Smart Home

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Abstract : *the paper is about the smart home concept. We discussed in this paper the definition of smart home, who it works, need, current technology, challenge and advantage, disadvantage and future development in this field .we also listed same big smart home project which is under research and developments in different countries and companies.*

Keywords *:- Introduction, working, technology develop, challenge ,pros and cons, future of smart home.*

I.   Introduction

Home sweet home everyone knows the values of home .IT is one of the prior thing that everyone wants the home when we out of the home then we also think about our home smart home is the one of the alternative for saving and caring the home .Smart home make your regular home so much easy and beautiful .In smart home you can do many things that u can't do in our regular home such as security, controlling your home surveillance monitoring, saving of energy etc. A smart home one of the most discussable topic in the world in current scenario because of smart home reduces human effort for home.

II. WHAT IS SMART HOME

Smart home term is commonly used to define residence that has application hitting ,lightning, air condition , entertainment audios and videos system, security and camera system that are capable with one another and can be control remotely by a time schedule and the person of authorized

A smart home is a convenient home setup where applicants and devices can be automatically controlled remotely from anywhere in the world by using other network device through a authorized person life in a smart home make easier and comfortable.

III. Why We Need Smart Home

There are so many problem we are facing in our regular and modern homes that can be solved by switching smart homes .A smart home make our home secure peace of mind energy efficiency and environmental impact provides more security and access control ,comfort and well willing ,convenience and efficiency , convergence , assisted living , simple interactive and personalized , intelligent and productive , entertainment games and fun , quality of life and lifestyle ,knowledge and learning.

IV. How Smart Home Work

Any device in your home that uses electricity can be put on your home network and at your command. Whether you give that command by voice, remote control, tablet or Smartphone, the home reacts. Most applications relate to lightning, home security, home theater and entertainment thermostat regulation.

Internet of Things (IOT):- The Internet of Things is a phrase that refers to the objects and products that are interconnected and identifiable through digital networks. This web-like sprawl of products is getting bigger and better every day. All of the electronics in your home are fair game for this tech revolution, from your fridge to your furnace. On the next page, we'll take a look at the technology in a smart home.

V. Effecton Power System

A smart home reduce energy consumption in home due to atomization control home system it reduce 12% of energy consumption of home .The smart home can also produce energy by using solar panels , small wind mills, piezoelectric floors ,etc. The smart is reduced the power consumption due to better efficiency of the house and there product. The fault in the house is automatic detected and rectified or notified as soon as possible. The distribution of power in smart is very effective and efficiently show that maximum amount of power can save.

PRODUCT NAME	FUNCTION	USES
ALEXA, GOOGLE NOW, AMAZON ECHO	HOME NETWORKING, ARTIFICAL INTELLENGENCE	Voice command, house automkitazation
Curb energy	Inside circuit-breaker panel in garage; outside house.	Monitoring device
ECOBEE 3	Smart thermostat, temperature control, cooling	In upstairs and downstairs hailways
Sonos wireless speaker system	Audio system, voice output	Voice output, interaction with AI, music, Entrainment,etc
Philips hue smart light bulbs	Smart light, automatically operation	Lightning of home
Jawbone's fitnessband	Health care, indicator, identification	Wrist of the homeowner.
Kwikzet Z-wave locks	Digital lock, security	Door, windows, locker's

VI. Future Techonogoly And Lifestyle In Smart Home

Smart Pen :- Smart pen offers a definition for any unknown vocabulary when people have problems read document important phrases.

Gate Reminder :- this reminds and notify the owner if same one on gate or something forgotten on gate.

Gia :- GIA is a new professional picture management device that controls every function in your photo album through interaction methods using simple hand gesture.

Smart Wardrobe :- this can reminder you what buy for new collection and automatic lock.

Smart Dressing Table: - this is best for women's for outfit and makeup. It suggests which look good on her.

Smart Bed :- Smart bed system can be programmed to remember your preferred sound, smell, light and temperature settings to gently wake up all your senses and give you a good start to every morning.

Smart Pillow :- play set timer, music, read book that u set for bed time in your home network.

Smart Mat :- it take footprints of every visited person in home.

Smart Table :- it is provide touch screen facility to use and control the hole house.

Smart Greenhouse :- it s suggest plant which improve your home air filter and cooling.

Projector :- this kind of projector can give you 3D projection at any angle and anywhere in your home.

Electronic Paper :- it a computer screen in which you can write by hand and it show portable that you can take it in your bag or pocket.

Smart Window :- it is provide 3D animation in Windows that you feel place that you want.

Smart Bathroom :- it is provide you audio and video facility and environment changing facility.

VII.   Impact Of Smart Home

IT is the expectation that adapting smart home automation would lead to reduced electricity usage in the household and over all environmental advantages .The LCA study concluded that largest environmental impact of hems is the used phase electricity consumption of home automation IN smart homes every electronic device work smartly that will reduce grid on an electrical system .As LCA studies present the paper of the impact of smart home the assuming a five year portioning Time smart plug consumed 368172 watts per hour with smart meter consume 876.6kva in total. This indicates that the environment " investment" in terms of home atomization does not pay itself back The smart meter can be paid back within 3.5 months .the impact of smart home country to country and state to state label it also good for environmentt smart home provides good balance between energy consumption and control system .IT reduce electricity demand between loads and supply and it also provides balance in CO_2 gas in environment. Study states that due to smart home CO emission factor reduce to 265 gCO_2/kwh to 196gCO_2/kwh In period of 2008-10(IEA 2013).

VIII.   Challenges

It's quite well known fact that home automation is still limited to a few household because of its high cost and complexity .the most basic obstacle Is people's ability and knowledge to handle and comprehend the technicality of the system. IT's not as simple as it seems. Many think of it as a concept that may not flourish for long. moreover ,since everything is automated , a smart home is subject to a lot of risk of being hacked allowing intruders to break-in. once hacked, the whole control wound be handed over to the hacker and then eve the owner would lose access to his ?her own house .

ADVANTAGES AND DISADVANTAGES OF SMART HOME

SR NO	ADVANTAGES	DISADVANTAGES
1	**Convenient** Adding convenience to your daily life. When u converts your home into a smart home, you'''will have all of your products programmed to your specific needs.	**Cost**: most families are able to purchase smart house products, but that doesn't mean it won't seem like too much to leave a dent in wallet .You can purchase the products one at a time and it won't seem like too much ,but by the time you have the smart home system you want you will likely have spent a larger sum than you would have if you had purchasd non-smart products .
2	**Customization**: there are many smart products on the market right now and you certainly need to buy one of them at once.As te consumer it's up to you to decide which product you want the most determine if u like it, And then add to collection of smart home.	**Slight Learning Curve:** I know I have state in the advantages the most smart home systems are easy to use , but at the same time there is still learning curve for most people .
3	**Security**: smart home security system allow u to view your home no matter where you are , you can have cameras installed ,motion detectors ,looks etc .	**Relaibility** : a smart home will be extremely reliant on your internet connection,if your connection drops you'll be left with a lot of smart products that won't work. Additionally, wireless signals can be possibly be interrupted by other electronics in your home and cause some of your smart products to function slowly or not at all.
4	**Ease Of Use**: almost all smart home products can be installed without much hassle , many of them don't even require you to bring someone in the home .	**Hacking** :- when whole house is automatic and digitally control then there is more chances to house get hacked. Then in this case owner is not allowed to use there own home.

IX. List Of Project Of Smart Home

- Cisco : Internet Home
- Colorado, Boulder
- KTH : cnmHOME
- Microsoft Researeh : EasyLiving
- MIT : House of the Future
- Orange At Home
- Philips : Home of the Near Future, Smart Connection
- Portsmouth : Smart Homes in Portsmouth
- SEARCH : CUSTODIAN
- Sussex,Science and Technology Policy Researeh unit
- Siemens : Smart Home
- University of Massachusetts
- Intel : Intel Architecture Labs
- Bath : Gloucester Smart House

X. Conclusion

The paper shows that smart home concept demands more research and development in this area. Paper also shows that the challenge and problem in smart home concept. The smart home is future of modern homes .its improve the lifestyle, comfort and security in over life.

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