

THE EMERGING ROLE OF HUMAN AND COMPUTER INTERACTIVE TOOLS

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Abstract

The interaction of humans and computers has been influencing the world with different applications constantly being reported. The interaction has given the greater benefits to the world compared with the negative aspect. The present study describes the influence of emerging role of human and computer interactive tools.

Keywords: Computer, Human, Networking, World, Interaction

1. INTRODUCTION

HUMAN-COMPUTER INTERACTION Human-computer interaction is the multi reformatory field of centralizing on computer design technology and specific interaction between humans (called users) and computers. While beginning worried with the computers, HCI has extended to cover up all forms of the design of information technology. HCI centralizes on improving the effectiveness of the user and increasing user experiences of computers with the company systems. It is doing so through improving the interface of the user by an understanding of the job tasks and company orders in that HCI happens [1]. HCI (human-computer interaction) is "this is discipline bothered with design, implementation, and evaluation of interactive computer systems for human utilization and with the study of huge phenomena surrounding them". Four significant fields of the HCI study emerge, all are busy with interactive computing systems for human utilization. Briefly outlined their key activities are

1. Interactive computing systems design "is developing interactive products which are simple, enjoyable, and effective for utilization. This is focused, the primary activity is the creation of new design solutions.
2. Interactive computing systems implementation centralizes on giving knowledge about the ability of the technology and concepts about how this is possible can be controlled. On this focus, the primary activities are developed applications [1].
3. Interactive computing systems evaluation is worried about the procedures of the systematically gathering data which informs them about what it is like to a specific user or team to utilize a product for the specific task in fix type environment. For this primary activity within focus in data usability of analysis and collection.
4. Study of the surrounding phenomena introduces problems like " how the introduction of computers will affect the work practices" or " how to develop a sense of what is going on and when people communicate with each other or with the machines", for this primary activity within the focus is the conduction of the user studies [2].

2.DESIGN

Human-computer interaction design can be partitioned into two clear classifications-Interaction designs as the system properties. For creating a system interaction design system. Design first category is concerned with interaction exploration design in material form: n the method users can interact with the computer.

The second classification of the method users can interact with the computer. The secondary classified is worried about the exploration of the methods through which this material can be generated. This clear stresses the double meaning design as a verb and as a noun one by one. Seeing interaction design as a noun explaining properties of the

system (a system), the first interest locus is on describing and understanding the significant qualities of which system providing it its specific characteristics and limitations [2-4]. Seeing interaction design like a verb explaining the process of developing a system, the focus is gaunt towards understanding and explaining the activities and practices contributing to this process. The definite between the interaction design and interaction designing can be recognized widely within the mainstream of the HCI for emerging technologies, and this is discussed more in detail in the further subsections-

3. INTERACTION DESIGN THE SYSTEM PROPERTIES

Interaction with the design as a property of the system is worried about refinement and invention of the user interface ideas and interaction styles for improving the computer application usability. The question of what design solutions work is well that situations work well in that situations and why, the aim of this classified the research is to understand the interaction design on the conceptual level and give to the knowledge development about the design solutions informing the form of the future systems. Key components of this classification of the HCI investigation is, development of this:

1. Abstract ideas for the interaction like mental models, mapping affordance, direct engagement, attention for locus, dullness, and action designing, etc.
2. Significant interaction styles like command language, direct manipulation, form filling, and gesture recognition, etc. following the utilization of a variety of input and output devices like printers, keyboards, and graphical displays, etc

4. DESIGNS FOR THE INTERACTION AS THE PROCESS OF DEVELOPING A SYSTEM

Accompanying the interaction designs as the properties of the system, research into the interaction designs as the process is worried about the development of meaning for the following the practice of developing the interactive computer systems. Prompted by the question that how the interaction design can be made in the process which is both creative and structured, the objective of this category is to understand the interaction design on the methodological level and to donate to the generation of improving the knowledge about the design procedures informing further system development. Key components of this classification of the HCI is-

1. Normal methods for following the procedure of developing human-computer interfaces like user-centered design, participatory design, contextual design, and design patterns and object-oriented examination and design, etc.
2. Concrete tools for implementing and designing human-computer interfaces in the form of, graphical development tools, and modern programming environments.

5. EMERGING TECHNOLOGIES

There are three emerging technologies are for human interactions utilized. but, no developed definitions exist. Explaining a technology as the emerging does not in, say anything about its significant qualities and properties exclude which it is currently up and coming. So all the technologies have at some of the points in the time been emerging and all the current emerging technologies will some of the time in future conclude to fall within this classification. Technology classification as the emerging is through temporary definitions. The utilization of the term emerging technology within computing defines a range of the different qualities and focal points. Explaining the emerging technologies as the digital frontier technologies, exhibiting “speculative interactivity and practical” centralizes on properties of the technology itself and foregrounds the technology also being innovative and inventive and on edge of what is the technologically potential. Explaining the emerging technologies as the “technologies which are not still broadly adopted” centralizes on the utilization of technology and specifies its possible further propagation. Explaining the emerging technology as the “technologies which could soon transform the computing” or “technologies which are self-assured to develop a dramatic effect on the world” focuses on the specific and

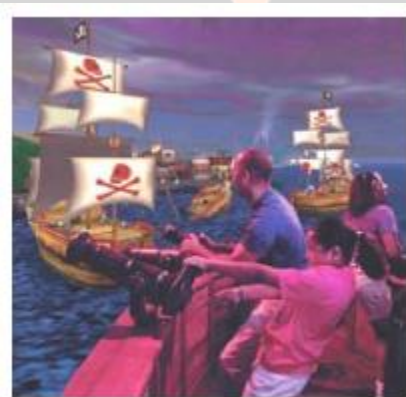
implications of technology and specifies its possible further effect. These all are related to explaining various aspects of the emerging technologies, these are not individually enough for the definition. Adding the focus on the properties, significance, utilization, and implications of the technology and foreground the focus on the human-computer interaction, so define emerging technology as, following exemplifies this definition with the four technologies [5-9].

Many of the novel computer technologies with the advanced properties, significance, and utilization, for that the implications of the human-computer interaction are still not clear, are currently emerging. For this example is the "Burton Amp Jacket" which extends an MP3 player with the wearable sound and control system develop into the fabric of the jacket.



Wearable music system

In context to, like change tracks and control the volume of music, the user touches significance areas on their jackets. Another example is Disney interactive virtual reality theme park ride "Pirates of the Caribbean", in this four persons steer a physical boat by a virtual environment while beating the virtual enemy pirate ships, monsters, and forts [5].



Immersive theme park ride

Interactive with that system, users are collectively operating a physical wheel and 6 cannons on the deck. And the third example is context ware car navigation system "BMW assists" that gives the driver with the planning of the route and other information, which is based on the location of the car, by a mix of text, speech, and graphics and automatically develops the emergency calls, in the crash situation.



Context-aware navigation system

Interaction with this system, when the user drives the car and gets the spoken commands. Finally, Electrolux "screen fridge" is an example of the computerized refrigerator with the implanted connection of the internet, etc. smoothing video and text based on the communication among the members of the family, giving suggestion and news based the recipe on food in it [5].



Embedded communication system

Interaction with the system, users scan their groceries and screen talks.

These above all examples represents 1 or more emergence direction within the computing. The navigation system of the car presents context, information system awareness, and multimodality in the human-computer interaction. The theme park ride presents the immersion into the computer created virtual 3D environments, the wearable music system presents computing mobility with physically. The internet authorized refrigerator presents embeddedness of the computer technology into everyday products.

Study about the signs on the interaction design, virtual machine, mobile computer system, an augmented reality system. These all are technologies that are related to the immersion into the virtual mobility and space in the physical space.

6. FUTURE CHARACTERISTICS OF THE HCI

HCI includes mortars between machines and humans because humans are sensitive to feedback to times, feasible human interfaces are much technology sensitive than the many other parts of computer science. In any case, the development of mouse devices provided get up to point-and-click, editor interface style, and graphics programs which are based on the mouse . Biased based on the above movements, the future expectation for the HCI with some following qualities.

1. Communication

Computers are communicated by the high speed of the local networks, nationally across broad area networks, and transportable by infrared, ultrasonic cellular and other many technologies. Computational services and data will be transportable accessible from many if this not more locations to that a user travels.

2. Higher functionality system

The system will have a huge number of functions related to them. There will so many systems in which more users, nontechnical or technical, will not have been time to learn them in traditional methods for example by thick manuals.

3. Availability of mass for computer graphics

Computer graphics abilities like image processing, transformations, graphics, interactive animation, and rendering will become broadly spread as not expensive chips become available for the general workstations inclusion.

4. Mixed media

The system will control images, sounds, video, voice, text, and formatted data. These data will be exchangeable across communication links among the users. The detached worlds of the client's electronics (for example VCRs, stereo sets, and televisions) and computers will be partially merged. Print and computer world will regularly cross comprehend each other.

5. Thin and large displays

Innovative display technology will finally mature the enabling too large displays and also show that they are thin, have low power consumption, and light in weight. This will put have a large impact on the portability and also will enable the paper development such as pen-based computer interaction systems too different in the feel from the desktop workstations of current.

7. EFFECTS OF THE HCI IN DAILY LIFE

Life

This is possible to recognize many ways in that technological innovation impacts an individual "absolute right" to life. Specifically, it seems too transparent that technical literacy will regularly influence individual income and economical prosperity. If the device designs can be which are "simple to use" and so remove the burdens of the literacy of technology then they may both broaden access to personal rewards and increase the economy. On the other side, it feels unrealistic to the expectations which access to the technology by enhanced interface the designs will reduce social and economic dissimilarity which exists in western society [6].

Liberty

The second imperative of the jefferson's, enhancement of personal liberty, keeps a clear resonance with quick issues facing the further of the human-computer interaction. More people have been focused on threats that context-aware the devices and electronic monitoring tools create for civil liberties. For example, cost savings that can be acquired across the web have assured many of the consumers to accept risks related with the disclosing individual information, like details of credit cards and records of the previous purchased, across the internet. For this HCI plays an important role. By removing technological barriers to exploitation and utilization of information technology, so they may be developing people much likely to accept risks take advantage of through modern surveillance techniques.

8. REFERENCES

1. S. Gulati, S.Sousa, and D.Lamas, Modeling trust: An empirical assessment. In *IFIP Conference on Human-Computer Interaction* (pp. 40-61). Springer, Cham. (2017, September).
2. A.Rapp, Social game elements in the world of warcraft: Interpersonal relations, groups, and organizations for gamification design. *International Journal of Human-Computer Interaction*, 34(8), 759-773. (2018).
3. Tajadura-Jiménez, A. Väljamäe, F. Bevilacqua, and N. Bianchi-Berthouze, Principles for designing body-centered auditory feedback. (2018).
4. S.R. Srivastava, and A.Joseph, . Stack automata-based framework for behavior modeling of virtual agents. In *Proceedings of First International Conference on Smart System, Innovations, and Computing* (pp. 341-352). Springer, Singapore.(2018)
6. R.Or-Bach, . Design and Implementation of an HCI course for MIS students—Some lessons. *Issues in Informing Science and Information Technology*, 12, 153-163.(2015)
7. R.R. Nadikattu. THE EMERGING ROLE OF ARTIFICIAL INTELLIGENCE IN MODERN SOCIETY. *International Journal of Creative Research Thoughts*. 4, 4 ,906-911.2016
8. R.R. Nadikattu. . The Supremacy of Artificial intelligence and Neural Networks. *International Journal of Creative Research Thoughts*, Volume 5, Issue 1, 950-954.2017
9. R.R. Nadikattu. . ARTIFICIAL INTELLIGENCE IN CARDIAC MANAGEMENT. *International Journal of Creative Research Thoughts*, Volume 5, Issue 3, 930-938.2017