, other than cold mathematics, to the music that they represent. That being said, there is a substantial opportunity to bridge the HMA format with a visualizer. The algorithms of a

visualizer could be linked with the type of custom graphics found within an HMA package. With thoughtful application of the visualizer algorithms and specifically designed HMA components, one could create a powerful and infinitely unique musical experience. However, at present visualizers remain a sterile experience. What the HMA successfully offers, that visualizers do not, is a connection to the viewer through emotive graphics and imagery. The responsibility of establishing a rapport with the audience falls to the designer. Establishing this connection and enhancing the emotional elements of the user's musical experience was another objective. Through musician interviews, careful study, and deliberate application of motion graphics, this objective was met. In fact, of those surveyed the overwhelming majority agreed or strongly agreed that the HMA enhanced their musical experience. In terms of Green design, the HMA format is extremely successful when compared to a CD. The HMA requires no paper or plastic nor does it require any environmentally harmful production methods.

An unexpected similarity and potential use for the HMA format was discovered late in its development. Having attended several music concerts between 2008 and 2009, this designer noticed the extensive use of motion graphics to augment the live music experience. For example, when this designer attended a concert for a band named The Offspring, large screens featured ornate motion graphics behind the performers. These visuals consisted of animated logos or imagery directly related to the band's songs and lyrics. The concert graphics were relevant, eye-catching, and dramatically enhanced The Offspring's performance. In a concert held at R.I.T., a band called Panic! At the Disco went so far as to use similar types of motion graphics projected on to three separate movie screens. The graphics were displayed during both their performance and as an intermission. After reviewing the advantages of an HMA, one can see the obvious similarity of and compatibility with the HMA format. One can surmise that, provided with a versatile HMA package, concert designers could easily incorporate high-end graphics into a band's live performance. Along those same

lines, one can envision the audience watching a concert with HMA-based graphics and then being reconnected to that experience, by having the same graphics presented in a downloaded HMA. As musicians continue to incorporate increasingly complex visual elements into live performances and downloadable music, the possibility for HMA integration only grows larger. Viewer's expectations continue grow and it has become clear that musicians must continue to meet and exceed them by employing new technology. The explosion of concert graphics and interactive sites like MySpace Music provide compelling evidence of the viewer's insatiable appetite. Considering the ever-advancing technology associated with downloadable music and video, the opportunity for the HMA format to become and necessary standard is extremely plausible. While the golden era of tactile album cover design may be well in the past, a new era for clever digital design lies within the Hybrid Motion Album concept.

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Appendix A.

Abbreviations & Terms

3D - Three dimensional. In this document, typically associated with graphics created using

three dimensional imaging software like Autodesk's Maya.

CGI - Computer Generated Imagery.

CMYK - Cayenne, Magenta, Yellow, Black. The color spectrum typically associated with printing

and print design.

HMA - Hybrid Motion Album.

RGB - Red, Green, Blue. In this document, typically associated with the color spectrum used by

computer monitors.

R.I.T. - The Rochester Institute of Technology.

TNOV - The Noise, On Vinyl.

Appendix B.

Survey of Literature:

"Album Art" http://en.wikipedia.org/wiki/Album_artwork. Accessed 3 October 2007.

 This article provides a brief historical overview of the uses and evolution of Album covers. It also provides significant historical examples of popular album covers. While many wikipedia articles suffer from inaccuracies, this article was generally well cited and provided a basic starting off point for my research.

Angellynn, Grant. "Album Cover Design: past influences, present struggles, and future predictions." Communication Arts. January/February 2001. http://www.commarts.com/CA/feadesign/album/

Angellynn's article provides an extremely well researched in-depth look at the design perspective on Album art. It provides a historical background for cover art followed by information from current design industry leaders. The article concludes by discussing the problems of digital media and the decline of physical copies of albums.

http://www.apple.com

The apple site combines and organizes a massive amount of technical information and online reviews of Apple's iTunes software. It also gives a general history regarding the software.

"Beck's DIY Album Cover." Creative Review #26 2006

Examines the thought process and intensive design work of Beck's album and its "design-it-yourself" style. It is a great basis for what has been lost by switching to a digital medium and

therefore, it provides a strong argument for finding better ways to fill the void left by physical packaging.

Bruno, Antony. "Digital album packaging to improve in '08." http://www.reuters.com/article/technologyNews/idUSN3049009520080102 Reuters. January 2008.
The author provides a detailed account of the current problems and short-comings of digital music. Bruno talks about several ways to solve these problems and presents the reader with several examples of upcoming technological advancements that may resolve the issues.

Borzykowski, Bryan. "A Picture worth a Thousand Songs" http://music.aol.ca/article/album-art/113/. August 2007
This article presents the pros and cons of the downloadable music age as it relates to album art. It also seeks to illuminate the appeal of album art and how it may translate into the modern age.

http://www.cddesign.com/covertalk/
An all around excellent resource for both historical and modern album design. This site provides a wealth of articles and reviews for album art. It also provides a large amount of information on the latest media players in relation to album art.

Heller, Steven "Design Artwork for a Shrinking Album Cover." Wired Magazine 17:03. February 2009.
Heller is both a writer and the cochair of the MFA Designer as Author program at the School of Visual Arts in New York City. He provides a detailed and insightful account of the challenges faced by designers in the digital age. Specifically, he focuses on MP3 player screen size and

aspects like Cover Flow in iTunes. In his article, he evaluates successful and unsuccessful examples of album art based on the limitations of smaller screens.

Howe, Jeff "Small Screen, Big Dreams." Print Magazine 2006

Howe discusses a proposed way of saving album art by using "Tunebooks" or digital booklets with scrolling capability. This article is an excellent resource for predictions of digital music sales as well as current dilemmas presented by the digital medium.

International Federation of the Phonographic Industry. www.ifpi.org

The definitive source for technical, statistical, sales data regarding the entire music industry.

Sleevage website. http://sleevage.com/about/

The Sleevage site contains a massive collection of album covers from the 1960s to the present. It also features reviews and forums about the creators and their work. This site will function as an excellent resource for innovative album cover design.

"Videos Boom on Web" Rolling Stone Magazine 2006

Detailed commentary on the rising popularity of youtube videos, music videos, and underground production methods. This article also examines downloadable music videos and iTunes' role in that market.

Apendix C.

Motion Graphics Standards Guide

Apendix D.

Hybrid Music Album Questionarre

Motion Graphics Standards

Hybrid Music Album Package Guide
Artist: Alpha Centaur
Song: Neptune 1

Introduction

The HMA is designed to enhance the musical experience. This is the single most important factor in setting up your HMA. Each time you make a design decision, ask yourself the question: does this enrich the artist's music? Whenever possible, become as familiar with the creators of the music as possible. It will provide deeper insight into how you can craft the best possible work. Don't try to overpower the music and make sure you prioritize your messages. Many of the elements can be mixed and matched. Experiment with them to achieve a unique look. For example, what is more important to the artist: tour dates or merchandise information? These types of considerations will help you throughout the process.

Image Size & Quality

For iTunes and other media players
600x600 Square pixels
1:1 Ratio
30 Frames Per Second
Compress using H.264 settings

For iPod and Mp3 players
480x480 Square pixels
1:1 Ratio
30 Frames Per Second
Compress using H.264 settings
Resize lower 3rd elements to maintain legibility

For Broadcast Television
540x540 Square pixels
1:1 Ratio using black pillars and/or letter box format
29.97 Frames Per Second - Adjust audio to compensate for any distortion
Compress using Animation settings
Adjust colors to match Broadcast Safe standards
(RGB values no higher than 235)

Lower 3rd Element

For Neptune 1, the lower 3rd element folds out. It is essentially a plaque that can contain either text or image information. Images should be cropped to a square format. Both should remain within the bounds of the plaque border edge sections.

Text & Images

Fonts & Colors

Use Sukato for all instances of Alpha Centaur.*
Minimum Size: 60 pt.
*Legability Issues - Sukato is a very stylized font. It should be noted that on smaller screen formats it may be difficult to read. Compensate for this by using a 1-3 pt. outline stroke or by switching to Myriad Pro.

ABCDEFGHIJKLM
NOPQRSTUVWXYZ

Use the Myriad Pro family for Informational Text (i.e. tour dates, websites, band information, etc...)
Minimum Size: 20 pt.

abcdefghijklm
nopqrstuvwxyz
1234567890

	R		G		B	
R	255	53	71	193
G	158	158	69	226
B	51	224	31	220

Hybrid Motion Album (HMA) Questionarre

Ryan Mott
Rochester Institute of Technology
Computer Graphics Design MFA Thesis

Your valuable time is appreciated and your answers will help me to improve my thesis. Please answer the following questions to the best of your ability. **1** means that you strongly **AGREE** with the statement and **5** means that you strongly **DISAGREE** with the statement.

1. I own a personal computer (PC) or laptop and I have a media player (iTunes, Windows Media Player, WinAmp, etc...).

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

2. I own a portable device capable of playing downloaded audio - visual media (i.e. iPod, Zune, iPhone, Blackberry, etc.).

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

3. I have downloaded music from a provider like iTunes, Napster, Emusic, etc.

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

4. The visual elements in the Hybrid Music Album (HMA) showed a clear relationship to the music and help me to better understand and/or add meaning to the music.

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

5. Overall, the Hybrid Music Album enhances the musical experience for me.

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

6. The type was clear and legible. In other words, I could read the text presented in each of the Hybrid Music Albums. This includes biographical information about the musicians, lyrics, song and artist information, tour dates, and any other element that uses type.

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

7. After viewing an HMA, I was better able to remember the name of the artist, band, or song title.

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

8. As compared to traditional static (non-moving image) digital album artwork, the HMA provided a more complete musical experience.

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

9. The HMA was better than or compensated for the lack of tangible items (i.e. album cover, notes, booklets, etc.) that are typically included with a Compact Disc (CD).

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

10. I would pay more for downloadable music that features the HMA than typical downloadable music that comes with traditional static album artwork.

    Strongly Agree **1 - 2 - 3 - 4 - 5** Strongly Disagree

Use the space below to add any additional comments, thoughts, or suggestions you have for the project.