

SAS SYSTEMS ENGINEERING **2012** Year in Review





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Chairman's message

Welcome to the SAS Systems Engineering 2012 Year in Review. It's an honor to share our accomplishments with you.

In the course of 2012, SAS focused on two overarching goals: first, to further strengthen its human capital, through continued trainings in advanced engineering and management; and second, to further broaden its projects portfolio, by winning a multitude of prestigious contracts.

Both goals yielded unprecedented results in 2012, attesting to not only the outstanding teamwork of our engineers, project managers, and sales specialists, but also our uncompromising commitment to remain at the forefront of technological innovation.

Yet perhaps the one corporate aspect of which I continue to be most proud is the unrivaled quality of service provided by all of our departments and branches, whether in terms of sales, consultation, engineering, or maintenance and warranty backup.

Indeed, our dedication to service, to optimal client satisfaction, is inseparable from our quest for engineering excellence, fueling our enthusiasm to grow well into the future as a robust, multi-specialty corporation.

I thank all of our clients for their trust in our work, and very much look forward to serving you in 2013 and beyond.

Alawi Baroum
Chairman, SAS Systems Engineering





General Manager's message

For the General Manager of a company such as SAS, nothing is more gratifying than the finely tuned operation of teams, products, systems, and services.

Throughout 2012, SAS experienced significant growth, in terms of project volume and scale alike, and I believe the key reason for this is that we never stop striving to make our work even better.

Consider, for instance, our major IT upgrades in 2012. As cyber security and digital efficiency remain top priorities for SAS, we implemented a complete overhaul of our IT systems, in line with the exacting demands of operational management and client services.

Still, computers and machinery, no matter how sophisticated, are only a part of the equation, because the ultimate strength of a corporation rests in its human capital: its pool of skills, knowledge, and experience; its cohesion; and the level of client support it offers, both before and after a contract has been signed.

With these in mind, we provided our managers with a series of advanced trainings in 2012, helping enhance their skills as team leaders and project administrators.

As notably, 2012 has been a year of refining our interface with our growing client base, partners, and prospective clients. In this respect, we carried out an extensive revamp of our website (sas-se.com), making it more dynamic and user-friendly, and added new partners to our roster of globally renowned suppliers and manufacturers.

Our achievements in 2012 symbolize our abiding pledge to surpass expectations, our dedication to flawless quality and consummate professionalism, and, ultimately, our irreducible passion for advanced engineering.

Hovig Kurkjian
General Manager, SAS Systems Engineering





Editor's note

In our line of work, nothing is more gratifying than to see human talent in action. Extraordinary talent. Talent that goes beyond expectations to create something truly magnificent.

This, before anything else, is what I recall from 2012, as I look back on the work carried out collectively by the dedicated engineers, executives, and sales specialists of SAS Systems Engineering.

Two thousand and twelve was the year when our Fire Protection Department began to carry out one of the most impressive projects in the history of our company: the installation of firefighting and fire alarm systems at all substations of the internationally acclaimed Haramain High Speed Railway.

Equally impressive were the firefighting systems projects at the Madinah Oberoi Hotel, the Taiba Armas Hotel, and scores of other sites, implemented by our branches in Madinah and Al Khobar.

The year 2012 saw the addition of several high-profile institutions which now feature leading-edge automation and building management systems designed and installed by SAS. They include the Qurayyah Power Plant and the Ministry of Interior Integrated Facilities, as well as the King Abdullah Waqf Hotels chain, which had commissioned our Riyadh branch for the project.

Security and communications were two other spheres where our teams excelled like never before. Take, for example, the major upgrade of security systems at the Tasnee Plant, which was carried out by our Jubail branch. Or the installation of next-generation Time and Attendance systems at the Saudi Airlines Ground Services Terminals, and the installation of fully integrated public address and fire alarm systems at the King Abdulaziz International Airport.

I am filled with a great sense of pride when I think that these accomplishments are only a tiny sample of the complex, extensive projects realized in 2012 by SAS. In the following pages, it is our distinct honor to present to you the full spectrum of projects implemented by the various SAS departments and branches throughout 2012.

Today, as we look forward to continue providing our clients with state-of-the-art technologies and top-notch service, in 2013 and beyond, I would like to express my gratitude to a very special colleague, SAS General Manager Hovig Kurkjian. I admire Mr. Kurkjian for not only leading SAS and having expanded it into one of Saudi Arabia's highest-ranked engineering companies, but also for his wisdom, consummate professionalism, and continued mentorship — qualities which make working for SAS all the more worthwhile.

Sona Hamalian
Business Practices Officer,
SAS Systems Engineering





Company profile

Since its establishment in 1986, SAS Systems Engineering has grown consistently to become a globally acclaimed technology corporation, with branches throughout Saudi Arabia.

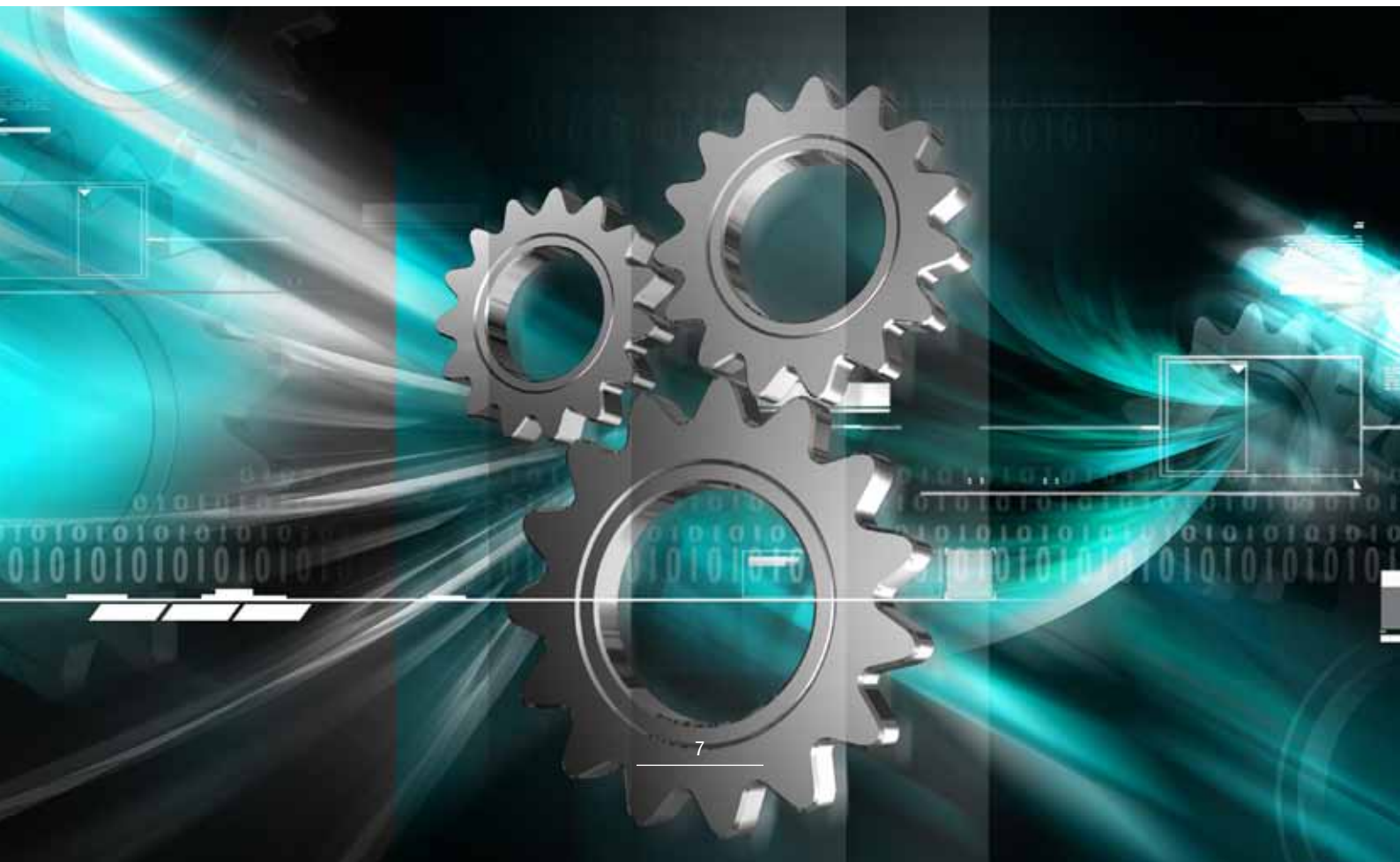
Today SAS offers the full spectrum of services encompassing **fire protection systems**; **security and communication systems**; and **automation and building management systems**.

Featuring state-of-the-art products from the world's premier manufacturers, and a highly trained engineering workforce with vast experience, we stand behind our abiding vision to provide unrivaled quality, innovation, and client support.

A key SAS advantage is the expertise in creating custom-designed environments where various systems are centrally controlled and work together seamlessly. To this end, we have pioneered a single-platform approach, through which all systems and subsystems synergize via a single control unit, powered by the SAS Centralized Management Software. This powerful software ensures full integration, resulting in unprecedented operational simplicity and user-friendliness, and eliminating system vulnerability.

Despite a long string of awards bestowed on SAS by government agencies, clients, global contractors, and regulatory organizations over the years, our company has never been known to rest on its laurels. Indeed, it is our belief that we're only as good as our expertise in the very latest technologies and methodologies. With this in mind, we place extraordinary emphasis on the continued professional growth of our engineers and technicians, encouraging them to attend conferences, seminars, and trade exhibitions, and providing them with a broad range of advanced trainings — including product-specific and system-specific trainings offered by our manufacturers.

Dedication of this order not only enables us to design, install, and maintain cutting-edge systems, but ensure on-time project delivery, as well as excellent warranty backup and customer service.



**Our areas of expertise include:**

- ◆ Consultation
- ◆ Design
- ◆ Supply
- ◆ Installation
- ◆ Testing and commissioning
- ◆ Service and maintenance
- ◆ Warranty backup

Our products and services comprise:

Fire protection systems

- ◆ Firefighting
- ◆ Fire detection and alarm
- ◆ Fire suppression

Security and integrated security systems

- ◆ Access control - personnel and vehicles
- ◆ Intrusion detection
- ◆ Motion detection
- ◆ Perimeter protection
- ◆ Closed-circuit televisions (CCTVs)
- ◆ Burglar-alarm systems
- ◆ Computerized monitoring
- ◆ Control centers (CMCCS)
- ◆ Metal and explosive detection
- ◆ X-Ray scanners
- ◆ Under-vehicle inspection systems
- ◆ Automatic car-plate-recognition systems

Communication systems

- ◆ Public address
- ◆ Audiovisual systems
- ◆ Sound systems
- ◆ Community and satellite TV
- ◆ Nurse-call systems
- ◆ Master-clock systems
- ◆ Hospital engineering systems
- ◆ Dimming systems

**Automation and
building management systems**

- ◆ Including HVAC controls

UPS

Our values

Diversity: SAS is an equal-opportunity employer and contractor. We provide equal opportunity to all employees, suppliers, partners, and subcontractors, irrespective of race, ethnicity, nationality, skin color, religion, physical disability, or age.

Environmental stewardship: SAS is a fully dedicated green company. We continually strive to limit our environmental footprint by enforcing energy efficiency, minimal or no waste, proper disposal of hazardous materials, and recycling.

Corporate governance: One of our core beliefs is that ethical conduct must define the way we do business. Therefore we uphold the highest standards of professionalism, at the workplace and in our relationship with clients, partners, suppliers, government bodies, and communities where we work. Our ethics standards, policies, and regulations are detailed in the **SAS Systems Engineering Code of Business Conduct**, and are enforced by our Business Practices Officer.

Community give-back: SAS is committed to operating as a model corporate citizen. We view all communities in which we work as our hosts. Accordingly, we treat them and their public institutions with utmost care and respect. We also support worthy social causes and cultural programs, and participate in community events which nurture local talent. Our initiatives include organizing summer training programs for engineering students preparing for graduation.





2012: A year of unprecedented growth

SAS Systems Engineering experienced unparalleled expansion in 2012.

The company made strides in terms of not only the number and scale of new projects, but the further technical and professional advancement of its engineering corps and managers, as well as evolutionary enhancements in the sphere of information technologies.

We believe our achievements in 2012 must be viewed, first and foremost, as an expression of the continued trust which our clients place in our work. As such, our accomplishments in 2012 have in turn led to a fresh string of high-profile projects, for clients such as the Saudi Electricity Company, General Dynamics, Hilton, Doosan Heavy Industries, Hyundai, Intercontinental Hotel, Samsung, Alstom, Marafiq, Aramco, and the Saudi ministries of Defense, Interior, and Higher Education, among many others.

Today, as we remain committed to surpassing our clients' expectations, we are honored to be entrusted with a broad portfolio of prestigious projects, in Saudi Arabia and beyond.

The projects which bear our signature run the gamut of public and private institutions, ranging from airports, power plants, universities, and hospitals to railway stations, shopping malls, hotels, corporate centers, mosques, and civic facilities.

In this article, we present some highlights from the year 2012, all of which have been realized as genuine team achievements, reflecting our enduring passion for the art of engineering.

Fire Protection projects: Standout projects on which we worked in 2012 included the design, supply, installation supervision, and testing and commissioning of firefighting and fire alarm systems for the 380 kV substations of the Haramain High Speed Railway.

Among major new contracts awarded to SAS were those for the full scope of fire detection and suppression systems at five power plant substations in eastern Saudi Arabia. Another milestone was achieved when SAS was awarded a contract for the installation of fire protection systems at the King Faisal Specialist Hospital and Research Center.

Automation and BMS projects: Top projects included the installation of a building management system at the Qurayyah Power Plant, and installation of Johnson Controls DDC systems across Ministry of Interior Integrated Facilities. As importantly, SAS won a coveted bid for the large-scale project of installing BMS systems throughout the King Abdullah Waqf Hotels chain.

Security and communication projects: SAS implemented numerous installations of integrated security systems, as well as integrated and biometrics-based Time and Attendance systems, throughout 2012. Major projects were carried out for the Saudi Airlines Ground Services and the King Abdulaziz International Airport; the Jubail Export Refinery; the Tasnee Power Plant; and the King Fahed Medical City.



Trade exhibitions

In the course of 2012, SAS took part in a number of distinguished trade exhibitions, presenting its work to regional and international clientele.

Thus teams of SAS engineers and sales executives showcased the company's diverse services and global product brands at several industry shows including:

- ♦ The IFSEC trade exhibition, held in Riyadh;
- ♦ The SFPE-SAC Conference, Exhibition, and Workshop, in Al Khobar;
- ♦ The INTERSEC Dubai Exhibition;
and
- ♦ The Saudi Safety and Security Exhibition, held in Dammam.



Trainings

Two thousand and twelve was an outstanding year for the professional and technical advancement of SAS engineers and managers. Throughout the year, they participated in a broad variety of trainings, which were provided by SAS partners, manufacturers, and the National Fire Protection Association (NFPA).

These events included:

Fire Protection: Advanced seminars and trainings (including certification and re-certification trainings) provided by NFPA, Kidde, Notifier (Honeywell), and Chemguard, focusing on various fire protection and fire suppression systems such as FM-200, Novec 1230, Aragonite, and CO2, as well as NFS2-3030 and Onyxworks systems.

Security and Communications: Series of project-planning, management, and systems trainings provided by Pioneer International Institutions; and trainings in the following: Sound Systems, provided by Duran; Project Management through Primavera P6 (Basic), by Proma Star; Interflex products, by Interflex; EASE, by AFMG; Lenel (for SATORP project), by Lenel; GE Fire Alarm, by GE; and Honeywell's Variodyn D1 public address and voice alarm system, the first-ever digital system of its kind.

Automation: Trainings in Apogee Migration, Desigo Total Room Automation, Desigo Insight Version 5 Automation System, and Specification Selection Tool, all provided by Siemens; and a Project Management Professional training, provided by BTC.

As significantly, a large number of SAS executives participated in a far-reaching management training, further honing their knowledge and skills as team leaders. Instructed by Scott Taylor of INNESSKIRK GLOBAL (who appears in the photo below), one of the world's foremost specialists in the field of corporate training, the eight-day course took place at the SAS headquarters in Jeddah.



The Fire Protection Department in 2012: ensuring the safety of eminent institutions

For the SAS Fire Protection Department, 2012 was marked by the highest-ever scale and volume of projects in the company's history. This achievement was due equally to the department's decades of experience in the field, its leading position in advanced engineering, and its reputation as Saudi Arabia's top-ranking provider of fire protection systems. Sites on which the Fire Protection Department worked in 2012 ranged from the Haramain High Speed Railway to universities, power stations, and corporate headquarters, with clients including the Saudi Electricity Company (SEC), Marafiq, Bemco, Doosan Heavy Industries, Hyundai Engineering, Alstom, Saudi Archirodon, Saudi Aramco, and the Saudi ministries of Defense, Interior, and Higher Education, among many others.

Top projects on which work was performed in 2012 comprised those for the Haramain High Speed Railway, commissioned by SEC; the King Khalid University, in Abha; the Al-Nuzha 2, Hindawiyah, and Tiyan 2 substations, in Jeddah, Makkah, and Madinah, respectively; the Qurayyah Power Plant; and the Ajyah Toilets and Ablution Building, Bus Station toilets, and Angary Toilets Building, connected with the Makkah Haram.

Among major projects completed in 2012 were several power plants across Saudi Arabia, the Western Regional Control Center, and the headquarters of Islamic Development Bank.

The most distinguished project on which the department worked in 2012 was the full design, supply, installation supervision, and testing and commissioning of firefighting and fire alarm systems for the 380 kV substations of the Haramain High Speed Railway. This is a highly prestigious initiative, since the railway itself is an unprecedented achievement for Saudi Arabia, as it links, for the first time, the cities of Jeddah, Makkah, and Madinah. The project will be completed in 2013.

Per the specifications of the Saudi Electricity Company, SAS was commissioned to execute the full scope of fire protection systems at all six 380 kV power substations connected to the railway's total of six stations. Since this was a rush project, SAS carried out its successful execution, including delivery of all materials, within record-breaking time frames. Currently all six components of the project are in the commissioning stage.

Systems and products offered by the SAS Fire Protection Department — encompassing top global brands such as Notifier, Kidde, Viking, Chemguard, GE, Mircom, and others — were featured at three renowned trade shows in 2012. Thus high-level department personnel participated in the SFPE-SAC Conference, Exhibition, and Workshop, in Al Khobar; the IFSEC Riyadh Exhibition; and the INTERSEC Dubai Exhibition, showcasing SAS products and services for a cross section of prospective regional and international clients.

Two thousand and twelve was also an outstanding year in terms of the professional and technical advancement of SAS Fire personnel. Our large teams of engineers and technicians received



extensive NFPA trainings, Certification trainings pertaining to Fire Alarm Panels from Notifier; Fire Suppression System trainings focusing on FM-200, Novec 1230, Aragonite, and CO2 systems; Kidde Fire Suppression System trainings; and Notifier (NFS2-3030 and Onyxworks) trainings, further honing their skills and expanding their knowledge. In addition, our managers completed a far-reaching series of executive trainings, which were conducted by Scott Taylor of INNESSKIRK Global at the SAS headquarters in Jeddah.

Today the SAS Fire Protection Department continues to bring its expertise and dedication to scores of high-profile projects across Saudi Arabia. These projects, many of which were carried over from 2012, include various power plants and substations — in Yanbu, Rabigh, Rafha, Qurayyah, Qaseem, and elsewhere — as well as the King Khalid University College of Languages and Translation, and Najran University, among others.



The Security and Communications Department in 2012: the next wave of technological sophistication



Teamwork was at the heart of the prestigious achievements made by the SAS Security and Communications Department in 2012.

With hard work and flawless coordination, complemented by the mantra “All for one, and one for all,” the department actually surpassed its own sales and project-implementation targets. Distinguished projects awarded to the department in 2012 included those for the Jeddah-Obhur Seashore development, Senegal’s Blaise Diagne International Airport, the Shoaiba and Qurayyah power plants, the Jeddah Business Park Center, the Hilton Commercial Center in Makkah, Bank Aljazira, and the Makkah Haram Expansion, among many others.



With clients including Alstom, Saudi Archirodon, BTC, Doosan Heavy Industries, Daelim, Samsung Engineering, Hyundai Engineering, Saudi Elastomers, Royal Commission Yanbu and Jubail, General Dynamics, Hanwha, Hilton, Marafiq, SABIC, and SBG, the SAS Security and Communications Department handled numerous high-profile projects in 2012. They included major industrial, commercial, and civil sites such as power plants, hotels, mosques, and corporate structures in Saudi Arabia, as well as the Blaise Diagne International Airport in Senegal.

The two most significant projects entrusted to the Security and Communications Department in 2012 were those for the Saudi Airlines Ground Services Terminals and the King Abdulaziz International Airport (KAIA). For the Saudi Airlines project, SAS was commissioned to install fully integrated Time and Attendance systems on multiple sites. The challenge of this project was to realize a time-recording mechanism for around 20,000 employees across an area of 1.8 square kilometers. SAS won the project against competitors by proposing a leading-edge biometric identification system, powered by German-made Interflex fingerprint scanners.



The KAIA project, which involved the installation of fully integrated public address and fire alarm systems, was awarded to SAS based on its extensive experience in the field as well as its outstanding record of professionalism.

The SAS systems now being installed at the airport are the most sophisticated, state-of-the-art, and user-friendly to date. Our public address system provides Ethernet-based configuration and seamless setup of various functions such as user profiles and zoning. The system is fully integrated with the airport's fire alarm and BMS networks.

Our fire alarm and detection system, which is a powerful life safety mechanism serving a key function across the airport, is a complete solution. It is a microprocessor-based, intelligent analogue addressable, and network-integrated system, compliant with all international standards. Moreover, our design includes all necessary interfaces with other systems and equipment, for the precise and timely functioning of all fire-safety components.



Building on a long tradition of offering the very latest in technical advancements, the SAS Security and Communications Department applied a cutting-edge radar technology in 2012, in addition to utilizing biometrics-based access control systems, which were installed and integrated with multiple systems, at the Seashore site and across other projects as well.

The products and services offered by the SAS Security and Communications Department were featured at the 2012 INTERSEC Dubai, IFSEC Riyadh, and Saudi Safety and Security Damman exhibitions. Our participation in the latter exhibition was organized by SASNET, a recently established SAS department which helps foster the company's growth through research, development, and marketing.

Our Security and Communications personnel also achieved an impressive degree of professional advancement in 2012, as they participated in a series of project-planning, management, and systems trainings provided by Pioneer International Institutions. In addition, our engineers received trainings in the following: Sound Systems, provided by Duran; Project Management through Primavera P6 (Basic), by Proma Star; Interflex products, by Interflex; EASE, by AFMG; Lenel (for SATORP project), by Lenel; and GE Fire Alarm, by GE.



The Automation Department in 2012: powerful solutions for landmark facilities

Two thousand and twelve was a standout year for the SAS Automation Department, equally in terms of the scale, range, and high level of complexity of the projects it carried out.

With clients such as Al Riassa, Arabian Bemco, BTC, Intercontinental Hotel, and the Ministry of Interior, the Automation Department completed three high-profile projects in 2012: the installation of a site-encompassing Siemens Building Management System (BMS) at the Qurayyah Power Plant; the supply and installation of a Siemens BMS for the control and monitoring of all electrical and mechanical equipments at the relocated Equipment Building of the Zamzam Water Plant, in Makkah; and the installation of Johnson Controls DDC systems (fully integrated with York chillers) throughout Ministry of Interior Integrated Facilities.

Among the ongoing projects implemented by the Automation Department in 2012, one of the most distinguished was the Blaise Diagne International Airport, in Senegal. Currently under construction near the town of Ndiass, it will serve as a new airport for Dakar. SAS is in charge of the supply and installation of an extensive BMS at the facility. To be fully integrated with all low current systems across the structure, the BMS is designed to monitor and control electrical and mechanical systems in all of the airport's buildings.

Other ongoing projects of the Automation Department include the installation of a Siemens BMS for the monitoring and control of electrical, mechanical, and HVAC equipments throughout the



Qaseem Power Plant, as part of the plant's reinforcement, Extension III; the installation of a control system for ventilation and electrical equipments of the new Ajyad Toilets and Ablution Building at the Makkah Haram, interfaced with the building's escalators, elevators, and UPS; and a major software and interface upgrade of the BMS at the Dar Al Tawheed Intercontinental Hotel, in Makkah.

Throughout 2012, the Automation Department continued to offer products and systems from renowned global manufacturers, and upheld its reputation for top-notch engineering, on-time project delivery, and comprehensive after-sales support.

The department also maintained its focus on technical advancements. Thus, for the first time, it adopted the KNX technology, applying it to the lighting and HVAC controls of two projects: Zamzam Water Plant Equipment Building relocation, and Qaseem Power Plant Extension III. KNX is an open, standardized, OSI-based network communication protocol for intelligent buildings, designed to be independent of any particular hardware platform.

As part of the Automation Department's abiding commitment to professional growth, its managers and engineers participated in a number of significant trainings in 2012. These comprised the Apogee Migration, Desigo Total Room Automation, Desigo Insight Version 5, and Specification Selection Tool trainings, all provided by Siemens; and the Project Management Professional training, by BTC.

The Automation Department also participated in the prestigious IFSEC trade exhibition, which took place in December 2012 in Riyadh.



The IT Department in 2012: optimal security and efficiency

Information technology (IT) is a critical resource for SAS, helping fuel the company's continued growth and development. In recognition of this fact, we have carried out a number of key IT projects in 2012, aiming to consolidate improvements realized through past efforts.

IT workforce enhancements: In 2012, our IT workforce was expanded in order to accommodate new projects and further broaden its pool of specialized skills.

Cloud computing: Throughout the year, SAS continued its adoption of cloud-based IT services. As a result, several additional departments and branches were incorporated into our cloud-based



communication and collaboration system. By utilizing cloud computing, we were able to reduce capital expenditures, reduce operational issues, and improve the use of existing resources. Such enhancements have also allowed us to execute a more agile business strategy.

Continued infrastructure improvements: Several IT infrastructure improvements were made throughout 2012, resulting in better networking, security, and disaster-preparedness.

Today our IT systems provide our clients and our own personnel with an unprecedented level of user-friendliness, efficiency, and security, in keeping with our abiding commitment to optimal productivity and customer service.

Our branches at work

Riyadh branch

At the start of 2012, the merging of our Riyadh branch's Automation and Security departments resulted in the inception of an extraordinary joint team of engineers and technicians, working synergistically under one management.

As a result, the Riyadh branch has had numerous accomplishments throughout 2012, not only working on several important projects in the central region of Saudi Arabia, but assisting SAS Jeddah in the implementation of a host of major contracts.

Thus the Riyadh team worked on the SGS time attendance and video surveillance project at Riyadh's King Khaled International Airport, where it installed and helped commission over 50 Time Attendance Readers and cameras.

Also, as SAS Jeddah had won a BMS bid for an extensive Ministry of Interior project, the Riyadh team was commissioned to work on 30 sites, and has already completed a number of them by the close of 2012. Other projects commissioned by SAS Jeddah to the Riyadh team included the Al Qaseem Power Plant and the Bank Aljazira in Dammam.

Perhaps the foremost achievement of the Riyadh branch in 2012 has been its winning BMS bid for the King Abdullah Waqf Hotels chain project, in Al Madinah Al Munawara. The project entails the construction of 2,800 rooms in five hotels, comprising four basement levels, a ground floor, 16 additional floors, and a roof, as well as a massive mall. Worth 8 million SAR, the project is considered one of the most prestigious of its type to be carried out in Saudi Arabia.

The Riyadh branch also witnessed considerable growth in the security field. New opportunities were explored in connection with the King Fahed Medical City, an ultra modern medical and residential complex, which has commissioned the Riyadh team to install access control systems for elevators in four hospitals. The team's excellent track record with the King Fahed Medical City is poised to lead to additional projects in the near future.

The team's top projects nearing completion include the BMS upgrades of the Radisson Blu Hotel Riyadh, an elegant destination offering 326 rooms and suites, four restaurants, a fitness center, and meeting facilities.

The team has almost finished upgrading the hotel's BMS network to Desigo systems. Another ongoing project is the Holiday Inn Riyadh-Meydan BMS expansion. By handling the testing and commissioning of 700 I/O points in five panels at the hotel, the Riyadh team has earned the client's trust for its expertise and professionalism alike. As a result, recently the team was assigned to execute all related tasks in the project.

Finally, throughout 2012, the SAS Riyadh branch placed equal emphasis on the professional growth of its engineering corps through trainings and seminars, and the introduction of new technologies. Branch engineers received trainings in the cutting-edge Siemens Desigo Insight Version 5 Automation System, as well as Honeywell's Variodyn D1 public address and voice alarm



system, the first-ever digital system of its kind. Given its extraordinary flexibility and seamless integration with most fire alarm systems, Variodyn D1 will significantly expand our advantages in the communications field.

As importantly, the Riyadh team joined Siemens in the launch of the EIB Lighting Control System in Saudi Arabia. The EIB system, one of the world's most advanced green technologies, is revolutionizing the building automation field. Considering EIB's singular importance, Siemens provided our Riyadh team with advanced sales and technical trainings pertaining to various aspects of the product.



Two thousand and twelve was the most successful year to date for the Fire Protection Department of the SAS Riyadh branch. Building on its achievements of 2011, the Fire Department upheld its reputation as a premier value choice for clients and end users, by providing outstanding quality in terms of on-time delivery and seamless performance of all products and services.

The department's accomplishments included advanced management and technical trainings, the signing of several new contracts, expansion into various commercial sectors, the implementation of a major seminar and technical presentation for the Saudi Electricity Company, and participation in the renowned IFSEC exhibition, with SAS featured as a top engineering company specializing in integrated fire, security, and BMS systems, and offering leading products such as Leoni cables.



Today the SAS Riyadh Fire Department continues to focus on comprehensive solutions encompassing design, supply, installation, testing, commissioning, and after-sales service, with teams of highly trained and experienced engineers who specialize in cutting-edge fire protection systems.

Major 2012 projects awarded to the Riyadh Fire Protection Department included those from Alstom and ABB. These projects were entrusted to the department not only in consideration of its engineering prowess and comprehensive after-sales support, but its singular focus on project-site safety. Like SAS as a whole, our Riyadh branch recognizes the critical importance of environmental health and safety on job sites, and accordingly executes stringent safety plans which prevent injuries or damage to property.

Another major milestone achieved in 2012 was winning the fire protection systems project for the King Faisal Specialist Hospital and Research Center. The project was a key component of the Riyadh branch's expansion into the commercial sphere, the health sector in particular.

As part of our ongoing commitment to professional growth and technical excellence, Riyadh-branch engineers, technicians, and managers alike received continuing trainings to further improve their skills. Throughout the year, our teams' high quality of work was recognized by several clients, with statements of satisfaction issued by distinguished companies such as Alstom.

The Riyadh Fire Department continued to make inroads also in terms of applying new technologies. Thus the department significantly enhanced its scope across all projects, especially by adopting Gravograph Engravers as well as Retrotec's Enclosure Integrity Testing System.

Al Khobar branch

Established in 1998, SAS Al Khobar is the company's flagship branch for eastern Saudi Arabia, specializing in the supply, design, installation, testing and commissioning, and maintenance of the very latest in security and fire protection systems.

One of the top projects that our Al Khobar team implemented in 2012 was the installation of an integrated security system at the Jubail Export Refinery. One of the biggest projects of its kind ever to be executed in eastern Saudi Arabia and the kingdom as a whole, it was designed and executed in accordance with the latest directives issued by the High Commission of Industrial Security.

Another milestone was achieved when the Al Khobar team won a contract to train 40 Saudi Aramco technicians in the utilization of KABA security barriers and turnstiles.

Currently our Al Khobar engineers are under contract with the Ministry of Health, in charge of maintaining complex UPS systems at ten regional hospitals.

The Al Khobar branch was also awarded new contracts for the expansion of KABA time attendance systems at the Saline Water Conversion Corporation's (SWCC) Riyadh plant and several sites throughout the eastern region. SAS has already commissioned and handed over to SWCC a state-of-the-art KABA time attendance network, installed at the entirety of the corporation's sites in the eastern and central regions.

Two thousand and twelve was an equally significant year for the Fire Protection Department of the SAS Al Khobar branch, as it performed work on a number of prestigious projects, with clients such as the Saudi Electricity Company.

The various scopes of these projects comprised the installation of advanced fire protection networks including foam, FM-200, CO2, sprinkler, Novec 1230, and deluge systems as well as required pumps and compressor equipment, all linked with main fire alarm systems through Intelligent Networks.

Our Al Khobar Fire team welcomed 2013 with an unprecedented portfolio, having won five major fire detection and suppression systems projects for the following substations:

- ◆ 115 kV Dye Substation;
- ◆ 115 kV Hafr Substation;
- ◆ 132 kV Arar Substation;
- ◆ 132 kV Muzamia Substation;
- ◆ 132 kV Al Markaz Substation.



Jubail branch

Ever since its establishment in 2009, the SAS Jubail branch has fast grown to become one of eastern Saudi Arabia's top-ranked providers of integrated security and fire protection systems.

With its pool of exceptional engineering talents and specializing in cutting-edge products and systems, our Jubail Security and Fire teams have made 2012 yet another year of distinguished accomplishments.



The teams executed several challenging projects in 2012, with work commissioned by some of Saudi Arabia's most prestigious petrochemical corporations, including Tasnee, Sipchem, and Advance Petrochemical Company (APC), as well as contractors like Rotary and Sarco.

The most extensive project completed by the Security team was a major upgrade of security systems at the Tasnee plant in Jubail. The initiative comprised the supply, installation, testing, and commissioning of the latest in integrated hardware and software technologies.



Other major projects included the installation of an integrated access control system as well as maintenance of security systems for Sipchem; a CCTV-systems upgrade for the same company; and maintenance of security systems for APC, Sipchem, and Tasnee. Concurrently, fire protection systems were completed at the Satrop site, as commissioned by Rotary and Sarco.



Today our Jubail security engineers and technicians continue to implement a number of far-reaching projects, among them the installation of integrated security systems for the Sipchem EVA Plant, the Tasnee AA Plant, and Commercial Port; as well as installation of CCTV systems at the Tasnee Plant Logistics Area, among others. Our Fire team also continues to execute several major projects, including those at AMJ, Sipchem, and Satrop sites.

As SAS Systems Engineering as a whole, our Jubail branch offered the full spectrum of leading security and fire products in 2012, including US- and European-made access control, AV, CCTV, UPS, and fire protection systems as well as road blockers, turnstiles, and barriers. The most noteworthy technology applied by our Jubail engineers was the state-of-the-art Remsdaq Access Control C-5 Enterprise Edition System, which was installed for the first time in Saudi Arabia, at the Sipchem Plant in Jubail.

Sales executives and engineers from the Jubail branch also helped showcase SAS products and services on an international level, by participating in the renowned Saudi Safety and Security Exhibition, held in Dammam in March 2012.

Madinah branch

In 2012, the SAS Madinah branch performed work on a number of major projects throughout the Madinah area, with clients ranging from several landmark hotels, Tacoma, and Saudi Oger to the Custodian of the Holy Mosques.

Projects completed by the Fire Protection team of the Madinah branch included some of the city's most prominent tourist destinations, namely the Taiba Armas Hotel, the Madinah Oberoi Hotel, and the Elaf Taiba Hotel.

For the Taiba Armas and the Madinah Oberoi, the team executed the design, supply, testing, and commissioning of leading-edge Kidde firefighting systems. For the Elaf Taiba, the team carried out a powerful fire protection upgrade, installing a state-of-the-art Notifier alarm system.

Ongoing projects in 2012 encompassed work in the spheres of building management systems and fire protection alike, with distinguished clients including Al Riassa, Aswaq al Haram, and the hotels Anwar al Madinah Movenpick, Madinah Oberoi, Taiba, Safir, and Karam al Hejaz.

Our work for these clients included, variously, the full scope of new BMS, firefighting, and fire alarm systems, as well as the maintenance of complex networks which comprised fire protection, BMS, CCMS, and billing systems.

The largest and most extensive enterprise on which the SAS Madinah branch performed work in 2012 was the King Abdullah Waqf project. Consisting of two five-star hotels, three four-star hotels, and a sizeable common mall, it is currently considered to be one of Saudi Arabia's most prestigious automation projects.

The latest BMS technologies being designed, supplied, tested, and commissioned by our engineers at the King Abdullah Waqf sites include more than 50 DDC panels, which serve to control and monitor over 8,000 I/O points, as well as 4,500 fan coil units, all of which will be connected to each site's automation system.

For our Madinah teams, 2012 was also marked by the continued acquisition of fresh professional knowledge and skills.

Thus our personnel participated in specialized NFPA, Kidde, and Notifier seminars and trainings, as well as a far-reaching series of management trainings conducted by INNESSKIRK Global.



Recognition and awards

In 2012, during the annual Lenel Value Added Resellers (VAR) gala dinner, held at the Fairmont Hotel in Dubai, SAS Systems Engineering was honored with Lenel's prestigious Certificate of Excellence. As an Authorized VAR of Lenel's OnGuard security platform, SAS was recognized for its extraordinary capabilities in systems integration.

Another distinguished recognition was bestowed by one of our most valued partners, Kidde Fire Systems, which named SAS Systems Engineering "Distributor of the Year 2011" for the Middle East region.

SAS garnered a number of additional awards throughout 2012.

Among them was a Letter of Appreciation from Alstom, which praised SAS Close-out Manager Mustafa Shareef for the seamless execution of the Shoaiba Power Plant Stage III project, including installation, commissioning, and integration.

A similar recognition was received from Doosan Heavy Industries and Construction. In an Award Certificate issued to SAS Site Manager Mohammed Nadeem, Doosan praised him for the successful implementation of the Rabigh Power Plant No. 2 project, and for achieving "20 million safe man hours with zero accident."



SAS Security Department Systems Design Engineer Serge Achajian (left) receiving Lenel award from Joe Kirmser, President of Lenel Systems International.



Pioneering technologies

Advanced technologies and a highly trained technical corps are hallmarks of the continued success of SAS Systems Engineering.

Throughout 2012, we offered the very latest technologies from Europe, the US, and elsewhere, supplying our clients with products from venerable manufacturers such as Siemens, Johnson Controls, Lenel, GE, Chemguard, Kidde, Notifier, Retrotec, UTC, Viking, Marioff, Spectrex, Geutebruck, and many others.

As importantly, our teams received extensive training and certification in the various technologies we feature, acquiring the necessary skills and knowledge for the optimal application of cutting-edge products and systems.

In Automation: In 2012, we began to use the KNX technology, applying it to the lighting and HVAC controls of two major projects. KNX is an open, standardized, OSI-based network communication protocol for intelligent buildings, designed to be independent of any particular hardware platform.

Other significant automation systems we offered included the Siemens Desigo Insight Version 5 as well as the EIB Lighting Control System. SAS was the first company to introduce the EIB system in Saudi Arabia, working closely with Siemens. One of today's most sophisticated green technologies, the EIB system is poised to revolutionize the building automation field.

In Fire Protection: Our Fire Protection Department continued to apply new technologies in a broad range of prestigious projects, including the King Abdulaziz International Airport. At this site, our teams installed a complete fire protection solution, consisting of a microprocessor-based, intelligent analogue addressable, and network-integrated system. In addition, the SAS-designed fire alarm and detection system includes all necessary interfaces with other systems and equipment throughout the airport.

Our Fire Protection Department enhanced its capabilities in terms of a broad range of complex



projects by also adopting two far-reaching products: Gravograph Engravers as well as Retrotec's Enclosure Integrity Testing System.

In Security and Communications: In 2012, for the first time in Saudi Arabia, we applied the Remsdaq C-5 Enterprise Edition System, which is a state-of-the-art access control network.

Another significant product we offered was the Honeywell Variodyn D1 public address and voice alarm system, the first-ever digital system of its kind. Variodyn D1 provides outstanding flexibility and seamless integration with most fire alarm systems.

Rounding out our noteworthy security offerings was a leading-edge network of Time and Attendance systems which we installed throughout the Saudi Airlines Ground Services Terminals. These fully integrated systems, based on powerful biometric identification technology, featured fingerprint scanners by Interflex.



Major completed projects, 2012

Project	Description	Contractor	Location	Owner
Izdihar Holiday Inn	Johnson Controls Metasys BMS including PC, monitor, printer, and DDC panels to control and monitor HVAC system: PACUs, FCUs, exhaust fans, monitoring and control of lighting system, fire alarm system, smoke dampers, electrical panels, and GENSET	Mahd al Diafeh	Riyadh	Holiday Inn
KACST - B32	Johnson Controls Metasys BMS connected to existing JCI workstation of B35 and B36	Al Saadeh	Riyadh	KACST
MOI Integrated Project - central and eastern regions sites	Standalone JCI FX control system for three PACU units for a police center	SBG	Riyadh	MOI
MODA - military facilities management	Supply, installation, testing, and commissioning of 11 GE cameras and required system	MODA	Riyadh	MODA
MODA - Warehouse catering	Supply, installation, testing, and commissioning of nine GE cameras and required system	MODA	Riyadh	MODA
MOI Mabatheth car maintenance	Police car camera maintenance	MOI	Riyadh	Mabatheth
NCB Riyadh	Supply, installation, testing, and commissioning of GE access control system for five doors	Sawaed	Riyadh	NCB
Dabab Towers	Maintenance of access control system, CCTV system, and physical security (barriers and blockers) for eight towers in Al Dabab	Al Rayada	Riyadh	Dabab Towers
UPS	Power cabling and wiring for three UPS systems, 80 kV each, in NCB	Safari	Riyadh	NCB

Project	Description	Contractor	Location	Owner
New 132/13.8 kV SS #8144 in Nasim area	Fire protection system	Al Toukhi Co.	Riyadh	SEC-COA
New 132/13.8 kV SS #8128 in Azizia area	Fire protection system	Al Toukhi Co.	Riyadh	SEC-COA
Princess Noura University substations #9024, 8183, and 8184	Fire protection system: Novec system, hydrant system, sprinkler system, pumps	ABB	Riyadh	SEC-COA
Hiteen Substation #9005	Fire protection system	Al Fanar	Riyadh	SEC-COA
New 132/13.8 kV SS 8086 in Information Technology and Communication Complex	Fire protection system	Al-Babtain	Riyadh	SEC-COA
New 132/13.8 kV SS 8715 in Colleges Complex in Al-Kharj area	Fire protection system	Al-Babtain	Riyadh	SEC-COA
New 132/13.8 kV SS 8142 in Qadisiyya area	Fire protection system	Al-Babtain	Riyadh	SEC-COA
New 132/13.8 kV SS 8145 in Nahda area	Fire protection system	Al-Babtain	Riyadh	SEC-COA
New 132/13.8 kV SS 8150 in Qudus area	Fire protection system	Al-Babtain	Riyadh	SEC-COA
Taiba Armas Hotel	Kidde firefighting system: design, supply, installation, testing, commissioning, and handover to Civil Defense	Electromechanical and Technical Associates Co. ETA	Madinah	Taiba Armas Hotel
Madinah Oberoi Hotel	Kidde firefighting system: design, supply, installation, testing, commissioning, and handover to Civil Defense	Madinah Oberoi Hotel	Madinah	Madinah Oberoi Hotel
Elaf Taiba Hotel	Notifier fire alarm system upgrade: supply, installation, testing, commissioning, and handover to Civil Defense	Elaf Taiba Hotel	Madinah	Elaf Taiba Hotel
Ministry of Interior Integrated Facilities	Installation of Johnson Controls DDC for HVAC control, fully integrated with York chillers	SBG (Advanced Vision)	Throughout Saudi Arabia	Ministry of Interior

Project	Description	Contractor	Location	Owner
Qurayyah Power Plant	Siemens Building Management System for control and monitoring of electrical, mechanical, and HVAC services equipments of entire site	Arabian Bemco	Qurayyah	SEC
Zamzam relocation of Equipment Building	Supply and installation of Siemens Building Management System for control and monitor of electrical and mechanical equipments (lighting, power, chilled water pumps, micro filters, storage tanks)	SBG (Advanced Vision)	Makkah	Al Riassa
Nejran 132 kV SS	Design, supply, installation, testing, and commissioning of firefighting and fire alarm system	Al-Mashriq	Najran	SEC-SOA
WRCC	Design, supply, installation, testing, and commissioning of firefighting and fire alarm systems	Al-Arrab Contracting Co.	Jeddah	SEC-WOA
KKNG SS Extension	Design, supply, installation, testing, and commissioning of firefighting and fire alarm systems	Siemens	Jeddah	SEC-WOA
Jeddah North West 380 kV SS	Design, supply, installation, testing, and commissioning of firefighting and fire alarm systems	Al-Oasis	Jeddah	SEC-WOA
Knowledge Economic City 1 & 2 substations	Design, supply, installation, testing, and commissioning of firefighting and fire alarm systems	Alstom - Cogelelex	Madinah	SEC-WOA
New Head Offices Building and Archive for Mhmd. Binladin Co.	Design, supply, installation, testing, and commissioning of firefighting and fire alarm systems	M. Binladin	Jeddah	M. Binladin
Shoaiba Power Plant - 3	Design, supply, installation, testing, and commissioning of firefighting and fire alarm systems	Alstom Power	Shoaiba	SEC-WOA
Islamic Development Bank headquarters	Halon replacement	Islamic Development Bank	Jeddah	Islamic Development Bank

Project	Description	Contractor	Location	Owner
Seashore	CCTV, ACS, microwave, and radar systems and boat	SBG	Jeddah - Obhur	National Guard
Saudi Private Airline Terminal (SPAT)	IPCCTV, ACS, IPTV, public address, A/V, and fire alarm systems	BTC	Jeddah	Civil Aviation Authority
Masa'a – Makkah Haram	Sound and CCTV systems	SBG	Makkah	SBG
Shoaiba SS III	ACS, CCTV and IDAS systems	Alstom	Shoaiba	SEC
Tasnee	Complete upgrade of security system throughout site	SAS	Jubail	Tasnee
SWCC Time Attendance network	Supply, installation, testing, and commissioning of KABA Time Attendance systems throughout SWCC sites	SAS	Throughout eastern and central regions	SWCC



Major ongoing projects

Project	Description	Contractor	Location	Owner
King Abdullah Waqf BMS	Over 50 DDC panels to control and monitor more than 8,000 I/O points across five major hotels and one large common hall. System includes 4,500 fan coil units, all to be connected to main system	Saudi Oger	Madinah	Waqf
Izdihar Holiday Inn - Wedding Hall and Kitchen	BMS components to be added to workstation installed by SAS	Touresco	Riyadh	Izdihar Holiday Inn
Holiday Inn Meydan BMS	Installation of more than 700 I/O points and over 400 fan coil units, all connected to BMS network	Madh al Diafeh	Riyadh	Holiday Inn
MOI integrated project	Installation of standalone control systems for three PACUs serving public areas at police stations	Vision	Central and eastern regions	MOI
King Fahed Medical City access control for elevators	Supply, installation, testing, and commissioning of 27 readers to control access to elevators in four hospitals	Shindler	Riyadh	KFMC
KSU Data Center camera system	Supply, testing, and commissioning of 27 Axis cameras with 16 IR led illuminators and one level NVR	BTC	Riyadh	KSU
Al Moussa Tower of Bank Al Jazira, card readers	Supply, installation, testing, and commissioning of 12 card readers on six doors, using GE equipments, controllers, interfaces, and server	Bank al Jazira	Dammam	Bank al Jazira
NCB maintenance	Maintenance of CCTV system including 170 cameras, 23 DVRs, and 23 monitor screens; AC system including 150 doors	Safari	Riyadh	NCB

Project	Description	Contractor	Location	Owner
New 132/13.8 kV SS #8160 in Rabia	Fire protection system	Al Toukhi Co.	Riyadh	SEC-COA
King Abdullah Financial District 132/13.8 kV SS #8191, 8192, 8193, and 8194	Fire protection system	Al Fanar	Riyadh	SEC-COA
King Abdullah Financial Center 380/132/13.8 kV SS #9020	Fire protection system: Novec system, hydrant system, sprinkler system, pumps	ABB	Riyadh	SEC-COA
King Abdullah Petroleum Studies and Research Center	Fire protection system	M.R. Al Khathlan	Riyadh	Aramco
New 132/13.8 kV SS #8146 in Khaleej area	Fire protection system	Al-Babtain	Riyadh	SEC-COA
New 132/13.8 kV SS #8153 in Salie area	Fire protection system	Al-Babtain	Riyadh	SEC-COA
Central West Interconnection Qaseem Madinah	Fire protection system: Novec system, hydrant system, sprinkler system, pumps	Alstom	Riyadh	SEC-COA
New 132/13.8 kV SS #8701 Alkharj Military Base	Fire protection system	Al Fanar	Riyadh	SEC-COA
New Rafha Substation	Fire protection system	Delta	Riyadh	SEC-ER
New Hiteen 380/132 kV SS at Central Region Telecommunication Control Center	Fire protection system: Novec system, hydrant system, sprinkler system, pumps	Al Fanar	Riyadh	SEC-COA
Qaseem 3 Substation #9029	Fire protection system: Novec system, hydrant system, sprinkler system, pumps	Al Toukhi Co.	Riyadh	SEC-COA
Substation #8201 at Al Qurtuba	Fire protection system	Al Toukhi Co.	Riyadh	SEC-COA
Substation #8522 at Al Muzamia	Fire protection system	Al Osais Company	Riyadh	SEC-COA
Tabarjal Qurayyat 132 kV Interconnection Part 2 Substation	Fire protection system: Novec system, water deluge system	Al Toukhi Co.	Tabarjal	SEC-ER
Substation #8068 at Huraymala	Fire protection system	Alstom	Riyadh	SEC-COA
Substation #8606 at Al Rossan	Fire protection system	Alstom	Riyadh	SEC-COA
Substation #8911 at Baqaa	Fire protection system	Alstom	Riyadh	SEC-COA

Project	Description	Contractor	Location	Owner
PP-9 Transmission Room	Fire protection system	Arabian Bemco	Riyadh	SEC-COA
Oraija SS #9016	Fire protection system: Novec system, hydrant system, sprinkler system, pumps	Al-Babtain	Riyadh	SEC-COA
SS #8783 at Khamsin Al-Dawaser	Fire protection system	Nour Energy	Riyadh	SEC-COA
King Faisal Specialist Hospital and Research Cent.	Fire protection system	Hazem & Brothers Contracting & Trading	Riyadh	King Faisal Specialist Hospital and Research Cent.
Samsung	Integrated security system	SAS	Jubail	Tasnee
Sipchem EVA Plant	Security system	SAS	Jubail	Sipchem
Commercial Port	Security system	SAS	Jubail	Sipchem
Tasnee Logistics Area	Security system	SAS	Jubail	Tasnee
Al Riassa Building #6, Plot 3138	Kidde firefighting system - design, supply, installation, testing, commissioning, and handover to Civil Defense	Jamed	Madinah	Al Riassa
Aswaq al Haram buildings #1, 2, and 3	GE fire alarm system repair: supply of spare parts, installation, testing, commissioning, and handover to Civil Defense	Hosn al Karama Est.	Madinah	Aswaq al Haram
Anwar al Madinah Movenpick Hotel	Maintenance of fire alarm, firefighting, BMS, CCMS, and billing systems	Anwar al Madinah Movenpick Hotel	Madinah	Anwar al Madinah Movenpick Hotel
Madinah Oberoi Hotel	Maintenance of fire alarm and firefighting systems	Madinah Oberoi Hotel	Madinah	Madinah Oberoi Hotel
Taiba Hotel	Maintenance of building management system	Tacoma	Madinah	Taiba Hotel
Safir Hotel	Maintenance of Notifier fire alarm system	Al Safa Co.	Madinah	Safir Hotel
Karam al Hejaz Hotel	Maintenance of Notifier fire alarm system	Karam al Hejaz Hotel	Madinah	Karam al Hejaz Hotel
Reinforcement of Qaseem Power Plant Extension III	Siemens BMS for control and monitoring of electrical, mechanical, and HVAC services across site	Arabian Bemco	Qaseem	SEC

Project	Description	Contractor	Location	Owner
Blaise Diagne Airport	Supply and installation of BMS for monitoring and control of electrical and mechanical systems in all buildings, fully integrated with all low current systems at airport	BTC	Dakar-Senegal	Senegal Government
Ajyad Toilets and Ablution Building	Control system for ventilation and electrical equipments of the new Ajyad Toilets Building at Makkah Haram, interfaced with escalators, elevators, and UPS	Mohammad Bin Laden	Makkah	Al Riassa
Dar Al Tawheed Intercontinental Hotel	Upgrade of BMS. Installation of new software version and regeneration of GUI	Dal Al Tawheed	Makkah	Dar Al Tawheed
Najran 380 kV SS	Fire protection system	ABB	Najran	SEC-SOA
SETE Marafiq Yanbu	Fire protection system	SETE Energy	Yanbu	Marafiq-Yanbu
SS 10J/101 Yanbu	Fire protection system	Siemens	Yanbu	SEC-WOA
Iskan SS	Design, supply, installation, testing, and commissioning of firefighting and fire alarm systems	Al-Gihaz	Jizan	SEC-SOA
Shoqaiq 6 SS	Fire protection system	Al-Gihaz	Jizan	SWCC
Rabigh Power Plant 2	Fire protection system	Doosan	Rabigh	SEC-WOA
SEC Substation, western region	Maintenance of all fire protection and fire alarm systems	SEC-WOA	Jeddah, Makkah, Madinah, Taif, and Tabouk	SEC-WOA
Najran University	Fire protection system	ABB	Najran	SEC
Hail II Power Plant, Extension 3	Reinforcement of fire protection system	Al Fanar	Hail	SEC
Rafha Power Plant Extension	Fire protection system	SSEM	Rafha	SEC
King Khalid University College of Languages and Translation	Fire protection system	Al Rashid	Abha	Ministry of Higher Education
Rabigh Power Plant No. 2	Fire protection system	Doosan	Rabigh	SEC
Qurayyah Power Plant	Reinforcement of fire protection system	SSEM	Eastern region	SEC

Project	Description	Contractor	Location	Owner
Haramain High Speed Railway six 380 kV substations	Design, supply, installation supervision, and testing and commissioning of firefighting and fire alarm systems	SEC	Jeddah, Makkah, and Madinah	Saudi Railways Organization
Marafiq Yanbu IWTP 2	Fire alarm and fire protection systems	SETE Energy	Yanbu	Marafiq
King Abdullah Financial Center 380/132/13.8 kV Substation No. 9020	Fire protection system	ABB	Riyadh	SEC
New Hiteen 380/132 kV SS CRTCC Building: Central Region Telecommunication Control Center	Fire protection system	Al Fanar	Riyadh	SEC
King Khalid University	Fire protection system	RTCC	Abha	Ministry of Higher Education
Supervision and T&C works for Qurayyah Open Cycle Power Plant	Fire protection system	Bemco International	Qurayyah	SEC-EOA
Supervision and T&C works for Qurayyah Combined Cycle Power Plant	Fire protection system	Bemco International	Qurayyah	SEC-EOA
Supervision and T&C works for Duba Power Plant	Fire protection system	Najam Al-Jazira	Duba	SEC-WOA
Supervision and T&C works for Hail-2 Power Plant	Fire protection system	Al Fanar	Hail	SEC-WOA
Supervision and T&C works for Qaseem-2 Power Plant Extension	Fire protection system	Bemco International	Qaseem	SEC-COA
Supervision and T&C works for Qurayyat PP	Fire protection system	SSEM	Qurayyah	SEC-EOA
Qurayyah Power Plant	CCTV, ACS, and IDAS systems	Arabian Bemco	Qurayyah-Dammam	SEC
Qaseem CPP	CCTV, ACS, road blockers, and barriers systems	Arabian Bemco	Qaseem	SEC
King Abdulaziz International Airport	Public address and fire alarm systems	ICAD	Jeddah	Civil Aviation Authority
Ajyad/Angary Makkah Toilets Building	CCTV, public address, and fire alarm systems	M. Binladen	Makkah	SBG ABCD
Hilton Commercial Center	Fire alarm system	Makkah Hilton Co.	Makkah	Makkah Hilton Co.
Bank Aljazira	Access control system	Bank Aljazira	Jeddah	Bank Aljazira

Project	Description	Contractor	Location	Owner
Saudi Airlines Ground Services	Biometric T&A systems	Saudi Airlines	Jeddah, Riyadh, Dammam	Saudi Airlines
Blaise Diagne Airport	IPCCTV, ACS, IPTV, public address, A/V, fire alarm systems	BTC	Senegal	Senegal Aviation Authority
Shamiyah Surveillance	IP CCTV systems	SBG ABCD	Makkah	SBG ABCD
Business Park Center	Cables	STS	Jeddah	STS
Shamiyah CCTV integrations and CR relocation	CCTV integrations and CR relocation	SBG ABCD	Makkah	SBG ABCD
Jubail Export Refinery security	Design, supply, installation, testing, and commissioning of integrated security system	Sumitomo	Jubail	Jubail Export Refinery
Training of Saudi Aramco technicians	Provision of training to 40 technicians in the utilization of KABA security barriers and turnstiles	Saudi Aramco	Throughout eastern region	Saudi Aramco
UPS at ten hospitals	Maintenance of UPS systems at ten regional hospitals	Ministry of Health	Eastern region	Ministry of Health
KABA time attendance systems, SWCC	Expansion of KABA time attendance systems	SAS	Plants in Riyadh and throughout eastern region	SWCC
115 kV Substation fire protection, Dye	Design, supply, installation, testing, and commissioning of integrated fire protection system	SEC	Dye	SEC
115 kV Substation fire protection, Hafr	Design, supply, installation, testing, and commissioning of integrated fire protection system	SEC	Hafr	SEC
132 kV Substation fire protection, Arar	Design, supply, installation, testing, and commissioning of integrated fire protection system	SEC	Arar	SEC
132 kV Substation fire protection, Muzamia	Design, supply, installation, testing, and commissioning of integrated fire protection system	SEC	Muzamia	SEC
132 kV Substation fire protection, Al Markaz	Design, supply, installation, testing, and commissioning of integrated fire protection system	SEC	Al Markaz	SEC

Our clients

ABB
ABV Rock Group
AECC
Al Arrab
Al Babbain
Al Dhaliliya
Al Essa
Al Fanar
Al Fozan
Al Gihaz
Al Haram Hotel
Alia E-M
Al Latifia
Al Mandarya
Al Mashariq
Al Moussa
Al Osais
Al Rashid
Al Rayada
Al Riassa
Al Saad Contracting
Al Saadeh
Al Sawaed
Al-Sharq
Alstom
Al Toukhi
Anwar al Madinah Movenpick Hotel
Arabian Bemco
Ashi & Bushnaq
AUVA

Bank Aljazira
Bemco International
BTC

Ceitcon
CREET

Daelim
Dar al Iman Intercontinental Hotel
Delta
Dhaliliya
Doosan Heavy Industries
Drake & Scull
Dulb Trading
Dyayim Punj Lloyd

Elaf Taiba Hotel
Electrical Work Est.
Electro Technique Arabia

El Seif Engineering Contracting Co.
ETA Star/Unistar
Ettimadat Contracting

Farafro
First Saudi Co.
Fuel Technology Co.

General Dynamics

Hanwa
Hashem Co.
Hazem & Brothers Trading Company
Hidada Contracting
Hilton Towers
Hosn al Karama Est.
Hyundai Engineering

IBS Co.
ICAD
Intercontinental Hotel
Iscosa

JAL International Co.
JAMED
Jubail Export Refinery

KADI Trading & Contracting Co.
Karam al Hejaz Hotel
KEC International
KFMC

LADA Trading and Contracting Co.

Madinah al Nasr
Madinah Oberoi Hotel
Marafiq
MEP Solution Road
Meridien Hotel Madinah
M. R. Al Khathlan
Ministry of Defense and Aviation
Ministry of Health
Ministry of Higher Education
Ministry of Interior
Mohammad Bin Laden
M/S Al-Khonaini & Partners
Musharabia MCC

(continued on page 41)



Nahil
Najm Al Jazira Contracting Co.
NCC T & D
Nesma & Partners
Nour Energy

Othaim Market

Plus Pro
PMDC
Private Affairs of Custodian of Holy Mosques

Rabigh Refining and Petrochemical
Royal Dyar Hotel
RTCC

SABIC
Safari Co.
Saleh Ali Hasan Hammouda
SALEC
SALMOC
SATORP
Saudi Aramco
Saudi Archirodon
Saudi Binladin Group
Saudi Electricity Company
Saudi Oger
Saudi Services for Electro-Mechanical Works
SSEM
Saudi Services Company
Saudi Technical Ltd.
SBG
Sete Energy
SICE
Siemens
SITE Technology
SSEM
STL Co.
SWCC

Tacoma
Techno
Transad

Unistar

YMCO
Youssef Marroun Construction (YMES)





Our partners

Name	Country	Product
Arecont Vision	USA	CCTV
Automatic System	Belgium	Physical security
Axis	Sweden	CCTV
Bosh	USA	PAS
CAME	Italy	Gate entry components: road blockers, barriers, bollards
Chemguard/Ansul	USA	Foam systems for fire protection
Cohu	USA	CCTV
Daetwyler	Switzerland	Cables
Duran Audio	Holland	Sound systems
EST Edwards	Canada	Fire alarm
Fibernetix	Denmark	CCTV
Fracarro	Italy	TVS
G+M	Switzerland	PAS and MCS
GE	USA	CCTV and ACS
Genetec	Canada	Security systems
Giacomini	Italy	Fire protection systems
Global System Technology	UAE	Fire protection systems
Guardian	Saudi Arabia	Road blockers and sliding gates
Guetebruck	Germany	CTCTV alarm management
HD Fire Protect Pvt.	India	Fire protection systems
Johnson Controls	USA	BMS
Kennedy/Muller	USA	Gate valves
Kidde Fire Systems	USA	FM-200, CO2, Novec 1230 fire protection systems, kitchen hood systems
Legrand	France	Enclosures
Lenel	USA	CCTV and ACS
Leoni	Switzerland	Cables
Le-vi	Germany	Security, surveillance, access control, T&A, audio & video, and lighting systems
Marioff	Finland	Hi-Fog water mist systems
Maxxes	UK	Security management systems
Milestone	USA	CCTV
Mircom	Canada	Fire alarm/gas alarm systems
Morex	USA	Fire protection systems
Nanodems	Turkey	Integrated security mgmt. software
Nataska	USA	Road blockers
National Foam	USA	Foam systems for fire protection
Neumann	Germany	Intercom systems
NLSS	USA	CCTV
Notifier (Honeywell)	USA	Fire alarm/gas alarm systems
ONSSI	USA	CCTV

Name	Country	Product
Pelco	USA	CCTV
QCS	USA	Security systems
Rankus-Heinz	USA	Sound systems
Remsdaq	UK	FO equipment
Retrotec	Canada	Room integrity systems
Reillo	Italy	UPS
Siemens	Germany, Switzerland	BMS
Spectrex / Detronics	USA	Flame detectors
Stratech	Singapore	Security Systems
Tyco / Ansul	USA	Fire protection systems
UTC Fire & Security	USA / Holland	Fire alarm systems
Vicon	USA	CCTV
Viking	USA	Fire protection systems
William Eagle	UK	Fire protection systems



Our commitment to you

At SAS Systems Engineering, our overarching goal is the complete satisfaction of our clients with the products, systems, and services we specialize in.

To every single project we are entrusted with, we devote the sum total of our capabilities — including our decades of experience, the outstanding skills and knowledge of our engineers, managers, and sales executives, and our corporate traditions of absolute courtesy and professionalism.

We treat the signing of a contract as the beginning of a long-term business relationship. And we view the completion of a project as yet another opportunity to gain your trust, as we stand ready to perform any required warranty backup and maintenance.

Ultimately our commitment to you is a commitment to engineering excellence, and a level of service in which we can genuinely take pride.



SAS Employee of the Year

Hassan Allouch, Head of Engineering at our Security Department, has been voted the 2012 SAS Employee of the Year.

For the past several years, Mr. Allouch has distinguished himself as a highly gifted engineer, an exemplary team leader, and an outstanding professional.



Known for his dedication beyond the call of duty, Mr. Allouch regularly complements his work with research and development, always seeking out new sources and technologies for integration into each project entrusted to his department.

As importantly, he plays a key role in ensuring seamless collaboration and synergy, not only among teams within his department but also with consultants, clients, and suppliers.

We congratulate Mr. Allouch on his latest achievement.



Year in Review
Editor: **Sona Hamalian**
Designer: **Ishkhan Jinbashian**



SALEM AGENCIES AND SERVICES

شركة سالم للتوكيلات والخدمات

JEDDAH

P.O. BOX 9270
JEDDAH 21413
KINGDOM OF SAUDI ARABIA
TEL: 966-2-665-4616
FAX: 966-2-660-7864
EMAIL: KHALIDB@SAS-SYSENG.COM

RIYADH

P.O. BOX 92831
RIYADH 11663
KINGDOM OF SAUDI ARABIA
TEL: 966-1-4640927
FAX: 966-1-4640759
EMAIL: SASRYD@SAS-SE.COM

AL KHOBAR

P.O. BOX 1674
AL KHOBAR 31952
KINGDOM OF SAUDI ARABIA
TEL: 966-3-8676641 / 6642
FAX: 966-3-8676858
EMAIL: SAS@SASKHOBAR.COM

JUBAIL

OFFICE #10, STAR TOWERS
KING FAISAL STREET WEST
JUBAIL TOWN 31951
KINGDOM OF SAUDI ARABIA
TEL/FAX: 966-3-3627157
EMAIL: SAS@SASJUBAIL.COM

MADINAH

P.O. BOX 1462
SULTANAH STREET AS SALAM CENTER
MADINAH 41431
KINGDOM OF SAUDI ARABIA
TEL: 966-4-8151659
FAX: 966-4-8151525
EMAIL: SAS@SASMAD.COM