e-Home, a Lifestyle and Comfortable Technology

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Abstract: : Technology has become an essential part of our homes, which are places that should be easy and peaceful to live in. That's why I imagine a concept that take all the technology necessary in your home, integrate it and make it simple and easy to use for everybody. This concept is based on idea that eliminates remote controls or something like this. Also this concept should propose you a lot of possible decision that you could take. These decisions refers on easy living in a normal home, such as climate, water temperature, lightning, multimedia, such as TV's, VCR's, DVD's, but also decisions about eating, paying taxes, investments, interfaces with public institutions and so on. This concept I name it e-Home. I imagine this concept with many modules, refers on easy living in such a home, referring on what do you eat, calories consume, food storage and clothes and about possible decision to take in matter of paying and investments of your family.

1. Introduction

Your home is a place that should be easy and peaceful to live in. Technology has become an essential part of our homes, but how do we keep it from making our lives complicated? I created e-Home concept to take all the technology in your home and make it simple. Imagine a home without the clutter of remote controls on the coffee table, without banks of light switches, and without separate panels for temperature, music, shades, intercom, and security.

You can imagine the most exciting element in one system, a motorized wall in the Living Room. At the touch of a button, the massive wooden panel glides silently to the side, revealing a 70" TV with multi-channel sound. Throughout the apartment, wall-mounted and wireless touchpanels control the music, lights, shades, temperature and TV. Included is an alarm clock feature, so the owners can wake up to any radio station, iPod track, or TV channel.

Also when leaving the home, the owners only press one button near the front or service entrance. This button turns off all the lights, lowers all the shades, turns off the

music and TVs, shuts down the air-conditioning, and arms the alarm system. Imagine having to walk 6 flights of stairs and into every room to achieve what that one button does. In addition to the tremendous convenience, the energy savings from shutting down all these power draining systems is significant, not to mention environmentally responsible.

2. WHAT IS THIS SYSTEM?

e-Home focuses on making technology work for you - be it for entertainment, education or just plain old Internet access. You may think about devices like high-definition media players, network storage devices, flat panel televisions, hi-fi audio solutions, as well as a full-range of computer parts and accessories (monitors, CPUs, keyboard, mouse, speakers), that is part of the concept e-Home.

The systems must be designed to seamlessly control all aspects of your property, including lighting, climate, appliances, curtains and blinds, multi-room audio/video, security, digital surveillance, entertainment and energy saving. Also this installations increase property value, differentiate houses from surrounding properties and enhance the lives of the people who live and work in them. The range of systems must be designed to the highest architectural specifications and represents the best products on the market today, in terms of price, functionality, customization and flexibility.

You can connect a lot of e-Home controls that must be designed to extend control of your home from a range of software interfaces including Touch Screens, PCs, Laptops, Smart Phones, PDAs, iPhones, Ultra Mobile PCs, Cisco IP Phones, the Web and Windows Media Centre. The system allows affordable, powerful and simple interfacing into home automation systems, giving the client a unified interface to their home wherever they are in the world. The e-Home controls suite of software is scalable and stable. The system is totally modular and is based off a centralized server. In practice this means that you can attach an infinite amount of interfaces via an infinite amount of connections from an infinite set of locations - giving the user control of an infinite amount of devices and events.

Of course all this controls that you can connect to the system must first designed, than programmed. We also must imagine a lot of interfaces that will communicate all aspects between, owners for example, and the servers that we need to manage the whole concept. These servers and the interfaces must have intuitive generations of software.

It is a lot of firms in the world that develop e-Home systems and these firms can undertake all aspects of the design process, including:
- Control Systems
- Security
- Digital Media
- Lifestyle and so on.

All this depends on the specific requirements of the owner of the house.

But, all this that we talked about before it's just for the lifestyle and to be comfortable. In addition we could imagine a module of our system that is occupied with our economic life, as a family or a single person. For example, everyone must pay a lot of taxes, currently bills, rates to the bank, and insurances for home, life, and car and so on.

So the system could be designed so that the user benefits not only for reminders inputted by the user, but imagine interconnectivity between the web or a server-side

database that keeps up-to-date information about the taxes that are due to be paid during a year, so that not only the user is reminded of the specific taxes but is kept up-to-date to the changes that can occur.

Scalability and further interconnection could allow an end-user to also easily query via a client-side interface the funds currently available in the user's account(s), or automatically the home server interrogating the availability of funds and making the reminder also simple in decision making i.e. "Funds available for X payment due today. Would you like to make the payment?". Or "Not enough funds available. Would you like to contact a representative from bank with the most advantageous loan currently on the market?". The design could incorporate multi purpose user-interfaces that the user could control any of the functions of the e-Home. It could also analyze that data and make suggestions with fund management, possibly based on previous history could suggest investment possibilities of a certain user's funds meanwhile maintaining liquidity based on the user's financial history.

Bills, rates to the bank and insurances that are due in a time frame could also benefit from the same system, also making suggestions and letting the user know if new offers are made available that more advantageous than the current ones.

Also imagine an intelligent fridge that incorporates bar-code readers so that at any time the e-Home server knows what it currently holds and based on the rate of consumption could make suggestions as one item runs out, i.e. letting the user know that he's running out of a certain item and based on expiration dates and rate of consumption to calculate the amount that the user needs to purchase so that a balance is achieved between what he needs and minimizing waste. Also it could warn the user if he takes out an item that has exceeded its expiration date.

If the user wants to monitor the number of calorie intake per day or as an average over a period, could make the information easily available to the user. Also based on healthy protein, vitamins, sugar and fat contents could be analyzed and suggestions made for a healthier and balanced life.

Sensors could also monitor the user if he has a medical emergency and can automatically alert the emergency services or for any other emergency (fire, flooding).

Remote management would allow the user to answer intercoms, possibly remotely opening doors/windows. Interconnectivity would also be helpful in maintaining the e-Home running, contacting servicing companies if repairs are needed or making orders of light bulbs and other consumer goods that maintain everything running smoothly.

Intelligent news coverage could select based on areas of interest the most recent and interesting articles and make suggestions of current events that might interest the user.

Every aspect of life would benefit from easily accessible information and would help using the power of analysis and statistical information in the decision-making process of the user.

Imagine the user is at work and deciding that he wants the home to have a 25 degree temperature at home and that he wants to take a 35 degree bath upon arrival sends said tasks remotely and half an hour before the user arrives the e-Home would start the AC system and the water heating system. As the car is also connected to the e-Home the garage doors open when the car enters the drive-way, lights come on if needed and so on.

Part of the system could be in charge with the communication with the fiscal administrations and other institutions that require statements to be sent periodically,

using its extensive database the e-Home could automate the process and relieve the user with repetitive tasks that uses information that is already available in the e-Home's database, freeing up more time for the user's personal needs and family life.

Other applications (as part of the system) would be in charge of optimizing power and utilities consumption turning on and off systems when they are not needed thus minimizing waste. Also recycling wastewater and using it for garden irrigation or heating could benefit from the use of an automated system.

3. THE INTERFACE

Primarily this system would be scalable from the very basic functions all the way to the most detailed aspects of an e-Home so that it could fit a large range of lifestyles, needs and number of members in a family. The further development of cleaning robots would also benefit from integration into such a system optimizing the timetables in which the robots could do their job as to have minimal intrusion into the user's life and at the same time keeping the e-Home in mint condition.

The system would also be dynamic while technology advances it could be further integrated into the e-Home boosting its efficiency and keeping the system up-to-date with the times.

Power saving could be further boosted by integrating power saving technologies such as solar and wind power and multiple system integration could share their schedule and power-usage history as to maximize usage and efficiency.

I name this concept e-Home. I imagine this concept with many modules. The first module refers on easy living in such a home, the second module is referring on what you eat, calories consumed, food storage and clothes and the third module is about possible decisions to take, in the matter of paying and investments of your family.

For the second module, that one with consuming food or clothes, I imagine to place at every entrance of the home a bar-code reader, the same from the fridge for example, to store in the system what every member of the family buys, how much money every member is allocated on clothes or food or gardening or housing. This must be interesting for the economy of the family, to know the administrator or the parents how much money the housing, the gardening, food and clothes costs every month, and this could be compared with the incomes of every member of the family or to the whole family per month. Everything from here will be found in the reporting area of the software, where the administrator could have the opportunity to see graphs with incomes and costs for every member of the family and also a lot of reports in matter of costs for housing, for gardening, consumption of energy, calorie intake and so on.

For every module, I intend to make a lot of reports that could be saved in databases. All of these databases must be archived and system independent. Also this system must be created with a friendly interface that will be very easy to use even for old persons. The interface must be designed with touch screen on a wall at the entrance of the home, but also by voice in every spot of the home. The core of the system must be designed based on neural network AI that means the home will achieve personality and it will learn from the behavior of the people who live in it.

The system also must be designed to be accessed from any place you have access to the Internet. With this occasion I must to make also a local interface to be at your disposal from the home, but also a internet interface, to make all the changes from afar.

The system must have parent control, to avoid possible damage for children in case they could use some functionality for grown people, such as porn, heating zone,

cooking zone and so on. For this reason I must to have in mind to design the software with many level of decision, for example: **Level 1** - for the parents you could give the rights to pay all taxes, to make investments, to take decisions, **Level 2** - for the children, who are over 14 years, you could give them the rights to access the heating zone, the cooking zone and so on, but not to make investments and to pay maybe just some small amount of bills, **Level 3** – for small children, up to 14 years for example, they could access just the part of the software where is the lightning zone, the open-close doors zone and many others with some restrictions, **Level 4** – I must consider also a rights level for the guest you have invited in your house or for the people who usually visit your house.

This system with levels of rights must have voice recognition, fingerprints, handprint, reticular scanner and so on, to know which one of the family are accessing some zones of the e-Home and give them the rights to do this or to forbid it, if the administrator of the software gave that person the right or not.

The software must have an administrator module that will give the rights, to access, to pay, to make investments, to communicate and so on to every person, part of the family or of the extended family.

Also if you have other properties you must have the opportunity to access all of those and take all the decisions for every property in part, which of the property will be accessible in very short time, which not, in matter of diminishing costs.

The system it is very useful for wealthy people, but could be very useful for people with disabilities, for example for blind people it is very useful to access lightning without touching anything, just with your voice or adjust the climate, temperature of the water from the bath also with your voice. Also to communicate with people with disabilities could be a great opportunity, to recognize people who come to your house from voice recognition or something like this and communicate with you.

In matter of multimedia and communication, we could think in the system to integrate a media center to share movies, photos, music, pod casts, radios and recordings. The term media center refers either to a dedicated computer appliance or to a specialized application software designed to run on standard personal computer hardware which then becomes a so called "HTPC" ("Home Theater PC", also sometimes referred to as a "Media PC"), both of which are adapted for playing various kinds of media (music, movies, photos etc.). A media center usually has a GUI (Graphical User Interface) designed to be used with a living room TV using a remote control. A media center typically allows one to watch movies (DVD, Blu-Ray, and other digital video formats) and watching and recording television broadcasts, playing audio (CD as well as MP3, WMA, and other audio formats).

The media itself may be stored, received by terrestrial, satellite or cable broadcasting or streamed from the Internet. Stored media is kept either on a local hard drive or on a (wireless) network attached storage. Some software is capable of doing other tasks, such as finding news (RSS) from the Internet. Media centers are often operated with a remote control, connected to a television set for video output, and can sometimes function as a normal personal computer. A media center can be purpose-built, modified or created by individuals by adding media center software to a PC or some other computer, for example an Xbox. Lately, some video game consoles (PlayStation 3 and Xbox 360) with their network services can act as a media center devices by default.

5. CONCLUSIONS

Critical thinking is an active and purposeful thinking process that is required to perform contemporary accounting and auditing tasks. Several task characteristics (e.g., task novelty) were identified as those that require critical thinking. It was also noted that several action- oriented attributes such as meaning imposition are necessary to understand the tasks and to perform them effectively.

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