

The Tread of E-Business Development and Its Key Technologies

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1. Brief History of E-Business

China has started the word E-Business since 1994. However, If we consider it in wide meaning, It will be much earlier.

At 1978, China has opened its door and the reform has started too. The computer application has expended to economics and management.

Two Understandings

E-Business vs. E-Commerce

Wide vs. Narrow

30 years vs. 15 years

General Background

In 30 years, China has changed dramatically:

Import and Out-port grow up 330 times;

Average saving from 23 yuan to 12300 yuan;

Average living area from 6 sq.m to more than 20 sq.m

Fast expending

1979 — about 9000 computes.

1983 — about 130000 computes.

1986 — over 1000000 computes.

Many factories has bought big computer, as IBM4381, HP3000.

However, according to the statistics from the Electronic Ministry, the average usage rate is only 15%.

Local Usage (1978-1992)

Key Word : MIS
(Management Information System)

key Technology: DBMS
(Database Management System)

Typical Usage: Accounting,
Inventory, Office Automation,
Salary and so on.

Pre-history of E-Business

Key Word : EDI (Electronic Data Interchange)

Key Technology: X.25, EDIFACT, WAN (vs. LAN)

Typical Usage: International Trade, Long Distance Shipping, Container Management.

Start Stage (1991-1995, the 8th Five years Plan))

Key Events:

- US opens Commercial usage for INTERNET**
- NII (National Information Infrastructure, Clinton) in USA**
- Three Golden Projects in China**
- Five Pilot Projects on EDI in the 8th Five Years Plan.**

Marketing Usage (1996-2000)

**Key Word : E-Commerce,
Network Marketing**

**key Technology: HTML, Web
page design.**

**Typical Usage: Marketing,
Enterprise Portal , CRM (Customer
Relationship Management) and so
on.**

Web Service (2000- now)

Key Word : Web Service

**Key Technology: IPv6,
Wireless Communication, Grid
Computing, Cloud Computing.**

Key Concepts:

- Platform and SOA (Service Oriented Architecture)**
- Standard as XML, UDDI ...**

Current Situation

— Most big enterprises have set own application system, as inventory, accounting, HR etc.

— 90% big enterprises and 38% middle and small enterprises have been involved E-commerce.

— The trade value of E-commerce has over 1500 Billions.

2. What is new today

After 30 years or 15 years development, we are facing many new situation new problems.

In one words, Opportunities and Risks coexist. The main points of them as followings.

More Business Oriented

——Many projects have failed because of technique oriented approach

——Business Process Re-engineering

More People Oriented

—Everything is done by people, if relative people don't want to do, the computer can do nothing.

—Human behavior have important influence on the application system.

More process Oriented

——It is Impossible to decide everything at the beginning. The Computer Application System is a process.

——The system should be grown up from the enterprises, not put in from outside.

More mechanism Oriented

——The most important is to design proper mechanism, let the system can run its self.

——Understand relevant side's behaviors is the key activity in the project.

More Data Oriented

—Any System will be meaningless if it have no enough real data. We need move our concern from system building to data usage.

—As more data have been collected and stored, efficient exploration and use data became key issue for E-business.

3. Key Technologies

Modern IT (Information Technology) is the base and tools for E-business. We need pay more attention to trace its development, not only from technical perspective, but also its influence on our E-Business practice.

Here I just want emphasize following three fields.

Data Collection Technologies

As the importance of data has been concerned, the Data Collection Technologies has attracted more attention today.

As more efficient sensors, remote data collection, RFID, all of them dramatically improved the completeness and accuracy.

Wireless Technologies

As the scope and function expanded, the data transformation convenience becomes one of key issues concerned.

therefore, E-Business based on wireless communication technology becomes hot topic.

Data Mining Technologies

Data Mining is not a single technique, instead of a group technologies which purpose is find out useful information from mass data storage.

So called BI (Business Intelligence) is just based on it .

4. Research Skeleton and Topics

From the research perspective, today there are many theoretical and practice issues needed deeper research based on Chinese reality.

These issues are quite new, we need new research skeleton and tools.

Research Skeleton

About the research in E- Business we can think as followings:

- Behavior model for the relevant economic agent;
- Business model in new environment;
- Technical Architecture to implement above business model;
- The role of government and related proper policy.

Research Tools

To deal with these issues we faced , we need theoretical tools as followings.

- Modern Economic Theory;
- Modern System Science;
- Game Theory and Mathematics.

Suggested Topics

Some Topics can be in consideration, for examples:

- **Statistics Index System for EB**
- **Value Chain in EB**
- **Business Model for Wireless EB**
- **Service Abstraction and Outsourcing**
- **Law and Tax Issues for EB**

A stylized green landscape with a tree and a hill. The background is a gradient of green, transitioning from a lighter shade at the top to a darker shade at the bottom. In the center, there is a large, leafy tree with a thick trunk and several branches. Below the tree is a dark green, jagged hill. At the bottom of the image, there is a white horizontal band that looks like a path or a body of water.

Thank you very much!

Q & A