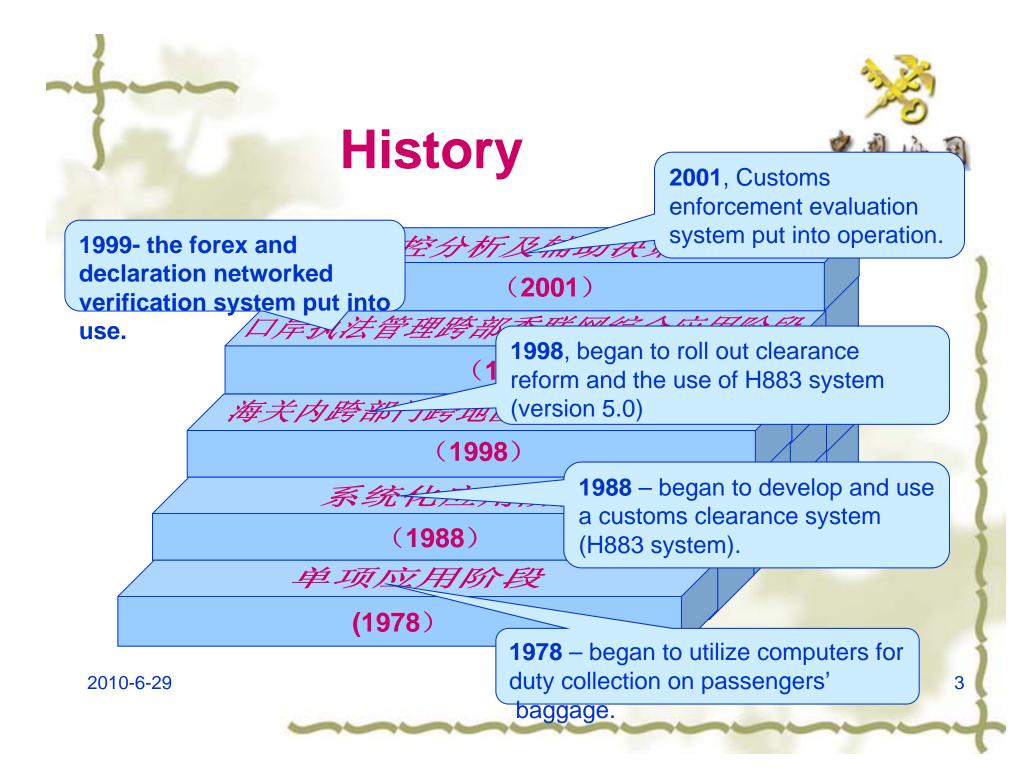


Application of Information Technologies in China Customs

— WU Jiang, Shanghai Customs College

2010-6-29

History Status Quo
 Solution: E-port Solutions Importance of application of IT in **China Customs** 2010-629 H2010 Project





Importance of application of IT in China Customs
2010-6-H2010 Project

Scale



30 years of development. Constant explorations and accumulation. Network infrastructure, technological equipment, project development and applications. Gradually phased in the above-mentioned applications. Preliminary explorations are made in networked clearance processing, smart cargo flow control, and digitized management system.

(1) Network infrastructure

Scale

Based on telecom companies' broadband PSTN ATMs, complemented by DDN lines, frame relays, X.25, and backed up by telephone dial-up lines, we established a large-scale networked system covering all the operational 2010-6-2 sites nationwide totally over 800 nodes.

Scale 2 Investment in Science, Technology and Equipment

By the end of 2009

Small machines	390
PC servers	2575
Storage systems	291
PCs	73,000
Network equipment	8222 sets

Container inspection systems	59
Inspection equipment for articles	440 sets
CCTVs	22 sets
Express consignment inspection systems	3 sets
Other equipment	

7

2010-6-29





(3) General picture of project development and applications

"E-Customs" projects: > 120

"E-GACC" projects: > 40

"E-port" projects: > 42

Local projects developed by regional Customs: > 280

2010-6-29

History Status Quo **Solution: E-Port ••**Other major applications Importance of application of IT in **China Customs**





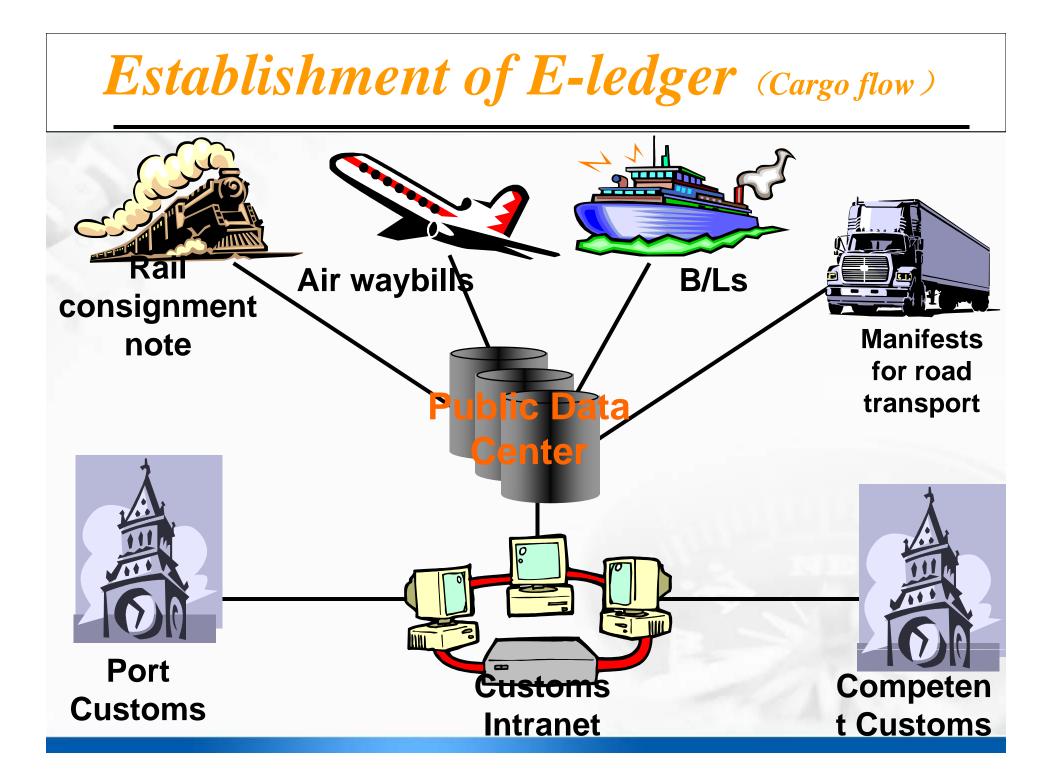




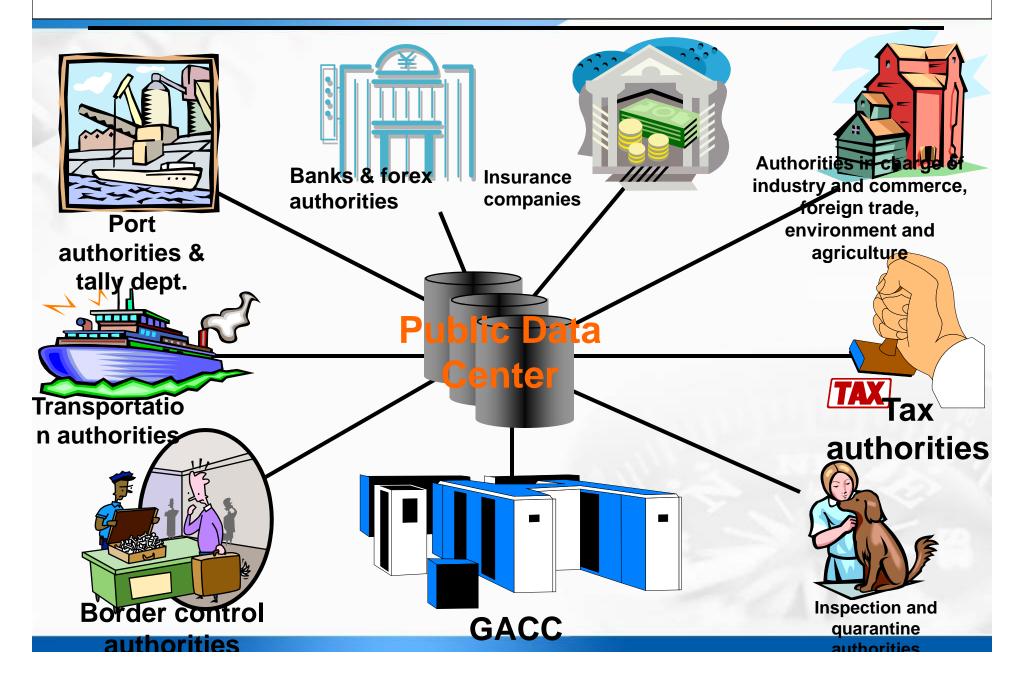
中国海天信息现代化的创築



China E-Port is a public data center and data exchange platform based on telecom companies' PSTN, which networks the authorities in charge of industry and commerce, Customs matters, forex management, foreign trade, quality supervision, inspection and quarantine, as well as banks, importers, exporters, companies engaging in processing trade, foreign trade intermediaries, and owners of goods, making one-card for all and one-stop services possible. To establish a new management model featured by "E-ledger, networked verification and online services", we built an integrated data center, i.e. single database, single switch center and single window. This has helped with the realization of "standardized and transparent enforcement, extended time and space for Customs control, holistic solution, risk management, and rule of law".



Cross-cutting Networked Verification





Mottos of China E-Port:

Service-oriented, demand-oriented, promoting economic development through cooperation.

Principles of development:

"Unified certification, unified standards, unified brand"

What is an E-Port

DE CHINA E-PORT

The goal is to build a unified information platform aimed at port clearance and enforcement mainly, which gradually expands to relevant logistics business and services, to realize integrated clearance, integrated logistics and integrated foreign trade. Two components:

- 1. China E-Port. Designed to realize data sharing and networked verification among government agencies under the State Council for integrated clearance, a shift from separate information platforms towards a single unified information platform. Information provided by those government agencies through this unified information platform is only intended for providing services for enterprises, so only involves data and information related to clearance, and other information (e.g. the proprietary information of the government agencies) is still kept within their own information systems and not disclosed to businesses.
- 2. Local E-Ports. Designed to bring the core procedures for integrated clearance and relevant logistics and business services onto a single unified information platform for local authorities, local institutions and business, to realize nationwide "unified certification, unified standards, unified brand".

Objectives of China E-Port:

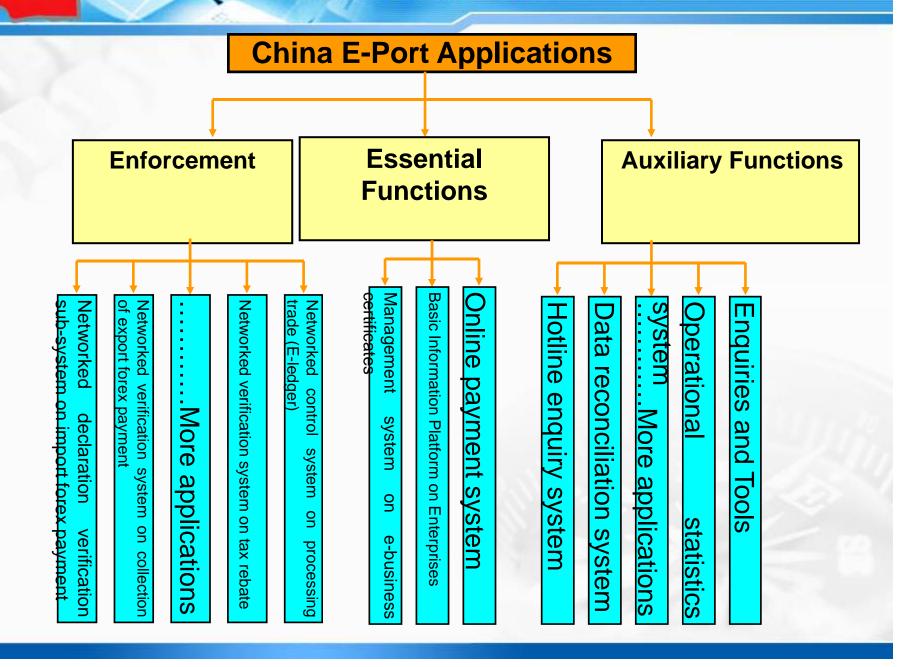
To be a paragon of China e-governance. Within 5 years, to build E-Port into a unified information platform to realize one portal for access to all, one-time subscription and one-stop processing of formalities, for both port clearance and enforcement and relevant logistics and business services. This will render port enforcement and administration more effective and efficient, and make clearance more orderly and easier, thus elevating China's openness to the outside world and its competitive edge on the international arena.

Status Quo of China E-Port

A total of 61 application projects already put into use.

Interoperability and information sharing is now available among the National Development and Reform Commission (NDRC), GACC, State Administration of Foreign Exchange (SAFE), State Administration of Taxation (SAT), General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ), State Administration of Industry and Commerce (SAIC), Ministry of Commerce (MOFCOM), Ministry of Railway, Ministry of Environmental Protection (MEP), China Council for the Promotion of International Trade (CCPIT), Trade and Industry Department of Hong Kong SAR, Macao SAR's Economic Service, as well as the Bank of China (BOC), the Industrial and Commercial Bank of China (ICBC), the Agricultural Bank of China (ABC), the Bank of Communications (BOC), China Merchant's Bank, totally 13 commercial banks. 470,000 companies have jointed this platform. Everyday, it processes around 1.2 million edocuments. China E-Port's portal daily hits have reached 4.8 million person times. The systems are operating smoothly.

🗘 🖻 🖶 🗗 🛱 🛛 CHIINA E-PORT



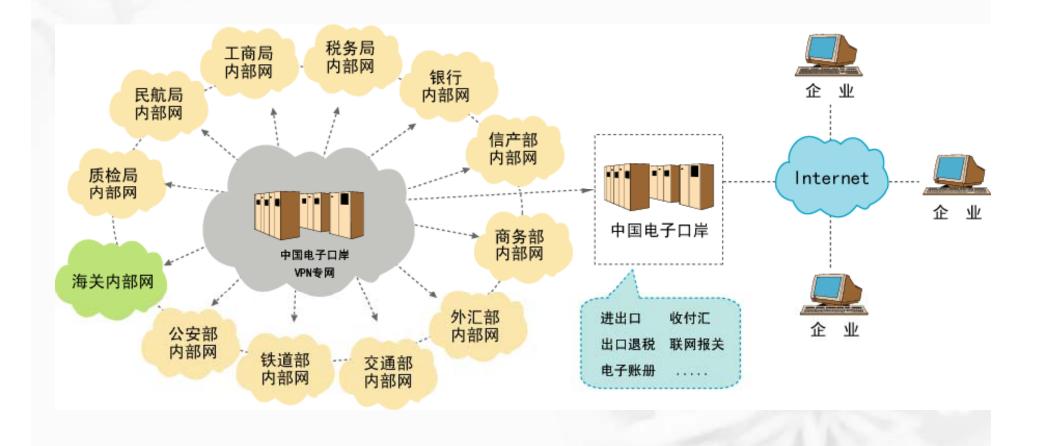
Major Functions of China E-Port

- (1) data exchange
- (2) transaction processing
- (3) evidence storage and production
- (4) standards switch
- (5) enquiries and statistics
- (6) network isolation
- (7) online payment

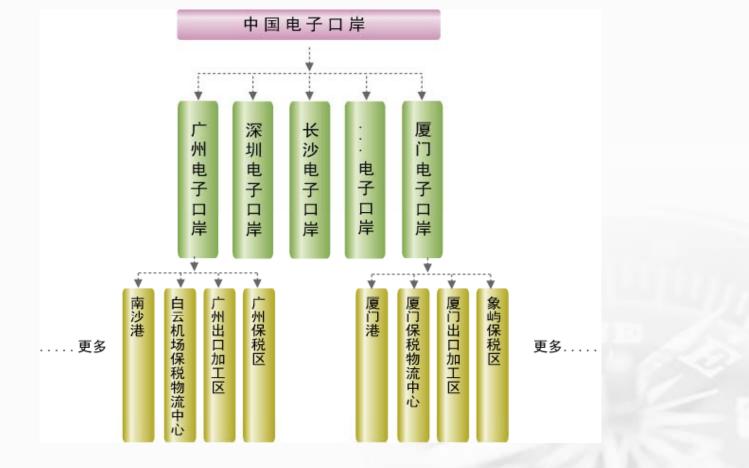
Importance of China E-Port

- Enhanced port enforcement and administration, elevated administrative enforcement capacity for government agencies
- Raised clearance efficiency, and reduced costs for businesses
- Improved non-physical environment for investment, and promoted development of logistics industry
- Advanced e-governance, and improved government services

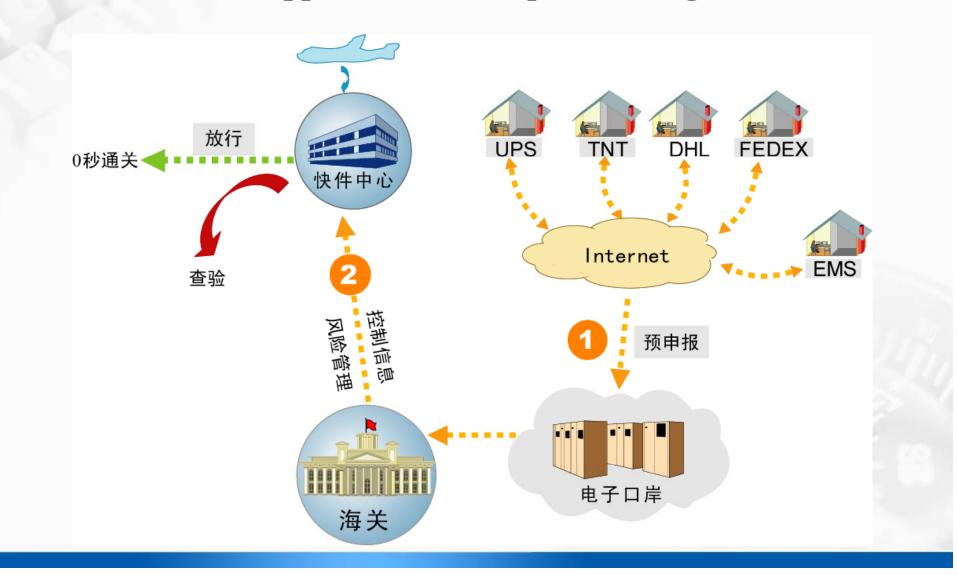
E-Port Network Structure



E-Port Vertical Management Architecture



Networked Applications for Express Consignments

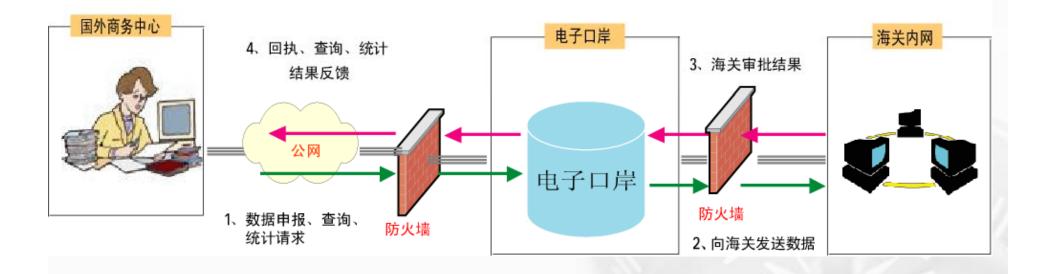


Networked CO Verification System among Laos, Cambodia and Myanmar

国外发证机构

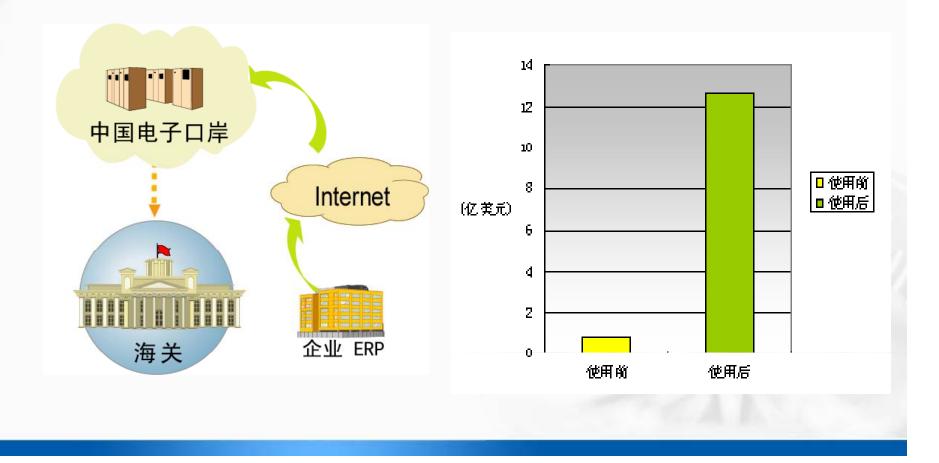
电子口岸

H2000系统



Networked Control System on Processing Trade

Before using this system of China E-Port, Inventec's annual export value was only US\$ 80 million. After utilization of the system, the annual exports surged to US\$1.27 billion, a 15-fold increase.



中国电子口岸 CHINA E-PORT

With the applications of China E-Port, remarkable economic and social benefits have been brought about in port clearance and administration as well as the modernization and informatization of logistics. We are looking forward to close informatization cooperation with other countries to make even greater contributions to the security and facilitation of global trade.

English Version





欢迎您访问 www.chinaport.gov.cn中国电子口岸。

中国电子口岸是国务院有关部委将分别掌管的进出口业务信息流、资金流、货物流等电子底帐数据集中存放到口岸公 共数据中心,为各行政管理部门提供跨部门、跨行业的行政执法数据联网核查,并为企业及中介服务机构提供网上办理进 出口业务服务的数据交换平台。

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2.	、在输入框中输入IC卡密码。		
3,	、请点击系统主页【退出系统】退出,	取回您的IC卡。	
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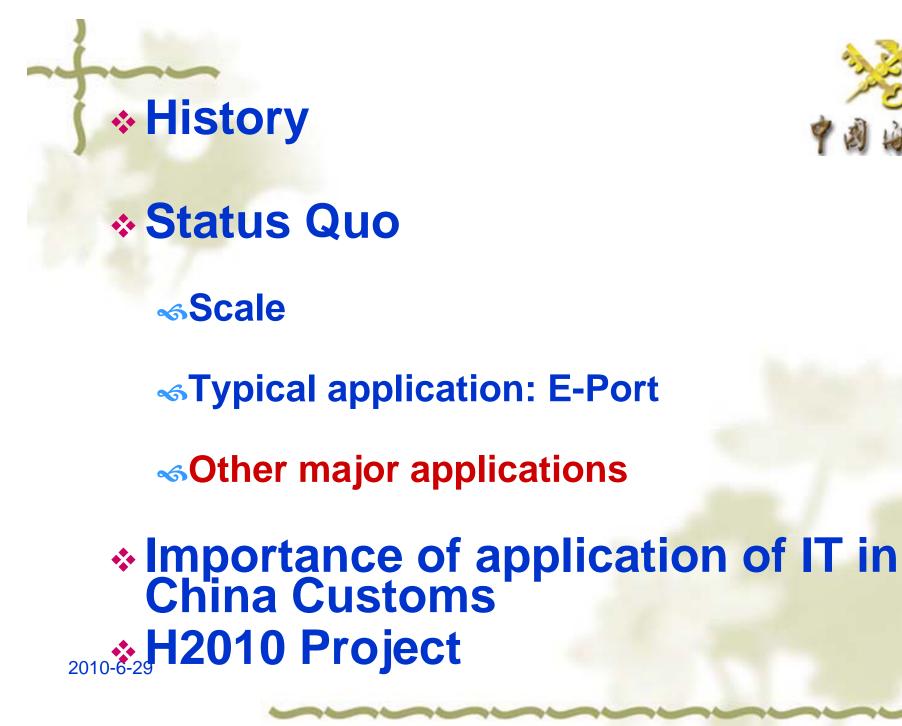




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海天編号 近口口岸 八里店 备案号 合同协议号						
进口日期 20030704 申报日期						
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Major Application System----E-Customs



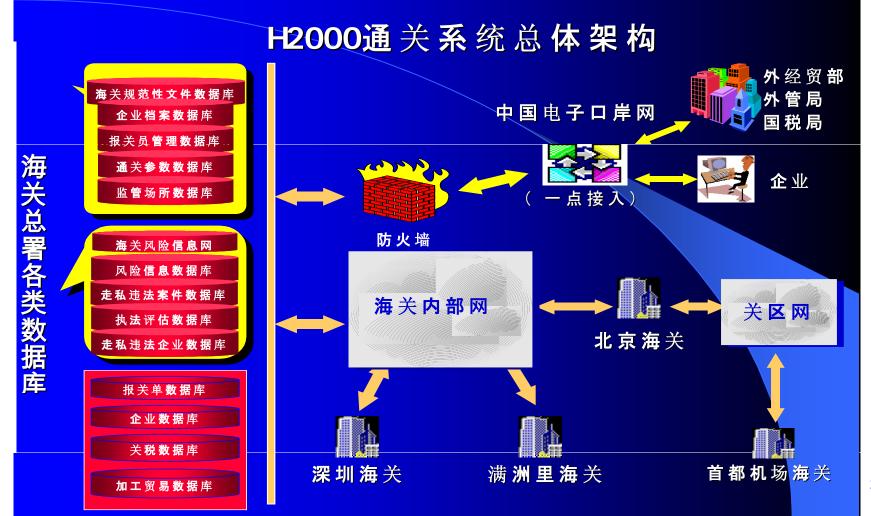
It is a Customs management information system covering all the business functions of nationwide Customs which connects GACC departments with regional Customs and connects different regional Customs, characterized by networked clearance operations and smart cargo flow control. In 1998, starting from clearance reform, we began the first step of building a modern Customs regime and rolled out the application of clearance management system (H883 version 5.0). E-Customs basically came to its shape. In 2003, focusing on risk management, we began the second step of building a modern Customs regime through some pilot projects and the rolling out of the H2000 clearance management system. E-Customs grew to a mature stage.

What has E-Customs realized?

Utilizing PSTN, we established a three-tier VPN to connect GACC, 46 regional Customs subordinates under GACC, and over 700 operational sites. The helped realize the networked applications among the different links of a clearance site, between operational sites and regional Customs, and among different regional Customs. The networking of the different links of an operational site formed an informatized operational procedure to ensure interactions as well as checks and balances among the links. The networking of operational sites and regional Customs well combined the computerized automatic document inspection and the concentrated document inspection done manually for screened problematic ones, and enhanced unified and standardized clearance management of various operational sites by the regional Customs. The networking among different regional Customs made cross-customs data sharing and networked verification a reality, which addresses, from the root, the problems of falsified documents, falsified licenses, falsified stamps and other smuggling activities through preemptive prevention.

2010-6-29

Core of E-Customs --H2000 Clearance System



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Characteristics of H2000 System —Centralized Databank

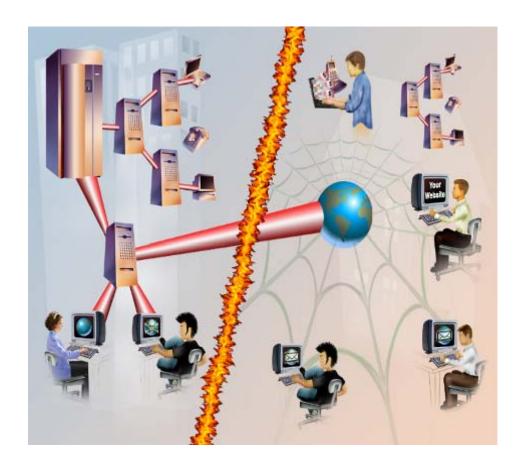


- Data recorded are shared across China Customs
 - contract of bonded operations
 - means of transport
 - import/export manifests
 - importers/exporters
 - permits, licenses, certificate
 - companies engaging in processing trade
 - table of duty reliefs
 - risk information
- Raised clearance efficiency, and reduced data transmission requirements
- Raised the accuracy of data, and reduced data redundancies
- GACC can have real-time access to data on import/exports across the country

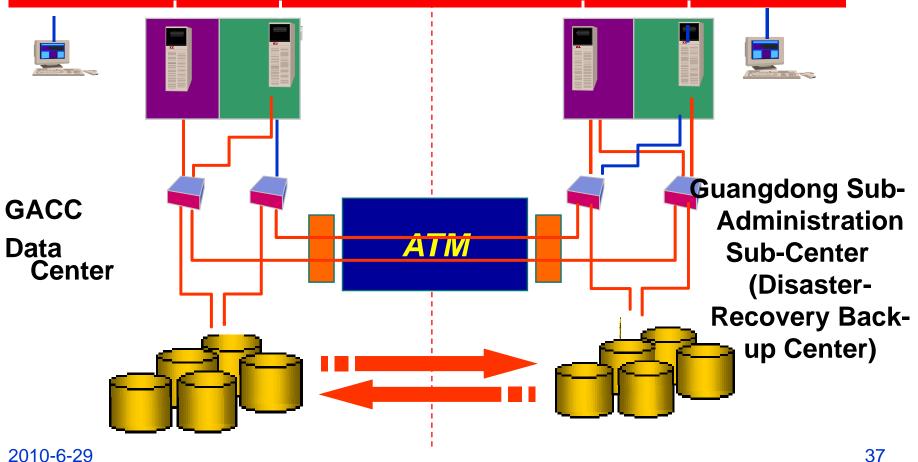
Safety— Safety Design of the H2000 System



- ID reading
- Digital signature
- Data encryption
- System audit
- Network safety
 Firewalls
 - Monitoring & Testing



Highly Reliable Data Center and Disaster-Recovery **Back-up Center**



Benefits of H2000 System



Economic

- **Good for raising clearance efficiency**
- **Good for reducing trading costs**
- Good for increasing national fiscal revenue
- Good for improving the economic order at ports

Social

- H2000's rolling out is a milestone in China Customs' informatization drive
- H2000's rolling out is a creative move in China's informatization drive
- H2000's rolling out will promote reforms of Customs operations and management
- H2000's rolling out will make Customs operations more unified and standardized

Essential Sub-Systems of H2000 System



- At present, under H2000 System, there are 35 essential sub-systems
 - GACC parameters maintenance, local parameters maintenance, authorized management
 - so advance input into the system, public services
 - document inspection centers, on-site operations, proceeding management, clearance management, manifest management, risk management, unified management of transit between different Customs houses
 - In enterprise management, license and permit management, duty relief management, vessel tonnage tax management, case management, confiscated income management, processing trade management, trade statistics compilation, forex payment verification and write-off, vehicle certificates



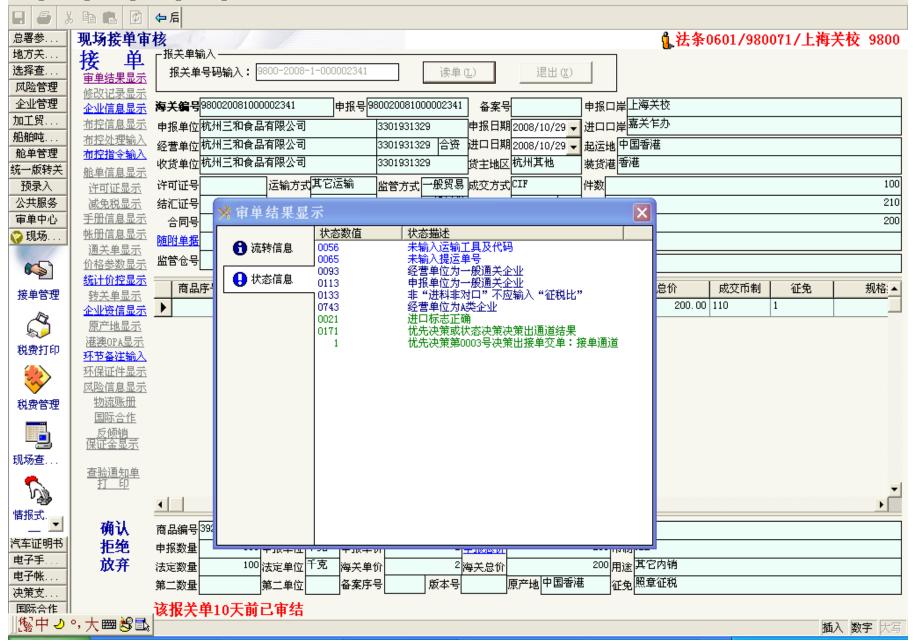
☆H2000通关管理系统:广州海关- (接单管理)

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% H2000通关管理系统:上海关校-(接单管理)

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What has E-Customs realized? 2. Smart Cargo Flow Control

Cargo Flow Control System is based on the clearance management system. It has adopted state-of-the-art monitoring and inspection technologies and computer network technologies to integrate container inspection equipment, GPS, electronic weigh bridges, electronic entry/exit gates, electronic vehicle plates, video surveillance and other relevant technologies and equipment into one single complex, which can consolidate the cargo flow information received from the risk management platform, E-Port and EDI centers to establish E-ledger and conduct networked matching and automated processing of cargo flow information ²⁰¹⁰⁻⁶⁻²⁹ collected on site.

-What has E-Customs realized?

The Cargo Flow Control System mainly includes the following sub-systems: subsystem on recordation of transportation companies, means of transport, their staff, sub-system on recordation of Customs control premises, subsystem on management of international means of transport, sub-system on container management, sub-system on entry/exit gate networking and control, sub-system on management of small vessels of travelling to and fro Hong Kong SAR and Macao SAR, etc.. Its development started in 1998. After 2000, it was put into use in some Customs houses and gradually realized the computerized management and whole-process monitoring of clearance of means of transport and goods. By the end of 2006, import containers controlled utilizing this system exceeded 90%.



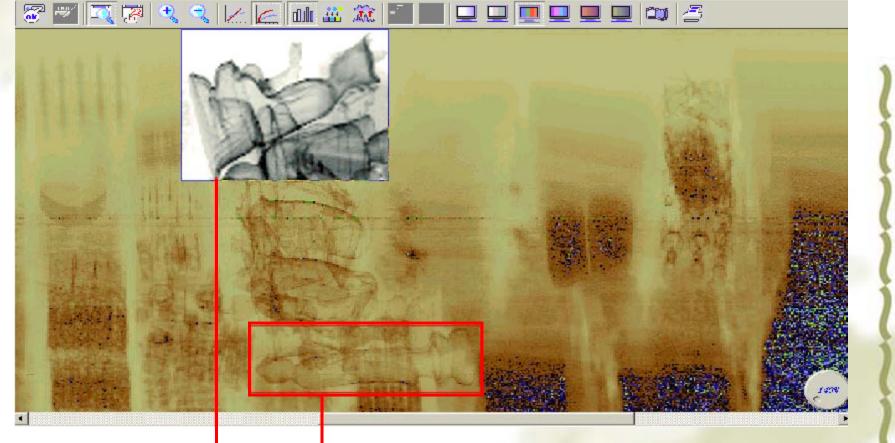






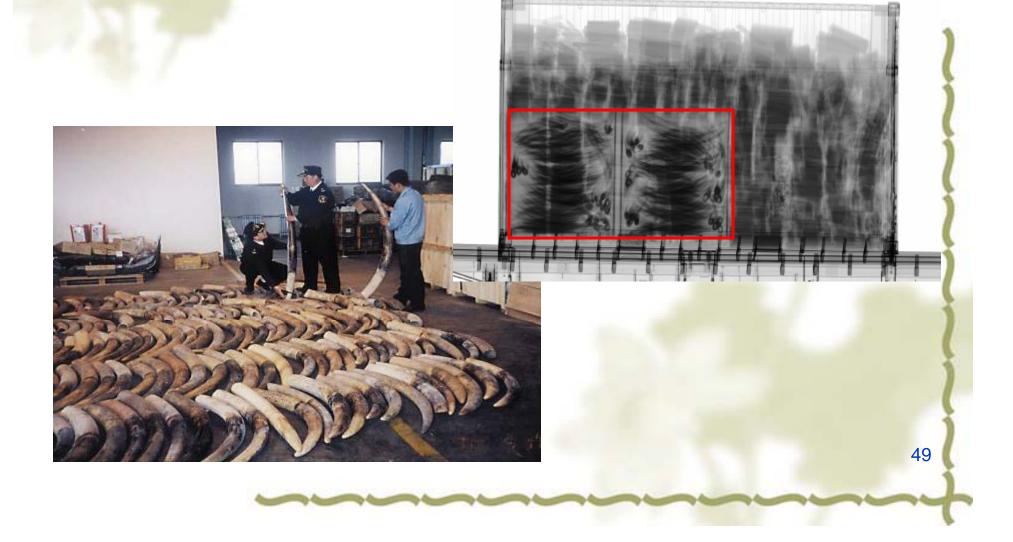
Guangzhou Sanshan Customs detected a case of Buddha figure smuggling





Buddha figure smuggled





or Applications: E-GACC



This is a virtual information system built in light of the vertical management structure of China Customs. Based on E-Customs, it helps realize digitized operational monitoring & analysis and auxiliary decision making. It enables GACC and the regional Customs houses to have more scientific functional management and day-to-day administration. It comprises a confidential intranet (OA), an operational extranet, and the Internet as well as the different applications at the three levels of network.





Development started in 2001. Now, a total of 5 key applications: risk management platform, subsystem on import/export statistics analysis & early warning, sub-system on enforcement evaluation, sub-system on tariff monitoring & analysis, and the confidential office automation (OA) sub-system.

Applications of E-GACC have provided scientific and effective means for GACC and regional customs houses for operational monitoring & analysis and auxiliary decision making. Very helpful.



E-GACC:

Risk Management Platform

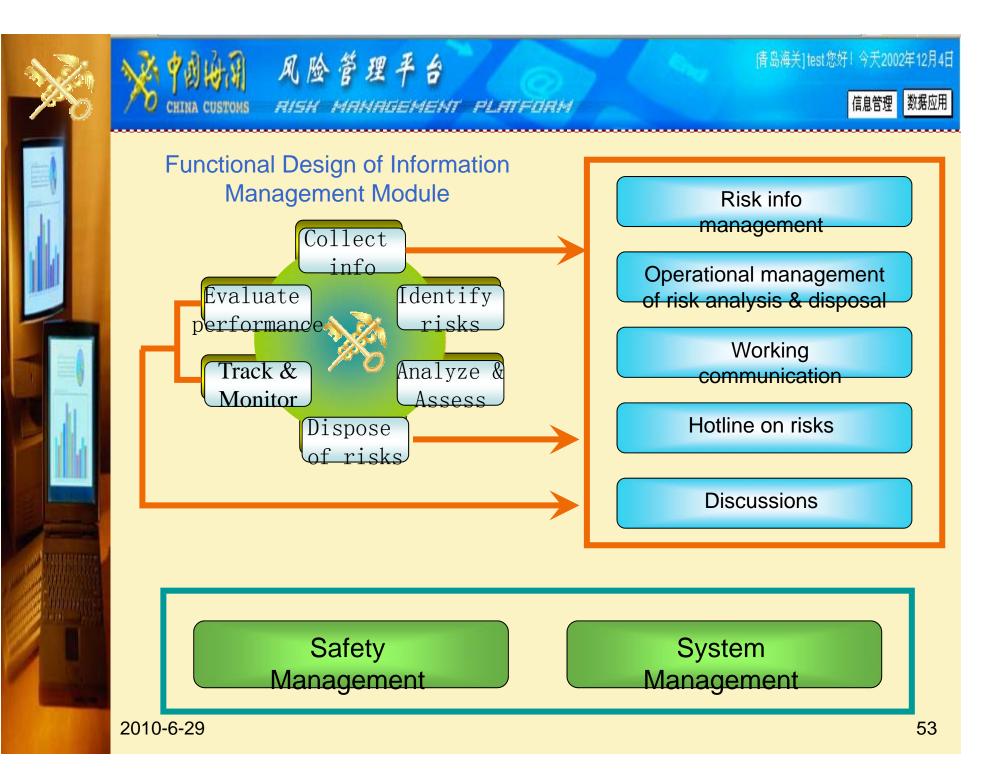


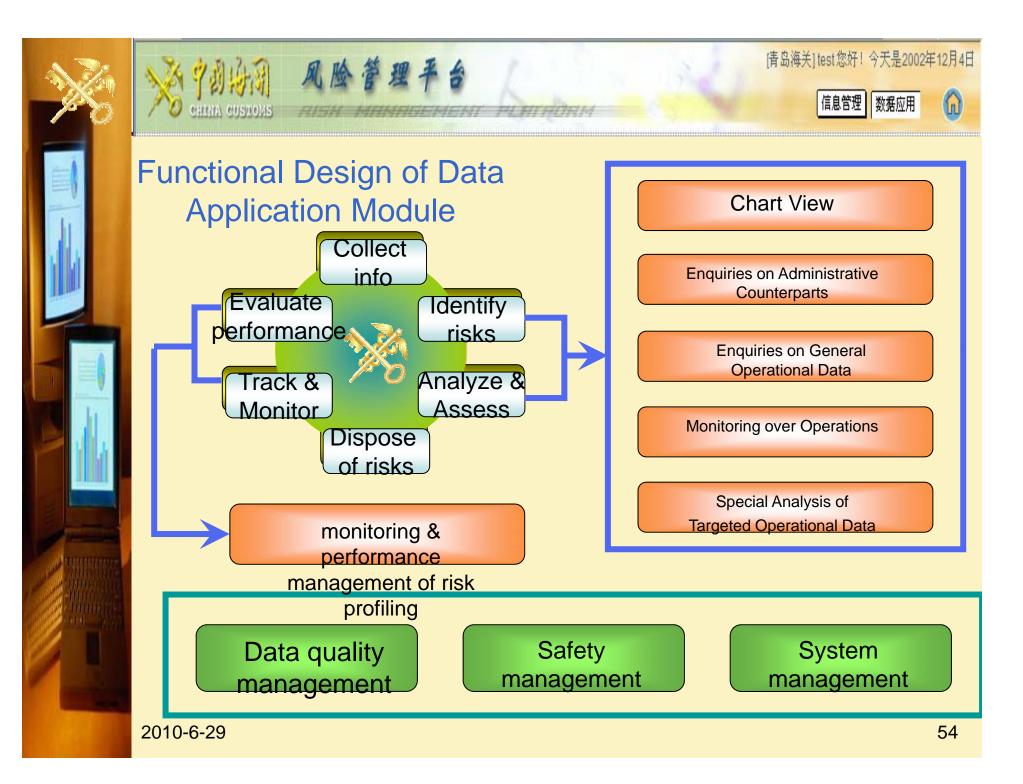
Data Applications

The risk platform collects various data, which are then presented in forms of reporting, enquiries, multi-dimensional demonstration. Through simulating human experience, it provides users with tools for knowledge and analysis of operations and risks.

Information Management

Through Customs intranet, it integrates the functions of risk analysis coordination, risk disposal coordination and information exchange into a single platform for unified and shared risk management nationwide across different Customs districts.





- Risk platform realized risk management information and data exchange and sharing within China Customs. It is a very good platform for different departments of Customs to collaborate and exchange information with each other for risk management mutual assistance. At the same time, it also boasts of a powerful function of data enquiries, analysis and processing, which enables Customs officers to have timely monitoring of the import/export situations focusing on enterprises or on commodities to identify the potential risks.
 - Incomplete statistics showed, in 2006 alone, through the risk management platform, China Customs detected 14,557 cases of violations, with a value of 18.583 billion CNY, involving 1.868 billion CNY of duties and taxes. Thanks to the platform, 836 million CNY of duties and taxes evaded and 114 million CNY of fines were collected. The platform can also reduce the blindness in on-site inspections, facilitate clearance for compliant enterprises, further standardize Customs operations and management, render operations more effective, and prevent corruption.



E-GACC: Customs E-governance

Confidential intranet (OA)

E-governance extranet



Homepage of China Customs Portal

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	22 授权委派		?署办公厅关于举办涉密办 │班的通知	▶公网分级保护整改实施工	收文管理	收文批办	陈荣	2010-05-11 14:33	
h		签批提 请示》	醒: 《关于成立上海海关	关学院等级保护领导小组的	签报管理	签批提醒	陈晖	2010-05-10 08:34	
	ℳ 收文管理 ≫		[件《海关总署关于召开海 [会议的通知》	幕关总署2010年巡视工作电	收文管理	文件送阅	毛成功	2010-05-07 14:36	
		!! !! 视工作	l处长对文件《海关总署关 ◎电视电话会议的通知》的	关于召开海关总署2010年巡 的批示	收文管理	提醒	吴江	2010-05-07 14:57	
	☆ 签报管理 > ☆ ☆ 松力管理 >	││ ││ 約通知	8 署关于召开海关总署2010]	0年巡视工作电视电话会议	收文管理	收文批办	陈荣	2010-05-07 14:57	
ICHOINE	督办管理 》 ① 政务信息 》			较全等级保护备案表的请	签报管理	签批提醒	陈晖	2010-05-06 09:28	
	(↓ 5) HALL → (处长对文件《上海市教育)年上海市科学技术奖推荐	§委员会关于做好市教委系 \$工作的通知》的批示	收文管理	提醒	吴江	2010-05-06 08:16	
	沃统管理 》 ※		ī教育委员会关于做好市教 Y推荐工作的通知	牧委系统2010年上海市科学	收文管理	收文批办	陈荣	2010-05-06 08:16	
1			醒:《关于将 "周界电子 5二期项目延续" 的请示》	【围栏及配套工程" 作为	签报管理	签批提醒	肖建国	2010-05-05 11:29	
		关于成	这上海海关学院等级保护	▶领导小组的请示	签报管理	签报人	刘继进	2010-05-06 08:15	
			报信息系统安全等级保护		签报管理	签报人	刘继进	2010-04-28 11:02	
			□处长对文件《科技司关于	-通报海关技术协作区2009	收文管理	提醒	吴江	2010-04-27 10:29	

E-GACC:

Tariff Analysis & Monitoring Sub-System

It performs the following tasks:

- timely compilation of statistics on tariff, processing trade and bonded operations
- Timely knowledge of trade mix and commodity mix for multi-dimensional analysis of tariff collection situations; monitoring the operations and enforcement at various links of duty collection
- Overall evaluation of duty collection by Customs for improvement of enforcement; provide risk information on clearance, examination & approval, and management;
- Promote standardization of various operations, and provide primary-line information on import/export duties/taxes, commodity mix, pricing level, trade volume, etc. for economic policy-making of the State.

E-GACC:

Customs Enforcement Evaluation Sub-System

- This system has adopted advanced statistics analysis and data exploration technologies. It can help with decision making through monitoring & supervising Customs enforcement effectiveness & efficiency and the overall risk indicators. It conducts overall analysis of Customs clearance data and data fed by other agencies and international partners. It conducts dynamic analysis & monitoring of the implementation of trade measures, duty collection quality, cargo flow control, processing trade control, etc. at different customs houses, and makes a quantitative assessment of their administrative enforcement, operations and management, to identify problems and signal an early warning.
- Specific functions of the system: evaluation of duty collection situations, price levels, risks, processing trade management, reasonableness of cargo flow directions; analysis & early warning concerning smuggling situations and trends; release and management of evaluation reports, etc.. Rolled out in 2001. By Aug. 2008, through tips given by this system, China Customs collected an additional amount of 970 million CNY duties and taxes, and detected 62 million CNY of evaded duties/taxes. The total amount involved in problems detected by the system reached 1.22 billion CNY.





Solution: E-Port

Solutions

 Importance of application of IT in China Customs
 H2010 Project



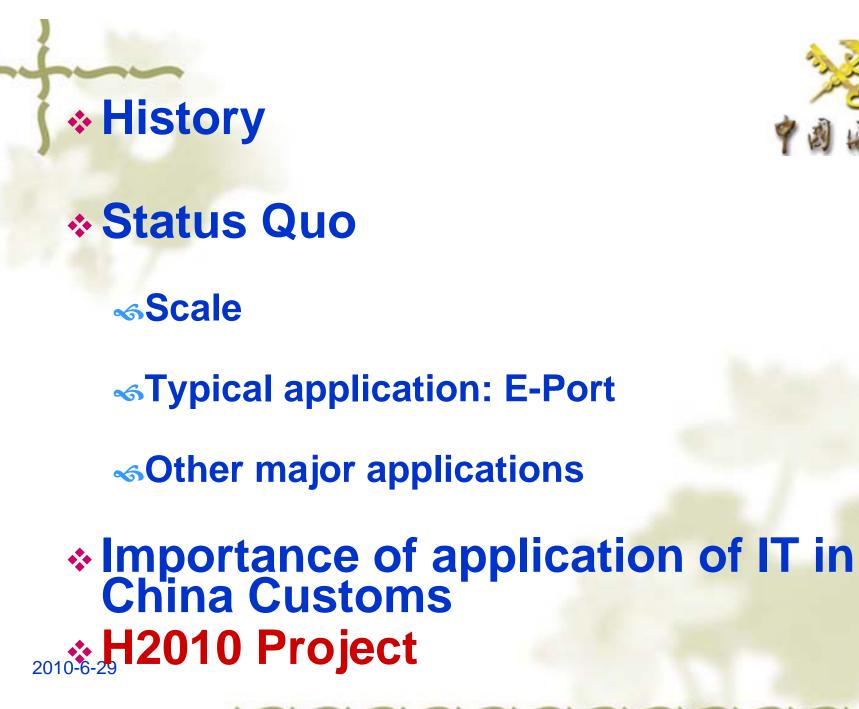
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Importance of application of IT in China Customs

- Better clearance operations
- Better duty collection
- Enhanced control and anti-smuggling efforts to ensure normal economic order of import/export
- Higher clearance efficiency, lower trading costs, and enhanced competitive edge on the international market
- Better cross-cutting cooperation for improved management and services at ports
- Better statistics analysis for provision of better services for decision making and macro-control by the State



Reduced corruption risks and higher level of integrity





An Integrated Management System for a Modern Customs (H2010 Project)

- In light of the requirements of changing situations, it is necessary to develop a new-generation computerized management system which can meet the needs of integrated Customs control while accommodating the needs of clearance management so that there is no lagging behind when the integrated Customs control framework is being built.
- Necessity and urgency for H2010 Project: development of integrated Customs control; non-traditional Customs functions and international cooperation; integration of Customs information systems; upgradation and development of modern ICT technologies.

Analysis & Monitoring System

Early warning, monitoring, customs statistics, risk management, enforcement evaluation

Dynamic Data Warehouse

Clearance, duty collection, processing trade, policies and legal affairs, audit-based control, enterprise management, anti-smuggling, statistics compilation Customs control, processing trade, means of transport, Customs control premises, manifests, entry/exit gates...

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H2010

Project

2010-6-29

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8 System

