

Technological Framework and Application of Exhibition Electronic Business

A Case Study of China Import & Export Fair

Yong-jun Chen¹, Shi Tan², Hai-jun Zhao¹, Cheng Hua¹, Ju Xiang¹

¹ Guangdong Electronic Business Market Application Key Laboratory,
Guangdong University of Business Studies. #21, Chisha Road, Haizhu
District, Guangzhou, Guangdong Province. 510320, P.R.C.
mikechen@gdcc.edu.cn

WWW home page: <http://www.gdec.org.cn>

² Electronic Business Section of China Imports and Exports Commodity
Trade Fair

Abstract. The combination of the electronic business and the exhibition industry has become an inevitable trend of the development of the exhibition industry. Through the efforts of many years, China Import & Export Fair has built a solid basic hardware platform for electronic business, hence made the exhibition management and electronic service e-enabled and web-enabled, then established the outward communication service systems, and built up an OA platform for foreign trade center. This paper provides a demonstration research analysis, and proposes a general model for the framework of electronic business in the exhibition industry.

1 Introduction

Electronic business is an important means to enhance comprehensive national power and to make great strides in social productivity. The electronic business development is an inevitable trend of boosting the national economy and social information development. A report named "Electronic business is becoming a necessary means to increase city competitive competency" was recently issued by Ccidnet Consultant Company (www.ccidnet.com), an authorized IT consultation organization.

Exhibition industry is a new prosperous industry in china with wide potential market and promising future. It can directly promote economic development and boost trade communication in an effective way. With rapid development, it has become an important composition of the third industry in China. Exhibition industry is an integrated services trade industry tightly related to communication, traffic

transportation, city construction, tour and leisure, hotel and restaurant, advertisement and printing and others. It has been seeking to utilize information technology to improve operational efficiency and to increase the whole operating level. It has been an inevitable trend for the exhibition industry to take advantage of the electronic business to improve the exhibition industry in recent years. A system combined exhibition electronic business and information service with proper design, perfect function and friendly interface has been the infrastructure of the modern exhibition industry [1, 2, and 4].

2 The Construction of China Import & Export Fair Electronic Business System

Exhibition industry is playing an important role in Guangzhou. national economy[3]. As the biggest exhibition in China, the electronic business system of the China Import & Export Fair has an effect of demonstration and standardization, hence has significant reference to the construction of electronic business system in exhibition industry in China.

The electronic business system of China Import & Export Fair consists of five subsystems:

- 1) Business management service system.
- 2) Trade fair website,
- 3) Spot service system.
- 4) Foreign trade electronic administrative system.
- 5) Online hardware support platform.

2.1 The Business Management Service System

The business management service system can be divided into two parts: one is the business management service system facing exhibitors; the other is the service system facing the merchant customers. The former is based on the exhibitor database and the later is based on the merchant customer database. The information flow in the whole process of the exhibition business operation hence can be handled.

(1) The Management Service System Facing Exhibitors

The Management Service System Facing Exhibitors consists of subsystems such as online record management system, online card management system, transaction statistic system, online one-stop shop management system and others. It is a business management system that using modern electronic business technologies to establish the business between exhibitor enterprises and all levels of management departments in China Import & Export Fair. It aims at leveling up the exhibition and management of China Import & Export Fair by means of network, and increasing the visibility, fairness and transparency of the stall and card distribution in China Import & Export Fair. At present, it has helped China Import & Export Fair to implement the information management of some operations such as stall distribution, card management, and exhibition preparation.

1) Online Records Management System

The first stage of the record management system development was finished by the 90th session of China Import & Export Fair. It has become a mature system tool after several sessions perfecting. The exhibition preparation and exhibition electronic management level of China Import & Export Fair thus reached a new stage and the online administration of traditional operation thus became more convenient, more efficient, more visible and more transparent.

The functions of the system cover all traditional business related to China Import & Export Fair stall distribution such as the application submitting from the enterprises, the qualification check and approving of exhibition applications of the enterprises by the commercial association/trade group, the stall distribution inquiry/statistics. It made the process of charge for trade fair group stall information-enabled. In details,, the pre-charge notice and charge notice to each trade fair group are produced according to the situation of the stall distribution for the trade fair group; and then the exhibition refund form for each trade fair group is automatically built according to the exhibition map record, so that the checking and accounting of China Import & Export Fair stall management is web-enabled.

2) Management System of China Import & Export Fair Merchant Card

In the 91st session of China Import & Export Fair in Guangzhou the “Exhibitor Online Card Handling System” was issued, and merchant card dealing on online was then promoted in four exhibition groups. The range of the 92nd session experimental unit has extended to six chamber of commerce and 10 trade groups based on the success of the former two sessions.

A uniform China Import & Export Fair management platform was developed in the 93rd session of China Import & Export Fair with the range of card handling expended to all trade groups, chambers of commercial and exhibitors. All kinds of cards included in China Import & Export Fair such as exhibitor card, work card, temporary card, arrangement and withdrawal card, conference card, vehicle card, foreign representative card, accompanying card, interpreter card, and so on, were included and handled online, while the guests card was exclusive. Business functions such as information submission, card dealing, card changing, business statistics, card index checking, card handling fee, payment and settlement and so on, were provided online. With all cards handled online, the hidden trouble on safety of the traditional card dealing can be avoided; the card handling procedure can be simplified; and the pressure on the spot exhibition can be reduced.

3) Transaction Statistics System

Transaction Statistics System is mainly used in the statistic of exported transaction daily concluding to offer timely and precise data to support various departments to make decisions. According to the requirement and the instruction of the former ministry of foreign economy and trade, export transaction statistic method of China Import & Export Fair was regulated. As a result, the transaction statistic form delivery became timelier; the commodity classification became closer to custom statistic; and the classification details were specific to each transaction

country. The statistic classification can really meet different needs of sponsors, chambers of commerce, and trade fair groups.

4) One-Stop Shop Service System

Traditional handwork operation mode was replaced by spot computer charge mode. Thus the efficiency of application procedure for dealing various service items of the exhibitors was increased. The One-Stop Shop Service System has become the core operational system during China Import & Export Fair arrangement period. At present, it has helped to implement the exhibition stall configuration confirmation from stall map, exhibition configuration prefabrication and repair, exhibitor spot services, background service and the whole processing electronic operation and data synchronization. Hence the precision and efficiency of the spot exhibition operation were greatly increased.

(2) Service System Facing Merchants

The Service System Facing Merchants includes subsystems such as the merchant invitation system, the merchant registration system, the electronic invitation and online card handling system, the VIP merchant management system and so on. The operation of invitations and registering customers now can be managed electronically; the data support merchants to make decisions can be tracked and analyzed; the traditional business is extended successfully to the Internet; the procedures for merchants to deal with long-distance business become more convenient, and communication costs are saved.

1) Merchant Invitation System

The Merchant Invitation System is an operation system for merchants to communicate with China Import & Export Fair. Functions of system include invitation issue, investigation, analyses, and so on.

2) Merchant Registration System

The Merchant Registration System is an operation system handling card to merchants. Its main functions are register, card handling, statistic, analyses, and enquiry. It can offer complete and precise basic data to merchants and has gradually formed the core database of customers.

3) Electronic Invitation and Online Card Processing System

The Electronic Invitation and Online Card Processing System has functions such as electronic invitation, electronic invitation issue, electronic liaison, online investigation, PVC card preprocessing, pre-registration, and so on. All buyers are managed based on the membership system. Information can be self-maintained and transactions can be self-operated by buyers through Internet. Advanced online development technologies are adopted to extend clients invitation, card handling and liaison to Internet areas. Thus the capability of response to customers is greatly enhanced; the contact channel between the merchants is developed; and contact cost is reduced.

4) VIP Merchant Management System

VIP Merchant Management System is employed to systemically manage merchant invitation and liaison. It is executed to realize functions as: recording and inquiring basic information of the important customers, recording and checking visiting business and liaison process of important customers. Through related data collection, sorting, contrast and analysis, it offers scientific decisions and practical tools for the work of invitation.

2.2 Spot Information Service System

During the China Import & Export Fair, services of high quality including information field service, information tool service, and information services are offered to exhibitors through spot multi-form information service products such as scan enquiry, compact disc, broad band and electronic business center.

(1) SCAN Inquiry System

This system is based on the database of the exhibitors at China Import & Export Fair. It is an important information inquiry system to offer participants information, exhibition information, demand and supply information, as well as exhibition service information to the exhibitors during the trade fair. The classification of enterprise characteristics and products are more detailed, and is successfully integrated with the records system.

Information of more than 8000 exhibitor enterprises in each session of China Import & Export Fair has been collected, sorted and checked. There are 36 SCAN desks with consultants in the exhibition hall during the exhibition event to offer comprehensive, precise, and integrated information consulting services.

(2) Compact Disc (CD)

China Import & Export Fair information CD is a kind of information product to publicize trade fair and China Import & Export Fair exhibitor enterprises. It is issued twice annually by China Import & Export Fair which is held two sessions annually. It contains up to date data from the latest session of China Import and Export Fair, the 8000 participant enterprises, and 100000 exhibition products. The CD can be directly distributed free to more than 100000 merchants. It is a major reference tool for foreign merchants to contact exhibitor enterprises.

(3) Electronic Business Service Center

There are twelve electronic business service centers set in the exhibition hall in each session to offer exhibition participants various services such as email receiving and sending, selling card printing, online fax, information communication, online marketing, trade cooperation, member logging-on, and so on. In addition, various information products of China Import & Export Fair are actively publicized.

(4) Offering Broad Band and Rental Computers Service

High wire speed online communication service is offered to exhibitor enterprises; wireless Broad Band service is offered to mobile users including foreign merchants and reporters; meanwhile, computer lease and hardware support services are offered.

2.3 The Official Website of China Import & Export Fair

The proposition of the Official Website of China Import & Export Fair is professional exhibition website for international trade. Found in autumn 1999, the website is completely updated in October 2001 and comprehensively offers lots of information and partially realizes some traditional online transaction. It has become the important window of China Import & Export Fair for invitation business and exhibition service. With the continual increasing in specialization and internationalization, the website construction of China Import & Export Fair is striding toward electronic business. The website of China Import & Export Fair features following functions:

(1) Publicity and business invitation

The website provides different language versions such as simplified Chinese, complicated Chinese, English, Japanese, German, French, Russian, Spanish, Arabic, and so on. Information is distinguishingly offered in different versions according to the targeted visitors on the website. Through merchant exhibition guides, exhibitor notice, news center and other columns, latest authority information of China Import & Export Fair can be timely issued. It is an important window of the business invitation by offering comprehensive and precise information on China Import & Export Fair to all exhibitors and merchants.

(2) Online Transactions of Traditional Business

1) Electronic Invitation and Online Card Processing System

The functions of this system are the same as the functions of the electronic invitation and online card processing system in service system facing merchants.

2) Easy-Connection between Exhibitors

“Easy-Connection between Exhibitors” online exhibition service center has been established for exhibitors; services to participant enterprises are gradually integrated; spot service, online reservation and information inquiry service are provided. In current phase, several contents such as exhibition information, transaction forms, and important notice are integrated by the platform; and some functions such as the declaration form enquiry, withdrawing stall configuration, examining chart result and other function are promoted; and services like broad band and information equipments reservation are offered online thus a new online approach for exhibitors to applying for services in advance is available.

3) Exhibitor Information Maintenance Online

At the beginning autumn of 2002, the transmission modes of SCAN information from exhibitor enterprises are partially changed from by mail of fax to by submitting directly online after logging on China Import & Export Fair website. Compared to the traditional mailing method, the way exhibitors submitting and maintaining information through web can ensure the accuracy and integrality of data. It is more convenient, faster, and more economic. Meanwhile, it can relieve typists from heavy workload.

4) “Authorized Purchase” Online Reservation

In order to cooperate with the event of “online purchasing” held in the 93rd session of China Import & Export Fair, an “online purchasing column” was issued on the website. Company information and purchasing lists from four purchasing companies including America Home Depot, were issued, and online reservations were offered on the website. Exhibitor enterprises can check event contents on the column, and can register their companies and main products according to the requirements. Buyer enterprises then can make appointments to carry on negotiation with exhibitor enterprises at China Import & Export Fair.

(3) Electronic Business Functions

Through columns like exhibitor enterprise, product inquiry, supply and demand information issuance, business affair section, and online business negotiation platform, the website offers international trade intermediaries service to national and international buyer companies. With multimedia means and multiple manners, the brand characteristics of China enterprises and culture are fully displayed, and China foreign trade export is boosted.

Online Trade Fair is improved version amended and perfected from the original online negotiation section. It has some new characteristics as following:

1) Better Customized Services

Business assistant offers multiple customized functions setting according to the requirements of users, and thus provides various customized services including “my negotiation”, “my search”, “my collection” and “customized services”, “my statistics” and so on.

2) Offering multi-level information safety guarantee

Sensitive information is classified and set according to the safety level to guarantee the safety of key data from enterprises; the management mode of the authorized browsing products makes enterprises checking individually, through which the spying from competitors in the same industry is avoid; the detailed information resource instruction guarantees the legal use of enterprise information.

3) Multiple Technologies Supported Trade Negotiation

Two negotiation modes—one is based on online video and the other is based on trade forms, are offered. Enterprises can select either mode according to their actual requirements. The detailed and practical online training using streaming-media offers enterprises guidance and help on electronic business application.

4) Comprehensive statistics analysis function

Relevant data for the electronic business are offered to enterprises; business event situation on the China Import & Export Fair website is comprehensively analyzed; degrees of attentions on companies and products are reflect; data to support online marketing decision-making are offered.

2.4 Construction of Foreign Trade Center Electronic Administration

The objective of foreign trade electronic administration construction is to offer decision-makers assistant decision supports, and to help functional departments to make office work, decision-making and transactions e-enabled through constructing and employing OAS system. Thus foreign trade center affairs processed without paper, administration information e-enabled, and transactions processed simultaneously can be gradually realized. Efficiency and quality of transactions then can be enhanced.

Foreign trade center has constructed and promoted OA information management system in batches and in phases. At present, foreign trade personnel management, capital management, financial management, party affairs management, enterprise affairs management, daily exhibition management, and other administrative subsystems have been launched to use. The center electronic administrative network includes 15 subsidiary platforms, which is playing an important role to support the center business management, daily administration, and internal communication.

2.5 Network Hardware Support Platform

At present, China Import & Export Fair has high speed network system all over the China Import & Export Fair lobby, through which the network connection between two exhibition halls of Guangzhou is implemented, and kilo-mega trunk and hundred-mega port are basically made realized. There are 2500 hundred-mega-ports in the exhibition hall located in Lihua Road and over 10000 hundred-mega-ports in the Pazhou exhibition hall. Thus the needs of the exhibition enterprises to use the network with high speed and with multimedia demonstration can be satisfied sufficiently. The core network safety project implemented centralized controlling of network anti-virus and supervision of malfunction retrievals; core data service server double-machine warm back-up project is finished; a batch of high performance service equipments are possessed of. Safe and reliable hardware support and network operation environment are offered to the electronic business of the China Import & Export Fair.

(1) Hardware Infrastructure

Some high performance computer equipments has been purchased for China Import & Export Fair. During the trade fair, the maximal number of running computers in the center (group) computer network reached 2500; various running servers are 46; and there are some printing equipments in different classes.

(2) Network System

The high speed network system all over at the trade fair is based on trunk- kilo mega, port hundred mega. There are 2500 of 10 mega information connecting point, through 200M bandwidth international internet connecting, which can fully meet the demand of the exhibitor enterprises to use the network with high speed and multimedia demonstration. In No. 1, No.2, No.3, No.5 hall, No.9 conference room, and in some public rest-rooms, there are wireless transmitting and receiving equipments that can meet the needs of wireless network communication service for

mobile users; there are 3000 network access ports in transactions areas of the trade fair hall, which can meet the requirements of the foreign trade administration and transactions management system.

(3) Network Security

The implementation of core network safety project has realized the centralized controlling of network anti-virus and supervision of malfunction retrievals; the implementation of core data service server double-machine hot back-up project and the server optimizing project have provide reliable hardware support and network operation environment for the China Import & Export Fair electronic business.

3 Analysis of General framework of exhibition industry electronic business technology Architecture

Presently, there is no literature review on exhibition industry electronic business integrated framework. Through analyzing Guangzhou Import & Export Fair electronic business system, we proposed a general framework of exhibition electronic business technologies as following:

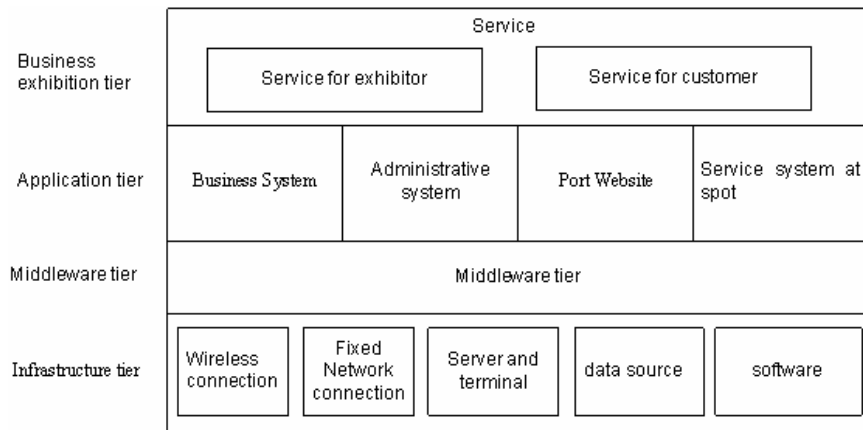


Fig 1 Exhibition electronic business framework model

The general framework of exhibition electronic business can be displayed as four tiers, which are 1) Infrastructure tier 2) middleware tier, 3) application tier, and 4) business display tier.

Infrastructure tier mainly offers basic software and hardware facilities. It consists of the network system, the system of servers and various terminals, the basic data source, and basic software. Network system includes wireless network ((GPRS/3G/WLAN/WIMAX/WIFI and etc) connecting, network connecting and exhibition intranet. The middleware tier mainly offers date integration of ground

level data source, communication, encryption, and other services. It is mainly composed of various middleware. Application tier is made up of four parts which are the business system, the administration system, the portal website system, and the spot service system. The business exhibition tier mainly offers various services to participants. It mainly includes services facing exhibitors and services facing merchants.

The model of exhibition industry electronic business framework is a general mode which is abstracted from real exhibition electronic business framework. It is expected to offer beneficial guidance for the combination and development of China exhibition industry and electronic business.

4 Conclusion

The exhibition management and service system shall be e-enabled and web-enabled with the development of the exhibition industry; the outward communication service system and OA system shall be built up with core of professional exhibition website. Going on this premise, various advanced facilities and communication systems such as digital information transmission networks and satellite communication systems shall be built up, and the combination and development of exhibition industry and electronic business shall be achieved. Undoubtedly, it has important meanings of demonstration and reference to the construction of exhibition industry electronic business in China, if we generalize the course of China Import & Export Fair electronic business system, and abstract the framework model of exhibition industry electronic business in exhibition industry electronic business.

References:

1. X.J Yan, and W. Liu, *Some Problems for the Internet using for MICE*, Theory and Practice, 2004(1),pp54-85.
2. Bei Jin, "The Application of Electronic Commerce in the MICE of Modern City", *Journal of Beijing City College*, 71(3), pp.84-88(2005).
3. S. Tan, Electronic Business Promoting the Development of Gaungzhou Trade Fair. The Proceedings of Electronic Business and Guangzhou *Exhibition Development Salon*, Guangzhou, China. November, 2006(unpublished), pp1-6.
4. X.J Cao, The Prospect of MICE Electronic Business Development, The Proceedings of Electronic Business and Guangzhou *Exhibition Development Salon*, Guangzhou, China. November, 2006(unpublished), pp21-24.