M-Commerce in Apps and its security issues

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Abstract

M-Commerce is the E-Commerce practiced on the mobile devices. E-Commerce is used widely in exchange of buying and selling of goods and services through internet. M-Commerce should not be viewed as E-Commerce with limitations this article deals with, how the technology instigate M-Commerce to take over e-Commerce, even though E-Commerce still existing in current scenarios. It is also clear that most of the sales are done through the mobile application using apps. This article also involves in M-Commerce security complexity encountered during transaction on mobile device and evaluates the solution by providing Security gateway(SeGW).To increase the speed of mobile to compute, should support the next generation networks as per ITU (International Telelcommunication Unit) such as 4G etc...

Keywords: *M-Commerce, E-Commerce, security, privacy transaction.*

I.   INTRODUCTION

In global business environment, e-Commerce is impacting technologies and focusing more on wireless mobile computing. With this, mobile users are accessing more on wireless for their multiple tasks. Mobile devices play a key role in customer interactions and an increasing number of transactions, including Commerce. The rise of mobile has been exponential in recent years and mobile impacts but also continues to drive many evolutions and trends in marketing (think about mobile content marketing or mobile email marketing), usability, user experience, the customer experience and design of customer-facing tools (responsive websites, apps,…) and really all areas of business, even leading to digital transformations.

II.   Review of Literature:

1. According to Anish K Ravi , The future of e-Commerce is undoubtedly M-Commerce. It is the revolution for all pay and shopping.
2. According to AtiyaParveen, SobiaHabib&SaoudSarwar. M-Commerce becomes little trifling in business than eCommerce.
3. According to M.Niranjanmurthy & Kavyashree, E-Commerce security is a protection of e-Commerce assets from unauthorized access. M-Commerceis the term for making business transactions using mobile devices.
4. According to Krishna prakash and balachandra, To support large number of cellular network

service providers with computing speed made user to use his mobile devices .
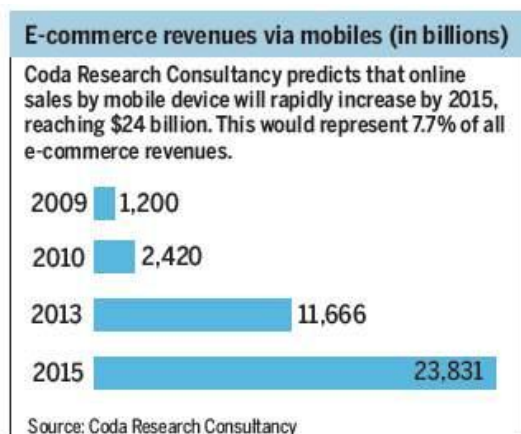
III. M-COMMERCE IN APPS

M-Commerce needs some development in specific area for secure transaction and better shopping experiences. M-Commerce is likely to take over e-Commerce as online shopping is increasing more on mobile apps. Mobile apps are becoming new way to target consumers. Optimism comes from facts reports that users accessing the internet through their mobile platforms, it is also seen in e-Commerce portals are considering more on mobile environments. This is another way to purchase online items from different service providers.
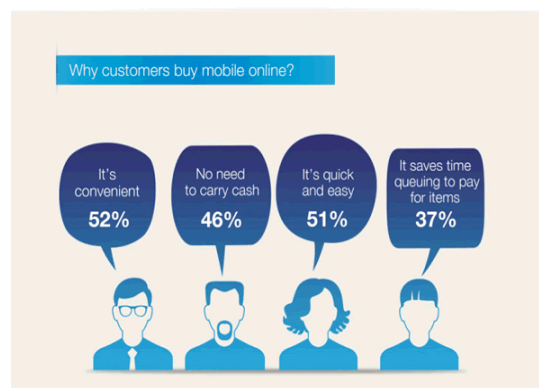
A survey by Webcredible looked in-depth at the behaviour of smartphone users

With 4G providing a faster data connection, retailers can reduce the emphasis they put on the speed of the website and concentrate on providing a better, more interactive user experience. The additional speed affords retailers an opportunity to capture sales from the browsing consumer because they can present them with more content and a quicker user experience, enabling the purchasing decision to be made in less time. 47% of consumers expect a website to load in two seconds or less. 4G will meet this expectation and remove the frustrations of waiting for pages to load, which is the number one cause for people abandoning their shopping baskets.

According to Coda Research Consultancy predicts that online sales by mobile device reaching $24 billions . This would represent 7.7% of all e-Commerce revenue.

E-commerce revenues via mobiles (in billions)

Coda Research Consultancy predicts that online sales by mobile device will rapidly increase by 2015, reaching $24 billion. This would represent 7.7% of all e-commerce revenues.

Year	Value
2009	1,200
2010	2,420
2013	11,666
2015	23,831

Source: Coda Research Consultancy

M-Commerce strengths
a. Covering wild distance through M-Commerce.
b. Filling forms all the time is not required
c. Include the company addresses along with other basic details.
d. Security to related sites on mobile.
e. Providing free shipping.
f. Look and user friendly colors on all sites.

IV. SECURITY

Online Purchasing became a major role on desktops and wireless devices. As this increase's, the users are also concerns more about the data they are sharing, whether secured from unauthorised party. Mobile security checks the identification integrity and message integrity to facilitate security services (Certificate Authority).Consumers can use payments in many forms through mobile apps and some will allows connecting the credit/debit cards to SIM numbers. While using WIFI , transforming all IP network access from untrusted public hotspots will exposes to new era threat.

For every handset, an authentication protocol and the network through SSL (Secure Socket Layer) encryption of voice/video with MIMO (Multiple In Multiple Out). Encryption being used to ensure confidentiality through a secret key. The key must be kept secret between both the parties.

The factors that influences the young generation in business like M-Commerce through smart phone. Security is a big features through mobile application .There are also risks associated with business whether it is offline or online. Cash-on delivery is a good option provided by portals to make consumers feel secure.

The different layers of security:

1.1 Device Security is provided by password mechanism and tamper-proof SIM card. Both are integrated together, which can be easily stolen. Java is recommended language security for mobile application.

1.2 Wireless Application Protocol (WAP) is a technical standard for accessing information over a mobile wireless network. A WAP browser is a web browser for mobile devices such as mobile phones that uses the protocol. WAP gateway is needed in order to translate Web-based protocols to and from WAP- based protocols.

1.3 PKI is a message sent from an applicant to a certificate authority in order to apply for a digital identity certificate.

V. SPEED IN M-COMMERCE

M-Commerce needs high speed connectivity of 4G and 5G further technology, to reduce frustration caused by unreliable internet access. It is not enough having optimised website that its performance meets the customer expectations.

The speed of internet does not allow users to make the payments efficiently. When user makes a payment he is taken to third party, and if anything goes wrong either we have to make the payment again else our order remains pending and many times cancelled.

The support of large number of cellular network service providers with competing speed made user to use devices.

VI. MOBILE NETWORKS

The current networks is called as 4G by International Telecommunication Unit (ITU). This supports fully heterogeneity transparent interconnection of IP, PSTN etc. Security gateway(SeGW) needed enhance for protecting mobile devices.

By enhance security gateway, mobile users can able to protect from hacking and attacks. This can be done by providing security requirements.

- SeGW must provide the encryption functions to support small cells(Compressing the major components of a cell tower)and wifi access points but also the private networks and cloud.
- SeGW should be flexible and support to protect mobile operators by various attacks by providing integrated firewall.
- Radio access networks has an ability to take action automatically without operators intervention, which installs some feature such as eNodeB.
- High availability features such as multi-chasis(small cells and WIFI) resiliency can minimises traffic loss.

The next generation networks to speed up is 5G networks.

VII.CONCLUSION

M-Commerce is yet another way to purchase online items since it's a new era for shopping and online transaction instead of using desktop. So it is new era where e-Commerce can develop many apps for mobiles, which increase the revenue for mobile retailers. Since then the mobile users prefer to consume the most of their job on mobiles. SeGW always in hands of mobile network providers by enhancing the future speed and security.

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