

A Study of the Integration of Digital Media Technology and Interactive Experience in the Digital Age and Its Development for the Media Industry

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Abstract: *In the context of the public's increasing pursuit of the sense of experience, digital media technology and interactive experience in the digital era have begun to integrate and develop, innovating media productivity tools while creating new needs for the public. The development of interactive experiences provides the most direct way to satisfy the needs of users by combining technology, theory and design with the aim of enhancing the user experience in this era. Originating from the digital era, the integration with digital media technology promotes the development of the era, and harvests the demand to create opportunities for its own innovation, forming a cycle. To a certain extent, it also promotes the development of the media industry. The integration of digital media technology and interactive experience in the digital age is a wise path for innovation and progress in the media industry, providing opportunities for the development of high-quality media industry. Interactive experience design lays the foundation for interactive services, adapts to the gradually increasing demand for interactive experiences, improves the actual experience of users, and promotes the integration of interactive experiences with productivity tools, digital media technology, the media industry, and even the entire digital age.*

Keywords: *Experiential, Digital Age, Digital Media Technology, Media Industry, Interactive Experience, Innovation, Demand, Development*

1. Preface

The digital era is the era of innovation and ideas, create demand to meet the needs and then seek new development, so as to enhance the public's sense of satisfaction for the life experience is the main theme of the times. When the development of products tends to be no longer satisfied with the status quo, when the traditional media tools can not meet the needs of the industry, when the public's sense of experience is waiting for the birth of a new type of product, the digital age of digital media technology and the integration of interactive experience is particularly important.

2. Changes in the Digital Age

2.1 The concept of the digital age

The digital age is a new era driven by the medium of digitalisation. Using digital media as the medium and means makes the innovation and creation of productivity tools in the era, and promotes the development in the new era. The technological innovation brought about by digital products enriches the public's vision in the new era and promotes the development of new media. No longer limited to the satisfaction of the audiovisual senses, such as interactive experience in the new era and the deep integration of digital media technology. It has greatly promoted the progress and development of the times. At the same time, the development and innovation of productivity tools in the digital era is also, to a certain extent, to promote the digital media technology in this field of footsteps continue to move forward, the productivity tools and information and technology feedback to this new era, promoting the development of the digital era. In the digital era, the media industry needs fresh blood and innovation, prompting the integration of interactive experience and digital media technology, so that the media industry has been greatly enriched in both theory and communication tools.

2.2 Changing trends in the digital age

With the development of digital media technologies and the innovation of functional tools for social productivity, society is transforming towards the digital age. Big data and statistics, data and data analytics, the convergence of digital media and interactive experiences, etc. are driving society in all directions towards the digital age. Development in the digital age is becoming tangible. The development of society at all levels is deeply embedded in our reality. This is manifested in the convergence of digitalisation and industry and the development of digital models.

As Figure 1 the Five Forces Model is an important study of the development of digital modelling for business outputs.



Figure 1: Porter's five forces model

In addition, the development of the digital age has long been a general trend, and in the digital age, the media has become inextricably linked to the development of society, and the role of the media has been fundamentally "shifted". The role of the media has been fundamentally "shifted". The function of the media has become more front-loaded, and it has become an important motive for social change, rather than just a result of social change.^[1]

3. The Evolution of Interactive Experiences

3.1 The continuous innovation and development of interactive experience design

With the development of the digital age, the people's vision has gradually shifted from ordinary material needs to the pursuit of spiritual fulfilment. Social development requires productivity, and the innovation of productivity comes from the people's needs. Starting from the spiritual needs of the people, interactive experience has attracted more and more attention in the digital era.

Interactive experience, since its inception, has been designed to enhance people's sense of experience. With this in mind, as the digital age develops, superficial experiences can no longer satisfy all of the public's needs, and the huge demand in the market drives changes in productivity tools and technological enhancements, experience design is born.

Interactive experience design is a new design method, different from the traditional generalised template design, interactive experience design will pay more attention to people's actual experience and the emotional changes brought about by interacting with the product, so that the product is no longer confined to the shackles of space or even time, and the product is no longer a cold object, starting from the real human-computer interaction, and taking the sense of user experience as the starting point to strengthen the communication and connection between people and the product. Starting from the real human-computer interaction, we take the user experience as the starting point, strengthen the communication and connection between people and products, realise and strengthen the interactive

experience between the two, and make the seemingly simple products have a sense of design while taking into account their experience, so that the products and design are full of vitality.

The special design concept makes it different from the traditional design, which emphasises the interactive experience between the design and the user, and meets all the needs of the user or consumer.

As Figure 2 demonstrates the integration of experience design in various areas.^[2]

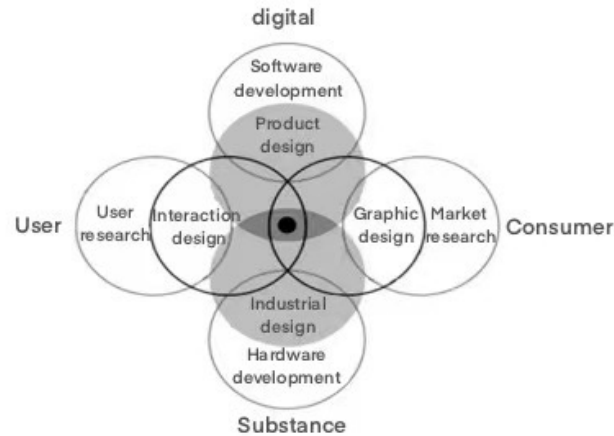


Figure 2: Design of the experience

3.2 Interactive experience first

From the perspective of everyday people, the richness of the experience will always stay with us for a long time, so interactive experience is a sustainable, needed and progressive new design with great prospects for continuous improvement and development. From a micro and economic development point of view, interactive experience products will generate long-term demand and even dependence after users experience and use them. In this way, it will extend the superficial and far from being satisfied to the luxury experience consumption in order to achieve the user's "experience first" consumption desire.

Interactive experience is getting closer, deeper and influencing life. Experience first has gradually changed from pursuit to habit, and users' consideration of experience has become daily. Traditional experience can no longer meet the needs of the rapid development of the digital age. Therefore, from "experience first" deepens a layer of further pursuit of experience, more excellent experience for users to accept.^[3] Interactive experience is the trend of future development under the premise of more immersive and realistic.

4. Convergence of Digital Media Technologies and Interactive Experiences in the Digital Age

In today's world where interactive experiences are needed and thriving, how to combine interactive experiences with the sense of reality and the virtual, and apply them to products so as to enhance the user's experience is our current problem. The development of digital media technology in the digital age has helped us to a great extent. The integration of digital media technology with interactive experience is the way out. Interactive experience is a means of applying the development of digital media technology to modern media, promoting the exploration and development of digital media technology and media industry.

4.1 Overview and development of digital media technologies

Digital media technology is a fusion technology field that spans multiple fields and technologies. It integrates science and technology, art, information processing, virtual and reality, etc. It is a cross-discipline and technical field of digital information processing technology, computer technology, digital communication and network technology. Through the innovation of productivity tools in the digital era, the use of computing, information processing, communication and other means, summary and centralised analysis and processing of various information, with the help of new media and media, virtual close to reality, make the abstract become image, so that people in the digital era in the

enjoyment of convenience at the same time to enhance the intuitive feeling of the audio-visual and other sensory sensations, so that inaccessible and inert data to become available for people to interact with. The development of digital media technology in the digital era is in line with the trend, the needs of the times is the driving force for the development of digital media technology. At the same time, the development of digital media technology is also the cornerstone of the digital era.

4.2 The Role and Future of Digital Media Technology and Interactive Experience Convergence

Imagine when you hear a good song on your mobile phone and you want to search for other songs by this artist, at the moment the mobile phone instantly pops up with detailed information about the artist and the representative tracks. After you listen to the songs and you feel that they are to your taste, you want to share them with your friends and at the same time there is a one-click sharing tip right next to this media to help you. This will make you feel thoughtful and give you feedback that this kind of interaction feels good. This is what happens when a basic, simple digital media technology meets an interactive experience.^[4] Data and computing based technologies coupled with interactive experiences are designed to give the user an interactive experience.

The digital age requires the integration of digital media technology with interactive experience, which is the developer's idea, a concrete design and attempt based on the user's actual sense of experience. Product developers can have any wild ideas and boldly design them because of digital media technology as a guarantee. This research enhances the concept of user experience, using technology to put ideas into practice, turning ideas into reality, and making the impossible possible.

Imagine a day in the future when you turn on your mobile phone and you see that the character in the video or the protagonist in the game you are controlling is no longer confined to a small display screen and jumps out of the screen. Not only that, you can even interact with them directly. You can actually see the person you want to see face-to-face (off-screen). You can even use the medium of digital media to really feel more than just audio and visual, to fully satisfy all your senses, you can feel and touch the person you want to see, you can even really touch the material of the clothes you want to buy, so as to achieve a truly interactive experience.

As Figure 3 shows, the interactive market demand is still high today.

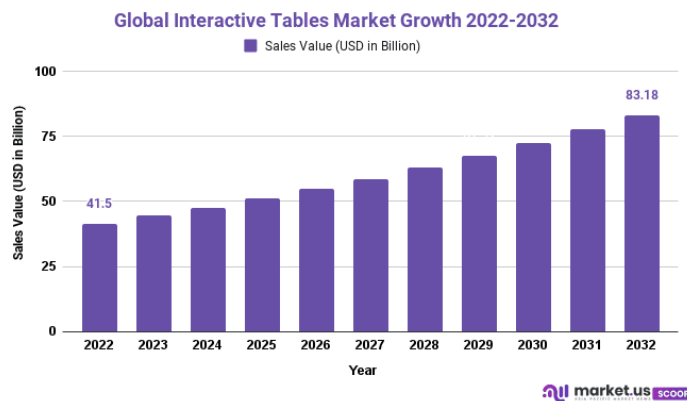


Figure 3: Global Interactive Tables Market Growth 2022-2032

While digital media technology and interactive experience are merging, while those pie-in-the-sky ideas are becoming reality, the digital era is progressing. At the same time, social productivity is also improving, digital media technology and media productivity tools are innovating, more user needs are being explored, more ideas beyond the limitations of the times will be inspired, and it is also promoting the conceptual innovation and development of interactive experience design.

5. Review and Prospect of Development - The End of Interactive Experiences

5.1 Review of Interactive Experiences in the Digital Age

Perhaps among the only ones we have, there is no way to travel in time, no way to travel in space. But in the digital age, every wonderful idea we have is something we can work towards. We can use

digital media technology to create digital images that help us preserve the past and look to the future for times that didn't happen but that we can imagine. What about space? How do we break the limitations of space?

I think most people have fantasised about having the ability to travel through space, so that we can actually appear in front of the people we want to see at once, and we can break the boundaries of space and go wherever we want to go and touch whatever we want to touch. However, the physical shuttle in space is still difficult for us to solve, but just the above mentioned is no longer a pipe dream in our digital age today, we can imagine that day.

For the space shuttle in the product user experience I divided it into visualisation, touchable and feelable three aspects. For once in the trend of the development of the digital age, we have a lot of digital media technology with the help of virtual reality products such as VR, such as projectors, VR glasses and other products, we want to see those scenes have been done to jump out of the screen of the initial conditions. What we want to see is no longer limited to the screen.

The development of virtual reality inspires us. If we can't travel in the real world, why don't we use digital media technology to create a data-driven virtual world? So far, the shuttle of space in the product of the user's sense of experience in the first step of visualisation can be achieved. But just visual is not enough, we need to touch and feel. These can be summarised as interactivity, which is no longer out of reach with today's development of digital media technologies and interactive experiences. Initial interactive experiences rely on tools. External devices such as joysticks, mice, and so on, capture the user's movements and feed them back to the device to achieve the interactive effect of human-computer interaction.

The traditional interactive experience stops there, as shown in Figure 4, including Apple's official launch of the Apple Vision Pro, Apple's first spatial computing unit, on 6 June 2023. The variety of modes of operation and the flexibility that allowed Apple to redefine the standard for VR and AR are just barely palpable. But it's still a long way from real touchable, real sensory interaction.



Figure 4: Apple Vision Pro promotional video

5.2 Imagining the End of the Interactive Experience - "Sensory Neurotransmitters"

Interactivity for the user is nothing more than sensory differences and feelings, if the user's senses can really feel the people or things they want to contact, that is, in addition to the invariance of the location of the person, it is also considered to achieve the purpose of space shuttle. In the digital era under the development of today, we flexibly use digital media technology in VR, AR, MR technology will be projected to jump out of the equipment outside, the use of interactive design to achieve human-computer interaction. In the future, when the digital media technology and interactive experience fully integrated that day, interactivity will be able to use data to transform, with the help of digital media technology to create tools to feel the user's sensory changes and the same record uploaded on the other side of the person can be the same to hold such interactive products to feel the other side of the changes, so that it is also considered to achieve the initial touchable interactive experience. "Sensory Neurotransmitters". For inanimate objects, the data and experience are recorded and uploaded to the cloud beforehand, and the user can really feel the feedback of the conductor and the sensory nerves given to the user's sensory nerves after contacting the physical objects in the virtual world while wearing the sensory nerve conductor with the visual projection, thus truly achieving the three levels of visualisation, palpation and sensation initially, and achieving the ideal interactive experience, which is

out of the limitations of the space. The ideal interactive experience is achieved, which is beyond the limitation of space. Unfolding the infinite imagination of the future, the user can really feel the feeling of touching the family, can really touch the texture of the clothes and so on, really amplify the user's experience.

5.3 Impact of the convergence of digital media technologies and interactive experiences on the media industry

In today's media industry, survival and change are key priorities. The convergence of emerging digital media technologies and interactive experiences has brought the media industry not only innovations in media tools, but also more social media needs and innovative ideas for the development of the media industry in the digital era. The barriers to the media industry are gradually being lowered as users are provided with products that are the result of the convergence of digital media technologies and interactive experiences. High-end talents or elites in the media industry have become rare, the direction of the media needs to be guided, and the constant search for innovation is an important problem that the media industry needs to solve in this era. The development of interactive experiences in the digital age has created opportunities for structural innovation in the media industry due to market demand.

6. Summary

The digital age is an era of development and innovation, and the products of the digital age tend to be more orientated towards what the user wants, taking the user's needs as a guide to drive the development of digital media technology, the creation of interactive experiences and the fusion of the two. The fusion of digital media technology and interactive experiences often results in products that benefit the user experience and drive innovation in productivity tools. Interactive experiences in the digital age have become more focused on fulfilling experiences that are difficult for users to experience in real life, and creating capital and business value while users enjoy the spiritual world, thus driving the development of social productivity.^[5]

The enhancement of user experience is the original intention of the interactive experience, in such a digital age we need to skyrocket imagination and creativity to completely open the needs of this era. In the long run, the development of digital media technology requires greater innovation and integration of resources to change the traditional forms of communication. Integration with interactive experience, redefine the physical space and the way of product interaction, enhance the user's experience, create a larger interactive, personalised and innovative platform.^[6] The digital age needs such a platform.

The transformation of media content production has gone through several stages, such as the co-development of traditional media and emerging media, the "you are with me, and I am with you" approach of traditional media and emerging media, and the priority of mobile content production. The future trend of content production in the context of deep media integration should be to further enhance the effectiveness of media production for the mobile Internet, i.e. for the integration of digital media technology and interactive experience.^[7] It comes from the digital era, integrates in the digital era, and works in the digital era. This is the significance of the development of interactive experience.

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