EC Development in China

Guangming Wang

Zhejiang Gongshang University(China), Professor

Contents

Abstract

The paper describes the up going and frustration of electronic commerce development in China during the past ten years. All the changes are classified as EC application trends and the trends on EC supporting environment construction. Later, some problems affecting EC development are raised, and one of them: social credit system construction is discussed in detail. The trends of EC development discussed in the paper are based on the practices in China, but it is generally analogous in the rest of the world.

Ⅰ. Introduction

It has been almost ten years since the concept of electronic commerce (EC) was introduced to China. During the ten years EC development in China has gone through three stages basically: rapid expanding (before 2001), moving down slightly (2001 and 2002), and developing smoothly and steadily (2003 and after) again. In February of 2004, Alibaba.com, the largest B2B EC services provider in China, obtained

venture capital investment of 82 million US dollars from four overseas companies, including SoftBank Corporation, Fidelity, Granite Global Ventures and Venture TDF China[1]. This could be considered the signal of EC rebound in China.

The changes in EC for the ten years in China could be summarized in the following aspects.

II. Trends of EC Applications in China

1. From Technique Orientation To Business Orientation

At the early stage of EC development most pioneers on EC business are technology- oriented persons, with a considerable percentage in IT sections. They paid a great attention to technique issues, and concentrated on stock market, however had less interests in business running. This is one of the important reasons that caused the EC recession around 2000 in China and in the world.

Learning from the recession of EC, people started to realize that business in the most important factor to achieve EC success. The composition of EC sector is therefore reconstructed naturally. The first Network Oriented Enterprise Conference Of China took place in Hangzhou in June of 2004 is one of the indications. Over 1000 companies and individuals participated in the meeting[2].

2. From "Mouse" To "Mouse Plus Concrete"

More then five years ago most companies involving EC activities were newly emerged, and purely digital companies, which had neither manufacturing bases, no corresponding physical stores. The term "mouse" represents cursor, is therefore stands for the above business model. The situation today is quite different, more and more traditional (not digital) enterprises, no matter large scaled enterprises, or medium and small sized company, tie to variety forms of EC means, "mouse + concrete" stands for the combination, the term concrete represents traditional business model[3]. It is estimated that, the number of small and medium sized enterprises in China is about 110 millions, among them 20% use EC approaches to support their business. And the percentage is getting larger daily.

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1) http://tech.sina.com.cn/i/w/2004-02-17/1401293444.shtml
2) http://www.ec.org.cn/2004-05/09/content_1458808.htm
3) http://www.datatrans.com.cn/dczn/cap4/cap4-1.htm, http://www.cio.cn/xxhgl/show_detail.asp?newsid=230

Ali Index indicating EC development in China has been presentedse[4].

3. From VAN-based EDI to Internet-based EDI

EDI (electronic data interchange) was developed on value added networks (VAN) at the beginning. It makes EDI more secure, but not flexible enough. It's better to have a national EDI network to provide the connection for people all over the country and provide necessary services. Unfortunately, there is not such network in China yet, although some efforts have been made. It makes the shortcomings of VAN-based EDI visible gradually: expensive connection for off city users, less flexible for business expansion. It's a general trend not only in China, but also in developed countries that EDI is moving from VAN-based architecture to Internet-based frameworks[5]. It should be mentioned that basing on the multi-years development EDI application has accumulated considerably rich resources, most valuable things among them are standards, especially standards related to the definition on data, data segment, business document, etc. They could be accepted without or with modification in Internet-based EDI[6].

4. From Intuitive Activities To Government Guided Activities

The behavior of government has important influence on EC development, especially in China, which is moving from planned economy to market economy. As an example, the National Committee of Science and Technology (NCST) put the project of Research and Development on Key Technologies for Modern Business Informalization into the list of high priority research programs during the "Ninth five years" (1996-2000) period[7]. The project paid a great attention to EDI (electronic data exchange). NCST poured 10 million Yuan into the project, which is consisted of 22 sub projects. Successful EDI applications in the field of foreign trade, customs and domestic trade today are fundamentally based on the achievements of the above research activities. The author and his team had opportunity participated and in charge of 3 sub projects[8].

At the end of the period (year 2000) NCST added one more EC project to support: City's EC

4) http://it.sohu.com/2004/06/01/86/article220338604.shtml
5) Guangming Wang, "From LAN to Internet/Intranet – Progress Scanning of Commerce Modernization in Hangzhou," *Market and Computers,* 97.10, ISSN1007-2632
6) http://www.chinaeclaw.com/readArticle.asp?id=1781
7) http://www.lzisti.net.cn/CXY/jwggxm.html
8) Development and Applications of EDI_DT system, *Proceedings of the International symposium on Government and E-commerce Development,* Zhejiang University Press, 2001.4, ISBN 7-308-02695-7/ F.325, pp.214-217.

Experimental Project. Altogether ten cities were selected, Hangzhou is one of them focusing on merchandise circulation[9], and the author was one of the research team members.

The NCST has decided to put the project Research on EC and Logistics into the list of supported research programs for the "Tenth Five Year" planning[10]. The research program covers a number of sub projects, some of them are listed as below.

- Application demonstration in 15 cities and provinces including Hangzhou
- Key technologies and their integrated applications for modem logistics
- Standard system and its applications
- CRM and SCM
- EC development strategic research
- Construction of EC consulting and service system

In order to promote the development of electronic commerce throughout China, strengthen international cooperation between China and the rest of the world in e-commerce, China Electronic Commerce Association (CECA) was set up on June 21st, 2000 with the approval of the State

CECA is a nationwide non-profit organization related to e-commerce without restrictions on regions, industries or nature of ownership. The Ministry Information Industry (MII) provides the professional guidance, the Ministry of Civil Administration (MCA) is in charge of related registration management The honorable director of CECA goes to the general manager of China Electronic Technology Group Corporation (former deputy minister of the Ministry Of Information Industry) Lǔ Xinkuai, and Miss Song Ling, a high ranking officer of the Ministry Of Information Industry plays the role of director of the council[11]. The head quarter of CECA is located in Beijing. Under the supervising of CECA, Zhejiang Electronic Commerce Association was set up three years ago, the author was honored to be vice chair person of the institution.

Education on EC should also be mentioned. Up to the end of last year 181 universities and colleges (including ZGU) in mainland China have been approved by the Ministry of Education to provide undergraduate study on EC[12], and students majoring in EC has reached a few hundred thousands. In 2000 the National Higher Learning Self Study Examination Guiding Committee opened EC major associate degree examination. In 2003, the EC middle level professional certificates and high level professional certificates were presented jointly by the Higher Learning Self Study Examination Office of Ministry of Education, and CECA. So far nearly 2000 people have obtained the above certificates.

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9) http://www.chinacc.com/00/000501.htm
10) http://www.hd123.com/Asprun/cooperation/hdcenter.asp
11) CHINA ELECTRONIC COMMERCE ASSOCIATION, http://www.ec.org.cn/english-01.htm
12) http://www.21eb.org/2004/6-15/124535.html

As more people are interested in EC, and all levels of the government pay more attention to EC development, the number of EC and EC related conference is getting larger, and the forms of conferences are having more variety. The following list is just some cases.

Starting from 1997 there was an International EC Conference every year organized by National Development and Planning Committee, Ministry of Information Industry, National Economics and Trading Committee, and International Trading Promotion Committee of China. Except the conference in 1997, which was held in Shuzhou, all the rest have taken place in Beijing[13].

The second Sino-American Forum on EC, and the third Conference For EC Specialty Construction For Higher Learning Institutions Of China took place in Chengdu of Sichuan in June of 2004. The meeting was jointly organized by four institutions: National EC Specialty Construction Collaboration Group of Higher Learning Institution, EC Research Center of University of Texas, Austin, USA., EC Specialized Committee Of Association Of Information Economics of China, South-West Financial University.

The International EC Conference, China (Fuzhou), 2004 was held in May, which was supported by China Electronic Commerce Association, National EC Specialty Construction Collaboration Group of Higher Learning Institution, Scientific Association of Fujian, city government of Fuzhou, Scientific Association of Fuzhou.

The First International EC Engineering Conference, organized by the Committee Of Science And Technology Of Shanxi Province, will be held in Xian of Shanxi early October 2004.

III. Trends of EC Supporting Environment Construction

1. From Absence of Law Supporting To Active Law Construction

It could be traced that from 1995 up to today, countries in the world have set up hundreds EC or EC related laws to protect EC development. Although there is still not a single law on EC in China, but the issue of law construction has received wide attention, and high priority consideration from academic circle, government, and people congress. Plenty of work has been done towards setting up laws governing EC activities. Some cities and provinces have presented regulations on EC, such as Regulations on Electronic Transactions in Guangdong, Management Approaches for Digital Authentication in Shanghai, Management Approaches for Digital Signature Authentication in Hainan, etc[14]. More significantly, the draft of digital

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13) http://www.chinabbc.com.cn/yljc/view.asp?newsid=2004421175039127&classid=110
14) http://www.chinaeclaw.com/readArticle.asp?id=1781

signature law has been developed, and was submitted to the Standing Committee Of National People's Congress for review in April 2004[15].

It is worthy mention that a sample law called Model Law on Electronic Commerce set up in 1996 by UN Commission on International Trading could be referenced by law constructors. The law contains two parts, four chapters, and altogether 17 articles[16].

2. From Standard Adoption to Standard Adaptation

It is relatively easy to adopt the standards developed by other countries or by United Unions. And it is actually the practices Chinese government or institutions do generally towards standard construction. The standards set up related to EDI practices is one of such cases. However, developing our own standards, or adapting standards available to well fit in Chinese market is extremely important and valuable. Fortunately, some standard construction jobs related to EC are going on in China.

From technique point of view one of the most important technology achievement related to EC is XML (extensible markup language). XML is a subset of SGML (Standard Generalized Markup Language, ISO8879:1985) developed by W3C (The World Wide Web Consortium). XML is powerful, but is not as large and complex as GSML. It has the following additional abilities comparing with HTML: ability of data structure defining, separating data definition from displaying, enhanced displaying ability and linking ability, ability to connect with databases. Because of the above characteristics XML has developed into the international standard for defining descriptions of the structure of different types of electronic document, therefore, is widely used in EC fields[17]. Due to the fact that XML is a 'metalanguage', organizations in the world have developed a number specialized business languages to fit specific applications.

The EC Technology Research Center of Software Institute, the Chinese Academy of Sciences, has presented and is pushing forward the research program of cnXML (Chinese XML). Based on XML, cnXML supports both English tags and Chinese tags, it supports OBI (Open Buying on the Internet) process models[18].

Due to the fact that logistics is strongly related to EC practices people pay a great attention to logistics standard construction. National Logistics Standard Technique Committee (set up in 2003) under the direct leadership of the Standardization Administration of the People's Republic of China is working hard on the

15) http://www.people.com.cn/GB/14576/14957/2475625.html
16) http://www.jus.uio.no/lm/un.electronic.commerce.model.law.1996/
17) Jianping Xu and Guangming Wang, "Interactive Technique and Method between XML and Databases," *Information Theory and Practices*, ISSN1000-7400, 2003.1
18) http://www.chinatech-bj.com/page/article/bzgf.htm, www.cnXML.org.cn

construction of a series standards including bar code, RFID, etc. The framework of the above standards has been reviewed and modified, and probably will be available in 2004[19].

IV. Other Problems and Solutions

In order to promote EC development, some other jobs should also be well done, such as: social credit system construction, security enhancement on line, payment services improvement on line, etc[20]. This chapter is devoted to discuss the issue of social credit system construction.

It is said that one of the characteristics for market economy is its trustworthiness. Social trustworthiness is fostered basically by means of education and law/ regulations construction, both of which need a lengthy process. China is moving from planned economy system to market economy system, so much work are needed to be done in the sense of social credit system construction. Due to the fact that business activities on line are remote activities and have the property of untouchability, it is far extremely important for EC development. It is a problem to solve that how to raise social credit level efficiently and promptly.

Besides lengthy progress on education and regulation/law construction, it is quite effective measurement to set up third party credit assessment organizations, which, with the permission from relevant government branches, collect relevant data, process the data, and then provide credit information services to the public. As an example, under direct support (it is necessary today) from Zhejiang government the Business Credit Search Center of Zhejiang (BCSCZ) was opened to use in November 2001[21]. It collects related data from a number of banks, Provincial Tax Bureau, Provincial Business Administration Bureau, Customs, Statistics Bureau, etc. And provides business credit related information services to the public.

To promote and regulate the business on credit assessment and credit information services providing Hangzhou government presented Hangzhou Credit Assessment and Management Method for Medium and Small Business in May 2003[22].

There are a number or other credit information services providers in China, some of them have no direct relationship with government. China Company Credit On Line (CNCO), set up in 1999, and sponsored by Yinde Broadband Network Service Co., Ltd. and Agricultural Bank of China)[23]; Chongqing

19) http://www.cbiq.com/news/newshtml/zixun/20030823091405.htm
20) Guangming Wang, *Issues on the Application and Development of Electronic Commerce*, Zhejiang Economy, 2003.19, ISSN1005-1633.
21) http://www.zjcredit.gov.cn/
22) http://www.1128.org/node2/node8/node28/userobject1ai19308.html
23) http://en.cnco.cn/

Business Credit Investigation and Consultation Center (CBCI), founded in June, 1998 under the approval of Chongqing Municipal Government, are some examples. The later provides credit information services to both business and individuals[24].

V. Conclusion and Further Discussion

Before ending the paper the author present the following ideals. First, the paper does not provide any specific values, for example, the annual business volumes for B2C, or B2B. There are so much data released by different paper and materials, but they are not consistent, and it is not comfortable to adopt them. Fortunately, starting from 2002 a book called Almanac on Chinese Electronic Commerce has been published every year. It consists seven chapters including survey, environment, standards, application, trends, enterprises, supplement, covering all the aspects on EC in China. Interesting readers could find whatever useful data from the book. The editing board of the book is composed of officials and experts from 22 national ministries and committees, such as the National Development and Planning Committee, the National Economics and Trading Committee, Ministry of Science and Technology, Ministry Information Industry, People's Bank, etc.[25].

Around the end of last century people around the world doubted the future of EC, starting from 2003 some people are full of optimistic hope again towards EC development. Actually, although EC development could be smooth or devious, could be affected by other factors such as macro economic situation and IT movement, from long period point of view its development track is fundamentally determined by its potential properties. It brings people convenience, reduces business cost, raises the service quality, creates a relatively fair environment for enterprises no matter their magnitudes.

Some other issues related are not listed in the paper, such as improvement of on-line security, enhancement of payment on-line, logistics, etc. actually so much works in the above fields have been done in China recent years. It does not mean that they are not important, but to make the paper not too lengthy, and leave more space for further discussions.

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24) http://www.creditinfo.com.cn/english/index_zxjj.html
25) http://zhengzhou.bookschina.com/book_detail/this.asp?book_id=335710

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