

## Case Studies

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## 2005

### **Web-based Learning Management System for Customs & Excise Department**

As a progressive customs organization, Customs & Excise Department often organizes different updated training courses for its staffs to enhance service quality. The Department thus needs a complete IT infrastructure to manage, deliver and track training participation effectively. To enhance the administration efficiency of organizing training, Customs & Excise Department entrusted ASL to implement a Web-based learning management system for its 5000 users at the beginning of the year. ASL provided hardware infrastructure and licenses of Oracle iLearning to set up the training system. In addition, ASL provided customization of Oracle iLearning application and Web-based training courses to fulfill the Department's specific needs for the system. The project was completed at the end of July. With the new system, it is expected that the time and manpower required for organizing training will be reduced, and many administrative works such as venue booking and enrollment coordination can be saved. Moreover, as the training courses can now be accessed via the Internet browser, staff can enjoy flexibility to select the training time at their own discretion without disturbing their working schedules. The management can also generate reports to get an overview of the training status, including the level of attendance and training quality. In conclusion, the system has brought convenience to users and enhanced the overall effectiveness and quality of training.

### **Secure On-line Patient Records System for Canossa Hospital (Caritas)**

To speed up private-practice doctors' access to patients' medical records which are kept in hospital, Canossa Hospital (Caritas) implemented a pilot project "Pioneering Secure On-line Patient Records Management and Collaboration Between Doctors' Clinics and Hospital" funded by the Professional Services Development Assistance Scheme (PSDAS) of the HKSAR Government. ASL was assigned to provide end-to-end Internet access security solution which covered system design, implementation and maintenance services. In this project, ASL provided servers, networking products, firewall products, and installation services to build the Internet platform. To enhance the security level of the network system, ASL deployed a SSL VPN appliance to provide a secure remote access solution which was integrated with iSprint Access Matrix One-Time-Password (OTP) system to provide second factor authentication. When clinic doctors want to access the hospital's patients information system, other than the system username and password, they will be required to provide an additional one-time-password which is sent by the OTP system to doctors' mobile phone via SMS to complete the authentication. With this secured system, physical delivery of patients' records between clinics and hospital can be minimized and patient's information confidentiality can thus be highly enhanced. Furthermore, doctors can get patients' medical records from hospital conveniently and securely, enabling them to make fast and accurate diagnosis for

patients.

### **Backup and Recovery Solution for The University of Hong Kong Libraries**

To provide outstanding teaching and world-class research support collections and services to the library users, The University of Hong Kong Libraries (HKUL) needs to manage and safeguard burgeoning volumes of information. In order to increase the efficiency and management of data backup, HKUL has recently entrusted ASL to provide an integrated backup and recovery solution for its heterogeneous platforms, including UNIX, Windows and Linux. ASL provided the configuration and installation for the primary and secondary backup servers and a high capacity tape library. To build an automated server recovery solution for cross platforms, eliminating the need to manually reinstall operating systems or configure hardware, ASL combined the use of VERITAS NetBackup with Bare Metal Restore option. Furthermore, ASL also provided HKUL with 3-year onsite hardware warranty. The solution enables online database and application aware backup and recovery functions to deliver data availability. It also offers a single management tool to consolidate all database and application backup and recovery operations. Upon the completion of the project, HKUL can centralize the management of data backup for multiple servers and storage devices.

### **Integrated Hospitality Management Solution for the Minden Hotel**

Since the revival of local tourism industry in recent few years, ASL has successfully grasped the opportunity to win new customer's support. The Minden, a newly established boutique hotel, commissioned ASL to provide one stop shop IT services to automate its business operations. ASL provided various hardware infrastructure set up for all personal computers, printers, POS workstations, file servers and switches. To ensure a smooth and efficient operation of front desk, ASL deployed Comanche Point-Of-Sale System and Comanche Visual Front Office System which embodied comprehensive front desk management functions, such as the handling of flexible rate code and billing. Moreover, ASL implemented a call accounting system and an in-house developed Financial Accounting System comprising major accounting modules such as general ledger, accounts payable, accounts receivable, inventory control and purchase order, to streamline the accounting operation procedures. In addition, ASL also provided the customer with end-to-end IT support services ranging from system design, project management and consultancy, 7 x 24 maintenance support services to training. With ASL's quality one stop shop services, The Minden can save the manpower resources required for handling IT issues with different technical vendors, allowing them to focus on core business to enhance customer satisfaction while having an efficient IT operation.

### **Database Server Upgrade for Wing Lung Bank**

In view of the fast growing online banking business, Wing Lung Bank Ltd. (Wing Lung) decided to enhance the performance and efficiency of its existing database system. It called on ELM to provide an enterprise-class performance IBM eServer p5-570 AIX server to replace the existing system and to install an IBM LTO 3580 Tape Drive for back up purpose. Based on POWER5 processors with simultaneous multithreading, the building block architecture of p5-570 server is well-suited for database project and can deliver flexible scalability for expansion. Furthermore, the innovative virtualization technology of the p5-570 server can help increase the responsiveness of the server for the on demand environment, which can allow Wing Lung to meet computing requirements cost-effectively. Apart from installation and implementation, ELM also provided Wing Lung with 3-year comprehensive AIX support services, including 7 x 24 hotline and on-site support, free patches update, every 6-month on-site preventive system tuning and health check as well as annual system performance report. Upon the installation of p5-570 server, system performance is upgraded with high scalability, stability and data availability. The new system can help Wing Lung deliver speedy and quality online banking services to customers, raising its competitive advantage in the financial services market.

### **CyberOffice EasyDoc for BNU**

Daily operations of the banking business involve handling an enormous amount of paper documents. To improve efficiency and save cost of managing these documents, Banco Nacional Ultramarino S.A. (BNU), a commercial and one of the two issuing-banks in Macau, has recently appointed ASL Macau to implement CyberOffice EasyDoc, a Web-based document management solution developed by ASL. The solution is user-friendly and can support Chinese and English language. Apart from the solution, ASL provided high performance scanner and comprehensive services, including system design, consultancy, hardware and software maintenance support services and on-site training for BNU. After the implementation of CyberOffice Easy Doc, BNU can convert paper documents to digitized information and save them into a central repository for retrieval, thus increasing efficiency of workflow and productivity. Moreover, the Web-based feature of the solution enables staff to access and retrieve information within a secured environment anytime, anywhere.

### **Provision of Comprehensive Computing Facilities for BAAC**

Bank for Agriculture and Agricultural Cooperatives (BAAC), a state enterprise under the Ministry of Finance, is a well-established bank with many provincial branches in Thailand. ASL Thailand won two contracts to provide advanced computing facilities for BAAC in August 2005. The first contract covered the provision of 2-year onsite maintenance support services and supply of 45 units of Intel P4 processor-based Acer Veritron desktop computer, HP LasterJet

printers and HP Officejet All-in-One for BAAC's nine provincial branches. At the end of August, ASL Thailand was again awarded to provide 350 units of Acer Veritron desktop computers for BAAC's head office in Bangkok. With sophisticated and efficient computing facilities in place, the working efficiency and service level of BAAC can be greatly improved and enhanced. ASL Thailand is pleased to win repeated orders from a new customer within a month, demonstrating its quality services delivered to the customer. With this track record to provide bulk quantity of computing facilities to government organization with high level of customer satisfaction, ASL Thailand is confident to win more deals from large enterprises from commercial sector.

### **Oracle Professional Services for Sing Tao and Dragonair**

As an Oracle Certified Advantage Partner, ASL has a strong team of Oracle Certified Professionals to provide a full range of quality support services for enterprises to better deploy and manage Oracle products. ASL was commissioned by Sing Tao News Corporation Limited (Sing Tao) to provide Oracle migration and business continuity services for one of their mission-critical systems. To enhance data availability and security for the system, ASL upgraded the Oracle 9i to the latest Oracle 10g Database Enterprise Edition running on the fault-tolerant Windows platform. In order to ensure zero data loss and business continuity, ASL provided the Dell PowerEdge server and Oracle 10g Data Guard to set up a disaster recovery site for the customer, with real time data synchronization enabled between the primary and the secondary sites. Moreover, a single interface for centralizing the management of applications, databases and systems was provided by using Oracle 10g Enterprise Manager. After ASL had provided the Oracle service, the reliability and manageability of the system was greatly improved. ASL was also entrusted by Hong Kong Dragon Airlines Limited (Dragonair) to set up an enterprise portal with the use of Oracle 10g Application Server and Oracle 10g database running on the Linux platform. ASL provided various professional services including database migration and tuning, portal pages set up and template development, content management, on-site training and account migration for over 3,000 users. With the new portal, Dragonair can enhance collaboration and information sharing through the Web anytime, anywhere.

### **Multi-platform Hardware Maintenance Service for The Open University of Hong Kong**

The Open University of Hong Kong (OUHK) awarded a 2-year service contract to ASL in providing hardware consolidated maintenance services for servers, systems and related peripherals from October 2004 to September 2006. Under this contract, ASL provides OUHK with multi-platform maintenance services for various types of hardware products, including servers, networking equipments and firewall appliances. Based on the customer's requirement,

ASL has provided 5 x 8 and 7 x 24 onsite support for the OUHK's Ho Man Tin Campus and other sites such as Island Learning Centre.

This is the first time for OUHK to assign a single vendor to provide hardware maintenance services for its heterogeneous IT platform. By doing this, OUHK can expect to receive better quality and efficient maintenance services while saving the time and effort required to coordinate different hardware vendors. Prior to the winning of this contract, ASL has over five years' experiences in providing Sun server platform maintenance services for OUHK. With its strong multi-vendor support knowledge, ASL is confident of serving as the single point of contact and delivering professional multi-vendor hardware maintenance services for OUHK to create a quality, convenient and flexible learning environment for its more than 20,000 students.

### **Obtains over HK\$190 million Business from HKSAR Government**

ASL has gained orders valuing more than HK\$190 million from the HKSAR Government between Oct 2004 and Mar 2005. This amount included significant orders drawn from personal computers bulk contract for the Social Welfare Department and Hong Kong Housing Authority. During this period, ASL entered into major service contracts to provide Computer Technician Support Service for the 30 public libraries under Leisure & Cultural Services Department ("LCSD") from April 2005 to March 2008 and to provide maintenance service for network equipment, Internet and network security hardware and software for more than 110 hospitals/institutions under Hospital Authority from February 2005 to February 2008. Besides, ASL won a pilot project to provide document management solution for a government department. The solution is designed to help the department to enhance efficiency in handling large amount of documents and facilitate the retrieval of information whilst ensuring data protection and secure access control. Also, ASL has secured a multi-million dollar deal to provide three-year outsourcing support service for a mission-critical project for a disciplined service department. In this project, ASL provides comprehensive support services, encompassing 7 x 24 IT Helpdesk support, application maintenance support, multi-vendor hardware and software support, and on-site engineer support.

The HKSAR Government has always been one of ASL's most valued customers. To fulfill the government's stringent service level requirement, ASL strives to enhance service quality through such initiatives as seeking international accreditations such as ISO9001 and adopting Capability Maturity Model Integration (CMMI), an advanced quality process model for the IT software development industry.

### **Infrastructure Enhancement for the Email System of EMB**

To centralize management of the email system and enable more effective communication for its 3000 users, Education and Manpower Bureau (EMB) entrusted ELM to consolidate its email server and enhance its existing SAN infrastructure. ELM provided IBM eServer Blade Center servers, IBM Total Storage SAN M14 switches and IBM FAStT900 disk storage system with high fibre channel storage capacity to implement a SAN with greater scalability, reliability and better manageability. The simplified infrastructure has increased communication bandwidth for connection, increasing the speed and availability of the system. To improve the system performance, ELM provided a comprehensive suite of Tivoli system monitoring tools for a centralized monitoring of network devices, servers, applications, transaction analysis and SAN storage system. The new system can achieve root cause analysis, lower total cost of ownership and minimize the administration and maintenance costs with faster response time. Apart from the provision of infrastructure and installation, ELM has also provided training and workshops for EMB's staff.

### **SAN and Backup Solution for TVB.com**

Being one of the Hong Kong's leading Chinese language lifestyle portals, TVB.com needs to handle proliferated amount of business and multimedia information and ensure 7 x 24 availability for customers to access its Website information. To enhance the performance of the portal, TVB.com entrusted ELM to provide storage area network (SAN) and backup solution to improve the efficiency of its storage and data management system. ELM provided a comprehensive range of IBM servers and storage infrastructure, including pSeries UNIX servers, xSeries Intel processor-based servers, FAStT storage system, tape library and SAN switches, for the implementation of SAN solution. To manage and assure the accessibility, availability and performance of the system information, ELM installed Tivoli's storage management software to provide data protection and backup solution. In this project, ELM provided TVB.com with one-stop IT services including system design and analysis, implementation and maintenance services. The enhanced storage system can reduce backup time and allow future system expansion with increased storage capacity and higher scalability. With the reliable and high performance storage infrastructure and data management, TVB.com can deliver even more interactive multimedia infotainment contents, community features and e-commerce services to global Chinese audience online to raise the popularity of the portal.

### **Infrastructure Set Up for e-Ticketing System of MEAGOC**

To fully prepare for the success of the 4th East Asian Games, Macau 4th East Asian Games Organising Committee, Limited (MEAGOC) needs a highly secure and reliable IT infrastructure for the e-Ticketing system to run effectively. CSA Automated (Macau) Ltd. (ASL Macau) was

entrusted to provide comprehensive infrastructure including Sun Fire server, Oracle database, EMC network storage system and VERITAS backup solution for the system. ASL Macau also provided the overall infrastructure design and planning, implementation and maintenance support services for MEAGOC. To enable the mission-critical system running continuously, ASL Macau implemented high availability clustering and load balancing to minimize data loss and application downtime. Two layers of firewalls were deployed to provide highest protection for the system from any security attack. With these infrastructure set up, single point of failure can be eliminated and the e-Ticketing system can be accessed conveniently and securely by the public.

### **Security Solution for Lumpini**

Lumpini Property Management Co., Ltd. (Lumpini) is a subsidiary of a listed real estate development company in Thailand. With the widespread use of IT and Internet among its business operations, Lumpini sees the need to safeguard the network security against any cyber attack and enable staff who are away from office to access the company's network quickly and securely. ASL Automated (Thailand) Ltd. (ASL Thailand) was commissioned to provide integrated enterprise security solution including setting up firewalls and virtual private networks for Lumpini's hundred users. Juniper Networks NetScreen-204 appliance was selected to use together with Juniper Networks NetScreen Remote VPN Client to prevent unauthorized access of information. To protect users from spam mail and virus attack, 130 licenses of eTrust Secure Content Manager Suite v1.1 were installed for the users. In this project, ASL Thailand also provided consultancy and 5 x 8 maintenance service. After the implementation of the security solution, Lumpini's employees can have an easy and secure access to corporate information anytime, anywhere and the amount of time putting on clearing junk mail can be minimized. Their working efficiency and productivity can be raised and the integrity of data can be well-protected.

## **2004**

### **Data Management Software and Services for the Housing Authority**

ASL won the bulk contract from the Hong Kong Housing Authority (HA) for the supply, delivery, installation, integration, commissioning, maintenance, training and other related services of infrastructure software (Category C) for computer systems development and implementation. The contractual period is 24 months, extendable for another 12 months by HA. Under the contract, ASL provides HA with a comprehensive and integrated suite of data management software products, which mainly include Oracle9i Database and Oracle9i Application Server for relational database management. Besides, ASL will provide software training, professional software maintenance and support services for HA. In addition, ASL will give updates on the



latest related software products and services information and organize new product briefings for HA. With ASL's expertise in database management and a strong team of technical professionals, ASL is confident of providing quality IT services that can assist HA to develop efficient computer systems and infrastructure.

## **2003**

### **Business Management System for Cafe de Coral Group**

ASL has won the Business Management System (BMS) project from Cafe de Coral Group (CDC) to design, integrate and install a robust, flexible and user-friendly system to enhance the efficiency of CDC operation and information management. The new system, a HK\$65 million IT initiative, is used by CDC head office and its 180 retail outlets throughout Hong Kong which include Cafe de Coral Fast Food, Asia Pacific Institutional Catering, The Spaghetti House Restaurants, Ah Yee Leng Tong Chinese Restaurants, Bravo le Café and Scanfoods Manufacturing & Distribution.

The BMS is a multi-users system with five modules, including Branch Intelligence System, Human Resources Management System, Cash Management System, Sales and Marketing System and Procurement and Inventory Control System, to meet various needs of CDC daily operation. In this project, ASL has studied the CDC retail requirements and has given recommendations to develop a distributed web-based and multi-tiers architecture for the BMS. Through a web browser, users can gain an easy and fast access to real-time business information anywhere. In addition, head office and branches can exchange business critical information, including sales and marketing, inventory, accounting, human resources, changes in menu, ordering and even delivery schedules, over the Internet in a private, secure and reliable environment with substantial savings in manpower and administrative expenses at the back office. With ASL technical expertise, the new system is also seamlessly integrated and interfaced with CDC existing ERP system, streamlining their business operation significantly.

Apart from the design, development, testing and implementation of the BMS, ASL is also responsible for the supply and installation of hardware and software systems. To deliver the best service, ASL has provided comprehensive product training, consultancy, email and telephone support service and on-site maintenance support to CDC. In this project, ASL has fully demonstrated its technical expertise and capability to provide sophisticated systems for different business requirements in the food and beverage industry.

## **2002**

### **Total IT Solutions for Over 1,300 Primary and Secondary Schools in Hong**

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## **Kong**

Automated Systems Holdings Limited's (The ASL Group) subsidiary, ELM Computer Technologies Limited ("ELM"), has won the Education Bulk Contract ED5 as an authorized IT supplier for over 1,300 primary and secondary schools in Hong Kong. The ED5 contract duration is 24-month and its estimated value is HK\$760 million, and may be expanded to HK\$1,140 million in anticipation of huge demand for computer equipment.

The ASL Group has serviced the primary and secondary schools in Hong Kong under the Education Bulk Contract ED3 since 1999 to supply computer systems and IT-related services. In the past two years, the ASL Group had serviced over 800 schools and completed over 700 ED3 and non-ED3 projects with a total value over HK\$300 million. Most of the schools were involved in the IT Infrastructure set up and enhancement projects, as well as the Cabling Trucking Design projects. The ED5 project is an extension of the ED3 project to enhance schools' existing computing system infrastructure and teaching quality with the use of IT. As an authorized IT supplier, ELM will offer a wide range of products and services to schools. Hardware and software products will cover the areas of personal computers, networking equipment, servers, printers, storage management, security and applications development tools. For IT-related services, ELM will provide consultation, help desk and training services.

In addition to the supply of IT equipment and services, through this ED5 project, ELM will provide schools with comprehensive IT solutions to facilitate teaching, such as Wireless LAN Solution, Firewall Security Solution, Smart Card Solution, Multimedia Presentation Solution and eLearning, to cater for various teaching purposes. To cope with the new contract, the ASL Group has set up a specialist team of over 60 professionals to handle this specific project.

## **2001**

### **Computer Systems for Vocational Training Council**

ASL proudly announced the winning of a second bulk contract from the Vocational Training Council ("VTC"), amounting to approximately HK\$20 million in contract value. The contract will enable ASL to provide continuous services for the VTC with the supply of sophisticated hardware systems after the completion of the first contract. The previous contract of over HK\$20 million was won by ASL in September 2000. Within just a six-month period, the VTC has shown their confidence and trust in ASL with this second contract to provide PC equipment and IT services once again to the council and the nine campuses of the Hong Kong Institute of Vocational Education.

In the first contract, ASL provided 1,700 PC desktop units and servers to the VTC and its

campuses in Hong Kong for a six-month period. Due to the increasing demand for PC equipment and IT services from users, there were over 200 PC desktop add-ons but this still did not meet their demand. Therefore, the VTC decided to roll out a second tender for a further amount of 1,500 units. With ASL's track record for the VTC, ASL won the tender once again.

Apart from supplying PC desktop equipment, ASL has also supplied high performance servers to the VTC. In the past two years, the VTC bought two Super Computers, Sun Starfire, from ASL to support its rapid expansion. The first one was used as the database server for internal administrative computing, and the second was used as the email and applications server for Internet services.