Semi-Automatic Systems for Exchanging Health Information: Looking for a New Information System at Fixed E-Healthcare Points for Citizens in Greece

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ABSTRACT

The present paper deals with the topic of application possibilities of modern technology in daily practice, for the benefit of citizens. In particular, this work examines the implementation of e-Government at the local level in the field of e-Health for exchanging information. In the authors’ introduction, will see how from the first calculating machines, the authors have arrived today up to the modern computer, to the Internet and ICT. Then, the modern technology led them up to the e-Governance at central, regional and local level. Initially the authors examine the international, European and Greek ICT environment; subsequently, within the same geographical contexts, the authors investigated the existence of e-services and e-health services to citizens. Finally, the authors focus on issues related to automated machines for helping citizens on health related issues.

Keywords: Citizen Service Center, E-Bank ATM-Type Machines, E-Governance, E-Government Strategy, E-Service, Fixed Predetermined Points, Information and Communications Technologies (ICT)

INTRODUCTION

It is widely known that people need various tools and instruments to do their job in a more efficient way and organize their daily lives more efficiently. In particular, about the tools for measuring, even long before the advent of the Gospel, our sophisticated ancient ancestors were using the abacus. Much later, in the 17th century, the French scientist Pascal invented the mechanical calculator. In the 19th century, the English mathematician Charles Babbage designed the “analytical engine”, the precursor of PCs. In the 20th century, perfected by later scientists, Babbage’s “analytical engine” evolved gradually, from design to implementation and
application, into the current personal computer (Gates et al., 1996). Hence, the PC came to life to serve us and nowadays exists in workplaces and homes because its usage becomes more and more necessary. We need the PC indeed, for many different purposes or personal and professional targets but finally, in order to satisfy many our wishes. However, we have come a long way from a simple electronic computer (PC) to large computer systems (mainframes) and to computer networks. Moreover, from the first Intel microprocessor in 1971, through Pentium and Celeron versions, we reached within a few decades the sophisticated Intel Core processor. Also, we learned the law of Moore as the first researcher in 1965 who wrote the remark “The CPU capacity seems to be doubled every 18-24 months” (Tassopoulos, 2005). Thus, the sales of computers with faster CPUs and many more advantages have increased all around the world.

Communications technology has also evolved alongside computers. PCs took advantage of the evolution of communications technology. Nowadays the Unified Information and Communication Technologies [ICT] (Apostolakis et al., 2008) change the way we work, we study, we search and we educate our children (Tassopoulos, 2005). Furthermore, they affect the way we make our dealings with other individuals, and with the civil services of the public sector and local authorities. Generally speaking, they change the way we communicate within our social context and the way we lead our daily lives. To this end, the broad supply of the provided facilities at a pace, which few people expected, has indeed played a significant role.

The need for fast improvements in PC’s world led our footsteps from the Ethernet (Vasilakopoulos et al., 1990) to the Intranet (Gates et al., 1996; Tassopoulos, 2005). Then we saw the Arpanet (Gates et al., 1996) and finally the Internet (Gates et al., 1996). Today, the most popular Internet application is browsing the World Wide Web (Berners-Lee et al., 1999; Gates et al., 1996). In the USA, some people compare the interconnection of computers into an interactive network around the world, with the national network of interstate highways. That is the reason this new network was named the” Information Avenue” (Gates et al., 1996). “Without the enormous increase of the power of PCs, of software, of fiber optics, of high-speed electronic transporters and satellites, information relating to the economy and health would never instantly reach our monitors. These monitors are connected to this global communication and information system” (Kennedy, 1994). Moreover, history has taken its course on a planet where gradually more and more people continue networking and getting more and more interconnected.

Finally, with regard to the objectives of this work, our main aim is to investigate if there are ways to help more the average citizen on his/her daily activities of exchanging information in the field of health services. For this reason, we need to take into account modern technologies as are expressed through automation, modernizing communications and the rapid spread of informatics. We believe that the combined use of ICT actions together with electronic automated machines for citizens’ services, can offer solutions particularly in local level governance, such as municipalities. Because most of the Greek citizens are not familiar with modern ICT practices, we are convinced that the most proper machines are the semi-automated. This is explained from our faith that an employee of a municipality and physicians in some situations must offer help to the computer users if they need it; thus serving as supervisor of machines proper operation and citizen helper as well as for provisioning online medical support (Priscilla et al., 2013; Shima, 2013).

MODERN TECHNOLOGY AND ELECTRONIC GOVERNANCE

The evolution of informatics and expansion of databases continue (Pagalos, 1986) for useful and sometimes evil purposes. Information systems based on databases are now the dominant technology for registration and information management (Pierrakos, 2008). Database technology is constantly evolving,
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