Innovative Structure of Marketing in the Digital Age

Muminova Gulmira Bakhodirovna
PhD Researcher, Tashkent State University of Economics, Uzbekistan

Abstract: Rapid technological progress, and followed ultimate social trends promote a more collaborative mode of doing business. In fact, traditional idea of marketing has fundamentally upgraded to a new level with the ascension of innovative technologies. The opportunities enabled through modern technologies and social media (i.e. Internet, social networking, and smart technologies) increased the ease and scale of information exchange (sharing) to a global level. This movement can be viewed as the result of the digitalization of the global society from one side, and socialization of the Internet from the other side. The analysis of the relevant literature indicates that the development of the innovative marketing is influenced by two major factors: (1) technological progress (the growth of digital and social media); (2) the crucial and influential role of content.

Keywords: Digital Society, Digital Media, Social Media, Innovative (Modern/New) Marketing, Sharing Economy, Content, Smart Technologies, Internet of Things (IoT), Artificial Intelligence (AI)

Introduction

The expeditious development of information and communication technologies has created robust opportunities for businesses and economies worldwide. Traditional idea of marketing has fundamentally upgraded to a new level with the ascension of innovative technologies. Precisely, the boundaries of marketing discipline have significantly expanded with the emergence of innovative marketing communication technologies. The possibilities of these new technologies, such as the internet, social media, and smart technologies increased the ease and scale of information exchange (sharing) to a global level. In fact, this movement can be viewed as the result of the digitalization of the global society from one side, and socialization of the Internet from the other side.

The next paragraphs of the study aims to (1) provide systematic analyses of marketing evolution; (2) investigate specific features and components of modern marketing in the field of information
and communication services; and (3) analyze the practical implications of modern marketing strategies.

**Academic background:** The early marketing strategies (1950-1994) were limited to advertising through traditional communication channels (such as newspaper, billboard, radio, TV and direct mail), that assumed companies to buy media spaces and time (buying newspaper space, or buying a time to advertise on TV or Radio) with the hope that target audience will notice their brand. In fact, traditional marketing strategies were received as being distractive by consumers (Crestodina, 2016). Later, the emergence of Web technologies has considerably expanded the marketing communication channels of businesses, and marketing faced the next stage of evolution (1950-2004). This technological progress allowed businesses to more effectively involve in marketing applications of the company through accessing Web 1.0 technologies (Close, 2012). At this stage of development, businesses massively start to develop business websites, where maximum information about the business was uploaded – or in other words, “Brochureware” websites were developed (Crestodina, 2016). Further technological advances have pushed forward the importance of websites and laid the foundation for the emergence of web-centric marketing. Businesses started to increase the brand visibility through search engine optimization (SEO), the new advertising techniques - pay-per-click (PPC) have been introduced to the market. Although, technological evolution enabled businesses to find more effective channels to communicate with consumers, consumers were still likely to escape from it (unwanted email spam filtering functions, pop-up banner blocking, phone call block lists). At this stage of marketing evolution, literally marketing was everywhere (in the cover cap of your coffee – consumers would see it while drinking their morning coffee; on the packages of food or other products; everywhere in the public transports; even telemarketers used call and push their products). This stage of marketing was super distractive, as information was too much and the message of marketers was not targeted effectively. Traditional marketing struggled to reach consumers, and this fostered the development of smarter ways to interact with the audience. Certainly, the marketing has significantly upgraded since 2010 with the great influence of technological evolution that have profoundly changed consumers’ thoughts and behaviors. The modern (innovative) marketing enable businesses more effectively and efficiently plan marketing strategies, and at the same time allow consumers to choose which information to receive.
Theoretical fundamentals

Indeed, the evolution of innovative marketing could be viewed as aftereffects of these two mega trends: (1) the progressive technological evolution that promoted the emergence of social platforms and blogs, and (2) the growth of the role of content. Furthermore, as technologies remain to develop (ex. Web 3.0 and further), innovative marketing communication tools and new concepts will continue to evolve (Close, 2012), and potentially lay the foundation to a newer “Smart marketing” (see Figure 1.).

**Figure 1. The Evolution of Marketing**


**Progressive technological evolution (digital and social technologies).** The first wave of digital transformation in the marketing discipline can be connected to the emergence of Web 1.0 technologies. The new technology allowed companies and brands to create their own web pages and provide customers with interested information through web pages. This technology was later advanced to a Web 2.0, that led to the rise of social media and online communities. Consequently,
the implementation of Web 2.0 technologies extended the width of internet’s potential, enabling
businesses to gather deeper view of consumers’ behaviors and facilitated the development of
innovative, interactive and more efficient communication techniques.

The term Web 2.0 was developed by Darci DiNucci in 1999 and was first brought into
practice by O’Reilly Media in 2004 (Allen, 2012). The concept Web 2.0 is too complicated and
broad. There are many definitions and descriptions given to enlighten this popular buzzword.
According to Close (2012) Web 2.0 is a concept used to describe the progression of the internet to
a more interactive online communication, participation and engagement in comparison to the
internet’s early generation - Web 1.0 (see Table 1.2.1). Simply put, Web 2.0 is a platform on which
digital media, social media and other modern applications and technologies operate. These include
search engines (Google), blogs, social networking sites (Friendster, Facebook and Twitter), photo
and video sharing sites (Instagram, YouTube and Flickr) and many others.

**Table 1.2.1 Comparative characteristics of the Web evolution**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Web 1.0</th>
<th>Web 2.0</th>
<th>Web 3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The emphasis of the Web</strong></td>
<td>Web of information resources stored on a global network of servers where what matters is retrieval and display</td>
<td>Human web, where what matters is human contacts and relations between individuals</td>
<td>Human and machine web, where both are interconnected through smart devices, and continuously exchange content (share) for extra value creation</td>
</tr>
<tr>
<td><strong>Major sites</strong></td>
<td>Information portals</td>
<td>Online social networks</td>
<td>Improved (smart) online social networks (IoT, AI) and virtual reality</td>
</tr>
<tr>
<td><strong>Tools</strong></td>
<td>Oriented to display and retrieve information stored on the Internet</td>
<td>Designed to enable collaboration and content creation on the Internet</td>
<td>Focused to connect humans and machines with each other for smart information exchange</td>
</tr>
<tr>
<td><strong>Strategy pursued</strong></td>
<td>Efficiency</td>
<td>Effectiveness</td>
<td>Intelligence</td>
</tr>
<tr>
<td><strong>Economies sought</strong></td>
<td>Economies of scale</td>
<td>Network effects</td>
<td>Sharing for value creation</td>
</tr>
<tr>
<td><strong>Communication range</strong></td>
<td>Wide and local area networks</td>
<td>Mobile communicating also considered</td>
<td>Machine to machine communicating is also considered</td>
</tr>
</tbody>
</table>

*Source: Improved by author, based on data collected by Mata & Quesada (2014), “Web 2.0 Social Networks and E-commerce as Marketing Tools”.

The World Wide Web is continuously developing, opening more doors and providing larger
opportunities for both societies and economies. Recent developments in the WWW are argued to represent
the Web 3.0 technologies by some analytics in the field (Ohler, 2010), or in other words Semantic Web (Maddux & Johnson, 2012), while others consider latter technological inventions as further advancements in the Web 2.0 technologies (Morrow, 2014). However, some studies claim that these two are far from being synonymous concepts, as Web 3.0 goes beyond semantics, and implements space, images, and sound (PC Magazine, 2007). Other latter popular technological buzzwords include Virtual Reality (or 3D Web), Internet of Things, Artificial Intelligence and some others. As the technology world keeps continuously evolving, many studies are being dedicated to contribute the literature on providing clear and relevant definitions of these new technological concepts. However, the question on whether these are the further extensions of the current Web 2.0 technologies, or advanced inventions of the new Web (Web 3.0), or even a new phase of Web development is still under wide discussions. For the purposes of this research, these technological trends are defined as components of Web 3.0. As the scope of the current research focuses on the marketing implications of the latter technologies, rather than developing theoretical frameworks for better description of the recent technological evolution. Thus, analysis in the next paragraphs does not go deep in defining and describing the present technological trends. But rather, further discussions focus on marketing opportunities enabled with advent of innovative technologies. Rationally, the general descriptions of these concepts are provided in order to have a better picture of how these innovations may influence the marketing perspective.

Figure 1.2.2 Components of Web 3.0

Source: Generated by author.

Web 3.0 is considered to be a smarter web that saves time and improves lives of people by predicting what content people want to see and how they prefer to see it. Tim Berners-Lee describes the Web 3.0 as Semantic Web (PC Magazine, 2007). The innovative feature of Web 3.0 is its ability of smart data integration (Maddux & Johnson, 2012). In essence, Web 3.0 can be described with its three main components – Artificial intelligence, Internet of Things and Virtual reality (Figure 1.2.2) (Nations, 2018). Besides, these three main
 components, it is important to consider the role of Social Platforms and Blogs, that are the representatives of earlier Web 2.0, but are consistently being improved in correspondence with the Web developments.

Artificial Intelligence (AI): The core idea lying behind the Artificial Intelligence is the ability of the machines to learn on its own. Although the technology is has not reached to that level yet, the successfully implemented elements of AI can be noticed in the market. Everyday life examples include email spam filters (ex. Gmail successfully filters almost 99.9% of spam), plagiarism check (through turnitin.com), face recognition function and personalized newsfeed features on facebook.com, identification of the contextual meaning of emoji in Instagram, and others (Narula, 2018).

Internet of Things (IoT): Internet of Things is about connecting “things” (ex. human-human, human-things, things-things) (Morgan, 2014). Kramer (Kramer, 2016) views the IoT as the technological shift where physical devices are digitally connected with the purpose of creating more value. Gartner Inc. predicts that the number of devices mutually connected to each other on the IoT, will reach nearly 26 billion by 2020 (Kramer, 2016).

Virtual Reality (VR): The growing popularity of online virtual games (ex. World of Warcraft), or the virtual worlds could not be left without consideration. Although the current research considers virtual reality as one of the components of Web 3.0, the literature provides other views of the notion. Many examples of virtual reality already exists, and the number is keeping to grow. For instance, Kinset created a virtual shopping mall, which allows users to explore different shops and go through the shelves providing the experience of reality (Nations, 2018).

The growing level of Internet access, increasing number of devices offered with built in Wi-Fi features, falling prices for technology and Internet use, and growing demand for smart technologies are all laying the basis for the development of Innovative technologies, such as Internet of Things and Artificial Intelligence. IoT is the new approach for people, things and data to interconnect. Today, less than 2 billion people (less than 1 percent), and 20 to 25 billion things are connected to the Internet. According to some estimates, the number of people and things will reach around 5 billion and 50 billion accordingly by 2020 (Kramer, 2016). In essence, Internet of Things collects the sheer volume of data through connecting to multiple devices, which is then analyzed through and learned by the smart systems of Artificial Intelligence. Therefore, these two technologies are interrelated and would not probably efficiently work without each other.

The growing role of “Content”. Another important trend led by the technological progress is the fundamental change in the way people interact (communicate) with each other in the new web era. The ideology of the new web is based on the mass collaboration that assumes to pursue economic democracy as
an outcome of creating value for individuals by individuals. The wide expansion of sharing economy has brought to the shift in the power of consumers – as present consumers do not only consume the information generated by servers, but actively participate in producing the content.\(^1\) In particular, this trend has much to bond with the recent exponential growth of social media. Today, social media is considered as one of the most effective communication tools in marketing, where consumers have all the opportunities to contribute and influence to the business through creating and sharing content (information exchange). In fact, information exchange is the central characteristic of human behavior. And, the growth of digital and social technologies has upgraded the process of information sharing to a global level. Today, people are no more bound to geographical proximity, as the new technologies enable instant information exchange - sharing. Consequently, this has increased the role and capacity of content in the global web platforms. In addition, the speed and scale of traditional WOM to reach the audience has also significantly improved with the emergence of Internet (electronic word of mouth - e-WOM), that facilitates the process of information exchange.

**Discussions on Marketing implications**

The influence of recent technological advancements is viewed to be immense to the global economy, as the possibilities enabled through them profoundly changed and continuing to change the lifestyle of people. Subsequently, current socio-technological developments (or digital transformation) are offering better conditions for doing business, through facilitating easier ways for humans to offer/receive products and services from each other, and resulted in creation of innovative business models (such as, eBay\(^2\), Etsy\(^3\), Uber\(^4\), Odesk\(^5\)).

In a nutshell, the rapid technological progress, and followed ultimate social trends promote a more collaborative mode of doing business. However, these robust transformations in the market, poses many challenges to businesses. Brinker (2015) summarizes the outcomes of digital transformation to the businesses, through the five components of “digital dynamics”: speed, adaptability, adjacency, scale and precision (SAASP – Figure 1.2.3).

---

\(^1\) The content produced by consumers is referred to as User Generated Content (UCG) or Consumer Generated Media (CGM) (Close, 2012)

\(^2\) Online marketplace for everything, www.ebay.com

\(^3\) Online marketplace for unique, creative and handmade products, www.etsy.com

\(^4\) Uber is a peer-to-peer ridesharing, food delivery, and transportation network company, www.uber.com

\(^5\) UpWork is a global freelancing platform where businesses and independent professionals connect and collaborate remotely, www.upwork.com
Speed: The speed of the Internet in both spreading and gathering any information or data is astonishingly fast. Individuals can easily search, find, use or download any information required in a few seconds. Furthermore, importance of social networking sites has considerably grown with the emergence of the modern Web applications, which can spread news and ideas across a massive and distributed audience in a few hours. This has changed not just business communication strategies, but also the expectations of immediacy that potential customers have of businesses.

Adaptability: It is often hard to catch up with the ever changing and developing technological world in today’s digital age. Therefore, the adaptability of technologies and software are one of the most challenging factors for individuals to follow the digital trends. Businesses are trying to pursue people to catch up with latest digital trends, through making it simple and flexible.

Adjacency: The social media, one of the key tools of the digital age, brought the competitive landscape of businesses just a click away. Businesses now should no more focus on only the geographic location in implementing marketing approaches.

Scale: Businesses used to struggle to reach the customers, to provide them with full and related information. While with the advent of social media and other digital applications the matter of scale of audience to reach can go from few hundred visitors to millions just overnight with just posting a popular piece of content.

Precision: The concept “big data” became popular with the constant technological developments. Currently, businesses have much more accurate information about their potential customers as never before. The accurate data processing allows business to plan effective marketing strategies and increase customers’ interest into their products and services.

Figure 1.2.3 Digital Dynamics: SAASP
The business models are adapting to the changing world of consumer needs and purchasing behavior. Current marketing and business techniques fundamentally differ from the techniques applied not so long ago (around 8 years earlier). Today, customers demand to receive something extraordinary, rather than something usual. For instance, the vice president of Dassault Systems⁶, Ken Clayton comments on it as: “The loyalty and its definition has changed overnight...Customers have gone in a direction for reasons we didn’t understand. And now the experience has to speak through our products. Customers expect and deserve a personal experience (Kramer, 2016).” Current consumers do not only want a product or service, but rather they want to receive an experience related to a product/service. Ultimately, the creation of such experiences bonds to the development of information and communication technologies. Potentially, the latest technological advancements to influence marketing strategy are the ones enabled with the emergence of Web 3.0.

The modern economies and societies already have access to experience the elements of Internet of Things and Artificial Intelligence that is creating value through simultaneous information exchange, enabled by connecting different devices on the Internet platforms. For example, consider Google Express that is one

---

of the popular online services, which delivers any product you need within hours after your order. Similar business model is adopted by the local taxi company “MyTaxi”. Although, the innovative approach implemented in this business model does not demonstrate features of AI, it is a good example of the modern business model operating through IoT. MyTaxi App already connects the mobile devices of consumers with the electronic devices of many other businesses. This model shows how smartly information is exchanged between several “things”. Indeed, the possibilities of IoT and the number of connected devices are increasing exponentially with the creation of innovative software and devices (i.e. Spotify; health trackers connected to mobile phones). The effective implementation of such business models will allow companies easily filter consumer needs and wants, and consequently develop better marketing solutions.

Another vital feature of the new marketing derived by the latter technological progress – specifically Internet, is the capacity to create two way communications between the company and consumers, and lower costs of traditional communication channels. This could be achieved through different social media platforms, such as social networking sites (Facebook, Friendster, MySpace), blogging sites (Twitter) and geo-location sites (Foursquare) (Close, 2012), the benefits of which are overwhelming for both consumers and businesses. Incredible technological trends, for instance, the creation of hashtag and RSS media further adds value to the marketing practice in social media platforms. In fact, social media is one of the major drivers for a rapid growth of information exchange (content sharing), that is ubiquitously becoming an effective and innovative marketing communication tool. The latter trends prove that content generates trust between the business and consumer, meaning that a steady stream of useful content will eventually

7 The actual delivery is made by the Google Express employee (the car and the uniform of the delivery person has the Google Express brand logo) that partners with local retail stores (such as Costco, Target, Whole Foods and others) (Kramer, 2016).
8 Customers can order foods, buy presents or order a flower delivery through the app of the company. The service MyTaxi express is gaining quick popularity, because of its convenience and fast delivery regimes. The payment can be completed both, by cash, or by card through the local payment systems like Payme. Currently, the company already collaborates with more than 15 restaurants and cafes, and around 10 fashion brands.
9 Spotify is a digital music service (software) that gives you access to unlimited number of song, and allows you to access your music library from any device.
10 The data collected through health trackers, are then analyzed by machine and the owner will receive individual recommendations on improving his/her health conditions on the pre-installed app. Even though, the real Artificial Intelligence focuses on machines to analyze the data collected through connecting several devices, rather than humans, this case could still be considered as one of the brightest examples of innovative business models currently operating in the market.
11 The notion hashtag was first introduced at a tech conference in 2007. Today, businesses actively use it to promote their products/services, organize content – easily identify what people are talking about their brands in the Web, and allows consumers easily discover their beloved brands or topics to discuss.
12 RSS (Rich Site Summary) - is a format for delivering constantly changing web content. Majority of the news related sites, weblogs and other online publishers syndicate their content as an RSS Feed, which then supports in solving a problem for people why regularly visit the web. RSS technology allows individuals easily stay informed by retrieving the latest content from the sites they are interested in (Snow, 2006). This considerably saves time and raises privacy, as it does not require to sign up for each site’s newsletter.
attract fans (subscribers to the channel), improves brand visibility (likes and shares) and increases customer loyalty. Peculiarly, Crestodina (2016) expounds the content in the current marketing age as something that makes online marketing strategies live (coherently, the heart of modern online marketing).

Figure 1.2.4 The Model of Interactive Communication Channels

Source: Generated by author.

Conversely, it is also important to consider the opposing effects of social platforms to the businesses, such as the privacy issues and the wide access to the excess of uncontrolled negative information in the Web - “Malignant information density” (Schaefer, 2015). Although, modern marketers often skip the potential threats of social platforms, the risks hidden under such attractive innovations are quite high. There are many cases of social media campaigns that fail to reach the audience as expected by the marketers. Frequently, this is related to the customer’s frame of reference and/or previous experience. The simplest way to describe the current interactive communication model that relies on modern technologies is through improving Shannon and Weaver’s (1949) traditional communication model. The initial suggested communication model includes sender, channel and receiver. The model assumes that the sender transforms information (thoughts, ideas, opinions and etc.) to a symbolic form (encodes), and then sends to a receiver through the communication channel. The receiver then interprets the message through decoding it. The crucial part of

13 “A website without a steady stream of useful content is just an online brochure. It has no pulse.”
14 For example, consider the social media failure of the multinational financial services company JP Morgan’s “#AskJPM” campaign. The purpose of the campaign was to clarify the issues related to the investment bankers. However, the campaign work reversely to the company, as American users were still recovering from the 2008 financial crises, and thus the company was thrown with negative comments (for more details, visit https://twitter.com/search?q=%23AskJPM)
this process is to correctly bring the message of the sender to the receiver through encoding and decoding processes (Close, 2012). This is when customer’s previous experiences and background may interfere the proper message delivery. Such traditional marketing communication channels allowed businesses to collect the feedback on the promotional campaigns primarily through separate research or studies. However, the modern marketplace provides interactive communication models (with the ascent of contemporary technologies), that allows sender and receiver interchange their positions while they react to each other’s messages (see Figure 1.2.4). The reactions of customers (email replies, re-tweets, comments on social platforms) are valuable information to businesses, and this is another modern feature of innovative marketing enabled through the rapid development of ICT.

Discussions

The marketing has significantly evolved since its first applications in 1994 with outdoor billboard advertisings. Latter developments in the web technologies and emergence of its innovative applications have significantly expanded the variety of marketing communication tools. Correspondingly, technological progress had a crucial impact on consumer behaviors (consumer behavior is different in online environments). For instance, the easier and lower cost of Internet access, advanced technologies and increased content allow consumers to gather online information and feedback about the products/services before purchasing. Consequently, the role of brand visibility and its openness to two way communication with customers became crucial factors in planning marketing strategy of the business. These market changes have forced businesses to rethink their marketing strategies in order to survive in the era of digital evolution. Insistently, the rapid technological developments had a large impact on the way traditional marketing operates. The outcomes of this drastic technological progress can be summarized with bringing forward two major factors: (1) the growth of innovative, social and smart technologies; (2) and the rise of the capacity and scale of content.

(1) The creation of Web technologies offer powerful opportunities for marketers, as the applications of modern technologies (social platforms) allow simultaneous information exchange with millions of individuals. Indeed, both consumers and businesses benefit from blogging through social networks or company web sites, as any information can be quickly discussed considering the view and experience of many different people from different backgrounds, while being one of the least expensive ways to make a good impression on potential and current customers. Albeit this, the rise of innovative web technologies may have potential drawbacks, such as privacy and “Malignant information density”. Furthermore, the ever developing Web offers potential transformation towards smart marketing. The innovative applications, developed by Web 3.0 technologies (IoT, AI and VR),
offer exceptional opportunities for marketers to conduct a “Smart marketing”. The idea laying in the core of this progress is to connect several devices to each other through Wi-Fi, and enable machines to analyze the data intercommunicated. Although, the full potential of smart applications have not yet been introduced to the market, the partial presence of its features are already noticed in the local business models (i.e. MyTaxi Express, Health trackers). In addition, the purchasing behavior of consumers has outgrown traditional purchase decision-making process. Present customers want to receive an experience related to the service/product they are going to buy. Certainly, the effective implementation of smart technologies could offer a better customer experience. 

(2) The rise of web technologies have pursued the emergence of social platforms, such as social networking sites and blogs. These social technologies have greatly influenced on the promotion of sharing economy and the growth of the phenomenon “content”. Today, content is the core of marketing strategies. A steady stream of useful content will contribute to the better customer relationship, increasing brand visibility and improving brand loyalty. Furthermore, the growths of social technologies have established easy and quick two-way communication between businesses and consumers, and have significantly decreased the cost of traditional communication channels.

**Further Research.** The purpose of this research was to investigate the marketing evolution and provide systematic analysis; describe the modern structure and innovative features of the new marketing. Today, both consumers and businesses benefit from implementing modern technologies and applications that had a great influence on marketing. Many studies were dedicated on finding effective online marketing strategies; and less was dedicated on measuring the effectiveness of online campaigns and other business activities. Further research along three directions is assumed to extend the findings of the current study and contribute to improving the marketing discipline.

Firstly, it is important to analyze the methods to measure business’s activities in the online spaces. There are several methods already available to measure brands’ online visibility. One of them is free software that allows tracking brand’s visibility across 32 social media websites ([http://www.howsociable.com](http://www.howsociable.com)) (Close, 2012). Another one is to calculate website’s ROI (Crestodina, 2016). However, the concern is whether the brand’s visibility and its economic value have a positive correlation and whether the activities of two brands can be compared in the online spaces.
Secondly, the less have been studies regarding the actions of consumers in online environments - how do they engage with businesses? According to the annual survey conducted by Razorfish, 40 percent of users in Facebook - “friend” or “like” a brand, and 25 percent of users in Twitter – “follow” the brand they like (Close, 2012). At the same time it is important to note, that consumers can easily “unlike” the post, or “unfollow” the page if not satisfied with the content.

The third potentially interesting area to investigate is the changing behavior of the most powerful audience in the web – adolescents. According to Nielson (2011) the most active users of mobile and social media are 12-17 year olds, spending around seven hours per day watching mobile video and 78.7 percent of them constantly visiting blogs and social networks. In fact, more than 60 percent of the content in the web created by adolescents. The power of this group of consumers is constantly growing, that signifies importance of the topic.

The current socio-technological trends facilitate the creation of effective ways of doing business; and create many new directions and interesting areas to investigate. This provides researchers with an opportunity to contribute to the marketing discipline and challenge their knowledge and experience.

Reference


https://www.forbes.com/sites/jacobmorgan/2014/05/13/simple-explanation-internet-things-that-anyone-can-understand/#26516c0f1d09


