Failure to Use Telecenter for Bridging the Divide of E-Government : A Thai Village Case Study*

ความล้มเหลวในการใช้ศูนย์การเรียนรู้ไอซีทีชุมชนในการเชื่อมช่องว่างรัฐบาลอิเล็กทรอนิกส์: กรณีศึกษาหมู่บ้านหนึ่งของไทย

Rewat Sangsuriyong**

Abstract

This article, based on mixed-method research, was aimed at analyzing problems of using e-government services. The data were obtained through reviewing documents, mapping locations, observing what happened in the field, interviewing key informants, and conducting questionnaire survey among household leaders in a rural village of an Eastern Thai province. Results of the study found that failure to use telecenter for bridging the divide of e-government according to government's policy depended on not only readiness of telecenter in providing services, but also the readiness of people in using the services. Instead of using telecenter in their own village, whenever people needed any governmental services, they preferred to contact the government officials directly at the offices. Among villagers, direct contact with government officials is the cultural practice or way of life in receiving services; they felt more comfortable than dealing with online technology.

Keywords: 1. Digital Divide 2. E-Government 3. Telecenter 4. Village

* This article is a part of a research topic called "Research and development of Thai E-Government usage through community telecentres"

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ผู้ช่วยศาสตราจารย์ ดร. ประจำภาควิชาสังคมวิทยา คณะมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยบูรพา

บทคัดย่อ

บทความนี้มาจากการวิจัยเชิงผสมผสาน มีวัตถุประสงค์ในการวิเคราะห์ปัญหาการใช้บริการรัฐบาลอิเล็กทรอนิกส์ เก็บข้อมูลจากหมู่บ้านหนึ่งในภาคตะวันออกของประเทศไทย โดยการสำรวจเอกสารที่เกี่ยวข้อง ศึกษาตำแหน่งที่ตั้งภายในหมู่บ้านจากแผนที่ สังเกตบริบทของหมู่บ้าน สัมภาษณ์คนสำคัญในหมู่บ้าน และรวบรวมข้อมูลจากหัวหน้าครัวเรือนด้วยแบบสอบถาม ผลการศึกษาพบว่า ความล้มเหลวของนโยบายรัฐบาลในการใช้ศูนย์การเรียนรู้ไอซีทีชุมชนเพื่อลดช่องว่างความเหลื่อมล้ำในการใช้รัฐบาลอิเล็กทรอนิกส์ไม่ได้ขึ้นอยู่กับความพร้อมในการให้บริการของศูนย์การเรียนรู้ไอซีทีชุมชน แต่ขึ้นอยู่กับความพร้อมของประชาชนในการใช้บริการ เมื่อชาวบ้านต้องการติดต่อกับรัฐบาลหรือใช้บริการของรัฐบาลแทนที่จะใช้บริการผ่านศูนย์การเรียนรู้ไอซีทีชุมชนที่มีอยู่ภายในหมู่บ้าน แต่ชาวบ้านกลับใช้วิธีการเดินทางไปติดต่อหรือใช้บริการโดยตรงที่หน่วยงานของรัฐบาล ชาวบ้านยังคงใช้วัฒนธรรมหรือวิธีการเดินทางไปติดต่อและขอรับบริการโดยตรงจากหน่วยงานของรัฐบาลเหมือนที่เคยทำกันมาตามความเคยชิน

คำสำคัญ: ความเหลื่อมล้ำด้านดิจิทัล รัฐบาลอิเล็กทรอนิกส์ ศูนย์การเรียนรู้ไอซีทีชุมชน หมู่บ้าน

Introduction

Problems in providing people with e-government services have occurred in many countries, especially in their rural areas. Each government has policy to eliminate the problems by building telecenters to help people gain access to online services. The concept of telecenter has recently spread across the world and rises in Africa, Latin America, and Asia.

In the case of Thailand, telecenters have been set up in both urban and rural communities to provide people with internet to gain access to information and e-government services (Ministry of Information and Communication Technology, 2013).

In 2007, Thai government first launched the telecenter project, which was so-called “ICT Community Learning Centers”. The project has been carried out to serve people continuously. According to pre-research exploration, researcher found different practices in the telecenter administration, including general training, using internet for personal communication by peoples and for teaching students. Most telecenters had only a few users while some centers could not even run the services. From observing a telecenter of a village in Chonburi, the researcher found that the telecenter could not run its services because of not only lack of financial support for operation and other management including costs for internet, electricity and staffs, but also that only few people came and used the services. These observations were in the same token of the previous research. Studies of Thailand's National Electronics and Computer Technology Center ([NECTEC], 2003) and Sasithanakornkaeow (2004) also found that number of people who did not use telecenters were higher than number of those who did.

These insights encouraged the researcher to find out what other factors affect accessibility and uses of telecenter in receiving services through e-government.

Literature review

E-Government is the application of information and communication technologies (ICTs) to interact with, deliver governmental information to, and give service for citizens (G4C), businesses (G4B) and agencies (G4G). The ICTs include telephone, touch pad, fax, smart cards, self-service kiosks, internet and digital data interchange. (Almarabeh & AbuAli, 2010).

E-Government has been popular and world-widely used. The efforts to develop ICTs or e-governments in most countries also have encountered with implementation problems as the other policies and practices implemented. The common problems of policy implementation are inequalities based on socioeconomic differences in societies. The phenomena have resulted from imbalance of sociocultural and technical contexts, which is so-called "digital divide."

Digital divide refers to not only ICTs accessibility and inadequacy of individual skills but also the inequalities between the developed and developing countries. There are 'the haves' and 'the have-nots' between social groups, businesses, schools, government organizations, and literate capacities of the people (University of Illinois at Urban-Champaign, 2002; Alzouma, 2005).

Digital divide has been affected by many inter-related factors between ethnic differences, economic, languages, social backgrounds and physical abilities. It has resulted in the gap in varying degrees of socioeconomic status between individuals, households, businesses, and geographical areas which offered opportunities for people to access both information and information technology (Organization for Economic Co-operation and Development [OECD], 2001; Wiburg, 2003).

An approach that the government in many countries preferred to use for solving the problems of digital divide is to establish telecenter. Each telecenter must be equipped with essential tools for general communication services and office tools including telephone, fax, computers, printers and photocopiers. It also provides an internet access to e-mail, file transfer, digital library and databases. Some centers may have facilities and tools for teletraining, telemedicine and technologies for broadcasting digital radio and television. (DPIE, 1991 cited in Suzuki & Chamala, 1998; Harris & Others, 2001; Huyer & Carr, 2002; United Nations Conference on Trade and Development [UNCTAD], 2007; Bailur, 2008).

Although telecenters had telephone service and people used the service, other technologies such as computers, internet and fax machines were available. People might not use the telecenters because neither were centers useful to them nor the people were capable of using ICTs (Shakeel, Best, Miller, and Weber, 2001).

Harris, Bala, Songan, Lien, and Trang (2001) argued that for advocating ICTs adoption, the community was an influential factor for success in telecenter management. Therefore, needs of community should be assessed by conducting feasibility study. The studied topics of information and technology were in following: 1) study characteristics and needs of each community, 2) study types of information required to meet the needs, 3) study gaps between existing information and information needed, and 4) study how to use ICTs to reduce the gap of information.

The study of Ferro, De Leonardis and Dadayan (2007) revealed that the ability of the broadband technology was positively associated with e-government services and enabled people to have access to e-government services. However, AlShihi (2006)'s study revealed that barriers to accept e-government in Oman were unrelated to technological factors but people-related and governmental factors. Among people-related factors, the lack of ICT knowledge was the key while governmental factors were mainly the administrative factors including no long-term plan, lack of focus in the project, changes of structure management, and lack of campaign with marketing principles.

Bailey and Ngwenyama (2011) explained that enabling public readiness was an unavoidable duty of the telecenters. The telecenters provided equipment and services to meet the needs of people whose demands still had the gaps of e-government services. Besides having equipment and ability of services, the telecenters still had the gaps of services because to utilize telecenters effectively needed to train people for having ICT literacy.

The approach of developing the e-government services has primarily focused on website rather than other channels. This would deter those who have telephone or mobile phone with limited technology from access to the internet. Especially, in developing countries including India, Pakistan, Sri Lanka and Thailand, many lay people have heard the term "internet" more often than they practically use it. Even though much time and money have invested in establishing telecenters to increase technological coverage and sufficiency among people, most telecenters fail to meet their missions. However, people are more willing to spend their own money to buy their own phones to be able to communicate within limited

conditions rather than to go and use the services at telecenters (Galpaya, Samarajiva & Soysa, 2007).

The governments in many countries had experienced both success and failure. Heeks (2001) studied in developing countries and found that influences of successes and failures or inequalities of e-government depended on readiness of infrastructures such as informational, technological, institutional, and legal systems, human resources, strategic thinking, and leadership.

In conclusion, factors of success in using telecenter providing e-government services were related to all levels, ranging from government to community and individual levels. Although telecenter has fully equipped and ready to provide the services, but if people are not ready to use the services, the telecenter would not be worth for the services.

Objective of study

The research was aimed to explore social structure, ICT context, the process of using digital services of government organizations, and analyze gaps between e-government and people. The research conceptual framework is showed below.

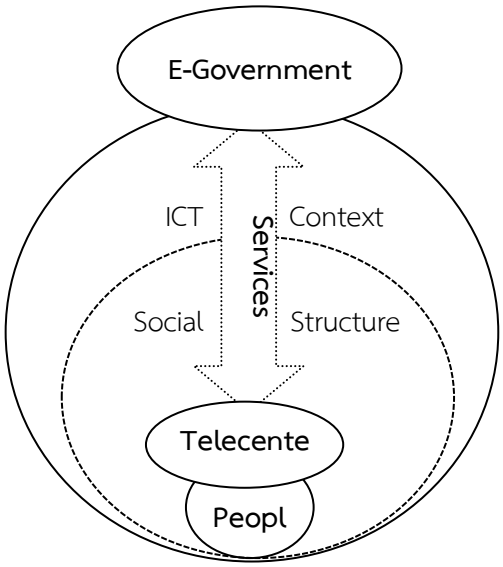

Figure 1: Research conceptual framework

Based on literature review and experiences, the researcher developed the conceptual model for the study. The model comprised e-government, digital services, telecenter, people in ICT context and social structure. The e-government divide resulted from not only ICT devices but also ICT context, social structure, and procedures of using e-government.

Methods

From study visits in different areas, researcher selected "*Ban Chai Khao*[1]" as a village studied site because it, with the size of 368 households, had a telecenter and the community leaders allowed the research to conduct the research. The researcher employed both qualitative and quantitative approaches between 2012 and 2015. The proposal and tools for data collection were approved by Burapha University's Research Ethics Committee.

The research had three following phases. First, to obtain qualitative data, the researcher used many methods including reviewing documents, mapping locations, observing in the field, conducting informal interview with the village headman and some key informants. The researcher also attended the village committee meetings for project introduction, observed how telecenter was managed and how people used the telecenter, and conducted community survey to understand governmental and private organizations and households' settlement. After interviewing 29 villagers, researcher analyzed data about socio-technological conditions of the village and the process of using ICTs, and then researcher developed a set of questionnaire, based on the data analyzed, for quantitative data in the second phase.

Second, the survey method was used for collecting data from household samples. The questionnaire contained close-ended questions related to households' ICTs readiness for using e-government including general information, using information and communication technologies, using telecenter, and how to connect with government and using e-government. The questionnaire was approved its structure and content validities by three scholars in the field of e-government and telecenter.

Third, at the final data collection, qualitative data was collected for analyzing gaps of services of government to people, including exploring government organizations in local and regional levels, exploring digital services of government such as e-mail, website, social media and call center, studying service process and interviewing public administrators-the Chief Executive of the Sub-district Administrative Organization and District Chief.

Both qualitative and quantitative data were analyzed by using content analysis and descriptive analysis.

[1] This name is not real name but pseudonym for the purpose of confidentiality.

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Results

Ban Chai Khao, located in Nong Ree Sub-district, was rural in Chonburi city. It was only seven kilometers away from provincial center, as the map showed in figure 2.

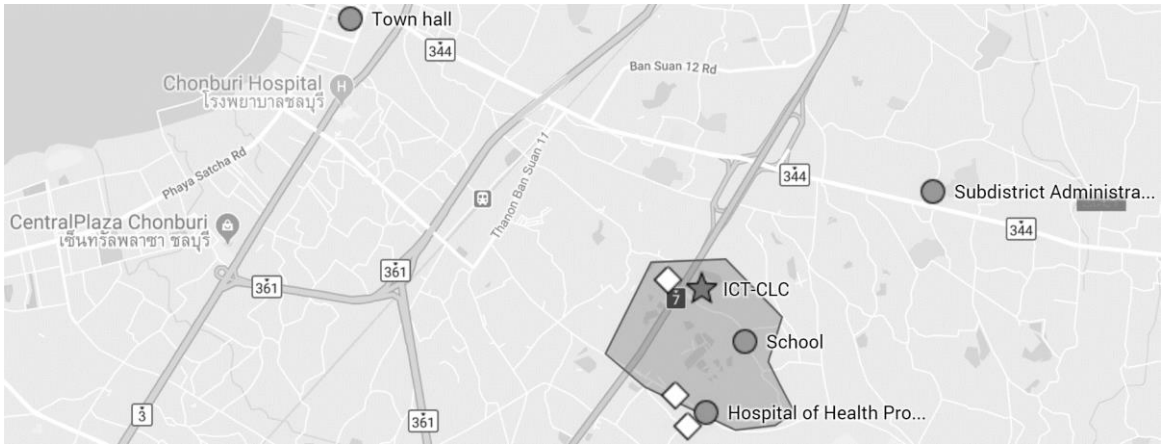

Figure 2: Map of *Ban Chai Khao* and government organizations.

The village was a unit of the local administration, Sub-district Administrative Organization (SAO), which was responsible for developing economic, social, cultural, public service, and collecting of local taxes, duties and fee abide by law. Whereas SAO provided services for villagers, the village headman, who was an administrative officer, functioned as the leader to keep the village and people in peace and wellbeing.

Like other villages, *Ban Chai Khao* had been affected by industrialization and urbanization. Comparatively, the village had changed from traditional rural outlook into semi-urbanized one. Agricultural areas had been turned into residential areas including modern buildings, housing development projects, apartment for rent, and factories. Its road structure had changed to concrete road that linked to highway in both sides of the village.

Social structure of the village showed various characteristics including demographic and socioeconomic dimensions as follows.

1. The demographic dimension

The village residents were categorized into three groups: traditional residents, new residents and non-registered residents. The traditional residents were those who originally lived in the village. They settled in their fields and gardens. The new residents were those who moved into the village and lived in the housing development projects. The non-registered residents were those who moved into and temporarily lived in the village by renting houses or apartments.

The village had tendency to increase its number of population, especially those who were newcomers because it was convenient to commute to work in cities and factories. From the Basic Minimum Needs Information from Ministry of Interior in 2013, there were 635 people in the village as the detailed in table 1.

Table 1: Percent of demographic and socioeconomic dimensions

Dimensions	Categories	Percentage
Ages	The elderly (60 Years above)	13.00
	The working (15–60 Years)	70.00
	The schooling (6–14 Years)	10.00
	Childhood (Below 6 Years)	7.00
Education	Higher education	17.00
	Secondary education	35.00
	Primary education	38.00
	Pre–school	7.00
	No schooling	3.00
Occupations	Unskilled labor	35.00
	Students	23.00
	Small business and trading	12.00
	Agriculture	9.00
	Others (Unspecified)	8.00
	Government official and private employment	7.00
	Unemployment	6.00

Source: Ministry of Interior, 2013

2. The socioeconomic dimension

In general, society of the village was rural and homogenous. Relationships among people were kinship-based. However, the great influence of industrialization and urbanization had changed it into heterogeneity. Its residents had more those who were from different regions and various occupations.

At the earlier period, the villagers made their own living through gathering produces in the forest for consumption and trading. Then, they became farmer and gardener. However, at present, they are no longer farmers but gardeners. They grow vegetable, coconut, mango,

and guava. While the traditional residents still work in agricultural sector, their children prefer to work in the factories, business companies, and government agencies after they graduated from high school and higher level of education. Most new residents work in factories, business offices, government offices and general employment. Both demand (people) and supply (government) sides of ICT context could be summarized as follows.

3. The demand side

The village had a telecenter but it could not give services because the village had no budget for management. In the meantime, villagers did not use it. While conducting household survey the researcher observed that people were so mobile. Many houses were left empty (no one lived in) while some houses seemed to have residents but they left for work and holiday outside the village. Based on 73 households as samples collected, their ICT readiness for using e-government could be showed the detailed as in table 2.

Table 2: Percent of households' ICTs readiness for using e-government

Questions	Responses	Percentage
What kinds of ICTs do you have in your household?	Feature phone	100.00
	Desktop and Laptop	88.00
	Internet	81.00
	Smart phone	55.00
	Home phone and Fax	19.00
	Tablet	22.00
Do you have accessibility and easiness to use these services?	Internet	8.00
Do you need to use telecenter?	Needed	9.00
What is the first and formost channel to receive information from government?	Television	63.00
	Internet	47.00
	News paper	34.00
	Radio	43.00
	Loud speaker	30.00
	Village headman	18.00
Do you know about the government contract center services (GCC) ?	Facebook: gcc1111	54.00
	Twitter: gcc_1111	46.00
	Phone call: 1111	42.00

Questions	Responses	Percentage
	e-Mail: contract_1111@gcc.go.th	41.00
	http://www.1111.go.th	40.00
	http://www.gcc.go.th	39.00
What do you belief about benefits of using internet to get service of government in comparison with direct face-to-face services?	Save money	81.00
	Save time	77.00
	No travel	74.00
	Easy to use	67.00

According to the table 2, the households had different kinds of ICT, which varied according to socioeconomic status (SES). Only few households had traditional ICT devices such as radio and television, whereas most households had both traditional and modern ICT devices including radio, television, PCs laptop, tablet and smartphone. Most household respondents believed that using internet to connect with government organizations could save time and money, and it was easy to use. However, most preferred receiving news and information from government through traditional devices rather than modern devices. They did not even know any government contact center services (GCC).

Table 3: Percent of agencies and methods that people contacted within the past 12 months

Agents and government offices	Contacting methods (%)			
	Themselves	Telephone	Internet	No contact
Village headman	38.16	28.95	14.47	26.32
Sub-district headman	18.42	32.89	0.00	42.11
Primary school in the village	28.95	3.95	0.00	34.21
Health promotion hospital in the village	47.37	1.32	0.00	22.37
Sub-district administrative organization	43.42	2.63	0.00	26.32
Regional government office	36.84	7.89	2.63	34.21
Central government office	6.58	7.89	1.32	53.95

From table 3, most villagers preferred to contact with government officials and organizations by face-to-face rather than internet. Not surprisingly, only seven households thought that telecenter was necessary for them.

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4. The supply side

From exploration of online government services related to the village, the result could be drawn in the diagram as below.

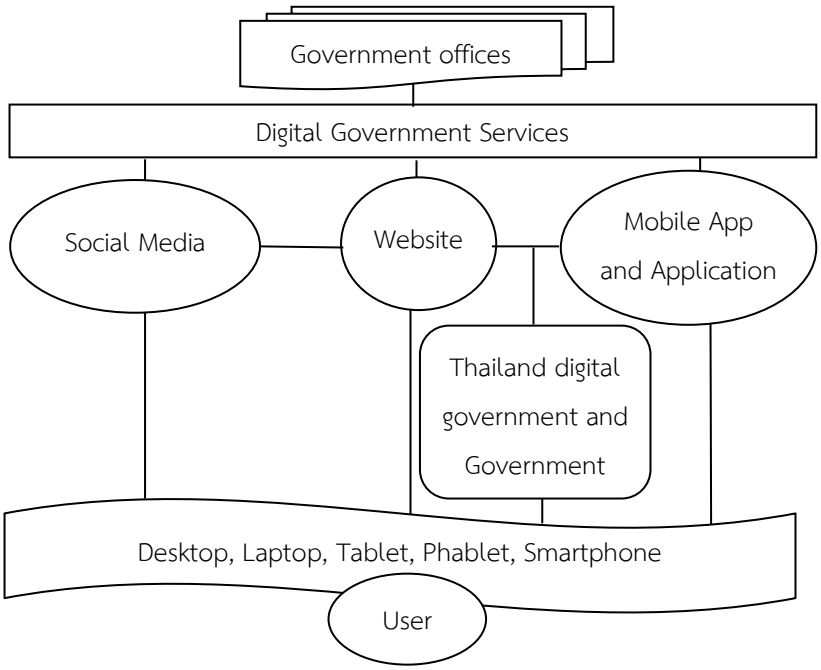

Figure 3: E-Government services diagram

From figure 3, governmental organizations at central, provincial and local levels had online government services; all organizations had websites and most had social media. Many government organizations had deployed the mobile app for public service. People could use the services through PC technologies such as desktop and laptop and in the post-PC technologies such as tablet, phablet and smartphone.

From conducting the interviews and observation about the government services in the field, researcher found as follows:

1) The district administration organizations, SAO, health promotion hospital (HPH) and school used ICTs for their administration and service providing for the public at their offices.

2) Almost all government organizations had no online service system to provide people and households, except service for personal income tax and car tax renewal from central government.

3) Many government organizations used Facebook for information services and contacting with people.

4) The local politicians and leaders preferred contacting with people by face-to-face over through ICTs.

5) Some government services could not be applied to online system; they needed the services manually and by face-to-face. For examples, there were health services that required physical exam and diagnosis by health professionals, and some transactional stages including reporting birth, death and migration, which required authentic identification with government officials.

Discussion

Based on research results, it was implied that the telecenter could not fulfil the government's policy for establishing the telecenter as a channel for e-government services. People in rural Thailand had been familiar with the primary relationship. Therefore, they prefer dealing with government service by face-to-face rather than through digital online.

This study showed similar results with some existing studies, which revealed that the digital divide had been associated with not only technological factors but also the socioeconomic, households, businesses, government, and geographical areas. In order to reduce inequalities of digital accessibility, most telecenters were set up at remote areas in which the disadvantaged people resided, but those people did not want to get benefits from internet (Heeks, 2001; OECD, 2001; Wiburg, 2003; NECTEC, 2003; Sasithanakornkaeow, 2004; AlShihi, 2006).

The telecenters in Thailand are not necessary to use for bridging the digital divide as expected in government policy. From this onwards, it has a tendency that accessibility of telecommunication services among Thai peoples will be better than the past because of following reason.

1) The Thai government sets conditions for the operators licensed to run 4G LTE which must be charged cheaper than that of 3G. (National Broadcasting and Telecommunications Commission [NBTC], 2015)

2) The operator must provide a package price for the disabled, the disadvantaged and those with low incomes. (NBTC, 2015)

3) It is required expanding the network to cover 40% of total population within four years and 50% within eight years. (NBTC, 2015)

4) People tend to have better affordability to digital devices because the price is lower and more available.

Conclusion

The studied site was the rural village within urbanized and industrialized surroundings. However, most traditional people and samples of the study had lived their lives in a primary relation society and they favor contacting with the government through fact-to-face interaction. The other groups prefer to live their lives in the secondary relation. They have the least need to contact with government.

According to the study, implementing telecenter for bridging e-government has encountered difficulties because of governmental and people-related factors. In the governmental aspect, the telecenter lacked financial support for operation and other management including costs for internet, electricity and staffs. In people-related aspect, the socioeconomic factors showed that most people did not need to use e-government services in any transactions because most of them were unskilled labors and low-income earners. For those who had cars, they paid the car tax renewal only once a year. Those who paid the local taxes had to pay at the local office because the online service for the tax payment had not yet been available. In addition, those who had their own ICT devices used the devices only for communicating with family, doing personal and private businesses, and other daily activities, but not for getting services from the government. That is to say, they hardly contacted with government organizations, except reporting birth, death and migration.

Based on the study, it is recommended that Thai government recognize and reduce the gap between supply and demand sides of e-government services in the following aspects.

1) The technology aspect: to support and promote using e-government services at the household level instead of establishing telecenters. The application development should be applied for both PC and post-PC technologies e.g. responsive web design.

2) The social aspect: to encourage people to learn and accept the benefits of e-government services through social marketing strategies e.g. fee reductions. To campaign using e-government services among the new generations at household level.

3) The service context aspect: government should transform transactional processes by reducing document submission and expanding payment gateway to offer more choices including online banking, debit card, credit card, direct debit, direct credit, third-party service provider, digital payment, and digital wallet.

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