Application of IOT in Digital Marketing

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ABSTRACT

The Internet of Things (IoT) enables marketers to create totally different experiences in bridging the digital and physical world and certainly when they dare to think out of the box and beyond the pure aspect of personalized messaging. (IoT) enhances customer experience, increases the amount of data gained through connected devices, and widens the scope of analytics. This provides a range of exciting marketing possibilities such as selling existing products and services more effectively, delivering truly personalized customer experiences, and potentially creating new products and services. Obviously the 'connected consumer' who is becoming hyper-connected once adding devices as happens in the IoT, is a great source of data for marketing.

Digital Marketing term has viewed as the marketing designed for products/services using digital technologies like emails, websites, online forums, etc. In order to successful when implementing Digital Marketing, marketers must collect online data and integrate these ones into a marketing database. Furthermore, the rapid evolution of the Internet of Things, in which objects interact with other objects, have given significant opportunities to generate a vast amounts of data. This leads to support marketers make decisions better by collecting Big Data and analyzing them to discern patterns.

Keywords: Digital marketing, IoT, connected consumer, personalized customer experiences.

INTRODUCTION

Internet of Things (IoT) is predicted to be one of the main raising megatrends in technology. Combined with current and expected ubiquity and pervasiveness of connected smart devices it gives ground to application in many areas: smart cities, smart homes, health, transportation, industrial automation as well as marketing. Technological development has enabled IoT technologies decreasing costs, increasing devices' computing power, cloud services, interoperability and security and privacy improvement. These factors contribute to decreasing technology, organizational and financial barriers to expand IoT in marketing.

IoT can be viewed as a global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies (ICT)." Main expectation from IoT benefits in marketing is seen in the potential of sensors and actuators for context relevant, personalized, real-time, interactive communication with consumers and shoppers as a driver of traffic and transaction, facilitator of movement along the path to purchase, able to enhance their experience. At the same time, IoT can serve to improve logistics and infrastructure for more effective business and store management.

LITERATURE REVIEW

A number of research papers and articles provide a detailed insight on Internet Marketing. The findings from the literature are presented below:-

Digital marketing is the use of technologies to help marketing activities in order to improve customer knowledge by matching their needs **(Chaffey, 2013)**.

Internet marketing has been described simply as 'achieving marketing objectives through applying digital technologies' **(Chaffey et al., 2009)**.

In order for digital marketing to deliver result for businesses, digital content such as accessibility, navigation and speed are defined as the key characteristics for marketing **(Kanttila, 2004)**.

Introduction of new technologies has creating new business opportunities for marketers to manage their websites and achieve their business objectives **(Kiani, 1998).**

OBJECTIVES

The study explains application of internet of things in digital marketing in select organisation.

The study explains the opportunities and challenges in the digital marketing.

METHODOLOGY

The study is about application of internet of things in digital marketing. The secondary data and information have been analyzed for preparing this paper extensively. The secondary data and information have been collected from different sources like published e-books, articles published in different journals, periodicals, conference papers, case studies etc.

MODEL OF IOT APPLICATION IN DIGITAL MARKETING

Fundamental Characteristics:

1. Interconnectivity: With regard to the IoT, anything can be interconnected with the global information and communication infrastructure.

2. Heterogeneity: The devices in the IoT are heterogeneous as based on different hardware platforms and networks. They can interact with other devices or service platforms through different networks.

3. Dynamic changes: The state of devices change dynamically, e.g., sleeping and waking up, connected and/or disconnected as well as the context of devices including location and speed. Moreover, the number of devices can change dynamically.

4. Enormous scale: The number of devices that need to be managed and that communicate with each other will be at least an order of magnitude larger than the devices connected to the current Internet.

5.2 IMPACTS OF IOT IN THE DIGITAL MARKETING:

The advent and the consequent explosion of IoT, enabled by forceful networking options and augmented abilities of modern computation appear to be a normal development. The speedy development of IoT is also suggestively renovating all businesses and influencing divisions that are stimulated by information, for instance, digital marketing.

How IOT works: The 4 major components of IOT,

1. Sensors: Gathering information is the first step of IOT workflow. Sensors are continuously collecting data from their environment or object under measurement. Mobile phones, wearables, and cars, also have lots of sensors that collect data. A sensor is able to measure a physical phenomenon like sound, heat, pressure, etc., and converts them into a digital representation.

Common sensors are,

- GPS trackers
- Temperature sensors
- Humidity sensors
- Pressure sensors
- Moisture sensors
- Smoke sensors
- Radio frequency identification tags
- IRsensor

2. Gateway: A Gateway is like a bridge that connects IOT devices with a cloud. The IoT gateway is a key element in the IOT ecosystem. They collect the data from IoT sensors and transmit them to the cloud, and it also receives information from the cloud and sends it to the devices.

3. Cloud / Big data: Internet of things generates a huge amount of data. Activities like storage and data analyzing take place in the cloud infrastructure. Cloud refers to as the brain of IOT. The analysis involves interpreting raw data to determine which is actually valuable and finally it provides useful information to the end user. This data is valuable for a predictive analytics model.

4. User Interface: The final step is delivering useful information to the end user, and that is the visible part of IOT. End-user may be an industrial user or another device, which is in M2M workflow. Raw data transform into insights, and it displays charts, metrics, and indicators. Mobile apps act as an interface to control and monitor smart devices.

ROLE OF AN IOT IN DIGITAL MARKETING

1. Product development: With the help of IoT, digital marketers can understand what customers actually expect from their brand that will help to improve their product quality. IoT not only help to increase the product quality, but it also helps to forecast the demand and planning for new products. Accessing data from IoT devices will help businesses to make better and faster with better decisions.

2. Analyse customer's buying behaviour: IoT helps digital marketers to understand the buying behaviour of customers from start to finish, and it will give a clear view of where the customer is in their buying journey. It also helps to analyse the needs of the consumer, purchasing pattern, what trends impact the purchasing pattern of consumer and location that allows marketers to customize the products accordingly. IoT can provide more accurate information about consumer's preferences.

3. Big Data: Smart devices allow marketers to gather lots of data about consumers which will be used for effective marketing campaigns. IoT devices can provide lots of data through sensors about consumers than traditional research. Big data provides more accurate insights that will help marketers to reduce risk and increase the opportunities.

4. Customer analysis: With the help of smart devices, one can read consumer's mind. Smart devices provide a huge amount of data which will give deeper and key insights about customers. Data from smart devices used to understand the everyday lifestyle of consumers. It allows digital marketers to promote products based upon collected data.

5.Data tracking: Data tracking from IoT devices will help marketers to predict when a customer needs a particular product or services. It also used for timing of sales and the real-time customer insights helps marketers to boost sales.

6. Better Personalization: Personalization is an effective way to reach, and engage your audience. IOT helps marketers to connect with their customers on a real-time basis. It helps to target the audience more accurately, and it improves the effectiveness of the marketing campaign. IOT allows you to gather a variety of information about your customers which will help you to identify what type of campaign should engage your customers.

7. Customer satisfaction: In today's digital world, everyone wants the fastest customer service, and it is utmost important for every marketer. With the help of real-time data, marketers can respond to their customers faster.

8. More connectivity: In IoT, any smart devices can be used as a channel to connect with your customers. So every smart product will help marketers to connect with their customers, and that leads to more customer engagement.

ADVANTAGES OF INTERNET OF THINGS IN DIGITAL MARKETING:

- Access information
- Communication
- Cost-effective
- Automation

DISADVANTAGES OF IOT IN DIGITAL MARKETING:

- Privacy & security
- Complexity
- Lesser jobs
- Dependability

Using IoT ethically as digital marketing professionals

As a professional in the digital marketing industry, the privacy of consumers should be of the utmost importance to you, especially as we move into an age where the amount of consumer data will surge. Although many consumers react positively to having product offerings and sales funnels customized to their unique preferences and needs, they also value their privacy both online and offline.

In the same way that data collection will change with the increase in technology use, how marketers utilize this data and interact with consumers will also have to change. It's imperative that digital marketers start preparing now for the major changes that the IoT will inevitably bring. Start by conveying a sense of trust and understanding the target audience, and develop a sincere connection

with their needs and expectations starting today. Align with consumer, and use the IoT development as an opportunity to refine your digital marketing strategy.

INTERNET OF THINGS IS TRANSFORMING DIGITAL MARKETING

IoT connects numerous kinds of devices in our daily lives and the amount of data generated by these devices will only surge. The marketers can leverage this data to create impactful insights, identify patterns to capture customer interactions, and predict customer behaviour and lifestyle. This further helps to envision customer preferences and link it to purchase intent.

1. Real Time Interaction with Customers: With the help of data, digital marketers will be able to establish a real-time interaction with their customers. Also this will lead to boosting the sales of a given company substantially.

2. Changing Role of Digital Marketers: With the help of Internet of Things, the fundamentals of marketing can be altered by simply cutting the role of a traditional marketer. Technology will be reached out to the customers instead of marketers with the help of IoT.

3. Taking Contextual marketing to a Whole New Level: With the help of Internet of Things data, digital marketers will be allowed to capture the consumer's behaviour, buying patterns, location and other analytics. With the introduction of Internet of Things, contextual marketing has got a whole new meaning.

APPLICATION OF IOT IN SELECT ORGANISATIONS

CASE 1: Heineken leverage IoT in a Digital Marketing action

In 2013, Heineken wanted to boost the number of visitants to "Heineken Experience" the beer brand museum in Amsterdam with an action true to the brand identity and driven by experiences.

With that purpose, Heineken placed GPS-enabled branded bottles around Amsterdam city. These bottles were to be picked up by curious tourists who would then start a treasure-hunt style tour through Amsterdam that would ultimately get them to the Heineken Experience.

IoT was successful: When one of the GPS-enabled Heineken bottles was picked up, the accelerometer it contained made it activate and vibrate. After that, the cap lighted up and started swivelling like a compass to guide the lucky tourist to the Heineken brewery.

Throughout this journey, the tourist was involved in a cultural and historic route through Amsterdam while still interacting with Heineken at every moment. This journey-like experience left the tourists with incomparable, unique experiences that enabled great branded content to be crafted online by Heineken.

This Heineken Experience marketing action leveraged IoT through GPS connected bottles to engage consumers in an enhanced cultural, historic journey branded experience that ended into another branded experience as reward: a welcome and a visit to the Heineken beer museum.
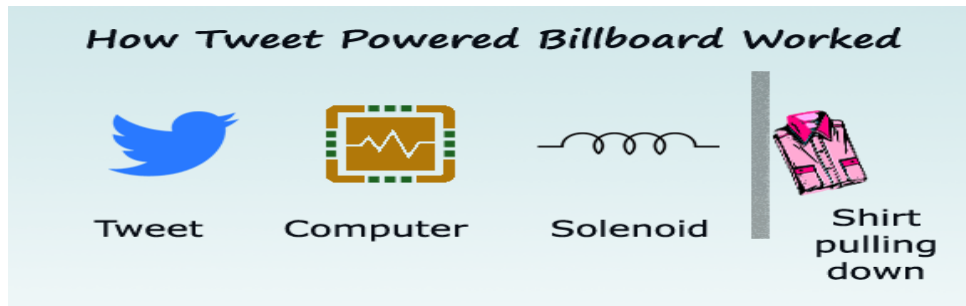
CASE 2: Allen Solly leverage IoT in a Digital Marketing.

It was 2012, and Allen Solly, a men clothing brand from India, wanted to engage new consumers with a different branded experience. In addition, Allen Solly wanted these potential consumers to try its products.

IoT in a Digital Marketing: It built in Bangalore a tweet-powered billboard that gave away free shirts!

A host beside the tweet-powered billboard encouraged people to tweet with the hashtag #RainingSolly. With each tweet containing this hashtag, the billboard randomly inched forward a shirt until it fell down, and revealed a portion of the billboard which contained a hidden message. The consumer who made it fall, was rewarded with a piece of Allen Solly's new collection.

This action engaged users socially through twitter, made them interact and play with the brand to get a free shirt, and achieved great quantity of user-generated content both on Facebook and Twitter. In this case, IoT was leveraged to maximize gamification and social media potential.

How Tweet Powered Billboard Worked

Tweet — Computer — Solenoid — Shirt pulling down

CASE 3: Kellogg's leverage IoT in a Digital Marketing action

In 2013, in Australia, Kellogg's wanted to connect with younger consumers to promote their Nutri-Grain cereal bars. To achieve that goal Kellogg's needed an action that spoke teens' language to tick with them, so they created the first ever glow in the dark skate park!

This skate park was connected to social networks, included RFID technology to power cameras that recorded the skaters' tricks and rides to not miss any moment, and uploaded them automatically to social networks.

IoT in Digital Marketing: Kellogg's invited hundreds of influential teens to this night skateboarding event. Then gave RFID tagged keychains to skateboarders that activated the cameras to capture every action shot whenever they passed by the infra-red beams. Finally, the shot images were shared on Facebook.

Here we have an interactive, highly engaging, and socially connected digital marketing action leveraging IoT through RFID tagged keychains and cameras. In this action, the target consumers have an enhanced branded experience through an impactful event that speaks their language.

CONCLUSION

Internet of things makes life more comfortable, and allows us to focus on things that really matter. The development of IoT will dominate the digital marketing world and that allows marketers to pitch efficient marketing campaigns. It brings consumers, and marketers, close enough to meet each other's requirement. IoT is a powerful tool to maximize branded experiences that boost consumer engagement and response. It can also result into viral social media content creation and into a great amount of user-generated content on social media.

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