COMPUTER GRAPHICS AND SPECIAL EFFECTS: A CREATIVE WAY OF PRODUCING IGBO-THEMED MOVIES FOR THE GLOBAL AUDIENCE.

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Abstract

Film production in developed nations have gone digital, and the old ways of producing movies are gradually dying. The Nigerian Movie Industry, popularly referred to as 'Nollywood' is yet to come to terms with this, despite being ranked the third highest grossing movie maker in the world, behind 'Hollywood' in the United States of America and 'Bollywood' in India. Computer Graphics, Animation and Special Effects created with computers have been embraced by movie studios in developed nations. Film editors, who for decades worked by painstakingly cutting and gluing film segments together, are now sitting in front of computer screens. There, they edit entire features while adding special effects, animations and sound that is not only stored digitally, but also has been created and manipulated with computers. Viewers are witnessing the results of all these in the form of stories and experiences that they never dreamed of before. This paper aims to create more awareness on the need for Film Makers, Producers, Directors and all other Stake-holders involved in the making of Igbo–themed Nollywood Movies, to incorporate computer graphics, animations and special effects in their movie productions, and also to encourage more people to get involved in this virgin area of film production. By doing this, the movies produced would be globally accepted and would compete with other movies from around the globe. This in turn would create positive awareness for the Igbo people and their culture, in a globalized society, create employment for them and create wealth for all the other stakeholders involved in the movie industry. Perhaps the most surprising aspect of all these, however, is that the entire digital effects and animation industry are still in their infancy in Nigeria. Igbo Nollywood practitioners must tap into this very virgin area of film production. The future of Igbo-themed Nollywood Movies looks very bright.

Keywords: Digital Art, Computer Graphics, Animation, Special Effects and Igbo-Themed Nollywood Movies.

Introduction

In the beginning, computer graphics, animations and special affects were as cumbersome and as hard to control as dinosaurs must have been in their own time. Like dinosaurs, the hardware systems, or muscles, of early computer graphics, animations and special affects were huge and ungainly. The machines often filled entire buildings.[1]

Also like dinosaurs, the software programs or brains of computer graphics, animations and special affects were hopelessly underdeveloped. Fortunately for the visual arts, the evolution of both brains and brawn of computer graphics did not take ages to develop. It has, instead, taken only three decades to move from science fiction to current technological trends. With computers out of the stone-age, we have moved into the leading edge of the silicon era. Imagine sitting at a computer without any visual feedback on a monitor. There would be no spreadsheets, no word processors, not even simple games like solitaire. This is the reality in the early days of computers. The only way to interact with a computer at that time was through toggle switches, flashing lights, punch cards, and teletype printouts.[2]

Computer graphics, animations and special effects in movies in their earliest invention were really hard to manipulate but with time, the software companies started to improve their programs, adding more tools and key features, which helped the manner computers generated pictures and simulated real world scenes.[3] Creating computer graphics, animations and special effects are essentially about three things, Modeling, Animation, and Rendering. Modeling is the process by which 3-dimensional objects are built inside the computer; animation is about making those objects come to life with movement, and rendering is about giving them their ultimate appearance and looks.

Even though some Igbo-themed movie producers try to incorporate these effects in their movies, the movies produced are still sub-standard, not because of the story-line, but because the computer graphics, animations and special affects used in the movies are way below standard, to be compared to movies produced in the western world. This gives the impression that Igbo-movies producer are less professional and unserious.

I carried-out a thorough research on three Igbo-themed movies, namely, *"Ode-Eshi"* (A movie produced by Sunny Collins for Great Movies Ind. Ltd, 2002), *"Agbalusia Ngene"* (A Movie produced by AkaGod Productions Ltd, 2011)) and finally, *"Ndi Olu Aka"* (A Movie produced by Blessed Mishack Ltd, 2011). It was observed that the story-line in these movies were very good. These movies dealt on societal problems, such as maltreatment of women, stealing, abuse, wickedness and the use of diabolic powers to do evil and so on. Unfortunately, the special effects used in these movies are

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[1] Wendy Richard, *Design and Technology Erasing the Boundaries* (New York: Mostrand and Reinhold, 2005), 42.

[2] Robin Baker, Designing the Future: The Computer Transformation of Reality (London: Thames and Hudson, 2008), 71.

[3] W. Dixon, *Film Genre 2000: Critical Essays*. (New York: State University of New York Press, 2000), 67.

way below standard. For example, in *"Ode Eshi",* the special effects used to portray diabolic powers of Akpi (Nkem Owo) were so bad that it gave Akpi's actions different meanings. Likewise *"Agbalusia Ngene"* and *"Ndi Olu Aka"*, I observed that even though the movies were produced in 2011, the computer graphics and special effects used were also very poor. The movie *"Ode-Eshi"* was not even sub-titled in English, this would definitely narrow the expected audience to just people that understand the Igbo language. The essence of sub-titling is to facilitate communication with people who do not share the primary language of communication with the communicator. It is also to widen, for diverse reasons, the scope of communication beyond the speakers of the primary language.[4] It is in the light of this that this paper advocates that all Igbo-themed movies must be subtitled in English.

Computer Graphics, Animations and Special Affects: Origins in the United States of America.

In 1962, Ivan Sutherland, a Ph.D. student at the Massachusetts Institute of Technology (MIT), created the science of computer graphics. For his dissertation, he wrote a program called Sketchpad, which allowed him to draw lines of light directly on a cathode ray tube (CRT).[5] The results were simple and primitive. They were a cube, a series of lines, and groups of geometric shapes.

This offered an entirely new vision on how computers could be used. In 1964, Sutherland teamed up with Dr. David Evans at the University of Utah to develop the world's first academic computer graphics department. Their goal was to attract only the most gifted students from across the country by creating a unique department that combined hard science with the creative arts. They knew they were starting a brand new industry and wanted people who would be able to lead that industry out of its infancy. Out of this unique mix of science and art, a basic understanding of computer graphics began to grow. Algorithms for the creation of solid objects, their modeling, lighting, and shading were developed.

This is the root upon which virtually every aspect of today's computer graphics industry is anchored. Everything from desktop publishing to virtual reality, find their beginnings in the basic research that came out of the University of Utah in the 60's and 70's. During this time, Evans and Sutherland also founded the first computer graphics company. Aptly named Evans & Sutherland (E&S), the company was established in 1968 and rolled out its first computer graphics systems in 1969.[6]

Up until this time, the only computers available that could create pictures were custom-designed for the military and prohibitively expensive. E&S's computer system could draw wire frame images extremely rapidly, and was the first commercial "workstation" created for computer-aided design (CAD).

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[4] V. Akande. "Upping the Prospects of Indigenous-language Films." *The Nation Newspaper*, 24 August, 2009, p. 24.

[5] Dan Bordwell and John Staiger. *Technology, Style and Mode of Production*. (New York: Columbia University Press, 1985). 36.

[6] Bordwell and Staiger, 41.

Throughout its early years, the University of Utah's Computer Science Department was generously supported by a series of research grants from the Department of Defense. The 1970's, with its anti-war and anti-military protests, brought increasing restriction to the flows of academic grants, which had a direct impact on the Utah department's ability to carry out research. Fortunately, as the program wound down, Dr. Alexander Schure, founder and president of New York Institute of Technology (NYIT) stepped forward with his dream of creating computer-animated feature films. To accomplish this task, Schure hired Edwin Catmull, a University of Utah Ph.D holder., to head the NYIT computer graphics lab and then equipped the lab with the best computer graphics hardware available at that time. When completed, the lab boasted over $2 million worth of equipment. Many of the staff came from the University of Utah and were given free reign to develop both two and three-dimensional computer graphics tools. Their goal was to soon produce a full-length computer animated feature film. The effort, which began in 1973, produced dozens of research papers and hundreds of new discoveries, but in the end, it was far too early for such a complex undertaking.[7]

The computers of that time were simply too expensive and too under powered, and the software not nearly developed enough. In fact, the first full length computer generated feature film was not to be completed until recently in 1995. By 1978, Schure could no longer justify funding such an expensive effort, and the lab's funding was cut back. The ironic thing is that had the institute decided to patent many more of its researcher's discoveries than it did, it would control much of the technology in use today. Fortunately for the computer industry as a whole, however, this did not happen. Instead, research was made available to whoever could make good use of it, thus accelerating the technologies development.[8]

As NYIT's influence started to wane, the first wave of commercial computer graphics studios began to appear. Film visionary George Lucas (creator of Star Wars and Indiana Jones trilogies) hired Edwin Catmull from NYIT in 1978 to start the Lucas Film Computer Development Division, and a group of over half-dozen computer graphics studios around the country opened for business. While Lucas's computer division began researching on how to apply digital technology to filmmaking, the other studios began creating flying logos and broadcast graphics for various corporations in the US, including TRW, Gillette, the National Football League, and television programs, such as "The NBC Nightly News" and "ABC World News Tonight." Although it was a dream of these initial computer graphics companies to make movies with their computers, virtually all the early commercial computer graphics were created for television.[9]

Computer Graphics, Animations and Special Effects in Movies

The use of Computer Graphics, Animations and Special Effects in movie production has come to stay. Watching the movie titled "*The Matrix"* (a movie produced in 1999); I noticed the constant use of computer graphics and special effects in its production. This movie was enhanced and completed with the aid of computerized special effects. It has become obvious that for one to make a block-buster hit, computer graphics and special effects are very essential. Nowadays, any top science fiction or action/adventure movie

[7] Cynthia Goodman, *Digital Visions.* (New York: Harry N. Abrams, Inc., 1987), 18.
[8] Goodman, 21.
[9] Goodman, 29

uses at least some bits of computerized special effects. I still remember being amazed at how real the tyrannosaurus rex looked in the blockbuster hit, "*Jurassic Park"*. I was amazed at the power and realism of the virtual dinosaur. Computer graphics, in some respects, are a necessity in today's films. For example, in Tom Hank's "*Cast Away"* (2000), all the island scenes were filmed on a mud-pile overlooking a parking lot. Michael A Hiltzik describes how almost all the shots with a sky or ocean were done with special effects.[10] There are numerous examples where computer graphics and special effects enhanced a film, including the creation of fantasy worlds in "*Lord of the Rings"* (2001). What made these computer-enhanced movies so effective was that they relied almost entirely on live human actors. They had the beautifully depicted scenery, from the snowy mountains to the cozy village of the Hobbits, which were all generated by computer, but there is nothing better to portray human stories, stories that we can imagine ourselves in, than live actors. But there comes a point when enough is enough, where computer graphics come at some loss. When I saw *Star Wars II: "Attack of the Clones"* (2002), I was a bit disappointed at the vast amount of computer graphics and special effects. What made the *Star Wars* saga so famous was partly the realism; the worlds that George Lucas created seemed so real, so much like Earth, but were not. With the addition of battles that were entirely computer generated, the realism was lost. Instead of having people in armor battling each other, the newer movies had aliens and robots you would find in a computer game or in a cartoon. Even though, this paper advocates the use of computer graphics, animations and special effects in movie production, caution should still be maintained as regards the usage of these effects. Over-use of these special effects would cause more harm than good. The film maker must strike a balance, when incorporating these effects.

Computer Graphics, Animations and Special Effects in Nollywood Movies

Nollywood filmmakers are wonderful entertainers. They have told great and amazingly inspiring stories through their movies: stories that Nigerians at home and abroad can relate to, and stories that have created positive awareness about the Nigerian people and culture to the outside world.[11] Unfortunately, good and inspiring stories alone do not make a good movie. Other aspects such as the quality of the acting, special effects, clarity, among others all contribute to making a successful movie.

Even though some Igbo-themed Nollywood movie producers have tried to use computer graphics and special effects to showcase scenes in the movie produced, I still believes that a lot still needs to be done in that aspect. In *"Ode-Eshi"* (2002), a particular scene elaborates the poor quality of special effects used in the movie. The scene depicts "Akpi" (Nkem Owo) adding some diabolic poison to a piece of kolanut that he intends to serve "Akuma" (Sam Loco Efe). In the said scene, "Akpi" gets a pin and scratches the kolanut, the special effects used to depict the diabolic poison entering the kolanut was just rays/flashing of light. I had to rewind and play that particular scene over and over again before I understood what he was trying to do.

[10] Michael Hiltzik, *Digital Cinema Take 2*.(New York: Grosset and Dunlap, 2007). 44.

[11] V. Akande. "Upping the Prospects of Indigenous-language Films." *The Nation Newspaper*, 24 August, 2009, p. 24.

In spite of all these, there is still great hope as regards the quality of computer graphics, animation and special affects that are used in Nollywood movies. In the cinema box office movie, *The Figurine* (Kunle Afolayan, 2009), the special effects used to showcase the diabolical powers of the Figurine is world-class. The said movie was produced in Nigeria and has premiered in the USA, the UK, Europe, Asia and other African countries. This goes on to show that it is actually possible for Igbo-themed movie producers to incorporate these high quality special effects in their movies.

In the same light, a feature Igbo-themed animation movie was produced by Obinna Andrew Onwuekwe in 2009. The animation movie titled *"Mark of Uru"* is centered on Azuka, a girl born with a birthmark identical to the tattoo of a sinister sorceress *Uru*, who died long ago. Despite her mother's effort to conceal the birthmark, it is eventually discovered, and the annihilation of the child becomes imminent, in order to protect her people from the curse of *Uru*. The intervention of the earthbound elemental spirit *Isi-Agu* and his protégé *Etido* forestalls Azuka's execution.

Azuka is taken to a sacred mountain well beyond the reach of her family, friends and foes. The moment she grows into a woman under the protection of *Isi-Agu* and *Etido*, the news of her survival sparks a deadly manhunt initiated by people bent on her annihilation, in order to protect everyone from the curse of *Uru*. The chaos is heightened by the emergence of malignant elements with the intent to capture her and utilize her powers.

Caught in the midst of the chaos, Azuka's longing for answers grows. With the assistance of a band of outcasts, she embarks on a grueling journey, through the most treacherous terrains to unravel the mystery behind her bizarre birthmark. The interesting thing about this animation movie is that it is set entirely in an Igbo village setting. Igbo, as well as English language, was used side by side in this movie.

Film critics such as Iroh E and Balogun O, have all condemned the overall quality of Nollywood movies for several reasons. Iroh, for instance, condemns the "poverty of creativity, ideas, innovation and a coordinated strategic plan" in the industry.[12] Balogun on the other hand, believes that the content of Nollywood films is predictable and always revolves around topics like "conflict between mother-in-law and son's wives, scenes dealing with police battling criminals, burial and consultations with native doctors, and so on".[13]

Even though Iroh and Balogun's sentiments could be true, I beg to disagree on their argument that the content of the movies (story line) determines entirely on how a successful movie produced, would be. The quality (clarity of picture, special effects etc) also go a long way in determining how good a movie would turn out to be. Moreover, the societal problems addressed in these Nollywood movies are problems that are peculiar to the environment.

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[12] Iroh, E. "Nollywood, Nolly What?" *This Day Newspaper*, 26 May, 2009, *p*. 32.

[13] Balogun O. "Does Nigeria Have a Film Industry?" *Making African Movies*. June 2005, < http://www.nollywood.net> (29 August 2011)

How Computer Graphic and Special Effects Artists Work

In the making of movies, nothing should be impossible. Living, breathing dinosaurs roam the Earth. Humans rocket to distant galaxies and war with alien races persist. Monsters rise from the sea and destroy New York City. This type of cinematic magic is made possible by the hard work of computer graphic and special effects artists.[14]

Next time you watch a movie, stay around for the credits. If the film is one of those big summer blockbusters, get comfortable; you're going to be there for a while. Thousands of people collaborate on these million-dollar projects. And a big part of what makes these movies so much larger than life is computer graphics and special effects. Hundreds of computer animators, model makers, explosives experts, puppeteers and make-up artists spend thousands of hours crafting these on-screen realities.

When we think of modern special effects, we tend to focus on computer generated**,** or CG effects. Computers have had a greater impact on special effects than any other tool. But you might be surprised at how many old-school effects tricks are still used in movies, like precise miniatures, creative makeup and good old-fashioned dynamite.[15]

Most often, however, good special effects are a blend of both physical techniques and digital wizardry. Computer animators might create a digital Tyrannosaurus Rex that races through a forest. Pyrotechnics experts set up controlled explosions that splinter tree trunks and branches as the digital creature crushes through them. When it is time for the beast to grab the hero in his teeth, the animatronics team creates a giant mechanical puppet of the T-Rex's head. After the T-Rex has had his snack, the makeup artists paint a gruesome wound on the hero (he lives, of course).[16]

Conclusion:

A lot has happened in the ways movies are produced all around the world. The commercial computer graphics, animation and special affects industry has brought about lots of changes in the way movies are made. The cost of software and hardware has reduced considerably. Some Nollywood movie producers (especially those from the South Western part of Nigeria) have taken advantage of these new methods of film-making and they have seen their movies reach heights they never expected. Unfortunately, most Igbo-themed Nollywood movie producers are yet to come to terms with these new developments. This paper has shown the advantages of incorporating these effects in Igbo-themed movies; it has also shown that it doesn't cost a fortune to acquire the necessary software/programs needed. The writer strongly encourages the notion that Igbo-themed Nollywood movie producers should be exploratory in their quest for excellence in their movie productions. It acknowledges the fact that Igbo-themed film

[14] Matt Rose. "How Stuffs Work", 13 June 2011, <http://entertainment.howstuffworks.com/special-effects-artist.htm> (9 October 2011).

[15] Arnold Smith. *The Reality of Simulated Actors.* (Washington: J. Thomas Books, 2002). 56.

[16] Jim Campbell "Homepage" 2004, <http://www.jimcampbell.tv> (19 November 2011).

makers can build their worlds according to their own conventions, by laying out the germ and watching what evolves from it. As the digital tide continues to rise, only one thing is certain. We have just begun to see how computer technology will change the art of film making. Igbo-themed Nollywood movie practitioners must tap-into this very modern and lucrative area of film production.

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