

sains Corporate Focus



Envision. Innovate. Advance.

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Sarawak Information Systems Sdn Bhd

Head Office:
Level 3, Wisma Bapa Malaysia, Petra Jaya
93502 Kuching, Sarawak, MALAYSIA
Tel: (60) 82-444199 Fax: (60) 82-444211

www.sains.com.my

Call Centre:

Tel: (60) 82-236633 Fax: (60) 82-235522
Email: helpdesk@sains.com.my

For Business Enquiries:

Tel: (60) 82-426733 Fax: (60) 82-423533
Direct Line: (60) 82-422472
Email: service@sains.com.my

SAINS Overview

SARAWAK INFORMATION SYSTEMS SDN BHD (SAINS) officially began operation in 1992 and has strategically developed a presence in Malaysia as a leading ICT Systems Integrator and Solutions Provider. At the onset, our stakeholders set out to ensure we build a critical mass of knowledge and know-how of mainstream technology. The selection and choice of partnerships and alliances with technology leaders and hardware manufacturers in the industry were deliberate to achieve that goal as quickly as possible.

Today, **SAINS** is widely recognised as a leader among governments in the region for cost-effective deployment and efficient utilisation of IT. Our greatest achievement was putting Sarawak onto the IT radar screen of Malaysia. **SAINS'** achievements in the IT field of the Sarawak Government today is recognised as a benchmark by other States in Malaysia; with some States Government venturing to replicate our holistic model of IT development.

With an experienced and resourceful management team, **SAINS** has built a model track record of achievement dedicated towards producing enterprising solutions and services for our customers. Through the combined skills and expertise of over 400 staff, we have successfully developed in-house, over 200 different software application systems for a wide range of clients to meet the specific requirements of their organisations.

We provide comprehensive, end-to end IT services and solutions for both government and commercial sectors. Beside software development, our specialisation extends from the areas of consultancy, business analysis and strategy development to building and managing a complete range of ICT infrastructure, solutions and services.

In recent years, **SAINS** has also expanded its business outside of Sarawak and is steadily seeking synergistic business partnership and building strong customer relation with government entities and multinational corporations in the region.

Vision To be a world class Information Communications Technology player in the region

Mission To be your long-term ICT Solution and Service provider on the basis of mutual value creation and trust

Board of Directors



Y.B. Datuk Patinggi Tan Sri Dr George Chan Hong Nam
Chairman, SAINS



Y.Bhg Tan Sri Datuk Amar Haji Abdul Aziz Bin Dato Haji Husain
Deputy Chairman, SAINS



Y.B. Datu Wilson Baya Dandot
Director, SAINS



Y. Bhg. Dato Sri Ahmad Tarmizi Haji Sulaiman
Director, SAINS



Mr Teo Tien Hiong
Managing Director / CEO of SAINS

Message from CEO

“Benchmarking” is one of the most common and accepted measures of product standard and success in the ICT industry. In this regard, I wish to take advantage of this issue of the SAINS Year Book to highlight the national and international benchmarks achieved by the Company’s e-Syariah solution.

In 1996, SAINS took the decision to invest in the development of a full-fledged court management system – code named “CourtMas”. This solution was implemented for its first customer – the Syariah Courts in Sarawak – as *Sistem Elektronik Mahkamah* or “SEMak” in 1997. Since then, it has been customised for a number of other customers, including the Jabatan Kehakiman Syariah Malaysia (JKSM), a municipal court each in Pulau Pinang and Selangor, and the Bumiputra Courts in Sarawak. The JKSM implementation began in 2002 with the selection of the “e-Syariah” project by MAMPU as the 7th EG-MSC Flagship Application. Consequently, the solution was enhanced, customised and implemented for 112 Syariah courts throughout Malaysia.

In terms of international benchmarking, the e-Syariah solution was nominated by the Malaysia Government for the United Nations “Information & Communications Technologies for Development Platform” (ICT4D) initiative. ICT4D is an initiative aimed at bridging the digital divide and aiding economic development by ensuring equitable access to up-to-date communications technologies. e-Syariah was subsequently selected from among a large number of international submissions for showcasing in the “World Summit Information Society & ICT for Development Platform” in Geneva, Switzerland in December 2003.

As for national benchmarking, in the “Benchmarking and Comparative Study of Malaysia Government Portals and Web-sites” conducted in 2005 by Multimedia Development Corporation (MDeC), e-Syariah was ranked second among more than 900 government portals and web-sites in Malaysia evaluated. Apart from that, in July 2006 in conjunction with the “Telehealth & E-Government Flagship Seminar: Flagship Lessons Learnt, Best Practices & Transformation” e-Syariah was voted the best EG-MSC Flagship Application.



TEO TIEN HIONG

SAINS Competitive & Innovative ICT Solutions And Services

SERVICES

Over the years, **SAINS** has successfully implemented and deployed hundreds of projects in various government bodies and private organisations, with some deployed over multiple sites. Our proven track record and success in providing cost-effective and strategic ICT solutions positioned us as one of the leading ICT providers in the region. Our people are knowledgeable, experienced and skilled in delivering end-to-end technology solutions and services to meet your business needs.

Applications Software Development & Integration

We provide IT solutions to improve the performance, quality & reliability of our customers' businesses through the design, development, deployment and integration of custom-made application systems.

Data Conversion & Digitisation

Using a variety of computer-based techniques, we are able to convert data contained on analog maps, raster images, satellite imagery and other geo-referenced data, into a digital map form. We also provide digitisation service to convert hard-copy images and documents such as photos, certificates, etc. into digital forms.

Geographic Information Systems

We provide Geomatics services to government and private organisations with user functional needs and data requirements analyses, systems and database design, applications development and implementation of Geo-Spatial and related spatial technologies. Other services also include training and developing custom Geo-Spatial applications and solutions, integrating databases, imagery, GPS, CAD, LIS, World Wide Web and other state-of-the-art tools and technologies.

IT Consultancy & Planning

We provide IT Consultancy & Planning services such as ICT Situation Analysis and Audit Services, Strategic Information Systems Planning, Technology and Architecture Planning, Business Process Re-engineering (BPR), and Methodologies Development. We combine industry expertise, thought leadership and best-of-breed alliances with world-class technology providers to nurture creative innovation for your organisation.

IT Project Management

SAINS IT project management service can help you oversee and manage project life-cycle in a controlled systematic manner in assuring each and every project implementation is smooth and meeting our customers' objectives. Our specialised team of project managers are trained with innovative processes, skills, tools and adoptive project management standards through practices from Project Management Institute in USA.

IT Training

SAINS has developed more than 70 computer courses including in-house applications and technical oriented courses. From time to time, our training professionals develop courses to cater to the wider market needs. With conducive learning environment and fully equipped training facility, we aim to deliver proficient IT training to benefit our customers.

Managed Services

Facility Managed Services - Customers have a choice of engaging SAINS technical or management skilled personnel to be attached at their location to provide Facility Management Services. These personnel represent SAINS in such areas as application support, network operation, IT managerial supervising a team of shift operators, etc.

Maintenance & Support – SAINS provides maintenance and support services to customers to ensure their investment is well utilized

Data Centre - SAINS Data Centre is a purpose-built, highly secured facility to provide end-to-end ICT resources and services to customer who prefer to outsource. The facility is equipped with comprehensive environment and security control, protected against fire, humidity, interruptions in power supply, and armed with round-the-clock intelligent security surveillance and access control systems.

Call Centre - SAINS Call Centre acts as a one-stop information and customer service line and is accessible 24 hours by telephone, fax, email or Internet. Using our specially tailored Call Tracking System (CATS) we log, route, track and monitor progress of all calls received to ensure customers get prompt and effective response at all times.

Multimedia & Portal Development

An effective Web portal offers our customer an extended market and business reach beyond the traditional brick and mortar market. Our production team are skilled in J2EE (Java) Open Source, Lotus Domino (Workflow and Collaborative) development tools, etc.

We help our customers achieve their business objectives on the Internet through conceptualization, design, development and implementation of appropriate web-based business applications model. Successful portals that we have developed and implemented are the SarawakNet, eMOSS (My One Stop Sarawak), PayBillsMalaysia, LibraryNet, and the award winning e-Syariah portal.

Network & System Engineering

SAINS has a specialised engineering team who focuses on designing and building secure and scaleable networks such as Local Area Networks (LAN), Wide Area Networks (WAN), or wireless connectivity networks. The services provided also include server and storage systems integration, VOIP, video conferencing and network security. Increasingly in demand is also the need for network security audit where the service will assess and identify vulnerabilities within our customer's network and recommend actions needed to reduce possible outbreak.

Technology Research & Development

Our Technology Research and Development (R&D) team brings together emerging technologies, technical skills and business experience to innovate and develop prototype to meet up and coming market demands.

SAINS Competitive & Innovative ICT Solutions And Services

SOLUTIONS

SAINS offers end-to-end ICT solutions for both the government and commercial sectors. We also build, integrate and manage IT infrastructures for your operation. Our innovative solutions can help you deliver value by increasing process efficiency, enhancing workforce productivity, cutting operating costs, boosting employee and customer satisfaction and enabling better, faster decisions.

COMMUNICATION

Corporate Intranet

Corporate Intranet is an efficient and cost-effective communication and collaborative tool for an organisation. It builds a closer working atmosphere and enables speedier communications and coordination among staff.

Email Hosting

We provide affordable email hosting service in a secure, reliable, spam-filtered and virus-free manner. We also offer guaranteed reliability for your corporate email needs, while providing you flexibility in your email selection. Customers can opt to use our readily available domain name, or register under their own preferred domain names.

Multimedia Conferencing System

The Multimedia Conferencing System is the next generation communication tool, which works by making your virtual presence felt where it counts the most in the present-day demanding business dealings. Offering more than just video conferencing, it also incorporates other communication functions such as document conferencing, global or private chat, and live and on-demand video streaming.

Networking Infrastructure

We build networking infrastructure for communications purposes either via Local Area Networks (LAN), Wide Area Networks (WAN), or wireless connectivity networks. Our networking solutions are integrated with our best-of-breed technology partners' products and services to ensure they are secure, reliable and scaleable.

Voice over IP

Voice over Internet Protocol (VOIP) offers a simple and cost-effective way of reducing your organisation's phone bills to as much as 50%, depending on your call pattern. VOIP transmits ordinary telephone calls over the Internet which lets users save on call charges. There will still be great savings even if your organisation is already operating on discounted calls.

Multimedia Conferencing System

Multimedia Conferencing System (MCS) works by making your virtual presence felt where it counts the most. Enhancing your communication channel, the next generation video conferencing method, which MCS is mostly recognised as, ensures that even though you are not physically there, it is almost as if you were. MCS is more than just a videoconference, it also incorporates technologies such as document conferencing, global or private chat, and live and on-demand video streaming.

EDUCATION

Integrated Student Information System

The Integrated Student Information System (ISIS) allows the management of educational institutions through the usage of ICT by leveraging on the advancement of technology.

Content Management System and Learning Management System

Content Management System (CMS) and Learning Management System (LMS) is an integration of various technologies to enhance educational teaching & learning process. The CMS / LMS solution allows educators to work as a team and collaborate with their students/group of students via online collaborative tools such as self-paced learning courses and online quizzes.

GOVERNMENT

Development Project Monitoring System

The Development Project Monitoring System (DPMS) is a system used to monitor the implementation of government's development projects, from the high-level management down to activity levels.

Standard Government Budgeting and Accounting System

Standard Integrated Financial, Budgetary and Accounting System (SIFBAS) offer an integrated and timely management of government accounting and financial information. The objective of SIFBAS is to centralise and improve budgetary control and monitor expenditure of government funding.

Government Contractor and Supplier Information

Contractor and Supplier Information System (CoSIS) publish Contractors and Consultants registration information. CoSIS provides an interface for Government Agencies or businesses to obtain information and verify status of Contractors or Consultant's registration. CoSIS allows searching of companies registered and their expiry date. Category, Class, Head, Subhead of works and services eligible and details of projects carried out previously can be obtained from the system.

Geographical Information Systems

The Geo-Spatial Systems utilises geographical intelligence to provide both government and private organisations with the means to visualise, synthesise and analyse spatial information for natural resources, utilities and infrastructure management and decision-making.

Our current GIS solutions include Digital Topographic Data, Geographic Calculator, Sarawak Street Map, Sarawak Travel System, WaterGIS, LAGIS (Local Authorities GIS), i-SALaM, etc.

i-SALaM

A flagship application of our GIS services, this solution is undoubtedly the most comprehensive and integrated land information systems available in Malaysia. **i-SALaM**, stands for **I**ntegrated **S**ystems for **A**ll **L**and **M**atters.

i-SALaM integrates digitised cadastral and maps database for land use planning, land title management, land acquisition and land revenue collection management.

Judicial Management System

SAINS has successfully built and fully deployed an intelligent judicial management system through the usage of ICT, to improve the management of court cases and link courts with other legal and enforcement organisations. Automation in case registration and notification of case schedule via emails and sms have greatly improved communication between judges, court administrators, lawyers and their clients. Our Judicial Management System is being used in 112 Syariah courts in Malaysia (e-Syariah), and recently in the High Courts of Sarawak for staggering court cases and using video conferencing for brief court appearances.

SAINS Competitive & Innovative ICT Solutions And Services

SOLUTIONS

Local Council Information System

Our Integrated Local Council Information Systems consists of: Compounds & Parking fines system, Rating and Valuation system, Revenue Posting & Standard Accounting and Financial system, Trade Licensing system, Bills Presentment and Payment on the Internet, and Local Authority Geographical Information Systems (LAGIS).

Recruitment System

e-Recruitment System is a centralised job posting, application and processing system that allows multiple government agencies to advertise their job openings, and candidates to submit their applications via the Internet. Using the powerful medium of the Internet, submitted applicants' details are matched against pre-set criteria and short-listed for face-to-face interview. To date, e-Recruitment has a total of 80,143 registered members who are actively accessing the system or utilising the service. As of June 28, 2007, the system has received a total of 433,745 online applications.

LIBRARY

We specialised in library automation systems. Our library team consist of professional librarians, database and web based technologies with extensive experience. Many public libraries, government resource centres and academic libraries in Sarawak are currently using our library systems. ANGKASA, our very own Web-based Library Management System is the first of its kind in the Malaysia to deploy the Union Catalogue feature, allowing central hosting of the application for a network of libraries.

OFFICE PRODUCTIVITY / MANAGEMENT

Financial, Assets & Material (FAM) Management

Managing your company's financial matters and assets has never been easier with our streamlined FAM. In addition, it also enables you to keep track of your stock items and inventory; thereby ensuring a well-managed store. It consists of three main modules: Financial (budgeting, accounting & financial reporting), Assets (plants & fleet management), and Materials (procurement & inventory).

Fingerscan Attendance System

Fingerscan Attendance System (FAS) integrates fingerprint recognition technology to capture and match against employee database and track employee attendance. FAS was designed and built to replace the conventional punch card and logbook systems widely used in private and public sectors today. FAS provides self-service desktop interface for employee to notify and remarks to HR Managers concerning attendance and allows employee to set task reminder and scheduling on their electronic calendar.

HR Management Suite

The HR management suite or in short, the HRSuites, consists of Personnel Records, Payroll, Claims, and Leave modules. The modules are closely integrated and real-time updating and secured self-service features reduces costly HR manpower to manage your personnel.

Registry & Case Tracking System

Paperless Registry Operations & Case Tracking System (PROACTS) is a filing and case-tracking system especially designed for systematic and organised office administration works for all levels of management. The system trace movement of office files and monitor assigned officer work progress and actions on incoming correspondence, which promote and improve office communication and accountability.

PORTAL

e-Commerce - Payment Portal

PayBills Malaysia (<http://www.paybillsmalaysia.com/>) is the e-payment portal offering the equivalent of SBBS or One-Stop Payment collection counter concept on the Internet. In other words, a virtual collection counter that is accessible anytime and virtually any place in the world. Subscribers not only pay their bills online, they can also see and verify their actual bills online, track their payment history and receive notification of bill arrival or its due date.

e-Community - Library Portal

LibraryNet (www.librarynet.com.my) is a virtual library community, built specifically to network a consortium of libraries from all over the region together. This is where libraries will share and exchange resources, publish information, exchange opinions, and benchmark with other librarians, for the benefit of general library users as well as researchers.

e-Government Portal

MyOneStopSarawak (www.myonestopsarawak.com.my or www.emoss.com.my) is the Internet Portal hosted by SAINS for the Sarawak State Government service user community. The portal contains information such as government publication, government directories, news and announcements. Key public services provided are government jobs advertisement, payment of government bills such as local councils assessment bills and land rents, booking of public facilities, request for service and public service complaint helpline, etc.

SECURITY MANAGEMENT

Network Security

We specialises in a range of firewall solutions, intrusion prevention and detection system, anti-virus and anti-spam protection, detection and cleaning solutions. Years of experience and on-the-job exposures have produced personnel with unmatched skills to assist organisations with their network security issues. Security solution is implemented not just by building a thorough network but enhanced with multiple levels of defence mechanisms.

Visual Security Surveillance

The intelligent Visual Security Surveillance system is the result of many years of development and is designed to solve many of the real world issues faced by security managers and others involved. The system utilises various components of technology from SAINS' technology partner, Safehouse Technology Pty Ltd., an Australian based global technology company. This powerful and sophisticated security software tool allows the optimisation of security surveillance tasks, both in cost and effectiveness, whilst significantly expanded the capability and gives flexibility to analysis of surveillance data.

Vehicle Tracking System

OmniTrac uses electronic device installed in a vehicle to track vehicle location, trace its movements, monitor the vehicle conditions and analyse behaviour of drivers. SAINS' latest addition in security solution is the introduction of this dynamic, scaleable and affordable Vehicle Tracking System, the **OmniTrac**.

OmniTrac integrates the technologies of Global Positioning System (GPS) or Global System for Mobile communications (GSM) or General Packet Radio Service (GPRS) to easily and accurately locate vehicle via satellite transmitters or existing cellular phone operator system to relay the vehicle's location to a remote user either real-time or in pre-set time intervals.

ICT Solutions for eGovernment

e-Welfare: Social Service Delivery with An Edge



Welfare Realities

A community's state of welfare is always linked to its state of social, politics and economy. Break down from those bigger factors are smaller but equally important elements such as education, immigration, social segregation, digital divide, labour market, religion, etc. In the 21st Century, the Third World Countries are progressing away from 'poverty' or 'underprivileged' status. Malaysia, for example, is now considered as a developed country, thanks to our flourishing economy and stable political environment. It would be hard to imagine that there are still many groups in our midst who are in need of constant attention and aid to continue with their lives and survive from day to day.

These groups are made up mostly of women, children and the less fortunate, such as single mothers, orphans, widows, the physically disabled, poor, etc. We do not prosper equally or receive equal privileges in life, hence the existence of these groups. However, we should not view them as excess baggage to the country. In fact, it is only a caring thing to do to offer assistance of any kind to help them move on with their lives, as called for by any caring government.

The Department of Social Welfare was established for this very reason – to look into the affair of the needy and the unfortunate. The Department is given the role to alleviate human suffering and facilitate the improvement of the quality of life for marginalised groups, and to enable them to participate optimally in their personal and community socio-economic development initiatives.

As part of implementing the national welfare policies, the Department of Social Welfare provides many forms of assistance to those marginalised groups. One of the main challenges faced by the department includes monitoring of the ever-increasing demand for services. Sometimes there could be a case redundancy due to inefficient administrative process. And because there are more than one Welfare offices, miscommunication and misinformation can happen easily and this could prove costly.

How do we lessen the burden of Welfare officers and administrators, and at the same time deliver effective and equal Welfare distribution?

e-Welfare: A Tool for Efficient Social Service Delivery

This is where the e-Welfare comes in.

e-Welfare is designed especially for the Department of Social Welfare with the objective to facilitate the department in their effort to manage and monitor the recipients of welfare services.

The features and benefits of e-Welfare System are:

Computerised Work Processes

Application for welfare assistance is now made faster and more efficient. Registration of the profile of recipient is done only once and includes comprehensive details of the person. For subsequent application, it is a matter of retrieving the recipient record and updating the type of assistance applied for. All this can be achieved in a matter of minutes, compared to the paper file process of manual registering and updating via the manual forms. From initial registration to financial aid payment to recipients, administrative works are now completed faster and communication has improved. Aside from eliminating costly paper-based environment, employee's productivity also increases and they can now spend more time on their assigned social cases.

Systematic Workflow

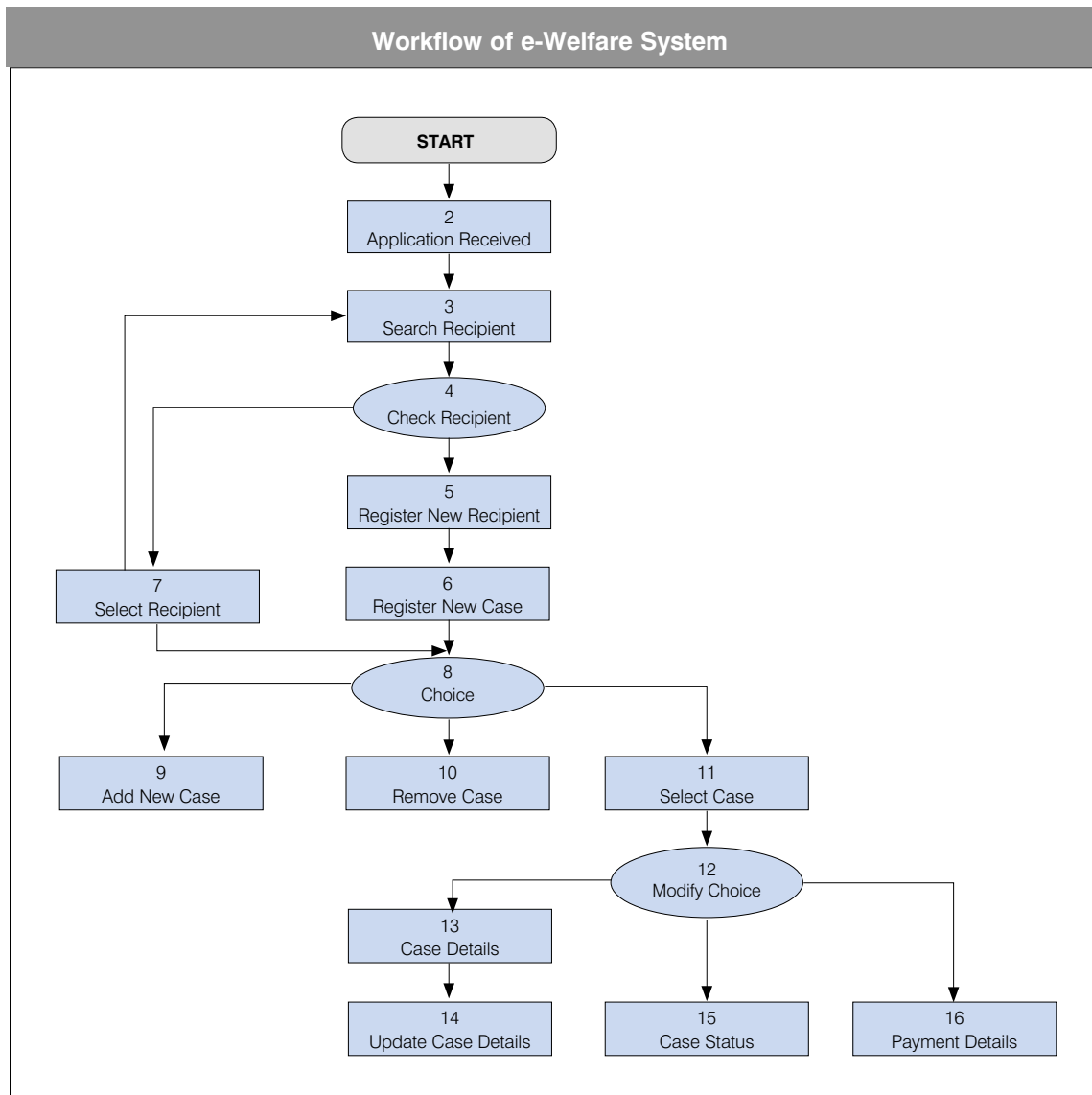
e-Welfare system promotes a systematic workflow, which eases routing and processing. The workflow starts from process of submission of application to the process of reviewing the cases. Once the registering of application is completed online, the welfare case is instantaneously routed to the Investigation Officer for follow-up. Email trigger function is also built-in into the system as another alternative to alert users on items that require their action.

Centralised database

The centralised architecture of e-Welfare with its consolidated database now allows the Department of Social Welfare to share recipient information across every branch offices in Malaysia. There is at least one social welfare organisation in every State. In the past, it is not an easy task to sift through every person's detail to make sure his record and profile does not exist in another location. The centralised database allows information sharing to reduce case redundancy, detect non-genuine recipients or fraud cases, improve communication, and provide ample opportunities for exchanging of best practices to improve overall administration. Real-time access to data will help staff resolve problems faster and reduce delays in delivering aids. The system provides fast search and retrieval functions to facilitate prompt decision-making.

Reports Generation

e-Welfare management reporting is one of its most important function. Report generation is now made easy and fast. Over 30 standard reports can be generated by the system. The generation of reports is now a 'click' away, unlike the tedious manual processes of checking resources everywhere to come up with just one report. Policy makers and management of the Welfare Department can now obtain or extract the latest information from the online reports to facilitate accurate and prompt decision-making.



Web-enabled Application

e-Welfare is equipped with web capability to give it the special 'anytime, anywhere' access. To access the application, users will need to connect to the Internet using a web-browser and call up a specific Internet site address. The site will feature a login screen for their assigned ID and password. In addition, compared to paper applications, which require data to be entered into databases at a later time, online applications via the Internet are more complete and have fewer errors. Furthermore, misplaced paperwork or illegible handwriting are problems of the past.

Secured and Safe

e-Welfare has built-in security feature to manage access control. Different levels of users have different access rights to prevent data manipulation thus ensuring transparency and integrity. Due care is also taken to ensure the system's servers are safe and functioning in optimal state with minimum downtime; such as implementing physical security, installing firewall protection and incorporating data backup services.

Project Study: e-Welfare in Departments of Social Welfare, Malaysia

The first generation of e-Welfare was developed and implemented in Sarawak Welfare Department in the year 2002. The system was codenamed 'Sistem Pengurusan Bantuan Kebajikan' (SPBK) in Bahasa Malaysia or Welfare Management Information System in English. Through a variety of feedbacks and inputs from various relevant parties, SPBK v.2 was conceptualised and delivered to the Department of Social Welfare under the Ministry of Women, Family and Community Development of Malaysia.

The nationwide project with the Department of Social Welfare was awarded in October 2006. The project implementation was also in line with the 9th Malaysia Plan in which the government of Malaysia intends to leverage on ICT application to improve service delivery to the public. e-Welfare is deemed as part of the 'e-Khidmat Sosial' project that will involve the Ministry of Women, Family and Community Development and 13 other agencies all over the country on how to improve life quality and social aid delivery to focused groups.

Awareness and trainings on e-Welfare took place soon after with the National Level Awareness Seminar which was conducted in March 2007 at the Institute Social Malaysia and attended by 200 plus senior government officers from both the Ministry and the Department. At State level, 5 other sessions were conducted at different locations throughout Malaysia. At user level, End User Trainings were also conducted to teach and guide a total of 340 users on how to use and utilise the system to improve their everyday tasks. Technical training for the IT personnel of the Department was also provided to ensure they have the skills and knowledge to maintain the system and hardware.

Through various processes of implementation, it is anticipated that with e-Welfare in place, the Departments of Social Welfare in the country will be able to perform their responsibilities more efficiently and effectively to benefit the needy and the less fortunate.

Encik Inau Edin Nom, the Director for Aid and Socio-economy Section, Department of Social Welfare Malaysia, in his opening remarks at the National Level Awareness Seminar, said that it was about time the Department embraces change brought on by the wave of globalisation and technology. Inau, who is also the Project Manager for e-Welfare, was responding to questions by certain parties on the rationale of having the e-Welfare system.

"I am not saying the manual and conventional ways did not work, I am saying we should try to adapt to changes because when environment changes, people change, and their behaviour change. Every government department is progressively moving towards Electronic Government (EG), and it is time we do the same because we want to move in line with our country's overall vision," he said.

He added: "It is hoped that with this system, there will be positive changes taking place especially in our service delivery. We expect to reduce customer complaints, minimise errors in our administration, improve our work processes, increase customer satisfaction, and realise our good intention as established by the policies set by our caring government. Hopefully, with all our cooperation and positive response, we can start to benefit from the full implementation of the system shortly."

Fresh Approach to Timber Management



Picture: Species Checking using PDA

Widespread logging of the world's forest is a major concern for everyone. Many timber-producing countries today have embarked on major reforestation and more sustainable manner to reproduce timber for the world's consumption.

What has not been tackled effectively is the continuous occurrence of illegal logging. Illegal logging is a pervasive problem and if left unchecked, it could cause enormous environmental damage and costs governments billions of dollars in lost revenue. It retards sustainable development. Unfortunately, some consumer countries contribute to these problems by importing timber and wood products without ensuring that they are legally sourced.

How do we resolve this problem and ensure everybody benefits from the forest vast produce? How do we ensure timbers are being harvested legally and reach the final destination as designed?

Exploiting Technology for Timber Management

In recent years, producer and consumer countries alike have come together to devise regulations and controls to ensure timber produced are harvested legally.

With encouragement from Sarawak Government, SAINS together with Sarawak Forestry Corporation embarked on the initiative to develop a system, named **TimberNet**, to resolve logging issues faced by the world's forestry organizations.

TimberNet was especially designed with the aim of assisting key players of the timber industries **in tracking the movement of logs** and **to address the issue of illegal logging**. TimberNet targets two key groups in the timber industry and they are the timber authorities and the timber licensees.

Purpose of TimberNet

The design and development of TimberNet was based on the following principles:

- Use of available and cost effective RFID technology to tag, track and trace logs from the felling points to sawmills and export points
- Use of global communication system and networks to transmit production details from timber licensees to timber authorities for validation and approval
- Use of handheld RFID reader and portable PDAs to facilitate verification of log consignment onsite to detect any irregularities
- To facilitate accurate assessment and collection of timber royalty

How TimberNet works

The four core components of the TimberNet System are as follows:

- Logs Production Module
- Royalty Assessment Module
- Logs Tracking Module
- Royalty Billing Module

TimberNet allows timber licensee to perform online transactions such as to apply for registration of Log Production Identity (LPI) Number, to apply for registration of Daily Log Production, to apply for Royalty Assessment, to apply for Royalty Removal Pass (Transit), to apply for Shutout Log, etc.

TimberNet **speeds up the application** and **submission** process and eliminates manual form filling and the need to transport the application paperwork to the respective timber authorities offices. System validation checks features are designed and built into TimberNet to authenticate the validity of the application made by the licensee and to match the species of logs to be produced from the designated location, before any approval is granted to the licensee.

With **RFID** capability, log tracking and regulation enforcement are now made more effective. The RFID is implanted or nailed to the individual log and it stored data to uniquely identify each individual log. With a unique identity of its own, the log can be easily traced with the use of portable RFID reader.

Unlike other tagging technology such as barcode, **RFID is difficult to duplicate** and thus able to **prevent fraud**. RFID is ideal for use in the harsh timber or logging environment such as felling site and log pond (that are often covered in mud or submerged in water) because of its durability.



A worker implanting RFID tag



An officer reading the RFID tag

The information of logs captured in TimberNet can be downloaded into Personal Digital Assistant (PDA) for onsite physical checking of logs species and assessment of royalty. Any deviation or discrepancy can be easily spotted and this serves as a strong deterrent to any irregularities.

Data on logs collected during the physical check carried out by relevant timber authorities on the ground (i.e. felling site, log pond, pass return stations, checkpoints, etc.) can also be entered into PDA and later uploaded into the TimberNet System for further verification process. The use of automation provides better control and transparency to timber management. Once the data of the physical check collected on ground match the information captured in the TimberNet system, the necessary approval and clearance can then be authorised and approval issued.

Case Study: TimberNet in Sarawak Forestry Management

In 2004, TimberNet was judged the winner in the E-Government and Services category, at the Multimedia Super Corridor Asia Pacific Information, Communication and Technology Award or MSC-APICTA Award. The MSC-Asia Pacific ICT Awards (MSC-APICTA), under the patronage of the Prime Minister Datuk Seri Abdullah Haji Ahmad Badawi, is a prestige annual event in which many ICT multinational organisations take part.

The Sarawak Forestry General Manager for Security and Asset Protection, who headed the Project Team, informed of the global concern and demand for visibility and accuracy in timber processing. Importing countries, traders and consumers demand for legally sourced timber and although there are in existence, various means of ascertaining them, the process remains cumbersome and time consuming.

“What we have done is provide a solution that is not only modular, but also enabling it to meet the needs of various user types. We also employ latest technological hardware available and place them on the Internet platform that will solve all these needs and more,” the General Manager said.

As one of the winners representing Malaysia, Sarawak Forestry went on to bring TimberNet solution to the rest of the world when they showcased in Hong Kong that same year.

An Intelligent & Integrated Approach to All Land Matters



Aerial view of Kuching, Sarawak

Land and the E-Government fundamentals

Good land administration is an essential element for good governance of any countries. Increasingly, we see government development projects initiated in many countries relying on Geographic Information System or GIS for managing and deploying spatial data for planning and decision-making.

Spatial information from small to large data sets is of enormous value to governmental authorities at all levels; the local, regional and federal government. The establishment of geodata portals and metadata catalogues are therefore the necessary prerequisites for operating and sharing cadastral data in land administration.

Access to and use of land is fundamental to modern society, as we know it. E-Governments at all levels rely on accurate and updated land records and related land use information to determine the location and extent of landholdings, to establish the ownership of the properties and to determine the value of those properties. This information provides the basis for revenue generation, land use, planning, environmental management, public safety, public works and utility supply, housing development, crop cultivation, roads and town planning, public utility services, and etc.

Cadastre

Cadastre in a broad context is the description of the legal and fiscal interest of land that forms part of land ownership records. The cadastre helps in the administration of lands inclusive of the private and public holding and enforcement of laws with regards to the use of the lands.

A legal cadastre is a parcel-based description of the interests or rights in a real property. It is typically supported by titles or deeds, and registries. A legal cadastre defines the property's rights and the extent of the property rights spatially. It supports the transfer of lands and provides the evidence of ownership.

In the last decade, with the emergence of Information Technology (IT), there were moves toward the establishment of fully digitised cadastre throughout the world. Today, the potentials and usage of digitized cadastre is widely recognised and accepted and it augurs well for the land market as well as the land administrator. The use of digitised cadastre promotes economic development, social cohesion and sustainable development. In general, the use of digitised cadastre data can be multi-purpose. Combined with intuitive and user friendly Geographic Information Systems (GIS), the benefits are limitless.

i-SALaM, a system for all land matters

Land related application systems are always of high impact not only because they invariably involve large revenue transactions, but also because they generally touch the whole population as either current or potential land owners and/or users.

SAINS has developed undoubtedly the most comprehensive and integrated land information system available in Malaysia, called **i-SALaM**, to support the full range of business processes of the Land and Survey Department of Sarawak. The concept of i-SALaM centred on a system that is interactive and contains the relevant information and application for all matters on land.

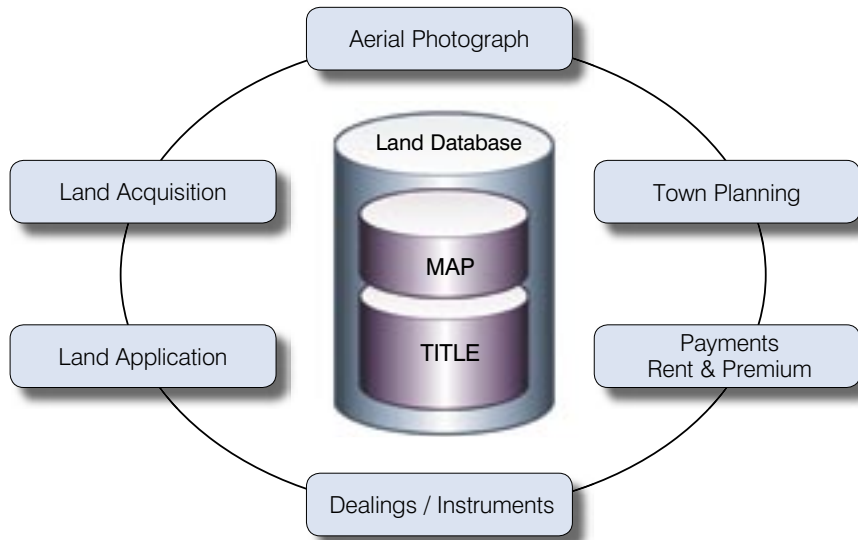
Land administration on the ground invariably involves covering vast tracts of wide geographical spread. i-SALaM allows the daily running of the individual subsystems to be decentralised. The administrative routine relays the data collected from these subsystems to the central data custodian daily.

Briefly, which **i-SALaM** stands for **I**ntegrated **S**ystems for **A**ll **L**and **M**atters, provides comprehensive tools for processing of all land matters.

The objectives of i-SALaM are:

- To provide a single interface for all land matters
- To promote better land administration through working smart with process automation
- To provide a tool for legal, administrative and economic decision-making
- To integrate various systems for efficient land administration (land/strata titles)

The various sub-systems in i-SALaM are integrated with each other.



At the core of **i-SALaM** is the digitised cadastral and maps database system for identifying land parcels. **i-SALaM** provides the means to access, manage and analyse land records with cadastre as the main component and provides the basic infrastructure for running the interrelated systems such as the Land Tenure, Land Value, and Land Use.

Various subsystems in the cadastral are linked by establishing cross-referencing in the registries. The registries contain all the key identifications of all the subsystems. These identifications are the parcel number, the building number, the address, the UPI and etc. The identification-keys are linked into the relevant physical element represented in the digital maps, e.g. the parcel, the building, etc. Thus, it is possible to obtain all available information on a specific property or building by knowing only one of these keys.

The cadastral process here is focused on providing great accuracy in the cadastre relative to the parcel boundaries as today some users such as local authorities and the public utilities companies requires the great accuracy in the cadastre in order for them to combine the legal property features in the cadastral map with the spatial features in the large-scale topographic map.

i-SALaM Planning Sub-System

The Planning Sub-System is designed based on the principle of a framework control, in which plans must not contradict the planning decisions at the upper levels. The state councils or agencies that carry out regional planning emphasizes on the basic infrastructure and the interests of the region. Whereas, the municipal councils or city halls that are responsible for municipal planning, emphasize on the local issues and the function and development of the urban areas. The municipal councils are also responsible for the legally binding and detailed planning of a specific development project including the granting of occupation permits.

The cadastre is increasingly used as a basic instrument in the planning process. Some local authorities use the cadastre map as the basic layer in municipal town planning. Cadastre in digital format provides a number of opportunities.

For example, land-use on a specific property can be easily links to the addresses and name of the owners. Furthermore, the regulatory details, such as zoning and building restrictions can be identified on the relevant properties and located according to the property boundaries. This facility can also be made available on the Internet and made the relevant planning information accessible by the business communities and the general public.

i-SALaM in E-Government

Undeniably, land records information is one of the most highly demanded types of government information. The combination of a readily available Internet access and digitised cadastre allows the government to provide improved levels of public services. As a result, the traditional surveying, mapping and land registration focus has transformed from being primarily provider-driven to user-driven. Today's modern societies moving towards E-government and E-commerce service are identifying new organisational structures and work processes in the public sector jointly with the private sector to enable the creation of an electronically processed cadastral service for both the government and the general public.

i-SALaM represents a great improvement and possibilities in E-government and E-commerce service. E-Government is making collaboration between government agencies possible in new and powerful ways. The strong data integration abilities of i-SaLAM let governments truly capitalize on data existing in legacy systems.

Fair and Responsible Land Use, Valuation and Revenue Collection

It has been commonly understood that the origin and main objective of a cadastre is to identify the land parcels for the purpose of levying land taxes and/or securing legal and economic rights to land.

The existing economic activities on a piece of land and its physical use command great influence on the value of the land. Land values are also influenced by the land development potential such as through zoning and future land-use plan.

i-SALaM is not only about Land Tenure and Land Value. On the whole, it provides comprehensive and overall land database for efficient Land-Use Control, Land Development, and Land-Use Administration. The combinations of efficient land use control and land-use administration form the basis for a sustainable approach to economic, social and environmental development. The success of a cadastral system is a function of how well it achieves these broad social and economic objectives.

Development Project Monitoring System : Efficient Project Supervision for Sustainable Development



Tighter project supervision for better use of public funds

We read with great trepidation the many-failed government projects, big and small, and the millions of public funds wasted as a result. If only these millions could be better managed to ensure the grandeur of government plans for infrastructure and basic amenities such as roads, housing, water and electricity supply, hospitals, schools, etc. are delivered for the goodness of its people.

Any good government would own up to the responsibility arising from being entrusted with the people's development money to ensure it is well spent and it is by no means a small task.

In 1995, more than 10 years ago, SAINS worked with Sarawak State Planning Unit to design the very first version of **Development Project Monitoring System** (DPMS). Since then, valuable lessons learnt from two subsequent upgrades led to a more recent redevelopment using web-based technology to meet the changing needs of government projects monitoring from the ground.

Development Project Monitoring System (DPMS) is an e-government application system designed to plan, monitor and facilitate the management and evaluation of all government development programmes and projects.

With increasing number of development projects to be carried out and limited funding allocation, it is vital to have an effective and useful tool for project monitoring. With the government focusing on sustainable and balanced development for both rural and urban areas, it is crucial for every approved programmes and projects to be well managed, well implemented, within budget and on time to reap the expected benefits. All these can be achieved using a feature-rich and proven system to execute project monitoring processes both at high level and administrative level.

Key Objectives

- To provide a single project monitoring system to manage development programmes and projects that can feed information and reporting to central monitoring agencies
- To provide a central database that can cater for the monitoring and review of different types of development programmes and projects over multiple years
- To achieve timely feedback of accurate and complete information for project monitoring through integration with other Line of Business (LOB) systems such as project planning and approval, budgeting and accounting, land ownership, and contractors management.
- To allow monitoring of both physical (e.g. roads or buildings) and non-physical projects (e.g. research or studies);
- To facilitate the dissemination of timely reporting and information to central agencies for better decision-making;
- To eliminate manual processes such as re-entering of information and laborious re-scheduling of tasks
- To address the needs of implementing agencies for better project management and monitoring purposes;

Key Features

Project Application

The Project Application captures application and approval of development programmes and projects. It can also be used for Ad-Hoc project application and Mid-Term Review (MTR) submission. It allows agencies to submit or resubmit application of projects online together with the yearly financial detail and physical plan involved. Before project approval, the system allows changes to be made to the project proposal submitted.

Financial Module

All agencies are required to plan in advance their monthly and annual budgetary requirements for each project based on the approved and awarded project sum. This feature captures planned monthly expenditure and planned distribution of funds for each sub-project. Financial monitoring is essential in a project to ensure there are no incidences of overspending, corruption, and misspending. It captures annual budgetary allocation and expenditure, supplementary, variation orders, warrant, payments etc. The financial performance is presented in the form of charts and graphs.

Work Progress Module

The system has different activity templates to cater for different project types that are categorised as Physical projects (e.g. roads or buildings) and Non-Physical projects (e.g. studies or research). It allows activity-based monitoring for different stages of implementation namely pre-implementation, implementation, and post-implementation. It also permits multiple units of measurements to be defined (e.g. number of participants, ha, km, m³). Other than that, the Work Progress Module allows agencies responsible to update details of activities that are assigned by the client agency. This includes revision of planned schedule and project completion report for evaluation purpose. Task Management can be created to provide a channel for agencies to discuss project-related issues or assign tasks internally or externally for better communication and cooperation.

Project Profile

The project profile captures the general background of approved programmes and projects such as Project Name, ID, Vote Head, monitoring officers and etc. It also allows financial allocations to be defined and entered for each sub-project. Other than that, it captures problems encountered during implementation of projects to allow reviewing for fast troubleshooting purposes.

Contractor's Management

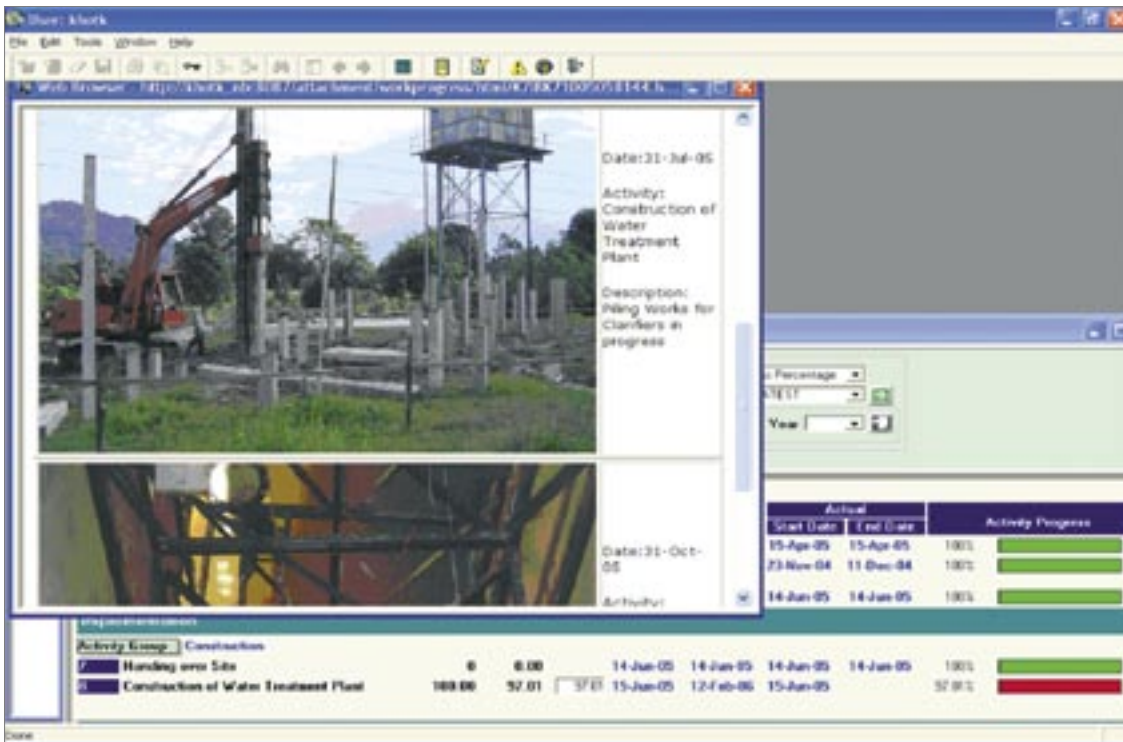
The system captures contract particulars such as contractor's details, contract period, contract sum, and other relevant information. The contractor's performance review is also captured for timely assessment. This information would also be needed in the future during assessment of contractors for other projects.

System Integration

DPMS is dynamic enough to allow integration with other Line of Business (LOB) systems for more efficient administrative work and better decision-taking. Systems that can be integrated with DPMS are Budgeting or Financial System, Contractors Information System, Enterprise Resource Planning (ERP), HR system, Geographical Information System (GIS) and etc.

Project Completion Report (PCR)

Apart from that, the system has a built-in alert system or online reminder including emails notifications and updates to ensure reports are submitted on time. Online submission speeds up project reporting from the ground to central agency. Thus, unnecessary delays are minimised.



Activity-based monitoring

Case Study: 'Sarawak Monitor' for 9th Malaysia Plan

The Chief Minister of Sarawak, Malaysia, the Right Honourable Pehin Sri Haji Abdul Taib Mahmud, officially launched the Development Project Monitoring System on July 12, 2005. YAB Pehin Sri later renamed the system to '**Sarawak Monitor**' in recognition of the progress Sarawak has made in e-Government application.

"With the new system being rolled out, project managers are anticipated to have fewer obstructions to deliver their responsibilities better but instead this will empower the way they work and how things are being done" the Chief Minister of Sarawak stated in his speech during the launch.

The rollout of **Sarawak Monitor** commenced in May 2005 and was completed in Dec 2006. It is an eGovernment application system designed to monitor and facilitate evaluation of all development programmes and projects under the current 9th Malaysia Plan and beyond, making use of the SarawakNet as the main network infrastructure. With the major upgrade on the system features, backend engine and hardware, **Sarawak Monitor** provides a more robust and scalable platform to serve the daily operation of the project monitoring officers on the ground.

Sarawak Monitor is under the custodian of State Implementation Monitoring Unit (SIMU) of the Chief Minister's Department. Benefited from the knowledge gained in earlier system implementation and feedbacks gathered throughout the years, **Sarawak Monitor** has positioned itself to be a user-oriented tool that suits the needs of the end-users, instead of a tool that monitors projects from bird's-eye view.

Designed to be an activity-based project monitoring system, **Sarawak Monitor** eases the job of monitoring officers by providing customised monitoring tool based on different project nature. With full involvement from agencies in contributing the activity templates, **Sarawak Monitor** strives to promote the idea that every user is a contributor and owner of the system.

Currently being implemented in more than 150 sites, **Sarawak Monitor** continues to serve close to 600 users from the ministries, central agencies, departments, statutory bodies and local authorities.

The Strengths of Sarawak Monitor

Sarawak Monitor

- attends to the needs of central agencies , client agencies and implementing agencies;
- alerts users on delay of projects and outdated of project data;
- provides system scalability for future expansion on system scope;
- integrates with other Line of Business (LOB) systems like Development Projects Submission System (DPSS), State Contractors and Consultants Registration System (SCCRS) and State Integrated Financial and Budgeting Accounting System (SIFBAS), to obtain the most updated data and reduce data redundancy;
- monitors both physical and non-physical projects;
- enhances project monitoring with aid of charts, graphs and photos;
- promotes interaction among agencies via task assignment and monthly progress update;
- serves as online reporting tool for agencies' project management or monitoring meetings;
- serves as reporting tool by the central agencies to the State Development Monitoring Committee;
- operates as central repository for knowledge sharing and data archiving.

Solutions for Security Management

SAINS Anti-Spam Solution: Stop the Frustration, Protect Against Spam



Have you checked your mailbox lately? Always wondered how did people like (or conveniently named themselves) Bill Gates, Osama bin Laden and Britney Spears know your email address when you have never met or introduced yourself to them before? The Internet world is now invaded by spammer trying to sell, trick or harm you or your system through the very vulnerable mailbox.

With snail mail, one could always trash the junk mail into the rubbish bin, but not with emails. Thanks to borderless Internet connectivity today, it takes little more than a click of a button for a spammer to spam thousands or millions of mailboxes, and it could take you precious hours clearing them later.

Spam: Annoying and Dangerous

Spam is the term used to describe frequent unsolicited, unwanted or junk e-mail. According to **Wikipedia**, "Spam is e-mail that is both unsolicited by the recipient and sent in substantively identical form to many recipients. Thus, a common synonym for spam is unsolicited bulk e-mail (UBE)". Based on **MessageLabs'** statistics, junk e-mails consumed about 50% of e-mail traffic worldwide while virus and 'phishing' traffic only consumed less than 0.5% of the total traffic.

Junk e-mail is not only annoying but also bad for businesses and end users. It will consume network bandwidth of the user as well as the Internet Service Provider (ISP), which ultimately delay essential transmissions. Moreover, it will eat up the server storage and end user's mailbox space, making life less convenient for the users. If it gets into the e-mail inbox, users will have to identify and delete the spam mail. This can be time consuming and affects the employees' productivity.

Junk e-mail often contains fraudulent, deceptive and worthless content. Users are usually tricked into disclosing their confidential information like password and their credit card information.

In worst-case scenario, huge amount of junk e-mail may jam up the user's Internet line and overload the server storage. In addition, the user's mailbox may cause problem to the network and e-mail system, which in turn may affect the company's business operations.

Fighting Junk E-Mails

Anti-Spam solutions currently in the market are quite matured. There are more than 10 anti-spam solutions in the market with most of them using standard technology and techniques to detect junk e-mail. The standard technology includes:

- **Signature-Based Filtering:** This method is similar to the method used for detecting computer virus. For every junk e-mails detected, it will create a signature for that junk e-mail and use that as the mean for detecting similar future e-mail.
- **Sender network:** When the junk e-mailer is sending out a junk e-mail from its mail server, the server will be blacklisted and future e-mails from that server will be treated as junk e-mail.
- **URL Blacklist:** Most junk e-mails include a web URL (Uniform Resource Locator) inside the e-mail. By blacklisting the URL, future e-mails with this URL will be treated as a junk e-mail.
- **Content-Based Filtering:** This method is based on the keyword used inside the e-mail. Keywords like stock names and drug names can be easily detected and the e-mails, which carry these, will be treated as junk e-mail.

SAINS Anti-Spam Solution

SAINS Anti-Spam Solution is based on Open Source technologies. It is cost-effective because it does not require client or server software licenses to operate. Besides that, it is also more flexible and customisable to better-fit SarawakNet environment.

The Open Source solution utilises a combination of Anti-Spam techniques available. All e-mail messages are subjected to some, if not all, matching patterns that correspond to each of the techniques available with scores given for each of the matching patterns, which are then tallied up. The tallied score will then be examined to ascertain whether it exceeds the predefined threshold value, or in other words determine whether the message should be rejected, flagged as spam, or even quarantined.

The solution also helps to reduce the risk and overall impact of e-mail attachment borne viruses, and also filters malicious e-mail attachments at the server. It can also effectively stop certain mail attachments – as specified – from reaching your mail server.

To provide better accuracy for the anti-spam solution, SAINS have also implemented white-listing and black-listing. White listing is to allow certain sender's e-mail address to pass through the anti-spam system while black-listing is to stop certain sender's e-mail address to pass through. Legitimate e-mail can be white-listed in advanced to avoid it being blocked or quarantined while those unwanted and non-productive e-mail can be black-listed.

System's Key Features & Benefits

Highly Accurate

Less than 10 mails trapped in the quarantined area out of 100,000 messages, or 99.99% accuracy.

Highly Effective

It can filter 99% of the junk mails. It uses a combination of multiple technologies and techniques to ensure it can detect all types of junk mails no matter how the spammer tries to work around it.

Customised rules

SAINS Anti-Spam Solution incorporates customised rules for better spam detection and also to ensure better accuracy. The rules are customised more toward our Malaysian environment and more friendly to e-mails coming from within Malaysia or those written in Bahasa Malaysia.

Automatic updates and self-learning

New spam signature and rules are automatically updated daily for the system to detect the latest junk mail. It also have customised artificial intelligent feature to provide self-learning from the day-to-day junk and legitimate e-mail. The more it learns, the more accurate it becomes.

Flexible and Customisable

The Open Source solution allows further customisation to your business requirement wherever necessary. You can white-list or black-list certain e-mails to suit your company or even to a specific individual if necessary.

Best value for money

The anti-spam solution is cost-effective and affordable because it is based on Open Source technologies and does not require client nor server software licenses to operate. That means users do not need to pay for the yearly 3rd party software licensing cost.

Built-in anti-virus and anti-phishing

The solution provides full e-mail security function to fight against spam, virus as well as phishing. It helps to reduce the risk and overall impact of e-mail attachment borne viruses, and prevent malicious e-mail attachments at the mail server level. It can also effectively stop certain mail attachments from reaching your mail server.

E-mail Quarantines

SAINS Anti-Spam Solution has an e-mail quarantine feature to ensure legitimate e-mails do not get blocked.

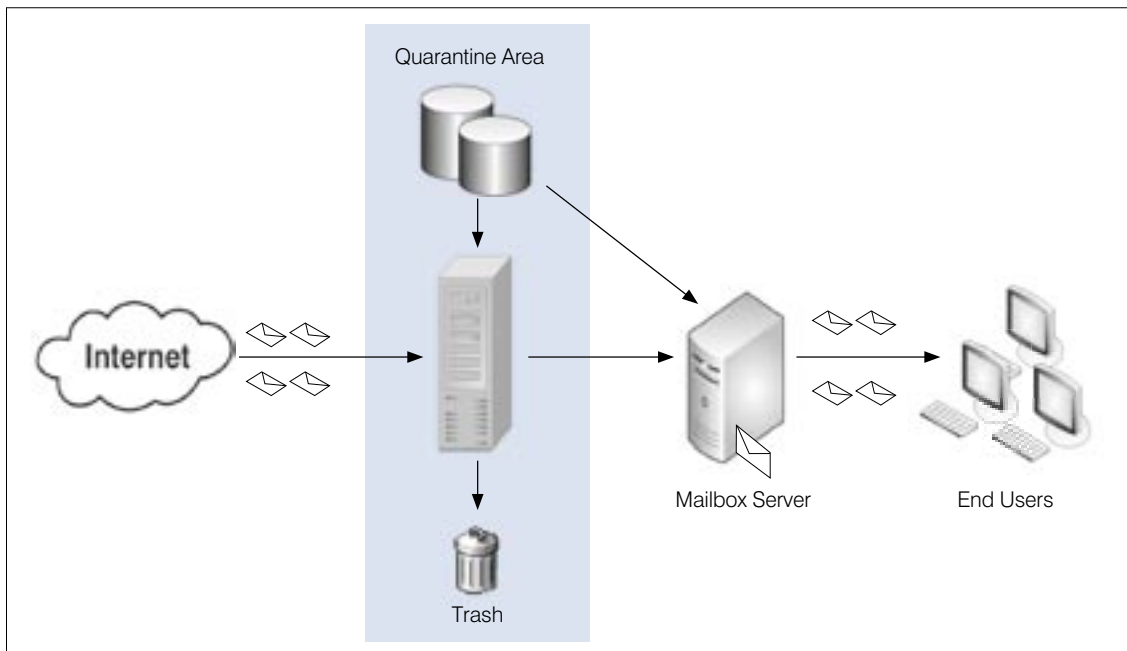
Easy web-based interface

Users can access the web-based interface to view their quarantined e-mails and take necessary actions. Administrator could also use the web-based interface to view, configure and monitor the anti-spam system.

Excellent support services

7 x 24 Call Centre support as well as experienced technical support personnel to provide rapid response time.

SAINS Anti-Spam Architecture



SAINS Anti-Spam Solution provides e-mail security protection to your e-mail services. As such, it will act like a “firewall” which sits in front of your mailbox server. There are two possible setup scenarios:

1. Subscribe Anti-Spam as a service - The SAINS Anti-Spam system is physically located at SAINS Data Centre. All e-mails to your company will be routed to the anti-spam system before routing to your mailbox server. As such, junk e-mail will be blocked or quarantined at SAINS Data Centre and only legitimate e-mail will be delivered to your e-mail mailbox server.
2. Out-Right purchase of the solution - You can purchase SAINS Anti-Spam solution and host it inside your company’s network. In this case, you will get a physical server which will be located at your company’s network. Junk e-mails will be blocked or quarantined inside this server. Legitimate e-mails will be delivered to your e-mail mailbox server.

Whichever option you choose, it will provide the similar protection against junk e-mails. Option 1 is designed for customers with little or non-IT personnel and would prefer to outsource the anti-spam solution for SAINS to manage. As for option 2, users would need to have some resources to monitor and manage the anti-spam server.

Glossary:

Phishing – In computing, phishing is a criminal activity using social engineering techniques. Phishers attempt to fraudulently acquire sensitive information, such as usernames, passwords and credit card details, by masquerading as a trustworthy entity in an electronic communication. (wikipedia.org)

Mail Relay Server - An e-mail processing server sitting between the Internet and the mailbox server.

Spam - E-mail that is both unsolicited by the recipient and sent in substantively identical form to many recipients. Thus, a common synonym for spam is unsolicited bulk e-mail (UBE).

Open Source – Open source software is computer software that is developed collaboratively by developers across the world. The software itself is available at little or no cost. The source code, or the human-readable version of the software is distributed freely to anyone with the executable form, giving users of the software the freedom to modify, adapt and improve the software to meet their needs.

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Case Study: SarawakNet E-mail Statistics

E-mail traffic from the Internet to SarawakNet fluctuates everyday. In 2006, we have an average of 80,000 e-mails per day coming into our mail relay servers. It reached the peak in December 2006 with 150,000 e-mails hitting our mail relay servers everyday. On December 27, 2006, a powerful earthquake hit the coast of Taiwan and disturbed the Internet access in Asia. With the reduction in Internet bandwidth and connectivity, the number of e-mails per day dropped to about 50,000. The distribution was recovered after few weeks. In 2007, the traffic stabilised at about 100,000 mails per day.

Although there are now more than 100,000 e-mails coming from the Internet everyday, not all e-mails are legitimate mail. In fact, most of these are junk mail. On average, our mail relay servers received over 80,000 (80%) junk mails per day with e-mails that are confirmed as junk deleted immediately rather than filling up the end user's mailbox. Other than junk mail, some e-mail may content viruses. There are about 1,000 to 2,000 (1-2%) virus e-mail been detected everyday and are deleted immediately by our mail relay servers. After blocking the junk and virus e-mails, there is only about 12,000 to 15,000 (12-15%) e-mails which are legitimate. Only these e-mails will finally reach the user's mailbox.

Some junk mails may look a lot like legitimate e-mail and some legitimate e-mails may look like junk mail. As such, for these uncertain e-mails, they will be quarantined for further analysis or action. Each day, some 10,000 e-mails are quarantined. The quarantined prevents a legitimate e-mail being deleted and allows the e-mail to be released as and when necessary.

Types of E-mail	Total Mail Count Per Day	Percentage	Action Taken
E-mail Virus	1,000 - 2,000	1% - 2%	Block
Junk E-Mail	80,000	80%	Block
Mostly Junk E-Mail	10,000	10%	Quarantined
Mostly Legitimate E-Mail	12,000 - 15,000	12% - 15%	Delivered

As junk e-mails from the Internet keep on increasing year by year, it is important to reduce the number of spam e-mails hitting our mail relay servers. To achieve this, the mail relay servers will block Internet servers that are sending a lot of junk e-mails. This effort will not prevent all spam e-mails from coming into our mail relay server but it will help reduce the number of spam e-mails. This is important as it will not only reduce the network bandwidth utilisation but also reduce the load on our mail relay servers. As of April 2007, the e-mail traffic has reduced to about 60,000 e-mails per day.

There is currently no foolproof solution to totally eliminate junk e-mail. So far, none of the anti-spam vendors in the market can provide a 100% detection rate. Most leading anti-spam vendor will only claim an accuracy rate of 98% - 99% for their products.

The anti-spam concept is similar to anti-virus where the very first few new junk e-mails or viruses will always escape the detection. Only when a huge numbers of junk e-mails have been detected, it is then considered as junk. Furthermore, an email considered as junk by someone maybe considered as legitimate by others.

Legitimate e-mail that looks like junk e-mail can sometimes fool the anti-spam system as well. Fortunately, with the quarantine precaution, certain e-mail that may be wrongly detected is kept for further action by each individual email users.

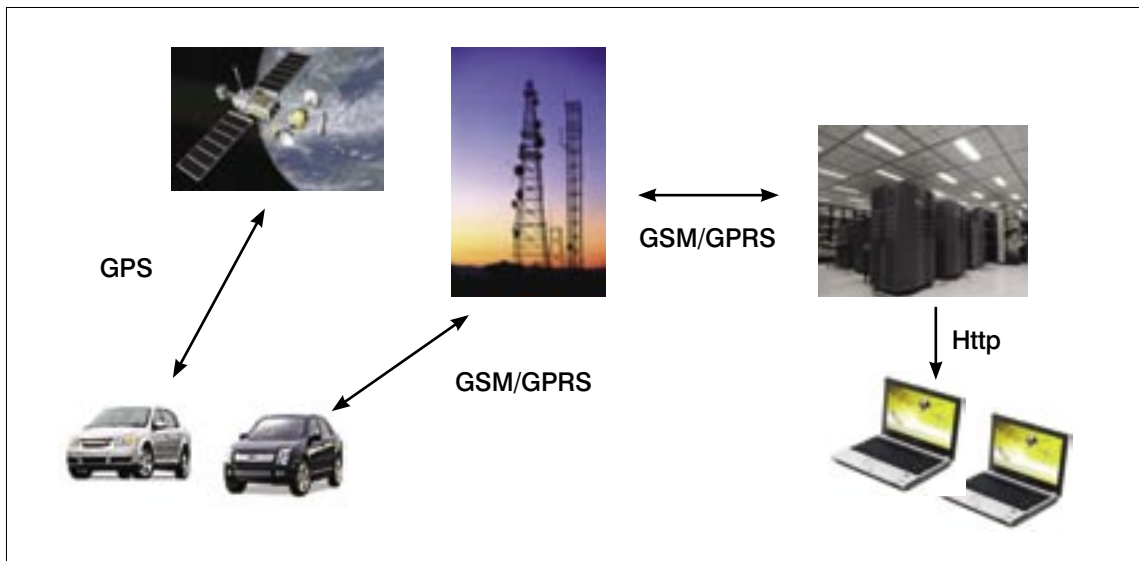
In conclusion, our users can rest easy with SAINS Anti-Spam solution monitoring their incoming emails for spam and infected emails. Gone are the days where the mailbox is filled to the brim with junk emails that burden the users' attention and productive time.

Vehicle Tracking System: Know Your Vehicle's Every Move



Vehicle Tracking System uses an electronic device installed in vehicles to enable vehicle owners or third parties to track the location, monitor movements, status and behaviour of a vehicle or fleet of vehicles. SAINS' latest addition in security solution is the introduction of its dynamic and scaleable Vehicle Tracking System, the **OmniTrac**.

OmniTrac utilises the technology of Global Positioning System (GPS) modules to allow for easy and accurate location tracking of the vehicle via satellite transmitters. OmniTrac also combine a communication component such as cellular via Global System for Mobile communications (GSM) or General Packet Radio Service (GPRS) to communicate the vehicle's location to a remote user. Vehicle information can be viewed on electronic maps via the Internet or custom-tailored software.



OmniTrac Vehicle Tracking System Model

Areas of application

Stolen Vehicle Recovery

A principal concern of new vehicle owners is the fear that their car may be stolen. OmniTrac can be used in vehicles as a theft prevention and retrieval device. Using GPS technology, your vehicle can be quickly located if it is stolen. Police can simply follow the signal emitted by the tracking system and locate the stolen vehicle. When used as a car security system, OmniTrac may serve as either an addition to or replacement for a traditional car alarm. OmniTrac can integrate with other security systems, for example, by sending an automatic alert to a phone or email if an alarm is triggered or the vehicle is moved without authorisation. The use of vehicle tracking device can be the justification to reduce insurance cost, because the loss-risk of the vehicle drops significantly.

Fleet Management

When managing a fleet of vehicles, knowing the real-time location of all drivers allows management to meet customer needs more efficiently. Whether it is delivery service or other multi-vehicle transportation businesses, managers only need a mobile phone or Internet connection to inexpensively tracked dispatch efficiently. This is useful also in asset tracking, especially when monitoring valuable assets in containers e.g. jewellery, cash, etc. Companies having to track items for time-sensitive delivery, insurance or security purposes can now plot the real-time asset location on a map and closely monitor movement and operating status.

Trailer Tracking

Transport and Logistics companies often operate vehicles with detachable load carrying units. The part of the vehicle that drives the load is known as the cab and the load-carrying unit is known as the trailer. OmniTrac can be used for different types of trailer, for example, flat bed, refrigerated, curtain sider or box container.

Field Service Management

Companies with a field service workforce for repair or maintenance must be able to plan field workers' time, schedule subsequent customer visits and be able to operate these departments efficiently. OmniTrac allows companies to quickly locate a field engineer and dispatch the closest one to meet a new customer request or provide site arrival information.

Field Sales

Using OmniTrac, mobile sales professionals can locate point of interest in unfamiliar areas. They can get driving directions to customers and prospects and add nearby last-minute appointments to itineraries. Benefits include increased productivity, reduced driving time and increased time spent with customers and prospects.

Other applications include monitoring driving behaviour, such as an employer of an employee, or a parent with a teen driver, or even suspicious spouses.

Why You Should Invest in OmniTrac

There are many opportunities to increase the efficiency, productivity and accountability of your organisation through the simple, cost-effective implementation and use of a vehicle tracking solution. The principle benefits of vehicle tracking include: -

Increased productivity

OmniTrac will allow you to monitor your employees and vehicles with assurance and confidence, which is of incredible importance, especially in some critical decision-taking situations. One of the most valuable parts of the system is the route-planning tool. As a standard tool to OmniTrac, it is possible within just a few seconds to check on the exact distance and time it should take to complete a particular route. This can lead to better job allocation, improved response times, and with route and schedule planning, less lost time arising from both undesirable practices and logistic problems.

Reduced operational costs

OmniTrac can be actively used to monitor employees' whereabouts and resolve disputes (if any) on expenses such as mileage, timesheet, and travel allowances. The system can be set to locate individual or groups of vehicles at regular time intervals, from daily, hourly, minute-by-minute updates or on ad-hoc basis. OmniTrac can also be used to settle customer disputes related to arrival time, service duration and service location.

Improved customer service

With the transparent nature of OmniTrac, improved customer service becomes more likely than ever before. Customers will be able to receive accurate timing of their delivery and faster response to service in most situations. For example, taxi services may use OmniTrac to better serve their customers. By using the system, their operators can see which taxis are available and choose the one closest to pickup the order from their customer.

Enhanced security and safety for both driver and vehicle

OmniTrac not only allows you to monitor the whereabouts of your vehicle and its driver and passengers, but provide enhanced security that comes with the knowledge of knowing where they are. Live tracking provides absolute real time assistance, giving the drivers total back up on the road whenever required. In cases of emergency or life-threatening situations, accurate location tracking is very crucial.

Written Information – Reports

OmniTrac can provide reporting on real-time or time-delayed, depending on the needs and transmission mode. When placed alongside existing management system, the added information will provide a new view of the business. Recorded information is crucial for reference, comparison and guideline for forward business planning, business and employee performance measurement and evaluation, and other important decision-makings that can make a difference in determining how successful ones business is.

The features and Functions of OmniTrac in a glance:

1. Active & Passive Tracking

- Real-time locations tracking
- Batch uploading
- Map and Google Earth
- Speed and direction

2. Geo-fencing

- Boundaries configuration
- Exceptional report
- Trigger notification

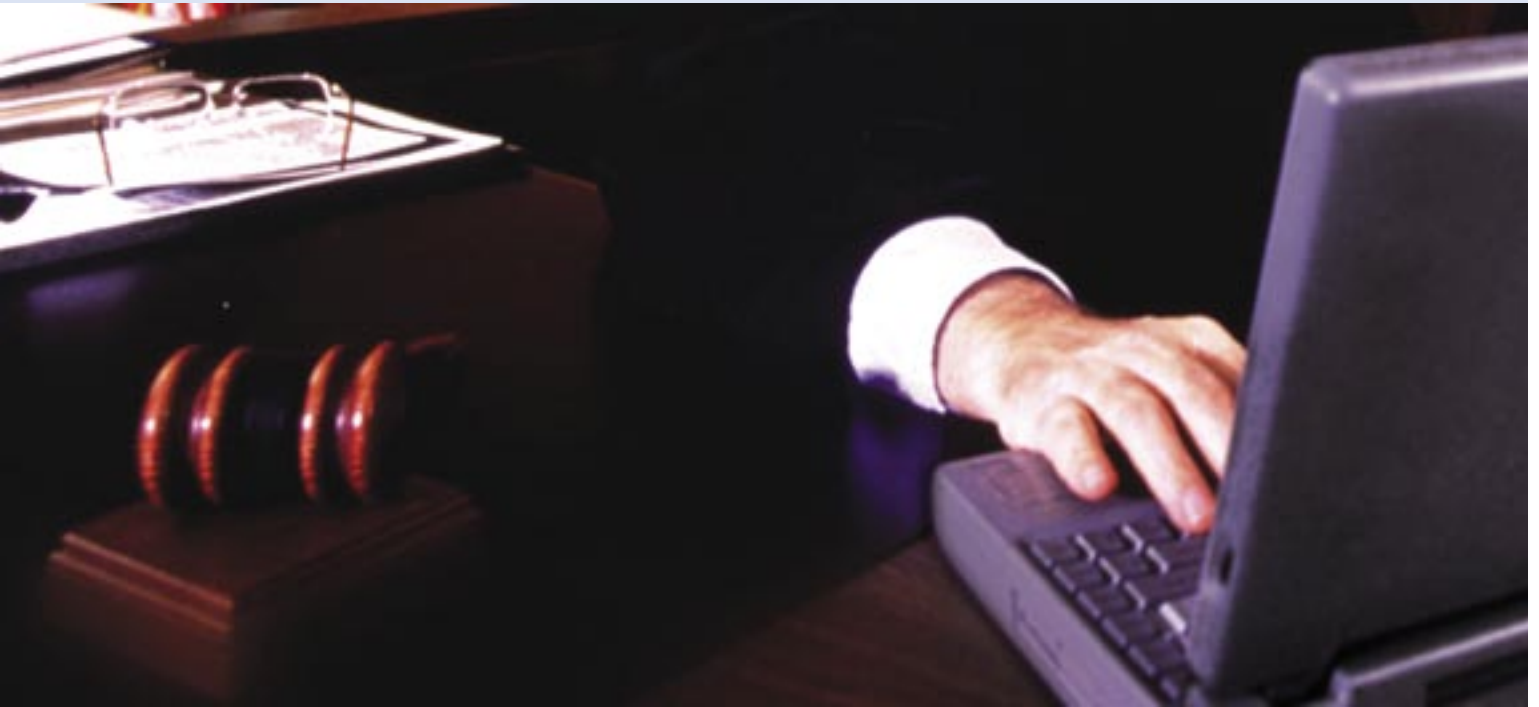
3. Route profiling

- Predefined vehicle routes
- Reporting

In conclusion, the competitive nature of our world today requires that you manage all aspects of your business. This includes your mobile resources, the fleet of vehicles that play an integral part in delivering your products and services to the customer, and your human resources. When put in the right hands, this information improves your value to your customer by improving the level of service you provide.

Solutions for Judicial & Law Management

Bringing Hi-tech to the Courtrooms



Clearing Backlog Cases

With more court cases and shortage of judges to preside over cases, traditional judicial system is bursting at its helm to cope. Today's well-educated and modern societies are putting pressure on their courts to dispose off court cases in shorter period.

The ever increasing cases filed in Courts and the high expectation of the public for the Courts to dispose off the cases in shorter periods, have the Courts constantly reviewing processes of managing court cases and looking for more effective, efficient and innovative ways to overcome the challenge.

Greater use of technology in Courts

SAINS, already venturing into providing various solutions for the Judicial Department, has come up with an innovative system called Electronic Case Management (ECM) that is designed specifically to reduce backlog of cases.

ECM is a virtual court hearing and case management system that consists of a video conferencing system and a court case management system integrated with Short Messaging System (SMS).

Convenient, efficient and economical, the hi-tech facility brought by ECM has quickened traditional court proceedings. With ECM, lawyers now can spend more time practising law, winning cases, and reaching settlements.

Multimedia/Video Conferencing

This is a low-bandwidth Multimedia Conferencing System (MCS) that is used for court hearing among the judges, lawyers and other persons involved in the sessions who are at different locations. This means lawyers can save time and money traveling to an out of town court. He can appear before a judge via video conferencing in a courtroom in his hometown. MSC runs on existing network infrastructure that most Courts have and uses Internet-Protocol (IP) to send signals of audio and video conferencing, thus eliminating the needs to reconfigure or redesign their network infrastructure. MCS also allows users to share documents, picture file, images, etc. among those in remote locations, which constitutes a very crucial feature for court hearings.

MCS can be used in the following situations:

Court Appearances – hearing, mentioning, pleas and trials. The Judges can conduct the hearing and mentioning of cases, pleas and trials with multiple parties such as lawyers, witnesses, clients and etc in multiple locations without their physical presence in the respective Judges' chamber.

Cases involving transporting persons in remand or detention. The Judges can order cases that involve transporting these persons to be heard over the MCS if the agency is connected to the System. Alternatively, these persons can be transported to the nearest Court that has the MCS facility.

Attorney-Client interviews. Initially, the attorney and client may meet face to face for the first meeting. The follow-up meetings can be conducted via MCS.

Video Conference Meetings. The Courts can conduct meetings or discussions with the lawyers or the Bar Councils in different locations.

Court Case Management & File Tracking System

This facility allows capturing of court cases as they first get registered at the court and manages the files that are associated with the cases, using Radio Frequency Identification (RFID) technology. This allows better management of court cases and the court would be able to keep track of the whereabouts of each individual file.

The system consists of four main modules, namely:

- Case Registration Module – To automate case registration
- Case Scheduling Module – To assign trial schedule and real-time notification
- Master Listing Module – To monitor and track file movement
- Administrator Module – To assign user access rights and set up profiles of the System

Short Messaging System (SMS) for Smart Court Environment

The SMS service provides two functions for the lawyer:

- Notification of reminder, cancellation and re-time of trials
- Interactive SMS function that allows them to check their schedules via SMS

Alternatively, lawyers can access the website to check their schedules. However, due to their pressing schedules and constantly on the move, the SMS is deemed to be more practical and convenient.

The pervasive SMS technology is used to notify and remind lawyers of the date, time and status of their cases. For example, SMS notifications alert informs an advocate of a last minute court hearing rescheduling thus enabling him to manage his time accordingly and more efficiently.

With the implementation of ECM, court case management is anticipated to improve greatly to benefit all parties involved.

Benefits of using ECM

Time and Cost Saving

- Reduces travel time and expenses of the judges, lawyers, witnesses, etc.
- Allows remote testimony
- Reduces overcrowding during court proceedings
- Enables more frequent Attorney-client interviews

Collaboration

- Real time exchange of files, documents and data such as video, audio, presentation slides, etc

Increased Productivity

- Able to handle more hearing and mentioning or cases or pleas as less time spent in traveling
- More timely appearance in Court for all parties
- Consultation or meeting could be called faster with shorter time frame
- Rapid face-to-face resolution in urgent situations
- Faster and better decision-making

Flexibility of Mode of Communication

- Able to switch conferencing mode either via audio (hearing), visual (image) or text (chat), or all three simultaneously

Efficient & effective court administration

- Increase efficiency and effectiveness in monitoring and tracking file movement
- Extra and improved communication channel with lawyers via Internet and SMS
- Increase efficiency and effectiveness of managing and assigning cases
- Detailed analytical reports for better decision-making
- Improve productivity for both lawyers and court officers by automating relevant tasks

Case Study: Sarawak Courts go high-tech

The courts in the State of Sarawak make judicial history on February 5, 2007 when it spearheaded the move of going high-tech with the launch and implementation of video conferencing, short messaging system (SMS) and file tracking system to reduce back-logged cases. This launch marks Malaysia's first-ever deployment of virtual court hearing system and a more efficient court case management system.

The Chief Justice Of The Federal Court, Malaysia, the Right Honourable Tun Dato' Sri Ahmad Fairuz bin Dato' Sheikh Abdul Halim was on hand to launch the system at Kompleks Mahkamah Kuching, Petra Jaya, Kuching. Accompanying him was the Chief Judge of the High Court in Sabah and Sarawak, the Right Honourable Dato' Richard Malanjum.

Following the launch, Sarawak courts went live with ECM for the first time on March 16, 2007. Judicial Commissioner David Wong Dak Wah of Kuching High Court conducted the historic court proceedings with the Miri High Court. The case involved a civil claim for the return of certain properties where the lawyers in the proceedings made interlocutory applications in chambers before the court, which took about an hour.

Kuching-based lawyer James Lo, appeared for the defendant in Kuching High Court while Mekanda Singh Sandhu, a Miri-based lawyer, appeared for the plaintiff appeared in the Miri High Court.

Lo said the videoconferencing was good and efficient while the audio-visual system was excellent, adding that the facilities provided much convenience for outstation lawyers.

Sandhu said: "It's a good step because it is very convenient for lawyers, particularly outstation lawyers. The proceedings were like normal (proceedings) and the atmosphere was good." Sandhu also pointed out that the public would also benefit from this technology because lawyers would not have to charge clients for travelling expenses. He noted that the only difference was there was no gallery for the public.

The High Court in Sabah and Sarawak Registrar, Gabriel Gumis Humen invited lawyers to use the facilities. He added that these facilities would provide much convenience for lawyers, and allow easier and cheaper access to justice.



Chief Justice Of The Federal Court, Malaysia, the Right Honourable Tun Dato' Sri Ahmad Fairuz (second left) tapped the judge's hammer to mark the launching of ECM while Dato' Richard Malanjum (left) and Datuk Patinggi Tan Sri George Chan (right) looked on



Lawyer James Lo in Kuching High Court went live in a first-time virtual hearing with Miri High Court lawyer, Mekanda Singh Sandhu

Legal Library Management System: Make Sound Judgment with Law Resources Anytime, Anywhere



A law practitioner's best friend is the law by which he abides. To practice law effectively and successfully, a judge, a lawyer, a law administrator, a clerk, or a law student, needs to understand and know in-depth about the law that he will uphold. Without readily available knowledge and information, he would be crippled in his attempt when defending the law. There are abundant of law resources for a law practitioner to source from, the challenges are how to make them accessible speedily, systematically and referable anytime and anywhere as needed.

The conventional law resources management method would be to gather all these information in a library where a lawyer or a judge can browse through the lists of books or journals. A law library is aptly designed to assist law students, attorneys, judges, and their law clerks in finding the legal resources necessary to correctly determine the state of the law. But to search for one clause within a bill sometime can take up precious hours because one have to browse through the whole content of the book to get the little piece of information that is needed. For a lawyer with pressing time and the burden of fighting to win a case, this could slow down his productivity and at the same time affect his submissions. Whereas for a law student sometime what he needs is a few paragraphs of well-researched case papers to support his thesis. Unfortunately, he could very well spend a whole day in the library, going from one case reference to another.

With many backlog cases that need to be resolved, judgment to be passed and research papers to be submitted, a conventional Law Library is just not enough anymore. There has to be a better way to search and retrieve information fast, effectively, and readily whenever or wherever needed.

Over the years, SAINS has excelled in delivering Library Management Solution to its customers. As alternatives to the conventional library that is within the confinements of the building and opening hours, SAINS has successfully built and deployed an online web-based Library Management Solution that is functional beyond library's borders at anytime of the day.

Applying similar concept deployed for public libraries, SAINS has now extended the Library Management Solution to include the Law Libraries, and specially designed to fit the needs of all law practitioners and administrators. The Legal Library Management System, as it is called, enables users to access the library material in their office and in fact even anywhere in the world 24 by 7. The systems provide users with an unbeatable source of library materials and resources, such as law books, legal research material, ancillary support, articles, case reports, journals, law reports, conference papers, serials, major works, bundles, legislation, etc.

The objectives of the Legal Library Management Systems are to:

- Provide an effective and efficient way to manage legal library activities in acquisition, cataloging, serials, membership and circulation of library materials;
- Facilitate online searching of library materials in the library.

Why Use Legal Library Management System

The Legal Library Management System is web-based, thus allowing it to be accessible **anytime and anywhere**. Its allows online search and retrieval of information at any places, be it right in the judge's chambers or in the lawyer's own living room.

With its **customised reports** capability, the system enable ease-of-use and provides an effective administrative works; and with its consolidated reports, there will be less instances of missing paper reports, who borrows what or who was the last person reading what material.

The system also acts as a **notice board**, an avenue for members to post news or make relevant announcement to other members. While this will undoubtedly improve communication between library staff or among law practitioners, it will also promote the spirit of integration and togetherness.

The system is built with **multi-lingual compatibility**. It currently supports English, Bahasa Malaysia, Arabic and Chinese languages and makes it adaptable to the regional needs. There are many law books and journals in other languages that have unique contents and make for powerful references.

On top of that, the system comes with **24 x 7 invaluable support services and maintenance** to ensure uninterrupted system availability. This will translate into higher productivity and efficiency to lawyers who are always on the move, where the timely retrieval of the next intelligent opening sentences could help them in winning a case. We make their life easier and equip lawyers with uninterrupted resources within a click.

Legal Library Management System Core Modules

There are 6 core modules in the Legal Library Management System, namely:

1. OPAC (Online Public Access Catalogue)

OPAC lets the library members to search material available in the library. They can check the location and availability of a book. It also lets members to search Legislations and to view the Roll of Advocates list. Member can search books with a specified material.

2. Cataloguing

This module allow the system to catalog different types of material such as Article, Book, Bundle, Case Law, Conference/Seminar Paper, Digital, Journal, Law Reports, Major Works, Serial, and legislations. It also keeps record of Roll of Advocates.

3. Acquisition Module

This module handles manages the process of purchasing and acquisition of library materials. Purchase Order List can be printed and received materials will automatically be catalogued. Statement Management also helps to keep track of payment records.

4. Membership Management Module

The Membership Management module helps librarians to manage members' accounts as well as keep track of services provided by the library to its members.

5. Circulation Management Module

This module allows a library to keep track of all lending records of the library. By tracking all library materials and where they are, administrative work is made more efficient.

6. Serials management

Lastly, the Serial Management module helps librarians to manage the periodicals that are ordered and owned by their libraries. The Serials management module allows users to manage the periodicals subscription control, Bindery, claiming and reports.

Project Study: Sarawak Legal Library Management Systems (SALEMS)

In 2002, the Sarawak State Government implemented a Legal Library Management System at its State Legal Department, to provide an effective and efficient way to manage acquisition, cataloging, serials, membership and circulation of legal library materials. The current library law belonging to the department was maintained conventionally and was accessed by local law practitioners in their research efforts. The system is used to facilitate the online searching of legal materials in the library to make their search faster at the convenience of their desks. SALEMS or Sarawak Legal Library Management Systems was developed and built for that purpose.

SALEMS is a web-based Specialised Library management Systems for Legal Libraries. The system is currently running in an Intranet model within SarawakNet, the State Government's Intranet portal. SALEMS is accessible by authorised staff, Librarians and Legal Officers within the Department.

Legislative Administration Made More Manageable



The administrative work involved in the handling of formal political debates by opposing parties until the passing and enacting of legislation can be tedious and procedural. A legislative assembly consisting of elected decision makers needs an efficient secretariat to handle recording of proceeding accurately.

Automating key legislative process flow can greatly enhanced the management of a Legislative Assembly. With a well-defined and systematic legislative administration system, the recording and thereafter the decision-making process of lawmaking can be made more manageable for the general populace to follow.

Benefits of an electronic Legislative Assembly Proceeding System

Legislative Administration System (LAS) can mean a “paperless” and quality management system offering a more systematic workflow to enhance the efficiency and effectiveness of the Government Legislative Assembly. Through effective Legislative Administration System, legislative proceedings can be captured in less time and with much lesser resources than otherwise required.

An electronic Legislative System can mean a “paperless” and quality management system offering a more systematic workflow to enhance the efficiency and effectiveness of the Government Legislative Assembly. Through effective Legislative administration system, legislative proceedings can be captured in less time and with much lesser resources than otherwise required.

SAINS has designed the proven and tested e-Legislative System especially for the Legislative Assembly Proceeding. The system can be divided into two main parts:

- Legislation – legislative proceedings management and workflow
- Hansard – online repository of past proceedings with search engine for fast retrieval.

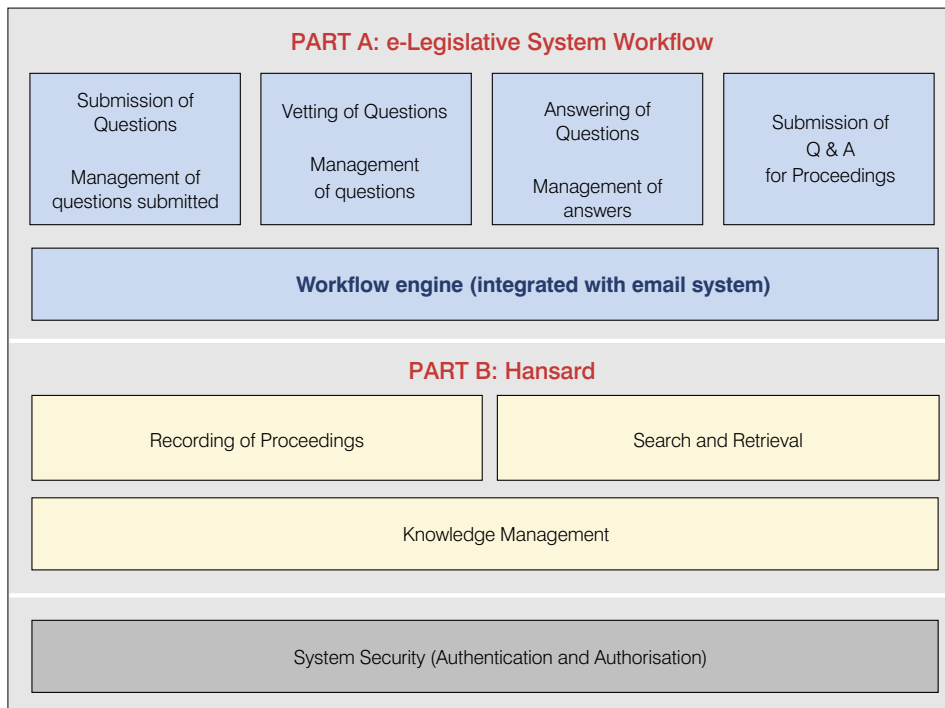
Below are some key beneficial features of a quality e-Legislative System:

- Always be connected all the time for spreading-out group of elected representatives
It is a web application system accessible conveniently and securely through their computer web browser.
- Routing management for better results
A systematic workflow engine that allows routing to various entities involved in the legislation process
- Notification and reminder of task in your mailbox
A workflow system integrated with email system to inform and/or trigger action on the part of the recipient by checking their emails in their mailboxes.
- Fast reference and accurate search and retrieval of information repository
Electronic Hansard to perform speedy, accurate search and retrieval of Hansard in the repository. It improves the productivity and comprehension of Legislative Members who need to refer to or be guided by large volume of textual information databases.

How does e-Legislative System work?

The e-Legislative System is designed to facilitate the submission of questions by legislative members and answers by government representatives through an electronic workflow system. The system facilitates the building of a strong knowledge base of legislative proceedings (Hansard), which is accessible via a search and retrieval system, for easy references. Parties involved using this system would be the legislative secretariat, the legislative members, authorities at the Ministry and central government such as State Secretary, State Attorney General, etc.

e-Legislative System workflow



The basic functions of e-Legislative System are:

- Notice of Legislative Sitting**
 Notice to be given out by the Secretariat to inform all Legislative members of the schedule of the upcoming sitting. The system sends an email notification together with the notice and sitting schedule. Legislative members can directly reply to the email from the Secretariat.
- Submission of Questions**
 This function is used by the Legislative members to submit questions electronically from their own offices or anywhere within the network coverage, for upcoming sitting.
- Vetting of Questions**
 The submitted questions are routed to the Secretariat for vetting. The Secretariat will be notified via email of the submission. The Secretariat may opt to route selected questions to State Attorney General (SAG) for further vetting. After all the vetting processes are completed, the questions are routed by the Secretariat to the ministry concerned.
- Vetting and Submission of Answers**
 Answers are routed from the ministry to state authority, e.g., the State Secretary, for vetting. The ministry shall route the vetted answers back to the Secretariat.
- Preparation of Order of the Day**
 Based on the submitted and vetted questions and answers, the Secretariat prepares Order of the Day (Agenda) for the sitting using the electronic system.
- Preparation of Hansard**
 The Secretariat shall prepare Hansard captured during the sitting of the day. The draft Hansard shall be made available for reference by authorised parties, anytime, anywhere within the network coverage.

Case Study: e-DUN at Sarawak's State Legislative Assembly

In Sarawak, the Legislative Administration System is locally called e-DUN (Elektronik Dewan Undangan Negeri). The system first version was developed in 1993 to digitize, index and store past Hansard documents in an electronic document repository. It was later enhanced to allow online submission and tracking of questions from the DUN members before each DUN session.

In 2006, the e-DUN version 3 was released with more enhanced features to serve the need of avid e-DUN users.

An administrative officer at DUN Sarawak, Puan Zainab bt. Haji Aini, retold her experience when using e-DUN the first time it was implemented: "It was a struggle adapting to new change but in order for us to improve our service, we have to adjust and position our mindset correctly. Thankfully, the system was not that hard to learn and I get used to it very fast. With new improvements constantly being added and implemented on the system, we look forward to the improvement in our work on the back-end of the DUN sitting."

The ICT initiative in DUN Sarawak has recently attracted the attention of the Brunei Darussalam Government. On February 15, 2007, DUN Sarawak entertained an official visit from their Brunei counterparts led by Yang Dimuliakan Pehin Orang Kaya Pekerma Jaya Dato Paduka Awang Haji Judin Bin Haji Asar, Setiausaha Majlis Mesyuarat Menteri-Menteri Kabinet/ Jurutulis Majlis-Majlis Mesyuarat Negara Brunei Darussalam. Speaker of the State Assembly, YB Dato Sri Hj Mohamad Asfia bin Awang Nassar was on hand to receive them.

During the visit in which e-DUN system was demonstrated by SAINS, Yang Dimuliakan Pehin Orang Kaya Pekerma Jaya Dato Paduka Awang Haji Judin Bin Haji Asar commented that he was impressed and interested to know more about the system. Dato Sri Hj Mohamad Asfia noted that as avid users of the system in DUN Sarawak, the integration of ICT into the DUN system has greatly improved administrative work for his employees.

"Sometimes we want very fast information and we want it on the spot because that will support our proposals. Now, that can be done effortlessly," Dato Sri Hj Mohamad Asfia said on the integrated Hansard system which has positively impacted DUN sitting by empowering search and retrieval processes to facilitate decision-making. He was answering a question posed by Dato Paduka Awang Haji Judin on organised data repository.



Speaker of Sarawak State Assembly, YB Dato Sri Hj Mohamad Asfia bin Awang Nassar (third left) exchanging positive opinions on e-DUN system with Yang Dimuliakan Pehin Orang Kaya Pekerma Jaya Dato Paduka Awang Haji Judin Bin Haji Asar (right), Secretary of Brunei Legislative Assembly.

SiliconNet Technologies Sdn. Bhd.



SiliconNet Technologies Sdn Bhd

SiliconNet Technologies Sdn. Bhd. (SNT), formed in October 1996 is one of the leading local companies that can meet today's business requirements for Internet and Intranet Solutions, Multimedia Services as well as web-based applications development and implementation.

SNT offers a comprehensive range of end-to-end e-Commerce and e-Government Solutions which include:

WEB-BASED APPLICATION DEVELOPMENT AND IMPLEMENTATION

Our dynamic team are skilled in web-based technologies such as J2EE (Java) Open Source, Lotus Domino (Workflow and Collaborative) development tools. We strive to help our Customers achieve their business objectives through development and implementation of appropriate web-based business applications. In addition to conceptualization, design and development, we are also able to provide effective, reliable and long-term after-sales support for the applications developed.

Successful applications that we have developed and implemented are e-Government and e-Commerce Solutions such as e-Payment gateway, Search Engines, e-Learning Solutions, Library Management Systems, Monitoring and Management Systems, Court Case Management Systems, Paperless Case Tracking Systems, e-Local Authority Solutions and many more.

INTERNET AND INTRANET SOLUTIONS

Our team of portal solutions provider is able to scope and implement Internet and Intranet Portals and Web-Sites and offer advice for today's dynamic business organizations. We also develop, manage and update contents for customers who require content development services. We are proud to be able to work successfully with customers from both the public and the private sectors.

Examples of our implementation include SarawakNet (www.sarawaknet.gov.my) and MyOneStopSarawak (www.myonestopsarawak.com) and a host of other Government and Corporate portals.

In addition to content management and publishing, we are also experienced in the operation of transaction-based portals, such as our online payment portal, PayBillsMalaysia (www.paybillsmalaysia.com), LawNet and LibraryNet.

HOSTING SERVICES

We offer comprehensive range of end-to-end Hosting Services to meet your business needs and growth for small and medium-scale business organisations embarking into e-business at an affordable budget. No capital investment is required by the organizations on any of the related infrastructure.

Our hosting service is also aimed at larger organizations that need dedicated or specific hardware, software and network equipment to run their businesses. No capital investment is required.

Our Server Co-location service is for organizations that have invested in business applications but require a reliable facility to ensure that the applications operate in an optimum environment which guarantees maximum uptime. The environment is designed with high bandwidth coupled with redundant Internet links. To ensure uninterrupted performance, reliable and redundant power source, excellent heat control system and safe ventilation have been installed within the facility.

MULTIMEDIA SERVICES

SNT multimedia team is comprises of multi-talent personnel who can deliver quality multimedia products and services to our customer in the most cost-effective manner.

Our multimedia products and services are:

Video Production: SNT provides a one-stop video production service from the point of Conceptualization until final delivery in DVD format and all CD Cover design and printing and packaging. We have produced videos for various government agencies and departments which include Corporate video, Documentary video, Marketing and products promotion and Event launching video.

Our Interactive CD-ROM Publishing service includes Content development for corporate information / brochures and Content development for CD Titles for archival purpose.

DIGITISATION SERVICE

Our digitisation service include:

Collection of content, conversion of texts into PDF, audio, video and photographs from old media such as magnetic tape, paper and photographic prints into digital format for preservation and archival purposes.

JASP

This is a distribution arm of SNT. Partnership has been formed with Jaring / MIMOS (Jaring Access Service Provider - JASP), to provide user services to local and regional companies and individual who require guidance and support in using these emerging technologies for their maximum benefits.

We are also a Jaring Access Service Provider (JASP) where we sell Internet dial up accounts via our Jaring Service Outlet (JSO) in major locations in Sarawak and Sabah such as Kuching, Sibul, Bintulu, Miri, Kota Kinabalu and Sandakan.

CONTACT US:

SiliconNet Technologies Sdn. Bhd.
Wisma Teo Say Ho,
Lot 369, Block 10, KCLD,
Jalan Tun Ahmad Zaidi Aduce,
93150 Kuching, Sarawak, Malaysia

Tel: (60) 82-234008
Fax: (60) 82-232008
E-mail: service@snt.com.my
Website: www.snt.com.my

Stratfos Consulting Sdn Bhd



Stratfos Consulting Sdn Bhd is a rapidly growing consulting firm focused on delivering practical and specialised Information Technology and Management Consulting. Having seasoned management with hands-on experience and successes, Stratfos Consulting provides an impartial and pragmatic perspective with niche area of ICT Management and Planning.

Stratfos Consulting anchors its strength on the selection and development of its consultants with public sector as well as private enterprises experience. Stratfos Consulting is made up of a group of dynamic, experienced and multi discipline consultants, some with over 20 years experience. Our experiences include ICT Planning, Architecture Development, Methodology Development, Project Management and Analysis. Our consultants are conversant with best practices in the consulting realm and are exposed to international ICT issues.

In addition to full-time professional staff, Stratfos Consulting collaborates with world-class partnership firms, both local and international, in niche technology and business areas in providing excellent training and consulting support. The close association with these world-class partnership firms and their business connections has also given Stratfos Consulting access to latest development in business intelligence and consultancy services management.

Our Services:

ICT Situation Analysis and Audit Services

Based on our extensive experience in ICT and our knowledge of the industry best practices, Stratfos consultants are able to study, troubleshoot, provide insights and make recommendations to enhance your organization's ICT environment, including organization structure, architecture, processes and solutions.

Strategic Information Systems Planning

We can ensure your organisation's ICT plays its role as an enabler for your business development by helping you to develop a medium- or long-term IT strategic plan, including the required data, applications and technology architectures tailored for your unique business needs.

Technology and Architecture Planning

The development of an architectural framework and the required technology components for your organization's ICT is an expertise of Stratfos Consulting, to ensure your ICT establishment is sustainable, and the usage of your ICT resources is optimized.

Business Process Re-engineering (BPR) Services

To support development efforts, BPR is essential before designing new applications. Re-engineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance. The said performance comprises cost, quality, service and speed. We provide our experience in organization business processes and deploy industry standard methodologies in BPR.

Methodology Development

With our access to extensive research repositories and best practices, Stratfos Consulting is able to design a systematic approach to perform a series of processes in your organization, tailored to produce a consistent set of results. Each methodology is accompanied by a set of templates, tools, principles, policies and guidelines.

Contact us at:

2nd Floor Lot 318, Section 9 KTL D, Lrg 12 Jln Rubber, 93400 Kuching, Sarawak, Malaysia .

Tel: (60) 82-234 342 Fax: (60) 82-234 454 Email: service@stratfos.com Website: <http://www.stratfos.com>



Silicon Group Of Companies

Silicon Group of Companies commenced its business on 1st July 1996, and has grown from strength to strength from the humble beginnings of a web design company to a consortium of around 50 staff with substantial depth of expertise and experience. We have applied effective and innovative business practices to ensure that we are a successful organisation.

Silicon Communications Sdn. Bhd.

Silicon Communications Sdn. Bhd. (SCSB), incorporated in Kuala Lumpur on 13th February 1996, is the holding company of Silicon Group of Companies. **SCSB** currently has 2 wholly owned subsidiaries, namely **Silicon Navigator Sdn. Bhd.** and **Silicon Intranet & Networking Sdn. Bhd.** Each of these companies specialises in different Information Solutions ranging from (but not limited to) library system, billing system, call management system, document management, project monitoring system, vehicle tracking system, security surveillance system, geomatic solution, system integration, data centre, website development and Internet Security solutions.

Silicon Intranet & Networking Sdn Bhd

Silicon Intranet & Networking is a purveyor of system integration services, spanning system study and concept design to the development, commissioning, testing and maintenance of complex turnkey projects. **Internet Security and Consultancy Services** are some of the key services offered. Silicon Intranet & Networking is the foremost leaders in digital technology offering a wide coverage of Internet Security, Intranet and Networking solutions. It takes great pride in its technical skills, quality of services and its reputation as a top-notch ICT Security Solutions Provider.

Silicon Navigator Sdn Bhd

Silicon Navigator is involved in providing top-notch Internet services such as Web Hosting, E-mail Hosting, Managed Services, Data Centres, Dedicated Servers and Server Co-Location. Silicon servers are hosted in a partner's data centre, a dedicated and highly secure data centre. A safe place, no power outages, controlled access with great network connectivity providing services anytime, anywhere.

Products And Services

Today, Silicon Group of Companies is an established and one of the fastest growing conglomerates in Malaysia. Our business focuses on 3 major sectors, namely **Information Management Systems, Internet Security & Consultancy and Data Centre Services**. We align our directions and business expansions to meet the new market demands with the exponential growth of Internet in Malaysia and worldwide.

Silicon Group Of Companies

Silicon Intranet & Networking Sdn Bhd

Information Management Systems

We have a wide catalogue of solutions exceeding 150 applications of a wide range of technologies and knowledge base. The applications traverse a wide range of business environments including the domains of public (such as government and local authorities) as well as private sectors.

Some of the major packages are listed below:

- ERP Financial Systems
- Library Management Information systems
- Billing systems including payment solutions
- Call management systems
- Document management systems
- Land Management Information Systems
- Project monitoring systems
- Vehicle tracking systems
- Geographical Information Systems (GIS) solutions
- Digital Security surveillance system
- Islamic Syariah Systems
- Local Authority Courts Systems

Internet Security & Consultancy

The Internet has created unlimited new opportunities. Higher revenue, lower costs, closer ties with customers and the promise of a borderless business regime. Internet technologies have these to offer and more. Internet security is now a default necessity for any organisation to protect its data integrity and to safeguard their customers' information.

Silicon Intranet & Networking specializes in all areas of security ranging from providing security consultancy to Internet Security solutions. We provide total comprehensive security solutions, security needs at different levels of IT setup and consultancy to companies and government bodies. We specialize in Internet security solutions at all levels for large and complex IT setup to basic firewall requirements for SMEs. We are partners with global security leaders like Internet Security Systems, Juniper, Packeteer, Cisco, CheckPoint, and NetScreen to provide risk management & assessment solutions. Our strong track record speaks for itself of our lending expertise and knowledge in security.

As an Internet Security solutions provider, Silicon Intranet & Networking plays a key role in extending consultancy and recommendations to eliminate risks and build strong security in infrastructure. We provide security consultancy to businesses and organizations with the aim to provide consultation and advice to corporations on the correct security measures to adopt to protect their data, thus,

Silicon Group Of Companies

maximizing and strengthening the system's security. Our mission is to provide the best method and solutions, especially to those companies engaged in e-business by giving unbiased and independent consultation.

At Silicon Intranet & Networking, we understand the value of our client's asset of information. Our highly experienced team provides a cohesive structure to deliver a comprehensive range of services encompassing consultancy and security assessment services. Our consultants are 100% security focused with many years' experience behind their back. We work on the one and only rule of success, that is, to follow the best practices and deliver the best results. We deliver nothing below our clients' expectation.

Silicon Intranet & Networking provides a host of Internet Security solutions to cater the individual needs of its clients.

Internet Systems Integration

Consultation

We assist companies to overcome geographical boundaries by providing total integration of multiple-protocol networks and operating systems. We offer professional consultation services on Internet, Intranet and Networking Security issues to both established and new corporations.

Networking and Systems Integration

In order to upgrade or create a LAN or WAN, we conduct a Systems Study or a Systems Development Life Cycle to attest to the feasibility of the network.

LAN Upgrades

We provide LAN (Local Area Network) upgrades either by revamping or expanding the current LAN, catering to the client's requirements. Our expertise extends to the implementation of WAN (Wide Area Network).

Our clients include the Government, semi-governmental organizations, multinationals and the private sectors. We are committed to set the assurance to our clients by providing the best security solutions and consultancy to our clients on the security of their network infrastructure.

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Silicon Navigator Sdn Bhd

Web Hosting & Personalised Email

Quickly deploy scalable and reliable website with abundance of features including professional e-mail accounts. Every professional organization today requires a website or email facilities. We strive to provide the best services and quality products to all our clients to ensure the uptime, performance and reliability are in place. Being a client of Silicon Navigator, our clients can be assured that their website and e-mails are managed by a team of professionals, enabling them to focus on building their business without the worry of service disruptions.

Silicon Navigator web and email hosting solutions are available on both Windows and Linux platforms running on Intel Xeon Quad processors with 4GB of RAM. Silicon utilises web control panels, such as Helm (Windows) and cPanel (Linux), which are widely used worldwide for web and email management.

Dedicated Servers & Managed Services

Dedicated Server allows our client to have full control over an entire server and enjoy the facilities within the Network Operating Centre without the need to purchase their own server or building a million-dollar data centre facility. With mission critical web applications in businesses, our clients need the power and performance of SILICON Dedicated Servers and facilities. All SILICON Dedicated Servers are packed with powerful processor(s), huge amount of Dynamic RAM memories and runs under RAID 1 or RAID 5 for better fault tolerance and data availability.

Dedicated Server includes:

- Free replacement on hardware parts and labours
- Choice of servers, operating systems and hardware
- Free upgrade and patches to server software
- High-speed Internet connection to your dedicated server
- Secure Internet Environment via Firewall and IDS
- Privacy of using your own server without sharing resources
- Full root access via Remote Administration Services
- Data centre facilities
- Redundant Power Supply and Internet Service Provider
- Unlimited Physical Visits to Network Operating Centre

Dedicated Servers are ideal for companies or individuals who do not want to purchase their own servers, hardware and software. Clients will have total control over their own server at a reasonable cost. Example of such companies include consultants, portals, firms or companies involved in web designing, web hosting, web applications, online consulting, online database management and any other allied business with an aptitude for quality and high growth.

Our principal business contact :

Unit 15.02, 15th Floor, MCB Plaza
No. 6, Changkat Raja Chulan
50200 Kuala Lumpur, Malaysia

Tel: (603) 2715 8648
Fax: (603) 2715 9648
Email: enquiry@silicon.com.my
Website: <http://www.silicon.com.my>



Tech Innovasi Sdn Bhd

Tech Innovasi Sdn Bhd (formerly known as SAINS Innovasi Sdn. Bhd) was formed to address the emerging needs for a more forward-looking usage of ICT in Malaysia and to offer a local presence of technology support and services in the country.

Officially commenced business in 2001, Tech Innovasi is led by a strong team of personnel with diverse experiences and proven track records in ICT development and deployment, both in Peninsular & East Malaysia. Tech Innovasi is a ' Bumiputera Status' company (awarded by the Ministry Of Finance), committed to serve customers and communities with innovative ICT solutions both in the public and private sectors.

Our Expertise

Tech Innovasi is committed to serving customers and communities with innovative ICT solutions both in the public and private sectors. Our expertise is in the areas of IT consultancy, systems development and integration, network systems design and engineering, I3 (Internet, Intranet and Extranet) services, multimedia development and implementation, IT training and support, project implementation services, data conversion, and systems upgrade and maintenance management.

Our People

Tech Innovasi is led by a strong team of personnel with diverse experiences and proven track records in ICT development and deployment, both in Peninsular & East Malaysia. Our people are dedicated, committed and well-trained in building strong customer relationship as well as ensuring the best customer service. Adaptive and resilient to their ever-changing and challenging business environment, our people are always prepared with the knowledge and skills to ensure your trust and confidence in us are well-placed.

All of Tech Innovasi Sdn Bhd experts and personnel are locals to ensure we bring to you 100% Malaysian-made solutions and services. This is also the company's vision that opens up opportunities for the locals to prove we are able and at par with other players in the global IT industry.

Customer Service

Tech Innovasi Sdn Bhd has stationed customer service centres in most major cities and towns in the country, including Federal Government Administration Centre in Putrajaya. This allows our customers to receive first-hand supports and assistance immediately. We always strive to better understand our customers in order for us to serve them better where IT is concerned.

Tech Inovasi Sdn Bhd

Our milestones

In such a short period of time since Tech Inovasi was formed, we have managed to build a name for ourselves through involvement and success in mega projects in the country.

e-Syariah

Tech Inovasi Sdn Bhd was given the mandate and confidence by Sarawak Information Systems Sdn. Bhd, a government-owned company in Sarawak, to implement Malaysia's 7th Electronic Government (EG) Flagship application which is the e-Syariah project. e-Syariah project is the implementation of Syariah Court case management for Jabatan Kehakiman Syariah Malaysia (JKSM) and all Syariah Courts in the country. The project which started in midst 2002 until end of 2005, have gained accolades and praises from JKSM, Mahkamah Syariah Negeri, and many others involved including the public users.

e-Court (E-Mahkamah)

Other than e-Syariah project, Tech Inovasi Sdn Bhd had also successfully implemented the e-Court system for the Municipal Courts at Subang Jaya Municipal Council and Seberang Perai Municipal Council. This achievement shows that Tech Inovasi has become a mature local IT service provider in providing efficient courts management systems to the country. In fact, this is true because courts management is seen as the most challenging to computerise.

PROACTS in the Local Authorities

Other than implementing e-Courts at Subang Jaya Municipal Council, Tech Inovasi has also successfully deployed the Web-based Paperless Case and Registration Tracking System (PROACTS) system there. Among others, PROACTS reduces the use of paper, improved staff productivity and efficiency in everyday case management and tracking at the Council.

e-Welfare

Tech Inovasi Sdn. Bhd. was also given the trust and confidence to develop the e-Welfare system for the Society Welfare Department under the Ministry of Development for Women, Family and Society. This system enabled all welfare departments in the district areas to efficiently process and manage the assistance for the less able (Bantuan Orang Kurang Upaya) and the poor in the country.

Tech Innovasi Sdn Bhd

Our Business Partners

Tech Innovasi Sdn Bhd has a close business relationship with its partner, Sarawak Information Systems Sdn Bhd (SAINS), a major local ICT service provider in Sarawak. Through this partnership, Tech Innovasi has gained various benefits especially through technology updates and sharing, and exchange of expertise. SAINS on the whole, has a combined experience of more than a decade in the field of ICT and has built various IT systems for the government agencies in Sarawak. SAINS expertise include the development and implementation of EG systems and solutions, Data Centre services, Multimedia Libraries, Geographical Information Systems, and many more.

Towards ICT Advancement

In today's dynamic world, businesses are looking for a competitive advantage to stay ahead of competition. As economy grows and business needs keep evolving, they are relying on proven and scalable ICT solutions to guide them through.

At Tech Innovasi, we deliver global competitive business solutions with the functionality and expertise to address local needs while remaining focused on industry-specific ICT solutions.

With a strong team of professionals behind us, we are committed in delivering the best of solutions to suit the needs of our customers both in the public and private sectors. All solutions are fully integrated, comprehensive and proven.

Contact us :

TECH INNOVASI SDN BHD

Unit 15.02, 15th Floor, MCB Plaza,
No. 6, Changkat Raja Chulan,
50200 Kuala Lumpur.

Tel: (603) 27152000

Fax: (603) 27159648

E-Mail: business@techinnovasi.com.my

Website: www.techinnovasi.com.my

Zimacsilicon Technologies (B) Sdn Bhd



About Us

ZimacSilicon Technologies (B) Sdn Bhd was formed to address the emerging needs for a more forward-looking usage of ICT in Brunei Darussalam and to offer a local presence of technology support and services in the country.

ZimacSilicon is led by a strong team of personnel with diverse experiences and proven track records in ICT development and deployment, both in Brunei and its neighbour, East Malaysia. ZimacSilicon is committed to serving customers and communities with innovative ICT solutions both in the public and private sectors.

ZimacSilicon Technologies was established with strong integration partnership of 2 well established ICT service providers in East Malaysia – Sarawak Information Systems Sdn Bhd (Sains) and SiliconNet Technologies Sdn Bhd

Together with our partners and their business alliances with technology leaders in the industry, we focus on building Infrastructure and ICT solutions for government and education institution.

Our Solutions

We build, integrate and manage IT infrastructures for your operation. We offer end-to-end ICT solutions. These include:

- e-Government System Development & Integration
- Digital Content Management Software
- Library Management System
- e-Learning Management System
- I3 Solutions (Internet, Intranet, Extranet)
- Visual Surveillance System
- Network and Network Security Management

How to Contact Us:

Lot.20009 Taman Alam, Jalan Telanai, Beribi,
Gadong, Bandar Seri Begawan
Brunei Darussalam, BE1118

Tel: +673 - 2652056

Fax: +673 - 2652057

Email: service@zimacsilicon.com.bn

Website: <http://www.zimacsilicon.com.bn>

SAINS Offices

SUBSIDIARIES

SiliconNet Technologies Sdn. Bhd.

1st Floor & 2nd Floor, Lot 369
Block 10, KCLD
Jalan Tun Ahmad Zaidi Adruce
93150 Kuching, Sarawak
Tel: (60) 82-234008
Fax: (60) 82-232008
Website: www.snt.com.my

Stratfos Consulting Sdn. Bhd.

2nd Floor, Lot 318, Section 9
KTL D Lorong 12, Jalan Rubber
93400 Kuching, Sarawak
Tel: (60) 82-234342
Fax: (60) 82-234454
Website: www.stratfos.com

Silicon Communications Sdn. Bhd.

Unit 15.02, 15th Floor, MCB Plaza
No. 6, Changkat Raja Chulan
50200 Kuala Lumpur
Tel: (60) 3-2715 8648
Fax: (60) 3-2715 9648
Website: www.silicon.com.my

BUSINESS PARTNERS

Tech Inovasi Sdn Bhd

Unit 15.02, 15th Floor, MCB Plaza,
No. 6, Changkat Raja Chulan,
50200 Kuala Lumpur, Malaysia
Tel: (603) 27152000
Fax: (603) 27159648
Website: www.techinovasi.com.my

ZimacSilicon Technology (B) Sdn Bhd

Lot.20009 Taman Alam,
Jalan Telanai, Beribi,
Gadong, Bandar Seri Begawan
Brunei Darussalam, BE1118
Tel: (673) 2652056
Fax: (673) 2652057
Website: www.zimacsilicon.com.bn

BRANCH OFFICES

Sains Business Centre

Lot 9366, Section 64 KTL D, Jalan Uplands
93620 Kuching, Sarawak
Tel: (60) 82-426733 Fax: (60) 82-423533

Sains Call Centre

Ground Floor, Lot 369, Block 10, KCLD
Jalan Tun Ahmad Zaidi Adruce
93150 Kuching, Sarawak
Tel: (60) 82-236633 Fax: (60) 82-235522

Sains Training Centre

Ground Floor, Lot 369, Block 10, KCLD
Jalan Tun Ahmad Zaidi Adruce
93150 Kuching, Sarawak
Tel: (60) 82-239004 Fax: (60) 82-235522

Betong Office

Tingkat Bawah, Blok C,
Kompleks Pejabat Kerajaan Negeri,
95700 Betong, Sarawak
Tel: (60) 83-472811

Bintulu Office

No. 87, 2nd Floor, Parkcity Commercial Square
Jalan Tun Ahmad Zaidi
97008 Bintulu, Sarawak
Tel: (60) 86-314518 Fax: (60) 86-314519

Kapit Office

No.2, 2nd Floor, Jalan Temenggong Koh,
96800 Kapit, Sarawak
Contact No.: 019-858 7416

Limbang Office

Bangunan Limbang Plaza,
Tingkat 4 (LDC Office),
98700 Limbang, Sarawak.
Tel: (60) 85-211 488 Fax: (60) 85 211 488

Miri Office

Lot 791, 2nd Floor, Jalan Bintang Jaya 4
Bintang Jaya Commercial Centre
98000 Miri, Sarawak
Tel: (60) 85-431213 Fax: (60) 85-431211

Mukah Office

Tingkat Bawah
Bangunan Pejabat Daerah Mukah
Jalan Kubu 1
96400 Mukah, Sarawak
Tel: (60) 84-872 987 Fax: (60) 84-873 987

Sarikei Office

1st Floor, Sublot 3, Lot 1799 Block 36 Sarikei
Land District, No. 5, Lorong Mutiara 2,
Jalan Bersatu, 96100 Sarikei
Tel: (60) 84-651132 Fax: (60) 84-651132

Sibu Office

No. 29, 2nd Floor, Taman Damai
Jalan Tun Haji Openg
96000 Sibu, Sarawak
Tel: (60) 84-349148 Fax: (60) 84-349149

Acknowledgement

Advisor Teo Tien Hiong **Editorial** Lucy Wong, Dinah Samuel, Allen Liew, David Yeo
Design & Production Yung Thieu Lac **Contributors** Alina Eleen, Bong Chee Thin, Busiai
Seman, Chai Chong Wee, Dinah Samuel, Grant Than, Iskandar Zainal,
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To obtain a copy of Sains Corporate Focus book, please contact Sains Business Centre at (60) 82-426733

Sarawak Information Systems Sdn Bhd

Head Office:
Level 3, Wisma Bapa Malaysia, Petra Jaya
93502 Kuching, Sarawak, MALAYSIA
Tel: (60) 82-444199 Fax: (60) 82-444211

www.sains.com.my

Call Centre:

Tel: (60) 82-236633 Fax: (60) 82-235522
Email: helpdesk@sains.com.my

For Business Enquiries:

Tel: (60) 82-426733 Fax: (60) 82-423533
Direct Line: (60) 82-422472
Email: service@sains.com.my

