# Video Michezo Nairobi's gamers and the developers that are promoting local content

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## Abstract

In Kenya, the rise of digital technologies and related new media, and an infrastructure able to support them, has seen the emergence of a growing local video games industry and a new generation of Kenyan video game developers, players and promoters. This article focuses on the particular design strategies employed by young producers of creative digital content for games and the current networks of practice, play and support unfolding around these new gaming technologies. Interviewees for this paper span industry experts and independent artists operating in and beyond the capital city of Nairobi.

The article will examine:

I.   Strategies employed by these developers and promoters looking to create and advocate **local content**, i.e. visual and narrative game environments referencing histories and folklore specific to their cultural context.
II.  Real or virtual **spaces of interaction** and networks these games developers, promoters and players operate within - including gaming studios, entertainment parlours, technology hubs, gaming conventions, and online SNS interest groups and video channels - and the ways in which these spaces might support the emergence, development and increased distribution of Kenyan games that incorporate local cultural context and regional folklore.

Utilising anthropological models of ethnographic interviews and visual culture methodologies informed by design research methods and trends analysis, we examine the characteristics of gaming in Kenya (whether aesthetic, cultural or organizational) that are distinctive in relation to the more mainstream and dominant Western formats.

*Keywords:* Kenya, Gaming, Digital Design, Virtual Spaces, Local Narrative, Digital Technology

# Introduction

This article focuses upon the emerging industry and practices surrounding the technologies of new media in Kenya. It specifically centres upon video game development and gaming culture in this context: the particular design strategies employed and the networks of practice, play and support. Through a **collective case study** - based on qualitative interviews with a selection of Nairobi-based independent games developers, promoters and retailers - the discussion offers a precursory survey on the cultures surrounding the practices of gaming in Kenya. The case studies alongside relevant readings, offer insights into the physical and virtual networks that the 'actors' move within (Latour, 2011) as they produce, promote and play video games in and beyond Kenya's capital city of Nairobi. These 'actors' reveal the strategies that are used in spaces (physical and virtual) that enable an engagement with the local user. These include the design of local storytelling elements within gaming narratives, the endorsement of specific and pertinent platforms within globally recognized gaming formats (mobile phone apps, 3D games, platform games, etc.) and considerations of the particular demographics of Kenyan gaming communities. In light of this, this paper asks what are the characteristics of gaming in Kenya (whether aesthetic, cultural or organizational) that are distinctive in relation to the more mainstream and dominant Western formats?

There is an implicit understanding that connected themes, such as (a) the different spaces of video game culture in Kenya, (b) the social context within which designers operate and (c) a design-format-technology lens, interweave throughout the discussion. These multiple threads reveal the complexity of a multi-faceted and multi-sited discussion of gaming in Kenya. In fact, this growing sector has connections to organisational structures that operate across digital design, content development, market expansion and game playing. All games discussed within the paper include Kenya-based characters, scenes and storylines, however they cover an array of formats ranging from mobile side-scroller games and single player puzzle-based games to multiplayer 3D games. Game design refers both to the artistic rendition of a game as an audio-visual interactive artifact and also to the formatting of a game for different hardware[1].

In cases where participants are directly involved with the design and development of video games, the paper illustrates this articulation through an analysis of games sampled from the participant's own portfolio but emphasizes discussions of design as understood in an aesthetic sense. Through these examples, it was possible to identify the ways in which participants from a range of perspectives draw on and re-articulate Kenyan real-world environments and regional oral mythologies in an attempt to grow the local game industry.

## I.    Delineating Gaming and Game Design

The word 'gaming' in layman's terms can be used loosely to refer to broad ranges of categorizations of games (as interactive experience with digital technology) and their associated cultures (Crawford, 2014) and industries. It is fair to say that different games including arcade games and games played on computers, consoles, and mobile phones deploy 'diverse representational strategies as to make general claims seem untenable' (Caldwell, 2004,42). As Apperley (2006) identifies, one of the problems encountered within game studies is that the field consists of different aesthetic forms that

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[1] In the context of this article, less attention is given to the manipulation of code and data-sets and hardware acceleration techniques, although these too can be considered part of the design activity associated with games development.

cannot be considered as uniform. Alternatively one can frame the discussion as split into two camps, the narratologists (interested in narrative paradigms) and the ludologists (interested in the structure, elements and mechanics of the game), that in turn offers different categorizations for games (Apperley, 2006, Jenkins, 2004). In 2001, game studies scholar Wolf identified 42 different genres of games, however as Clarke, Lee, and Clark (2015) demonstrate, the growth and diversification of technology and innovation in design make generic convention unstable and constantly in a 'formative state' (2015, 13). To illustrate this point one simply needs to look at Wardrip-Fruin and Harrigan's summary of the dimensions of gaming:

> Identifiable game genres (first person shooters, god-games, massively multiplayer online role-playing games [MMORPGs]) are emerging and entering the public awareness; the channels of game interaction (PCs, consoles, handhelds, cell phones, PDAs) are multiplying; and as new artistic and marketing methods arise and the first generations of computer games come of age, games are reaching and being developed for an ever-broadening market. (2004, 117)

Literature on game studies can vary from discrete textual analysis of games (in an aesthetic or technical sense) to a multiperspectival approaches such as that of McAllister (2004)[2] that accommodate factors such as the cultures and subcultures associated with games, social and economic influences, and audience reception. More recently a 'games design' approach has emerged, which refers not to the analysis of games as resolved artifacts, but to the pre-production phase of their development where decisions are being made regarding the rules and content of a game. A 'games design' approach is also outlined in Anthropy and Clark's *A Games Design Vocabulary* (2014), where games are understood as an artistic medium, while 'design' refers to the *craft* of games in terms of 'pressing and releasing buttons, […] color and shape, enemies and hit points, challenges and goals' (Anthropy et al, 2014, xiv). In Leckey-Thompson's *Video Game Design Revealed* (2008), games design is outlined as establishing gameplay rules that provide the framework for players to operate within and creating narrative structures that give players a reason to care about playing the game. To install rules and narrative requires the construction of a 'game world' including the design of environment, characters and levels of play (Lecky-Thompson, 2008, p43). We might take this approach one step further and consider that 'game worlds' are not only designed, but played out by players as a kind of *enacted design* (Jenkins, 2002). This view offers an understanding of games designers who promote a localisation of video game content, less as storytellers and more as active shapers of identities, worlds and spaces.

The cases outlined below reflect a 'multiperspectival' representation of gaming by making connections between design strategies, technology, economy, and user cultures in Kenya. Within these case studies, interviewed designers describe examples of their games in 'game design' terms, highlighting the characters, actions and objectives that they have created and modelled. The article recognizes video games as *designed experiences* (Squire, 2006) shaped through choices made by a designer, and able to contain and promote specific and located views of the world. Games are able to embody ideological assumptions about values dependent on the experiences of the designer (Bogost, 2006). This socio-cultural vision of the designer is in turn expressed through standardised structures and conventions of video games and choices that are shaped by availability of technology in his/her particular region. These interdependent components - design, format and technology - are

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[2] Mc Allister cites Doug Kellner's multiperspecitval approach in cultural studies as an approach that can be adopted when looking at games, i.e. 'the production and political economy of culture; textual analysis and critique of its artifacts; and study of audience reception and the uses of media/cultural products' (Kellner, 1992: 50).

key in the study of Kenyan games design and their visual analysis. In the words of Frank Lantz, Director, NYU Game Center:

> It's still something of a novelty to understand video games the same way [as film, music or literature], to pay close attention […] to their context, to think about the personal voices of the individual creators, the communities that gather around them, and the deeper currents they illuminate. (Anthropy et al, 2014, xiv)

In the context of this article, data gathered through the above-mentioned interviews and their subsequent analysis will draw out differences in types of gaming, however the discussion will not dwell upon the range of cited categories and their related academic discourse.  Furthermore, by 2010, the discourse in games studies had expanded to accommodate 'three interacting and mutually informed perspectives: the sociological/ethnographical, the theoretical/aesthetical, and the technical/design-oriented' (Albrechtslund, 2010, 117), which are reflected in this context. This is central to a deeper understanding of so-called gaming in Kenya and gaming culture at large. This short overview highlights not only the different aesthetic forms and formats to games in a generic sense, but also other facets to the term 'gaming' such as channels of interaction and economy.


## II.      A brief contemporary history of gaming in Kenya

Kenya has made a notable contribution in terms of government investment in digital technologies and the infrastructure able to support them. The resulting growth in engagement with new media has resulted in change in the creative sector to include digital-savvy 'produsers' (Burns, 2006). These *producers* of creative content and *users* of new technologies span industry experts and independent artists. Whilst it is fair to say that there remains an inter-country variation of the presence and use of digital technologies on the African continent (Onyeiwu, 2002), the impact of these technologies may still be felt distinctly across a range of sectors in different countries. With a degree of support from both government and private investors, Kenya is increasingly framed as one of the leaders in video game development on the African continent (Alexander, 2013) and yet literary references that investigate or allude to this phenomenon are relatively sparse.

The discourse about gaming in Kenya is more visible in recent news, with various success stories hitting local and international press around a wider narrative of investment in ICT (Information and Communication Technologies) by the government (Mulligan, 2015; Court, 2015). In the most part, from 2006 onwards it is possible to encounter a collection of examples of local game development studios visible online such as http://letiarts.com and http://urbandesignkings.com/.  However, the culture of gaming predates the assumed infrastructural mechanisms required for the local development of games. Most of the personal accounts from developers and retailers that were interviewed describe an engagement with game play on consoles from the 1990s at a video game parlour at The Village Market, one of Nairobi's shopping malls, and the POP-IN arcade hall in the city's business quarter for example (Barasa, 2016).  It was in these spaces that the generation of developers interviewed for this article, now in their early 30s, first watched games being played, or played these games as teenagers. As recollected by Wesley Kirinya, parlours such as these offered visitors the chance to play mechanical arcade games such as Pinball, and later video games such as Pac-Man and Streetfighter, igniting an interest in games among a young generation in Kenya. Additionally this environment was supported by informal networks of exchange, borrowing, lending, rental and purchase of handheld devices (such as Gameboy), consoles and cartridges in the early 1990s typically acquired from a relative overseas, or from a personal friend travelling from the UK or US.

Access to the personal computer in combination with the introduction of the Internet are repeatedly cited by developers as necessary components to the development of games. Whilst the Internet was introduced in 1995, access to it in its earlier years was restricted to a privileged few (less than 0.01% of population in 1996). All developers interviewed in this paper stated that they had obtained some form of access to computers and the Internet whether at school, work or home and that online tutorials were their primary source of learning of the technical craft of games development. According to Kirinya (Personal Communication, 31/08/2016):

> In 2001 when deciding on a course of study, there were no local references regarding 'the games industry' to point out to our parents - they simply didn't exist on the continent. There were no specialist games development courses available at Kenyan universities or colleges and so we had to combine courses in software development, social studies and creative work while gathering gaming material from online sources such as www.gamedev.com.

With continued efforts from the Kenyan government, between 2007 and 2012 the connections to broadband in Kenya increased from 6,000 to 6 million (Smith, 2012) and by extension, games development in Kenya was estimated to be worth 44 million USD at the end of 2013[3]. In what has been referred to as a context of 'technological leapfrogging'[4], it is via mobile platforms rather than the personal computer that most Kenyans now access the Internet. A 2012 report commissioned by the Kenyan ICT board states:

> Mobile phones remain the most commonly used devices for accessing the Internet. Of the country's near-4.7 million connections, at least 95% are via mobile devices. Our feedback shows that any strategies to engage with residents need to be deployed on mobile platforms, as backed up by the number of Internet transactions vis-à-vis mobile transactions. (IDC, 2012, 34)

The above report, which also identified an appetite for locally produced content specifically for social networking or entertainment purposes (IDC, 2012, 36), echoed the personal and professional views of the people interviewed that repeatedly identified the mobile phone as a far more important and wide-reaching technology than the computer in the discussion of gaming in Kenya. Even developers such as Andrew Kaggia, whose game *Nairobi X* was developed specifically for play on PC, has revisited the original game to enable play on a mobile platform and has considered any future game development in Kenya to be around mobile phone usage.

## Case Studies

The five case studies presented here are a selection from the larger group of interviews conducted with stakeholders in Kenya. These were carried out through a series of directed one-on-one interviews lasting one and a half hours with a selection of Nairobi-based independent games developers, a convention organiser and a hardware retailer. The aim was to better understand two particular areas of enquiry related to video games development in Kenya:

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[3] According to a *BBC Business* article 'Africa's games makers dream of exporting to the world', accessed on 13/09/16 at http://www.bbc.co.uk/news/business-33335555,

[4] Technological leapfrogging refers to a notion that suggests the rapid movement through and across newer technological systems without going through intermediary steps.

(a) The real or virtual **spaces** and networks these developers and promoters operate within**,** including gaming studios, entertainment parlours, technology hubs, gaming conventions, and online SNS interest groups and video channels;

(b) The strategies employed by these designers and entrepreneurs looking to create and promote local **content**, i.e. visual and narrative game environments referencing histories and folklore specific to their cultural context. In the case of games developers, participants were asked to describe games that employed local content using examples from their own portfolio.

## Case Study 1: Wesley Kirinya, co-founder of Leti Arts, independent games development studio

Wesley Kirinya (b. 1983) recalls his childhood ambition to work as a games developer in Kenya on encountering games such as Pac-man and Streetfighter in Nairobi gaming arcades in the 1990s. His relationship with games progressed from arcade games such as Pin Ball through to imported SEGA home video game consoles in the late 1990s, the cartridges of which were rotated amongst schools friends through a system of exchange. After graduating from Consulata Secondary missionary school where the emphasis lay on the learning of sciences and social studies, he attempted to gain the necessary skills for games design through a range of university courses. He initially enrolled in computer science at the University of Nairobi, which he described as 'too basic'. He then moved into aeronautical engineering at Wichita State University (WSU) in Kansas, USA. Here, he was hosted by a family friend, but was unable to obtain a United States worker visa and therefore returned to Nairobi four months later due to lack of funds. Finally, he enrolled in actuarial science at the University of Nairobi which offered training in maths and physics, while concurrently downloading information about games development online and ordering manuals on games design from the USA though travelling friends. In this way, he was able to learn programming languages such as C and software such as 3D Studio Max and Autodesk's Maya.

After leaving university in 2004, he established a games studio called Sinc Studios in 2005 and began working on a game called *The Adventures of Nyangi* (see Figure 1), a rudimentary 3D action-adventure PC game where the main female character, Nyangi, searches out rare East African artefacts hidden in the Kenyan plains. While the hero and action of *Nyangi* was based directly on the popular British action-adventure series *Lara Croft: Tomb Raider*, the tools she used, and the environments, artefacts, traps and enemies she encountered were based on African adventure stories: 'From the beginning, I was interested in African stories, legends and mythologies. I knew that my production quality couldn't be of international standard, so the characters had to be unique' (Kirinya, 2016). Despite low production quality and awkward functionality due to technological limitations, on its release in 2007 *Nyangi* received press coverage across the continent including an article in the *Daily Nation* (Mwaniki, 2007), which lead to investment from Meltwater Foundation[5] in Accra, Ghana, as well as a long-term creative collaboration with Ghanaian games developer Eyram Tawia under the banner of Leti Arts Inc.

Leti Arts Inc. is a games studio 'producing interactive media products based on African history and folklore since 2009' (http://www.letiarts.com/) with operations across Ghana for art and design and Kenya for technology and coding. Their most notable project is the development of a superhero franchise launched in 2013 called *Africa's Legends*, a set of pan-African characters in operation

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[5] The Meltwater Entrepreneurial School of Technology (MEST) and the MEST Incubator program provide training, investment and mentoring for aspiring technology entrepreneurs in Africa.

across mobile games, mobile apps and digital comics. The game *Africa's Legends* (see Figures 2 & 3) is a free PC tile-matching game inspired by comics and modelled around a growing set of African mythological and real heroic figures. It coheres different game genres by referencing the fight simulation game such as the likes of *Tekken* between two characters in the context of a simplified puzzle board game format. The game can be played in two modes - 'quick battle' for one-on-one combat, and 'quest mode' for team play. In quick battle mode, the player selects a character to fight as well as an opponent, and then must match three icons on the board to perform an attack or defence on their opponent. This means that the play is strategic rather than relying upon computationally demanding code for interactive combat animations and thus enables game play across a range of hardware including lower end and older smartphones. Furthermore it appeals to players from different genres, as well as the casual puzzle game player.

*Africa's Legends'* cast of characters in the game include superheroes such as Ananse (a trickster in Ashanti folklore), Shaka (a Zulu Warrior), Shizo (an ex-policeman turned vigilante against corruption), Wuzu (a Masai warrior), Rudy (the illegitimate daughter of fictional Nigerian President Mubacha) among others. Kirinya explains that these characters are collected through discussions about the heroes of African folktales - their characteristics, depictions and storylines - with family and friends based in urban and rural centres across Kenya and Ghana. The characters also populate the *Africa's Legends* comics app available for download alongside the game. Here, they are given graphic representation by Kirinya and Tawia and their storylines, often underpinned by social activism, are 'placed within modern-day African settings and connected to contemporary life challenges such as inner-city crime in Nairobi' (Kirinya 2016). The design of these characters suggest an aesthetic straddling between a recognisable so-called 'African' iconography and the more mainstream US depictions of the superhero with eye mask, skin tight suit and cape, which suggests a purposeful engagement with local and global players. As Tawia says, 'I want to see DC and Marvel comics license some of our characters for their African movies'.

The African superhero is a leitmotif that features across a range of artists and designers' work in gaming and the connected popular entertainment fields of comics, animation and film. In Kenya, examples such as cartoonist Frank Odoi's comic strip *Akokhan* in the *Daily Nation*, the character of Makmende in the viral music video *Ha-He* (2010) by the art-collective and musicians *Just a Band*, the comic series *Shujazz* (meaning 'Hero' in Sheng[6]), Jim Chuchu's exploration of the underdog-hero in the online series *Tuko Macho* (2016), and photographer Osborne Machiria's unlikely warriors in his *MENGO* Fightclub[7] (Page, 2016) suggest a wider contemporary engagement with popular narratives that re-cast the local as hero and the city of Nairobi as another 'Gotham City' (Chuchu in Leithead, 2016). As Omanga states, through an engagement with new media that 'enables specific aspects of borrowing' (Omanga, 2016, 267) and mass circulation, the African superhero is remediated and repurposed from popular myths or folklore. This remediation is visible in the *Africa's Legends* franchise that capitalizes upon the smartphone platform to extend beyond the downloadable game to include an additional app that features animated comics where one can see the game characters as heroes set in a narrative context of contemporary Nairobi. While the motivation for these characters is, according to Kirinya, one of market differentiation and audience relatability, collecting local stories has an added value in that many of them remain undocumented in storybooks or television series.

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[6] Sheng is a Swahili dialect originating among the urban underclass of Nairobi, Kenya, and primarily used as a language of urban youths.

[7] As seen at http://edition.cnn.com/2016/07/18/arts/mengo-underground-fight-club-osborne-macharia/index.html

Figure 1: Adventures of Nyangi (2012), by Wesley Kirinya, screenshot of gameplay
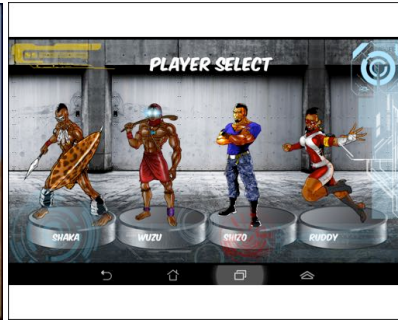
Figure 2: Africa's Legends (2014), by Leti Arts, screenshot of gameplay

Figure 3: Africa's Legends (2014), by Leti Arts, screenshot of gameplay

# Case Study 2: Salim Busuru, Evans Busuru and Joseph Nzomo, co-founders of Avandu (formerly Urban Design Kings), independent games development studio

The independent games design studio Avandu (formerly Urban Design Kings) was founded by siblings Salim Busuru (b. 1985) and Evans Busuru (b. 1992), along with childhood friend Joseph Nzomo (b. 1985)[8]. All three have strong recollections of encountering games in the early 1990s before the age of 10 years old, played avidly on family computers at friends' homes in Nairobi. According to Salim Busuru, 'We played games like *Street Fighter, Mario, Contra* in the years 1993 and 1994. While I enjoyed them very much, I never gave a thought as to how they were made or the careers and companies involved, until I was an adult'. Following their schooling at Nairobi's Lenana High School, which provided a strong basis in arts and design, Evans studied art and design at the University of Nairobi and Joseph completed an advertising and marketing degree at Daystar University in Nairobi. Salim went on to study a specialised graphic design and animation course at Nairobi's Shang Tao Media Arts College, a highly technical institution in contrast to the traditional university model, established in 2003 to address the local vacuum in computerised media production training in Kenya.

Alongside various jobs within Nairobi-based digital agencies, Salim, Evans and Joseph set up the company Urban Design Kings in 2008, working from their bedrooms and producing graphic design and package design projects, using Adobe design software CS3 Photoshop on a shared PC desktop and a laptop. As Joseph recounts, 'The market for design and graphic design was becoming flooded with start-ups. We wanted to combine our skills in graphic design and start in a different direction to explore aspects of design such as games, which was a new field developing in Kenya […]'. The skills they required to make this transition were initially acquired from online tutorials sourced on sites such as YouTube and Linda.com, and more recently through contact with other developers and gaming enthusiasts met through NAICCON, East Africa's first comic and gaming convention started in 2015.

One of the central aims of their newly-founded games development and design studio, as outlined by Salim Busuru, is for 'cool content that is local', i.e. to share African narratives through comics, animation and video games. For Salim, this translates primarily through the re-imagined and

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[8] At the time of writing this article, Urban Design Kings was in the process of renaming their studio 'Avandu'. Avandu Vosi translates to 'all the people' in the Luhyia language. According to Salim Busuru: 'Although we focus on African stories, we felt the name represents our desire to show the world, through our stories, that we are more similar than different.'

relocated superhero, designed to counteract the media dominance of 'overseas superheroes, ideals and values, offering relatable heroes with values that resonate with young Kenyans'. These resonating values are evident in the chosen battles of heroes whose childhood experiences are rooted firmly in East African realities, and include fighting against child warfare, corrupt politicians and fraudulent diviners. As such, Salim is currently working on an African re-conception of DC Comics superheroes in which Batman grew up as a child soldier in the Congo, Superman is a young Egyptian who was previously active in the Arab Spring (see Figure 4) and the Joker is a Kenyan false prophet. He also made a short 2D animation, Ma-Otero[9] that casts four Kenyan children as superheroes, stylistically in the same vein as Cartoon Network's *PowerPuff Girls* or *Teen Titans Go*. Games like *Operation Mlinzi*, released by Urban Design Kings in 2015, are inspired by iconic retro space shooter games, now set against the distinctive Nairobi skyline and revolving around a Kenyan air force pilot called upon to save the city.

*Kade: Ule Mtoi Mrui* (see Figures 5 & 6) (translating to 'Kade, the mischievous one' in Sheng, a Swahili dialect) is described by Evans as more of a 'realist' game set in a rural Kenyan village in which the hero is an average adventurous boy, who avoids working on the family farm and instead plays games pestering the neighbour's chickens - a storyline many Kenyans can directly relate to. It is a 2D, side-scroller adventure game in a retro, pixelated art style developed for mobile and released on Android in 2016. The player directs Kade who sneaks onto a neighbouring farm and attempts to hit chickens with stones fired from a homemade slingshot and steal eggs. Using simple touch-based controls, the player presses the left/right buttons to move, the 'jump' button to jump or swipes the 'shoot' button to use the slingshot. The goal of the game is to collect the eggs and sell them at the shop in order to earn money for a new bike at the village general goods store. As the player progresses across two levels of gameplay, s/he must prevent Kade from being caught by a guard dog Mbwa Kali, an irate rooster and the farm owner Mr. Njugama. To date, the game is most popular among Kenyans rather than an international audience, with approximately 2,600 Kenyans having downloaded the game. The game's theme music is set to a locally produced Kapuka soundtrack, further appealing to a local audience.

Games design employing the chicken motif is evident across a variety of mobile games that aim to connect to local Kenyan game players, as in the above-mentioned *Kade: Ule Mtoi Mrui* that employs the chicken as a familiar feature of childhood play in rural Kenya. Other examples include Black Division Games' *Kuku Sama* (2015), modelled to a degree on the global best-selling mobile game *Flappy Bird*, but with the central character recast as a persecuted chicken in urban Nairobi; and Momentum Core's *Simiyu the Chicken (2013)* in which a 'super chicken' navigates the underworld and heavens. A game such as *Simiyu the Chicken* resonates with the argument posed by noted scholars of indigenous African religion such as Jacob K. Olupona, who trace the iconographic significance of the chicken in African visual arts to the Yoruba creation myth of Oduduwa and the chicken (Olupona, 1993, 6). However, by and large the recurrent use of the motif within contemporary mobile games is based less on the mythological status of the chicken and more on its prevalence in domestic settings and across economic sectors in present-day Kenyan society. As such, the motif is a strategic visual tool for 'all-important localisation and marketing of games […] for every Kenyan', according to Dennis Riungu, COO of Momentum Core. This is reaffirmed by Joe Ketang, Head of Strategy at Black Division Games, who describes the chicken motif in *Kuku Sama* (see Figure 9) as a humorous reference to the popular deep fried chicken found at most fast food joints and urban eateries throughout Kenya.

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[9] Available to view on YouTube at https://www.youtube.com/watch?v=px-qVZeAKUc

Urban Design Kings and other Kenyan developers are tapping into a fast-growing mobile market within Kenya where, according to the Communications Authority of Kenya, the number of mobile subscriptions in September 2015 was almost 38 million, up from almost 33 million in September 2014. However, according to Evans, while games that can be described as 'local' in terms of their characters and settings are aimed at a developing Kenyan market, that market is not yet adequately developed and most of the projects generated by Urban Design Kings do not offer enough income to allow the studio to operate at a profit. With the explicit aim of developing a local gaming community, growing the Kenyan games industry around narratives from within Kenyan culture, the trio have launched the online platform ChekiChezo (http://www.chekichezo.com/) - a website for Kenyan developers to meet virtually, and upload and share their portfolios.



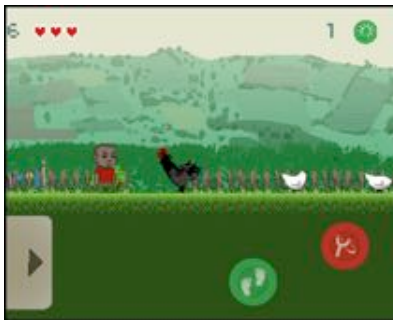**Figure 4: African Superman (2016), by Salim Busuru, as seen at salim_busuru.artstation.com**

**Figure 5: Kade (2015), by Urban Design Kings, screenshot of gameplay**

**Figure 6: Kade (2015), by Urban Design Kings, screenshot of gameplay**

## Case Study 3: Andrew Kaggia, founder of Afrikana Digital and Black Division Games, independent games development studios

Andrew Kaggia (b. 1987) frequently recounts his early interest in cartoons and how this led to learning about making computer animation in 2001 and his subsequent work in video games development. His love for games and animation was inspired by watching fighting video games such as *Tekken*, which he first saw at a video game parlour at The Village Mall in 2000. In Kaggia's view, there was no industry to speak of at the time in Kenya, so any potential career in computer animation and gaming was an unusual prospect (Kaggia, 2016). Whilst he had the opportunity to study computing as part of his secondary education in the early 2000s, in his own words it was 'outdated information'. During this time Kaggia independently learnt programming languages such as C++ and acquired a copy of 3D Studio Max (bootleg software) that he was able to install on his parents' personal computer. The software package introduced him to the basic concepts in 3D animation production, which he would continue to develop and later apply in his own 3D game *Nairobi X*.

By university age the expectation was that Kaggia would follow more conventional studies in engineering or economics. These educational expectations were echoed across the range of interviews conducted, citing gaming as a somewhat 'bad habit' and 'not serious'. Choosing to forgo a degree in economics from the University of Nairobi and instead continuing his self-sourced education online and through the local IT industry, he invested his time in makeshift jobs as a web-designer and through freelance jobs for advertising, whilst distributing his portfolio of work. During this time, he was able to form networks with other animation artists like Kwame Nyongo and Peter Mute (considered as the first generation of experienced animators with knowledge of the

technology and techniques). His own work was gaining traction as he promoted his films at local animation expos.

In 2012, Andrew Kaggia won the Best Animation award for his film *Wageuzi: Battle 2012* (2011), which made its timely appearance on the web in the run-up to the 2012 elections in Kenya. Wageuzi is a Swahili play on the word for transformers that 'can also mean *the change makers*, because our leaders are the tools for change' (Kermiolitis, 2013) and made reference to the 'transformer' or 'chameleon' politician who betrays others and changes allegiances. This became popularised on local and international media for its parodic depiction of Kenyan political leaders as competing cars in a race. It is worth highlighting that the processes and techniques of 3D computer animation, in terms of the generation of assets such as 3D models, texturing and animation are shared with those for games. For this reason, it was possible for Kaggia to transfer these skills to gaming which alongside his additional knowledge of game engines led to his more recent project *Nairobi X* (see Figures 7 & 8).

*Nairobi X* is one of Kenya's first domestically developed 3D first person shooter and multiplayer video games. The production was driven almost solely by Kaggia, who created nearly two thirds of the assets, models, textures, animation, and coding, relying on friends' help along the way. The plot revolves around an imminent attack on Nairobi by an unknown alien colony. Players assume the role of Otero, an elite GSU Recce Squad member, who through an unfortunate twist of events, emerges as the sole survivor in a special operation tasked to defend the country. The game is a first person shooter game based on different locations in the city of Nairobi. Aside from using the Nairobi Central Business District as its locale and a Kenyan hero, *Nairobi X* uses other Kenyan cultural markers like Sheng and local music. The players are assigned various mission objectives and have to complete the tasks to unlock the next level of the game. The game has a total of nine mission objectives. The game is available in two versions: Android mobile version and Windows PC version. It can be downloaded from www.nairobi-x.com.

In interview, Kaggia remarked why it was that 'aliens never come to Africa', a response that is not incidental when one considers that the science fiction genre is typically associated with Western-centric discourse. *Nairobi X* is a response to these generic biases, and in a sense presented as a form of Afro-futurism[10]. The game was designed to present the Kenyan as hero and main character, as he/she fights to protect the city from aliens attacking Nairobi. It engages with representations of future urban spaces, recasting Nairobi and the African hero within science fiction. As Eshun points out in the essay 'Further considerations of Afrofuturism', which presents the history of the movement and its intentions, offering counter- or alternative future scenarios that centralise Africans is a way to reorient attitudes towards Africa in the present. In this case the artist's intervention 'in the production and distribution of this dimension constitutes a chronopolitical act' (Eshun 2003, 292).

After launching his gaming career though *Nairobi X,* Kaggia identified the potential of the mobile platform game as having the largest potential audience, with African gaming markets expected to see annual double-digit growth[11]. This move towards mobile echoes the argument made by games theorist Jesper Juuls, regarding a global *casual games revolution* in which downloadable casual games (including small, free, browser-based games) purchased online and played in short time bursts, are fundamentally reinventing video games and their players (Juuls, 2009). In this light,

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[10] 'Afrofuturism' was coined by cultural critic Mark Dery in the mid 90s who affixed the term to the growing artistic movement and critiques arising in the 1950s and continuing to the present day that followed narratives of people of African descent in sci-fi, futuristic treaties. The approach was pioneered in the USA by the sci-fi novelist Ralph Ellison and popularized by the jazz musician Sun Ra. (http://ieet.org)

[11] According to a *BBC Business* article 'Africa's games makers dream of exporting to the world', accessed on 13/09/16 at http://www.bbc.co.uk/news/business-33335555.

Kaggia's *Kuku Sama* (see Figure 9) is a 2D side-scroller game played by tapping the screen or pressing 5 on a mobile phone. 'You take the role of a distressed chicken trying to escape from Wafula, who wants to make you into his dinner. This game is extremely addictive and people from all walks of life love it. You can subscribe to it on Safaricom and MTN portals and it is basically available all over Africa,' explains Kaggia (Kaggia, 2016).



Figure 7: Nairobi X (2014), by Andrew Kaggia , screenshot of gameplay

Figure 8: Nairobi X (2014), by Andrew Kaggia , screenshot of gameplay

Figure 9: Kuku Sama (2015), by Black Division Games, screenshot of gameplay

## Case Study 4: Michael Gathemia, co-founder of Gaming for Kenya (G4K), commercial digital enterprise

Michael Gathemia grew up in Nairobi (b. 1990) and describes himself as 'an entrepreneur, video gamer and now YouTuber'. He came into contact with video games early in his life, playing console games at his neighbour's house from around the age of 6 years old, including SEGA's *Sonic the Hedgehog* and Super Nintendo's *Mario Brothers* and *Duck Hunt*. Gathemia recalls an instant affinity with the 'programmable animated sprites' of these games and maintains a strong preference for retro games containing two-dimensional bitmap objects and simple 'run and gun' or fighter formats. Despite a brief period of experimentation with games development, learned via self-guided YouTube tutorials and forums centred on Unity Engine and Scirra Construct Engine, Gathemia's describes himself principally as a game player, promoter and industry entrepreneur. His business aspirations are tied to the growth and recognition of gaming and electronic sports (e-sports) as legitimate sporting activities.

In 2010, Gathemia alongside his childhood friend Daniel Ndung'u and gaming enthusiasts Benjamin Walulu, Manraj Lotay and Jalse Juliet founded Gaming for Kenya (G4K) while all studying Business Administration at the University of Eastern Africa, Baraton. The initial aim was to open a gaming café that would charge rates to customers for playing video games, a trending business in Nairobi at the time. The group was able to start small by holding gaming events such as LAN bashes[12], gaming competitions and game installation services targeting relevant University communities, such as the Baraton Information Technology Students Association (BITSA). Later inspired by international e-Sports organisations such as gamespot.com which aims to elevate gaming into a large-scale spectator sport, their ambitions developed a far broader focus. In 2013, G4K registered as a start-up

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[12] A LAN party is a gathering of people with computers or compatible game consoles, between which they establish a local area network (LAN) connection between the devices using a router or switch, primarily for the purpose of playing multiplayer video games together.

entertainment company based in Nairobi. Their future aim is to be the largest digital company in Africa focusing on video game news and developing an e-Sports network in which international players participate in large-scale global competitive gaming events in Kenya - thus ultimately supporting e-sports as a means of paid occupation for Kenyan gamers. As an organisation, the group also sees itself as having a wider remit supporting and promoting local gaming culture through online spaces such as Facebook and YouTube where it networks with other gamers, developers and event managers. For example in 2016, the organization partnered with the WAGE 2016 (West African Game Expo) in Nigeria, to promote Kenyan game developers and their games.

In 2016, G4K operated from the iHub, an innovation hub and hacker space for the technology community in Nairobi that lets space and resources to local tech-entrepreneurs and start-ups. G4K used the space to organise a number of LAN parties, some of which were competitive offering up small prizes. The competitive gaming brand that G4K established as a faction is known as KINGS e-Sports (Kenya International Gaming Series) and was set up to cater for competitive gamers who would like to earn cash prizes and 'stardom'. According to Gathemia some competitive gamers in Kenya such as Peter Mumu, Tej Virdi and Hirsi Ali, are currently able to make a living from gaming. Additional support and sponsorship for G4K's hosting and organizing of the parties and competitive events stemmed from a range of sources, including Activision, an American video game publisher; ASUS, a Taiwanese multinational computer hardware and electronics company; Red Bull, a Thai-Austrian company that sells energy drinks as well as sponsoring sports, music and culture events; and NAICCON, East Africa's first independent gaming and comic convention. Responding to the current lack of sponsorship and support from local corporate bodies, Gathemia explains that gaming is a largely misunderstood industry in Kenya, with many corporate funders confusing gaming with gambling. The sponsors and partners are an important factor to this type of event, as their support can directly affect the frequency and appeal of the events held. Despite this misunderstanding, Gathemia claims that the gaming scene is currently undergoing rapid growth in Kenya, with factions of gaming communities emerging around particular games and gaming devices - he cites the 'PC Master Race Community', 'the FIFA Fanatics' and various console and PlayStation allegiance groups.

The other events that G4K organise as a means to support the growth of the gaming community in Kenya are typically freeplay events such as LAN parties whereby players are able to come along and play games at no cost. Nevertheless, the LAN parties serve also as an important supporting mechanism to allow the company to promote and sell hardware to game players generating some additional revenue. Initially the company promoted specific brands such as E-blue, a Japanese manufacturer that makes gaming-specific products that are cheap to acquire and durable. By 2016 it included the provision of more high-end products and established relations with ASUS. Gamers were able to order online, purchase at specialist events, or at pop-up monthly sell events. The delivery and postage was restricted to Nairobi only with specific riders employed to make deliveries, as the type of user that would be investing in the purchase of gaming consoles or personal computers would tend to have more disposable income, from middle to upper income brackets typically found in the city (as opposed to rural communities).

## Case Study 5: Brian Barasa, exhibition co-coordinator for NAICCON, Kenyan comic and game convention

Brian Barasa (b.1988) grew up in Nairobi and therefore was relatively exposed to media and technology from a young age, which resulted in a long-term enthusiasm for comics and gaming. He grew up watching international animated television series like *Spiderman*, *Justice League* and *Sabre Rider* and later local cartoons such as *Gitonga*, developed by local political satirist Stanislaus Olonde, popularly known in the Kenyan press as Stano. While at junior school, he recalls cartridge-based console games such as Nintendo's *Super Mario* and *Terminator 2 Ending Man*, played fervently at 'world travelling' friends' homes. Later in the 1990s, game play moved to 'pay and play' gaming parlours that emerged in Nairobi's estates, such as 'Pop-IN' in the central business district near Tom Mboya street, which provided access to PlayStation-based football simulator games like *FIFA*. These arcades became social play spaces for active community engagement, however when gaming technology became more widespread in Nairobi and consoles were readily available on the market, game play reallocated to wealthy households.

This attraction to games-based community engagement is evident later in Barasa's career. He studied management at college, where he developed a growing interest in organising meetings and events within the community and subsequently worked for the Kenyan International Convention Centre (KICC), where he began to entertain the idea of establishing the first Comic-Con for East African audiences. The Nairobi Comic Convention was launched in 2014, by Brian Barasa and his partners Thomas Imboywa and Ann Ndanu. It set out to attract comic, animation and game hobbyists and professionals that commonly tend to share similar interests. It was setup as a bi-annual event that promotes and displays local and international comics, animation and games - gamers, comic artists and animators showcase their work; retailers demo and sell gaming and comic book merchandise and workshops are offered in gaming, comic artistry, animation and cosplay. The practitioners and audiences around these three areas of the creative industry are intrinsically interconnected with practitioners often working across media companies and consumers active across fan platforms related to all three aspects. The event is open to the general public who are charged for entry (entrance fees are approximately $2 per day or $3 for the entire event). The event also includes gaming and animation workshops that are delivered by professionals from the sector and take the format of a discussion or demonstration of software, techniques and practices.

This event plays an important part in the landscape of gaming in Kenya as it connects like-minded stakeholders, such as the team from Gaming for Kenya, independent developers such as Andrew Kaggia, and comic artists and illustrators, such as Salim Busuru from Urban Kings, that could play a creative role in the design of games. The connections within this network are a key aspect to the gaming community in Kenya as they support mutually beneficial relationships. In 2016, the event housed sponsors such as local mobile phone company Safaricom, computing company ASUS and local publishing houses, and attracted over 2,500 attendees. This developing recognition of the sector, albeit at a nascent stage, serves as an indicator to game designers in Kenya that there is a market and appetite for locally produced games.

## Spaces of Interactions

> Many people who don't know much about games assume they are socially isolating, that players always play against the computer. Solo play is one mode among many. Computer games originated in arcades before being marketed in the home; many preserve opportunities for spectacular performances best appreciated amongst friends. Playing alone

often becomes a way of honing skills which are best enjoyed in shared competition. (Jenkins & Squire, 2002, 75)

To talk of gaming necessitates a discussion of space at different levels, whether one is referring to game worlds as a site of 'contested space' (Jenkins & Squire, 2002) or the virtual social spaces of interaction. Gaming (as player or developer) in many instances takes place within networks of collaboration and exchange, encounters whether real or virtual that, as Jenkins & Squire suggest, are social. This interaction may occur within multiplayer online games, interest groups on online social networking sites, YouTube channels, or the real spaces that gamers move within such as video gaming parlours (see Figures 10, 11 &12), gaming competitions, conventions, or innovation and technology hubs. The establishment of these spaces has served as key catalysts to the development of gaming in Kenya. The early arcade parlours in the 1990s and the simultaneous development of video game parlours with consoles in suburban areas in and around Nairobi, are spaces that played an important role in inspiring and creating a culture of gaming amongst a generation of Kenyan youth. Whilst gamers at the arcade video game parlour would purchase token coins to insert for play, in video game parlours in the suburban residential estates games on consoles such as *FIFA* were being adjusted so that a match for example would last five minutes, allowing for a greater turnover of players (Barasa, 2016).

Video gaming parlours continue to be a growing enterprise, and whilst it is true that the Internet enables gameplay, the demographic of the people in Kenya playing games on consoles at parlours, by all accounts, is a majority of users that would not have access to a personal computer or the Internet. There are a number of little gaming cafes sprawled across the city including in the slums, where for a '100 bob' (approx. 70 pence) one can play for 15 minutes. As Kaggia outlined, game parlours are accessible in any major town, mostly offering consoles and not PCs. Furthermore, whilst one might assume that the competition between parlours would consist of comparisons between hardware and games, the space itself has more of a bearing on the gamer's choice of venue. The 'comfort' of the space in the form of leather seats, neon lights and a slick environment is more of a deciding factor (Kaggia, 2016). Most parlours would use bootleg games, where the original version of *FIFA* would cost a 100 dollars from a retailer, a bootleg copy could cost as little as a 100 shillings. As expected, the bigger the parlour gets the more important it becomes for them to use original (non-pirated) games.

The introduction of broadband was notably impactful upon this community in that it offered the opportunity for gamers, developers and retailers alike to engage with virtual online spaces and capitalise on them. These spaces present themselves in different guises as interest group on social networking sites, online gaming forums, retailer websites, and artist websites, blogs or YouTube channels. Here specialist knowledge in the form of design, game play tips, help with use of software, information on hardware and peripherals, and information about code and game mechanics is accrued and shared. Furthermore, on occasion it is in these networked spaces that talent is recruited and collaborations are forged. As Wesley Kirinya mentions, it became possible to commission 3D artists from other parts of the world to create assets for games in development (Kirinya, 2016). Even game developer studios such as the University of Games have cited working collaboratively across virtual spaces (Donlan, 2013).

The growing networks of Kenyan gamers were also visible on YouTube channels such as AfricaTubers, which air game reviews and makes links with other YouTubers that share similar interests. Here, through personal vlogs, 'videos where people either ask questions for others to answer, respond to questions asked by other vloggers, or discuss other vlogs on YouTube', Kenyan gamers respond to technology, test out equipment and illustrate game-play (Molyneaux et al., 2008). These vloggers are both producers and members of the audience and of the YouTube

community and therefore also share an identity as Kenyan gamers and contribute to the network of gamers in Kenya. Gaming enthusiasts and bloggers such as Kenneth Mwanka aka. JustaNerd and his channel *NerdSide* regularly review games and cross reference to other African bloggers with similar interests in comics, games, animation and film[13]. Similarly gamers and vloggers, such as James Karanu aka. Jazi Neon, Oliver Harding Fay aka. icezard6, and Davi Kamanzi network with other like-minded enthusiasts and share experiences, whilst acting as a platform to promote local events such as NAICCON (Nairobi Comic Convention). They engage the Kenyan gaming community by reviewing other African YouTubers and showcase local games developers, providing an informal incubation space for the Kenyan games industry[14]. Additionally the vloggers offer reviews of various games and specialist information on hardware and settings.

In terms of physical spaces of interaction, the iHub is often cited as a key establishment in Nairobi. The organization provides an informal physical space, (including a coffee shop, games space and lounge), for like-minded people to share, collaborate and create. Since 2014, iHub has had a strong online presence consisting of its own website, Twitter account, Facebook page, and YouTube channel. Its YouTube channel hosts 46 self-produced short films, including interviews with its users, coverage of the various events it conducts, and filmed documentation of its speakers. Amongst these videos is a special feature on 'Gaming in Kenya'[15] . The feature includes an interview with Nathan Masyuko, member of iHub, a computer science graduate and founder of NexGen Ltd., a gaming and computing company involved also in 3D computer animation (and organizer of Kenya's first official gaming event) and Wesley Kirinya, of Leti Arts. The iHub provides a virtual and physical place that serves as a catalyst to a range of emergent creative initiatives based upon the use of digital technology. In 2010, it hosted the World Cyber Games Festival, and has continued to host a range of LAN parties. In 2014, for example, one of their LAN parties included prestigious guest, Hamilton Chu, the executive producer for the games company Blizzard (of World of Warcraft fame)[16]. The hub has also collaborated with the Gaming for Kenya organisation where gamers are able to play over a local network for period of time, and at the same time view and review the hardware that Gaming for Kenya retails. They frequently invite a range of national and international speakers to run lectures and workshops on a range of topics relating to digital technologies, and have recently created a separate branch to the iHub called m-hub, that deals specifically with start-ups for mobile phone. This space is undoubtedly a key factor in the stimulation of Kenyan game development, offering up social spaces where shared knowledge and experience circulate. Furthermore as Ross (2013) identifies in his article on the Kenyan games industry:

> The iHub isn't the only melting pot for technology entrepreneurs in Kenya. The Growthhub, Praekelt Foundations, m:lab, Nailab, 88mph and Strathmore University's iLabAfrica[17] all support start-ups through a mix of entrepreneurship training, research, funding, working

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[13] Available to view at https://www.youtube.com/channel/UCugwZtOOCeJGT44PLkSdwNQ

[14] As an example, the YouTuber Nerd Side included a video posted in 2014 with a shortlist of his top Kenyan gamers who were uploading videos that documented their game play. Avaliable to view at https://www.youtube.com/watch?v=LjYePwGCIQw

[15] Available to view at https://www.youtube.com/watch?v=_SvhF2FCDyQ

[16] For coverage on the event as published on the iHub website, see http://ihub.co.ke/blogs/19291/introducing-blizzard-s-hamilton-chu-to-nairobi-s-gamers

[17] Websites can be viewed at http://www.thegrowthhub.com/ , http://www.praekelt.org/ , http://mlab.co.ke/ , http://nailab.co.ke/ , http://www.88mph.ac/ , http://www.ilabafrica.ac.ke/

spaces and mentoring. And there are others, too, with more springing up every year (Ross, 2013).



Figure 10: Gaming parlour, Nairobi CBD (2016), commissioned photography

Figure 11: Gaming parlour, Nairobi CBD (2016), commissioned photography

Figure 12: Gaming parlour, Nairobi CBD (2016), as seen at naibuzz.com

## Observations on the demographics of design and play

After the first set of interviews it became clear that networks of practice related to video game development in Kenya were not fully cohesive but rather divided along different demographic groups and according to users' access to specific technologies. These groups range from gamers that attend LAN parties and invest in hardware and software in order to spend time blogging game reviews and playing online multi-player games to a generation of gamers that buy play time on consoles in video game parlours across Nairobi. In Kaggia's view, the social context of gamers in Kenya could be split into three categories: 1) independent gamers that have their own PCs or consoles, and are likely to interact online and attend LAN parties - a minority in Kenya, 2) the majority of gamers that probably do not own their own PC or console and play in public gaming parlours and 3) gamers that play on their smartphones, which are likely to cut across different socioeconomic backgrounds and are therefore the largest grouping.

All interviewees gave nostalgic accounts of the video game parlour as a social meeting place from their early youth in the early 90s to their days at university. Typically references to 'parlours' whether in Lagos, Nairobi or Accra tend to be in the context of video parlours (Ajibade, 2007, Haynes, 1998) and most examine local film industries on the continent such as Nollywood or Riverwood. It is less common to hear of video gaming parlours found in these urban spaces, populated by younger generations of so-called gamers. In spite of that, interviewees recounted how the number of parlours in the city tended to burgeon in perimeter around the campus. A more interesting discovery was the expansion of the number of parlours beyond the urban centres to towns and slums alike. This aspect is an important factor to consider in any future discussion of emergent communities of game players and the growth of the related economies.

At the same time, one common denominator that is regarded as a 'game-changer' in the field is undoubtedly the penetration and use of mobile phone technology and the way it cuts across discrete demographic groups. Whilst not every gamer in Kenya has access to a personal computer or console, it is increasingly likely that they own a smartphone. These different platforms, whether personal computer, games console or mobile phone in turn affect the design of the game. In the most obvious case, whilst the computational power of smartphones are always on the increase, the physical screen itself remains small enough to fit in the palm of one's hand and for this reason limits

the types of games that are playable on this technology, as opposed to those intended for play on a console or PC with a larger screen. The game developers interviewed for this study were acutely aware of the connections between the demographics of users, access to technologies and the restrictions or potential that each technology presents.

# Conclusion

## I.  Local visual and content strategies

Individual games outlined in the above case studies have been discussed in terms of the interdependent components of design, format and technology. In broader terms however, games within the context of this paper are considered as *design artefacts* and their analysis lies in the conceptual motivations, structures and conventions that impel the interviewed designers whose primary aim is to impact the consumer or user, with less emphasis on interpretations by the authors themselves.

The interviewees identified that their motivations for developing games and promoting local content were not always unified, and in this regard, three categories were identified:  1) developers such as Evans and Salim Busuru of Urban Design Kings were driven by an ideological need to preserve local cultural heritage through the digitisation of Kenyan folklore; 2) developers such as Andrew Kaggia of Afrikana Digital and Black Division Games were seeking to relate to a growing local audience through familiar stories and content, both historical and contemporary: and 3) developers such as Wesley Kirinya of Leti Arts were attempting to differentiate themselves within the global games market by providing new and original storylines and characters. A postcolonial lens that sees the hegemony of Western discourse proliferate within popular entertainment, including games, oftentimes frames the discussion of a pursuit for the preservation of local heritage. In cases such as that of Evans and Salim Busuru, the aim is not only to represent the content of a community, but to counteract the media penetration and influence of 'overseas superheroes' created by designers based in the USA and Europe. According to the Busuru brothers, these role models portray imported ideals and moral values that do not necessarily reflect local worldviews. This resonates with assertions by Fatoki, working with specific reference to the Nigerian knowledge context, who claims that digitization has the potential to make Africans producers and exporters of indigenous information and knowledge, rather than passive consumers of imported knowledge (Fatoki, 2005).

## II.  Local visual and content strategies beyond the scope of this study

The developers that are cited here are but a small sample of the larger community of developers in Kenya that share similar interests and concerns, evidenced in their games. Game developers such as Eugene Adeli, with his 3D game Mseto Challenge, also suggest the move towards local themes. Mseto Challenge (2016), for example, is closely modelled along the lines of the more common game *Temple Run* but sets the main character as a Kenyan, sporting the colours of the Kenyan flag in his attire, being chased by a rhinoceros in an environment littered with obstacles such as fallen trees, barbed wire, and boulders. Similarly, the *Ma3Racer* (2012) game by Joe Muriithi Njeru (see Figure 13) features Nairobi's angry matatus[18] who compete against each other for passengers whilst racing round Nairobi. On occasion, a game makes reference to local news capitalising on the memes in

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[18] In Kenya and neighbouring nations, matatu or matatus are privately owned minibuses used for both inter- and intra-city travel, often decorated with famous or slogans and sayings.

circulation at the time, as in the case of the Bungoma hanging man incident[19] reported in the media (Oteba, 2016, Murimi, 2016). By his own account designer Frank Tamre identifies the rapidity with which the game *Bungoma Hangman* (2016) (see Figure 14) became popular from release to featuring on local news in less than 24 hours (Kimuyu, 2016, Mugai, 2016) as a testament to the capital in using local content.

In addition to these examples, there are a number of developers that are engaging with so-called 'serious games'[20]. *The Election Thief* (2013) supported by the government body TAANDA, developed by University of Games (made up of four members Herbert Mbuthi, Joseph Kariuki, Blaise Kinyua, Brian Kinyua) presents local content inspired by the political events following the election violence of 2007 and 2008. The game *Haki 2* (2013) developed by the company Afroes (a youth education organization) is another example in the 'serious games' category:

> HAKI Chaguo Ni Lako is a mobile phone game designed to inspire commitment to peace and tolerance amongst young Kenyan electorate. Ultimately the user is encouraged to commit to peace and tolerance. (Afroes, 2015 http://afroes.com/)

The portfolio of work that Afroes presents, as a pan-African venture between South Africa and Kenya, includes a range of games that engage with social and educational issues pertinent to a local context, such as the game *Moraba* that seeks to address youth audiences on gender-based violence (GBV). Their founder Anne Githuku-Shongwe has a strong commitment to gaming in the service of youth empowerment.

More recently, *Knock-out 2017* (2017) (see Figure 15), a mobile video game developed by Mekan Games (made up of Evans Kiragu, Charity Mbaka, Carren Mwikali, Pauline Waigumo and Darin Munene) is a more humorous and satirical reference to current Kenyan politics in which you are invited to choose your favorite political character, get in the ring and battle it out against your opponents. According to its developers, the game aims to:

> […] educate you on your rights and freedoms as a citizen. Many are times we are treated as the puppets and yet we are the puppeteers. We control them not the other way around! (Mekan, 2017 http://www.mekangames.com)



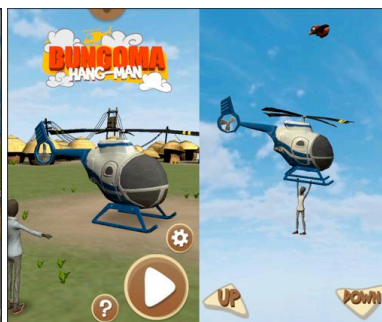**Figure 13: Ma3Racer (2012) by Joe Muriithi Njeru, screenshot of gameplay**

**Figure 14: Bungoma Hangman (2016) by Frank Tamre, screenshot of gameplay**

**Figure 15: Knock-out 2017 (2017) by Mekan Games, screenshot of gameplay**

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[19] On May 13 2016, a man identified as Saleh Wanjala (later known as the 'Kenyan James Bond') clung to an airborne helicopter carrying the body of murdered Kenyan businessman Jacob Juma in Bungoma, Kenya. A mobile game has been developed based on this ordeal called *Bungoma Hangman*. The game involves a man hanging from a helicopter who dodges birds and electricity poles and 'powers up' by eating local foods such as ugali, kuku and sukuma wiki.

[20] Serious games is the term that is used to refer to games whose primary function is not simply entertainment. These can include educational games, documentary games, and/or games that have a social and political engagement.

## III.   International Game Studies Context

> Video games are not merely sleek consumer appliances dispensing entertaining power fantasies, they are fragments of shattered machines out of which new identities can be constructed; sites where disorderly crowds can assemble for subversive purposes; platforms from which to examine the status quo; windows into the turbulent flow of power and progress. (Anthropy et al, 2014, xiv)

Until recently any focus on gaming has been predominantly preoccupied with progress in the West, with hardly any attention directed at these developments in Africa and more specifically Kenya. With the exception of only a handful of authors, such as Mark Wolf with his *Video Games around the World (2015)*, there appears to be little recognition of the rapidly changing ecology of digital creative industries such as gaming that are growing in the sub-Saharan region.  The implication of this is that whilst a few examples of transnational collaboration are visible on the continent, the same cannot be said for Europe or America and Kenya.[21] Furthermore, in the context of games studies, the focus upon game genres, narrative and game mechanics is almost always viewed from the perspective of European and American cultures.

As Alison Fiorito, a producer at XBox and Microsoft, in her article 'Gaming in Sub-Saharan Africa' states, the lack of relevant local cultural context in many games imported from outside of the African continent and available to young African gamers is one of the major hindrances to the growth of the games industry in sub-Saharan Africa. As a solution to this, she promotes local games developers writing and creating games based on games and stories that already exist in their local culture. 'The more content created by Africans for Africans, the stronger the market for African entrepreneurs and game designers will be' (Fiorito, 2011, 61).

Whilst this study is inceptive, it has identified a rich ecology of interdependencies and relationships within the creative sector in Kenya that constitutes and makes up gaming culture. In most cases the developers were themselves keen gamers, with personal ambitions to promote their own stories, motifs and heroes. Furthermore, following the growth of access to information across the Internet, these developers were able to look to methods and techniques that may be well-established formats in the mainstream games. This access also afforded them a degree of movement beyond Nairobi, in a transnational digital space, where they were able to collaborate with people in South Africa, Ghana or Nigeria for example. The Government of Kenya's investment in ICT is a continued aim, as highlighted in its long-term development policy Kenya Vision 2030. In line with this, the government is supporting the building of the most expansive tech project in Africa Konza Technology City, a 5000-acre technology hub outside of Nairobi. It should be noted however that according to the Konza Technopolis Development Authority, this project has been slowed down by difficulties in securing additional financing and challenges in attracting enough high-end talent. Be that as it may, according to Gathemia, high Internet speeds and innovative technological platforms provided in this space will revolutionise the e-sports and gaming industries in Kenya. These combined factors suggest

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[21] Unlike in Casablanca, Morocco, where international leading French company UbiSoft Games had been running from 1998 (Callus, 2017). By  June 2016 however Gamespot.com ran a story on the closure of UbiSoft's Casablanca studio citing economic crisis and the 'evolution of the games market' as the reason for the closure.

that the field of games development and the related cultural worlds that it impacts upon such as animation, the visual arts, new media, illustration and comics to name a few, are likely to change in the coming years, bringing forward new narratives and histories of gaming in an international context.

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