

IOT Based Smart Mirror

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Abstract— The paper illustrates the design, construction and working of the smart mirror. Every morning day begins by watching ourselves at least once in mirror before leaving our homes. This paper interacts with it psychologically to find out how user look and how their attire is. Smart Mirror or Magic Mirror is one of the applications of Raspberry Pi. A computer screen embedded in mirror looks very advanced. The Raspberry Pi rest at back scenes and controls the data displayed on mirror. While looking at mirror user can look at various notifications from social sites as well news, weather forecast and more things. The Raspberry Pi is connected to monitor via HDMI.

Keywords: IOT, Raspberry-pi, smart mirror, smart devices

I. INTRODUCTION

Smart mirrors are one of the advance mirrors. A part of the connected world where users able to see news, temperature, weather and more just while looking and getting ready in front of mirrors. This proposed paper allows to build such mirrors that allow for mirrors to receive news online and display it on the mirror screen. This system uses a raspberry pi-based processor board along with display and IOT based circuitry [11]. Proposed system uses specialized glass with a back frame to enclose the system. The frame cavity is now fitted with precisely positioned mounts for the display housing to be fitted in the mirror. This is needed to achieve the desired effect. Now project consist of raspberry pi to connect with internet using IOT circuit via wi-fi module. This allows user to receive data through the IOT platform. We use IOT in order to connect our system to the internet and get news headlines. Thus, proposed paper demonstrates a futuristic IOT smart mirror with news, temperature, date and time display.

II. LITERATURE SURVEY

In 2003 Phillip unveiled their Mirror TV that was assembled using the same rules that of smart mirrors. Their product was a normal TV that was put behind a two-way mirror so that the TV would appear as a mirror when turned on and as TV when turned off. They also had an option to have the mirror be larger than the TV. A working example presented by Phillips was to have the children watch cartoons while brushing their teeth at the same time [3]. Later in 2005 Phillips published their research project My Heart that assembled upon the idea of an informative mirror. While their original Mirror TV was simply a TV that also functioned as a mirror [4].

James Law Cyber tecture developed a commercially sold smart mirror in 2011. The display can show weather forecasts, stream internet, TV, the current time and various apparatus. The smart mirror has numerous input methods such as remote controller, smart phone app and onscreen implicit keyboard [5].

III. METHODOLOGY

Smart Mirror as a Mirror

User can see their view as they can see it in a natural mirror while looking and grooming with the help of one-way mirror with high concentration of aluminum content.

Smart Mirror as an Information System

Time, Date, temperature and news headlines are fetched from online using predefined URL.

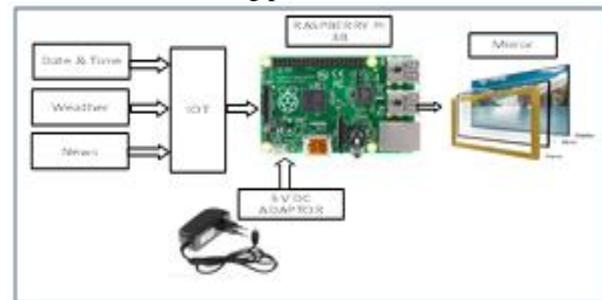


Fig. 1: Block Diagram for Smart Mirror

A. Algorithm for information system

- 1) Step 1: switch on the power supply
- 2) Step 2: get the date, time and weather details from internet.
- 3) Step 3: display it on mirror via LCD monitor.
- 4) Step 4: Switch off the power supply when it is not in used.

IV. RESULT

A futuristic smart mirror system that provides information like time, date, accurate temperature and humidity and latest news while looking and grooming in front of mirror.

V. CONCLUSION

Smart mirrors have great potential to enhance user experience of accessing and interacting with information. Not only do they allow users to see relevant information effortlessly. Smart mirror saves time and makes it easier to access information.

REFERENCES

- [1] Piyush Maheshwari, Maninder Jeet Kaur, Sarthak Anand, "Smart Mirror: A Reflective Interface to Maximize Productivity", International Journal of Computer Applications (0975 – 8887), Year: May-2017.
- [2] Govindan K., Saravanaguru R.A.K, "Review on IOT Technologies", International Journal of Applied Engineering Research Research ISSN 0973-4562 Volume 11, Number 4 (2016) pp 2848-2853, Year: 2016.
- [3] Jane Jose, Raghav Chakravarthy, Jait Jacob, Mir Masood Ali, Sonia Maria D'souza, "Home Automated

- Smart Mirror as an Internet of Things (IOT) Implementation”, International Journal of Advanced Research Trends in Engineering and Technology, Year: February 2017.
- [4] M. M. Yusri et al., "Smart mirror for smart life," 2017 6th ICT International Student Project Conference (ICT-ISPC), Skudai, 2017, pp. 1-5.
- [5] K. Fujinami, F. Kawsar, and T. Nakajima. AwareMirror: A personalized display using a mirror. In Pervasive, pages 315-332, 2005.
- [6] B. Cvetkoska, N. Marina, D. C. Bogatinoska and Z. Mitreski, "Smart mirror E-health assistant — Posture analyze algorithm proposed model for upright posture," IEEE EUROCON 2017-17th International Conference on Smart Technologies, Ohrid, 2017, pp. 507-512
- [7] M. M. Yusri et al., "Smart mirror for smart life," 2017 6th ICT International Student Project Conference (ICT-ISPC), Skudai, 2017, pp. 1-5.
- [8] D. Gold, D. Sollinger and Indratmo, "SmartReflect: A modular smart mirror application platform," 2016 IEEE 7th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, 2016, pp. 1-7
- [9] O. Gomez-Carmona and D. Casado- Mansilla, "SmiWork: An interactive smart mirror platform for workplace health promotion," 2017 2nd International Multidisciplinary Conference on Computer and Energy Science (SpliTech), Split, 2017, pp. 1-6.
- [10] S. Athira, F. Francis, R. Raphael, N. S. Sachin, S. Porinchi and S. Francis, "Smart mirror: A novel framework for interactive display," 2016 International Conference on Circuit, Power and Computing Technologies (ICCPCT), Nagercoil, 2016, pp. 1-6.
- [11] J. Markendahl, S. Lundberg, O. Kordas and S. Movin, "On the role and potential of IoT in different industries: Analysis of actor cooperation and challenges for introduction of new technology," 2017 Internet of Things Business Models, Users, and Networks, Copenhagen, 2017, pp. 1-8.
- [12] S. S. I. Samuel, "A review of connectivity challenges in IoT-smart home," 2016 3rd MEC International Conference on Big Data and Smart City (ICBDSC), Muscat, 2016, pp. 1-4.
- [13] Piyush Maheshwari, Maninder Jeet Kaur and Sarthak Anand, "Smart mirror: A Reflective interface to maximize productivity International Journal of Computer Applications (0975 8887) Volume 166 No.9, May 2017 .
- [14] S. Tanwar, P. Patel, K. Patel, S. Tyagi, N. Kumar and M. S. Obaidat, "An advanced Internet of Thing based Security Alert System for Smart Home," 2017 International Conference on Computer, Information and Telecommunication Systems (CITS), Dalian, 2017, pp. 25-29.