

GHOSTS, RESURRECTIONS AND FANTASY IN THE ENTERTAINMENT INDUSTRY

INTRODUCTION

Rapper Tupac Shakur, who died at age 25 in a 1996 shooting, recently made headlines when he appeared on stage with Snoop Dogg and Dr Dre at the Coachella 2012 festival. The Tupac "hologram" performed Hail Mary and 2 of Amerikaz Most Wanted with Snoop Dogg before dissipating into thin air, leaving the audience in awe, and somewhat unsettled, by the technology used to make the rapper reappear and perform.



Figure 1 Tupac joined Dr. Dre and Snoop Dogg during a performance

Following in the footsteps of Tupac is the king of rock 'n' roll Elvis Presley. The singer, who died in 1977 at age 42, has a cult following and has recorded super hits like "Hound Dog" and "Jailhouse Rock." Production company Digital Domain, also responsible for the Tupac "hologram," said they were planning multiple virtual Elvis likenesses across various platforms, including live shows, TV, and online. Dead musicians, actors, politicians, and other cult figures are being resurrected to entertain audiences across platforms. It is already technically possible to get these personas to "perform" fresh material using voice samples collected from their previous work.

THE TECHNOLOGY

MUSION EYELINER

The **Musion Eyeliner** is a proprietary high-definition video projection system that was used at Coachella to create three dimensional impressions of people and objects. The system works as a modern commercial variation of a stage illusion called Pepper's ghost.

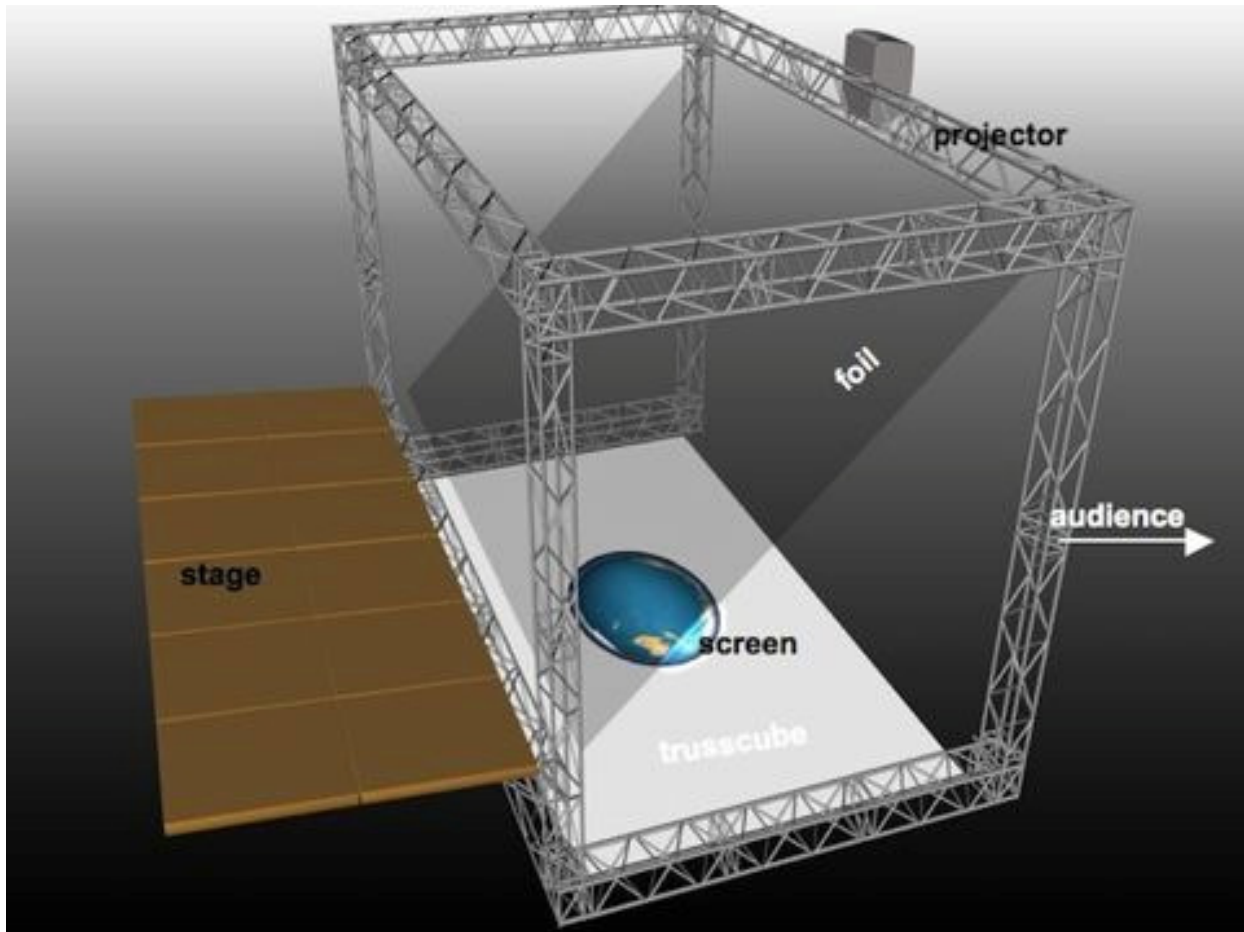


Figure 2 A regular 3D Eyeliner setup

Musion's Eyeliner holographic technology has been used for the world's first-ever "virtual tour,"¹ which allowed pop band Tokio Hotel to perform live as 3D holograms to fans in music retail outlets throughout Europe.

This collaboration, which allowed the band to perform in person virtually to numerous local crowds, was managed and delivered by Musion and Media-Saturn Management. Media Markt, one of Media-Saturn's consumer electronics retail brands, hosted the 3D holographic tour in 13 of its stores across seven countries in Europe.

¹ <http://www.avinteractive.com/news/21721/pop-act-tokio-band-embarks-on-virtual-tour-using-musions-eyeliner-holographic-system>



Figure 3 Pop band Tokio Hotel performing live as 3D holograms

There are some other great examples to show of successes using the Musion's system. Like the Black Eyed Peas Hologram - Live at the NRJ Music Awards 2011, which can be watched at <http://vimeo.com/19099631>.



Figure 4 Black Eyed Peas 3D hologram at NRJ Music Awards 2011

PEPPER'S GHOST

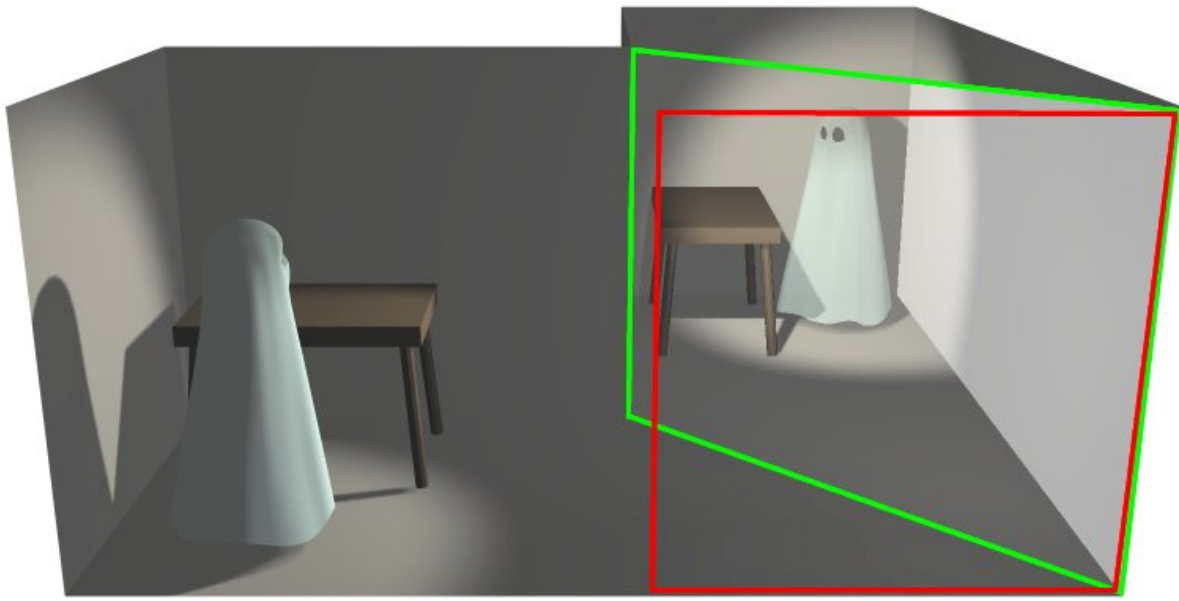


Figure 5 A setup for Perpper's Ghost

Pepper's ghost is an **illusionary** technique used in **theater** and in some magic tricks. Using a **plate glass** and special lighting techniques, it makes objects seem to appear or disappear, to become transparent, or to morph into one another. It is named after **John Henry Pepper**, who attempted to popularize the effect.

In order for the illusion to work, the viewer must be able to see into the main room, but not into the hidden room. The edge of the glass may be hidden by a cleverly designed pattern in the floor. The hidden room may be a mirror image of the main room, so that its reflected image matches the main room —this tactic is useful in making objects seem to appear or disappear. This effect can also be used to make an actor reflected in the mirror appear to turn into an actor behind the mirror, or vice versa.

The hidden room could also be painted black, with only light-colored objects in it. When light is cast on the room, only the objects reflect the light and appear in the glass, making them seem like ghostly images superimposed in the visible room. The reflections in the glass, which is vertical rather than angled, create the appearance of three-dimensional, translucent ghosts.

VOCALOID

Vocaloid is a singing voice synthesizer software developed by Yamaha Corporation and released in January 2004. The software enables users to synthesize singing by typing in [lyrics](#) and [melody](#) using specially recorded vocal samples of voice actors or singers. It can change the stress of the pronunciations, add effects such as vibrato, or change the dynamics and tone of the voice. Each Vocaloid is sold as "a singer in a box" designed to act as a replacement for an actual singer. Vocaloid has grown into a synthesizing phenomenon that has spawned new musicians, albums, and even concerts.

VOCALOID PERSONAS

Vocaloid and similar software have not only been used to replicate and imitate "real" artists' voices, but have also been used to create virtual artists.

BIG AL



Big Al is a persona created only for Vocaloid. He is stated on the Vocaloid Wiki as being male, 25 years old, 193 cm tall, and 86 kilos in weight. His voice samples were provided by two different professional voice artists.

He is considered one of the better English Vocaloids for clarity and considered the clearest English Vocaloid 2 voicebank. Big Al is typically geared for early-mid 20th century classic rock although he has been used for a wide variety of genres such as blues, disco, and pop. Amongst western producers, Big Al is considered one of the easiest English voices to use and is not known for any major glitches or flaws beyond the typical Vocaloid 2 engine restrictions. He had more keys recorded for him than Sweet Ann. His accent is American. His voice favors singing in the range (in classical music terms) bass to baritone, but also has a good tenor range. He was the only English

capable male Vocaloid with breath samples in the Vocaloid 2 range. Unlike other Vocaloid 2 voicebanks with breaths, his samples are not just inhaling sounds.

According to some reports, Big Al is the only Vocaloid 2 capable of hitting notes as far as E1 without any trouble. He is also the deepest vocal within the Vocaloid 2 era.

A sample of a user-generated cover of Alejandro by Shakira can be found at this address:

<http://youtu.be/sKdLfZO0PlQ>

HATSUNE MIKU



Hatsune Miku is the first Japanese Vocaloid2 in the Vocaloid2 Character Vocal Series, the third Japanese Vocaloid created by Crypton Future Media, and is the seventh Vocaloid to have appeared overall. She is considered as the most popular and well-known Vocaloid and the first to become a pop idol. The name of the title and the character of the software were chosen by combining Hatsu (first), Ne (sound), and Miku (future), thus meaning "the first sound from the future." The data for the voice was created by sampling the voice of Saki Fujita, a Japanese voice actress.

Miku performed a series of "live" concerts where she was projected in 3D on stage with an accompanying band. A sample of her live performance is available here:

<http://youtu.be/DTXO7KGHtjI>

After the success of Hatsune Miku, some other virtual stars were also released.

Kagamine Rin & Len were the second product released on December 27, 2007. They were called Vocaloid2 Character Vocal Series developed by Crypton Future Media Ltd. (CFM). The male voice was Len and the female voice was Rin. Their family name was from the developing code combining Kagami (鏡, mirror) and Ne (音, sound) characters.

Megurine Luka was the third Japanese Vocaloid2 from Crypton and released on January 30, 2009. Her surname combines Meguri (巡, circulate or around) and Ne (音, sound), while the name Luka invokes the homonymous Japanese words of "nagare" (流, flow) and "ka" (歌, song) or "ka" (香, scent); thus making "songs to all around the world as scent spreads." Yū Asakawa (浅川 悠 / Asakawa Yū) provided the voice for the "cool, somewhat mysterious" character.²

PEOPLE'S REACTION TO A VIRTUAL STAR

We can get a fair idea of the fan following of this virtual star by having a glimpse of the FB fan page. She has more than 560,000 fans on Facebook! Snippets of the fans' reactions when they were entering one of the performance areas can give a clue on how "real" they think their singing star is!

"After the rehearsal, the gates opened. Many audience hold pen-light, Uchiwa etc. in their hand!"³

² http://vocaloid.wikia.com/wiki/Megurine_Luka

³ https://www.facebook.com/note.php?note_id=180250415370203

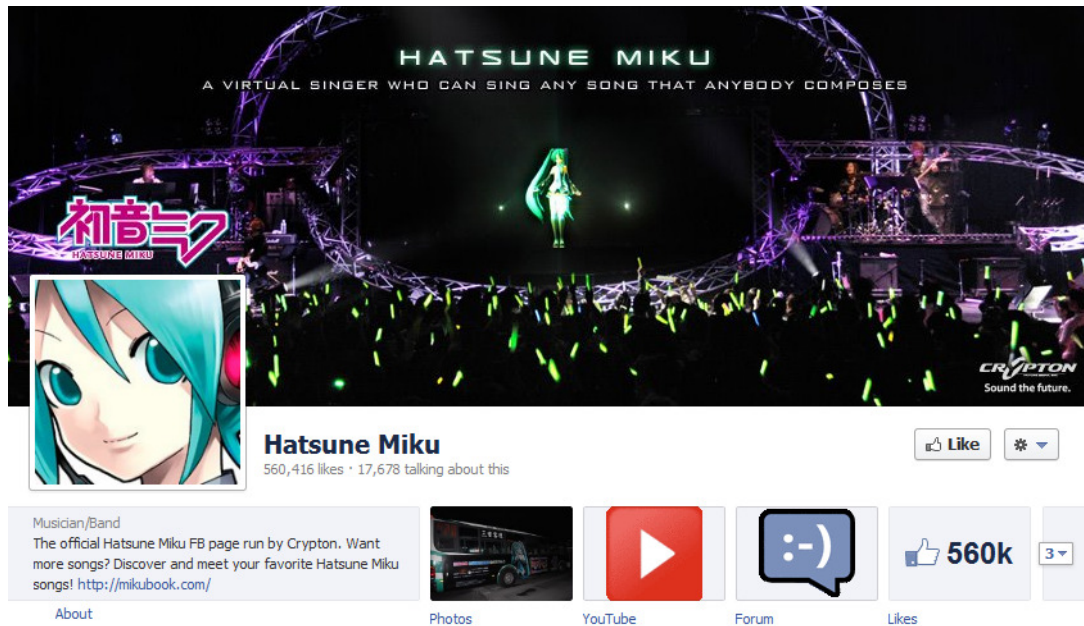


Figure 6 FaceBook fan page of Hatsune Miku



Figure 7 Megurine Luka, the 3rd "Product" or "star" playing on the stage

There have also been forums and other fan discussions around the virtual stars. One example is a pop-quiz asking questions on date of birth, age, likes and dislikes, etc. of Miku.

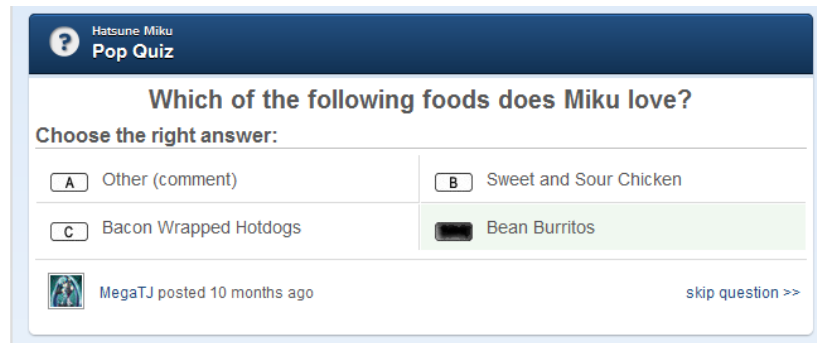


Figure 8 A pop-quiz on Miku⁴

In the most recent event held in Tokyo, all 10,000 tickets for the digital diva's four shows got sold out in hours despite the 6,300 yen (\$76) ticket price. In a related report, it is claimed that her image was produced by the company, but her music is a creation of her fans. Her best songs—the ones headlined at her concerts—have emerged from more than 20 different people.⁵

Not just that, there is a thin line between watching a “virtual” star for real and watching a “virtual” star for virtual. This is evident from a fan’s comments, “I’ve liked her for a long time and wasn’t able to come to the concert last year and watched it in a movie theatre. But this year I thought that I absolutely had to make it.”

The highest point of fan following comes when they request her everywhere! In the same report, it was stated that some online polls have her down as the most-requested singer for the London Olympics opening ceremony! Beat that!

THE POTENTIAL

In music as in cinema, dead artists such as John Lennon, Tupac Shakur, Bob Marley and Elvis Presley have attracted cult fan following across the world. Elvis Presley’s mansion Graceland is still one of the biggest tourist attractions in the state of Tennessee while Bob Marley memorabilia and music continue to generate millions across the world. This tendency to glorify dead personas of pop culture can be exploited very effectively if the dead artists begin churning out new material in the “studio” as well as on the stage.

Furthermore, once research and development iron out some basic kinks, it is foreseeable that virtual singers will become as popular as real ones. They are also likely to churn out material at a much faster pace. One may even see “them” being retailed for concerts on demand.

FUTURE SCENARIOS

SCENARIO 1

Andy just got tickets for the latest concert called “18 till I die.” As he enters the concert that is being organized in a large stadium, he is given a notification on his personal embedded communication device (PECD). He ignores it, since it is common for concert organizers to push targeted

⁴ <http://www.fanpop.com/spots/hatsune-miku/quiz/show/691015/which-following-foods-does-miku-love>

⁵ http://www.msnbc.msn.com/id/46679941/ns/technology_and_science-tech_and_gadgets/t/she-sings-she-dances-shes-not-real/#.UAA31JFKbRY

advertisements in this manner. As the concert starts, he sways on the old rhythms of 18 till I die. But then he is baffled to see that many of his admired singers join the stage - Jimi Hendrix, John Lennon and Stevie Ray Vaughan. They all seem to be in their youth. Not only that, some of them jump into the crowd and he also has the honor to touch and pass them along! When the show gets over, he checks his PECD, and it shows him the message, "This is to notify that most of the singers on stage have been digitally resurrected when they were aged 18. This is by all means to honor them for their great music."

SCENARIO 2

Andy is an 18-year-old, who is about to graduate from high school. His school has organized a prom, after which Andy wants to host an after-party at his family's vacation home. Andy has always been a Doors fan, and wants nothing more than to party with Jim Morrison, vocalist of the Doors. Unfortunately for Andy, Jim Morrison died over 40 years ago. Fortunately for him though, technology now allows him to rent Jim Morrison's persona for an evening. Jim Morrison attends Andy's after-party, travelling with him in the limousine he and his friends have rented for the evening. Jim sings, dances, makes jokes and even flirts with the occasional girl at the party. All Andy has to do to ensure that Jim doesn't disappear is carry a small portable device and place it in the area he wants Jim to be in.

SCENARIO 3

Andy has decided to give a talk to promote his new book on the field of psychology. Half an hour before the talk is scheduled to begin, Andy realizes that his audience is much smaller than he had expected. Furthermore, Andy wants to be asked certain specific questions during the Q and A session that he feels will help put his point forward. Andy then decides to rent an audience to ask the right kind of questions that he feels will be relevant to the comprehension of his book. He rents a virtual audience to fill in the blank seats. These virtual participants ask questions they have been programmed to ask, on cue. Andy answers these questions promptly, giving the "real" audience a better understanding of what he was talking about.

SCENARIO 4

Tom's mother had cancer while she was carrying him. She was terminally ill and passed away when he was six months old. She could not bear the idea of the child growing up without knowing her, and before she passed, she created a virtual persona of herself. This way, despite the fact that she had passed on when he was a baby, she was present to give him bits of prerecorded advice and life lessons as he was growing up. Tom spent an hour "with" his mother every day as a child. In this manner, he was able to get to know her, benefit from her wisdom, and have her "present" for many of his life events such as his graduation, marriage, and the birth of his children.

SCENARIO 5

Supermarkets, airports, shopping malls and other areas requiring video surveillance often install a large number of dummy CCTV cameras. In a similar manner, virtual security guards could help stop crimes such as shoplifting and vandalism. Furthermore, the "feel" of someone life-like present nearby, will deter people even more! If these virtual security guards are equipped with actual video and sound surveillance systems, they could potentially replace security guards to some extent.

CONCLUSION

While we have outlined 5 possible scenarios for the future , we would like to hear from you. Do you have a scenario for the future, based on this theme of technology aided resurrection? If yes, please share your scenarios with us at ice@humanfactors.com and we will post the 10 most interesting and thought provoking scenarios on the ICE site, scenario gallery.

References

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4. <http://www.fanpop.com/spots/hatsune-miku>
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