

Thales at IDEX 2005

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Thales and the United Arab Emirates	page	1
Thales in the Middle East	page	4
Thales at IDEX 2005	page	5
Thales Corporate Profile	page	15

Thales and the United Arab Emirates

DRIVEN BY A COOPERATION AND PARTNERSHIP SPIRIT

Thales has developed excellent relations with the countries of the Middle East and the Gulf region, and particularly with the United Arab Emirates, for many years.

- The United Arab Emirates is one of Thales' most valued and loyal customers in the region, and the company is firmly committed to strengthening cooperation and friendship.
- Thales has been active in the United Arab Emirates for more than thirty years, and its permanent delegation in Abu Dhabi has constantly developed to better serve its customers, and promote all Thales activities from communications and airborne systems to air defence, optonics including commercial executives and technical assistance. Thales Middle East regional office is located in Dubai.

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THALES

- One of Thales' primary goals is to strengthen its ties with the region even further by carefully analysing the remarkable economic development that is taking place here with a view to addressing the needs and ambitions of the United Arab Emirates.

Thales is a key partner of the UAE Armed Forces. Thales' aim is not only to provide systems and equipment that will help customers to enhance their security and defend themselves, but also to reinforce, through technology and industrial development, and training of technical personnel and engineers from the United Arab Emirates, the foundations of a progressive cooperation.

In 1999, the Center of Excellence for Applied Research and Training (CERT) of the Higher Colleges of Technology signed a significant agreement with the UAE Armed Forces and Thales.

Under this Memorandum, CERT and Thales University set up a joint-venture training company, **CERT Thales Institute** in Abu Dhabi.

CERT Thales Institute (CTI) provides courses and programs in : Radiocommunications, Project and Maintenance Management, Multimedia Development, Software Development, Logistics, Aeronautical Maintenance and Electronic Warfare. Drawing heavily on Thales' know how in developing state-of-the-art technologies and engineering practices, **CTI** is able to provide educational and training programs to nationals that reflect the latest technical and engineering developments. **CTI**, through its relationship with Thales University and its partners, is able to provide paths to advanced degrees, including masters degrees.

In July 2002, Thales and Gulf aircraft Maintenance Co. (Gamco) announced the creation of **Gamco Thales Systems**, a joint venture company based in Abu Dhabi, with the ability to locally manage integration of high tech electronic systems for defence and aeronautics. Gamco Thales System, in cooperation with CTI, is also in a position to provide maintenance and after-sales support of systems, and training of systems users.

Gamco Thales Systems will provide for technical and industrial development (assembly and integration, set up and testing of electronic equipment, design, upgrade and/or development of hardware and software, installation and testing), integrated logistic support (studies and analysis, technical manuals and documentation, training), maintenance and repair as well as operational training activities (maintenance of simulators for civilian and military helicopter pilot training...).

With this initiative, Thales strengthens and reaffirms its commitment for a long term partnership with the country by contributing to the development of the high tech capacities of the UAE industry.

Thales is contributing to the largest aeronautical and defence programmes that the United Arab Emirates has launched over the last few years.

For example, the company supplied onboard radars, optronics, electronic warfare and communication systems for the Mirage 2000-9, combat aircraft in service with the United Arab Emirates.

Thales is also a major partner in the programme to upgrade these Mirage 2000s and the supply of Mirage 2000-9s that the United Arab Emirates recently purchased.



Since the mid-1970's, the United Arab Emirates has deployed Thales' **Crotale short-range air defense systems**.

One of Thales' recent successes in the Emirates was the contract to supply various versions of the **PR4G fourth-generation VHF tactical radio system** for Leclerc tanks and other armoured vehicles and platforms.

Thales has been recently selected by NATO and the DoD to design the future generation of VHF/HF radios, so called "Software Radio".

In 1998, Thales signed a major contract with the United Arab Emirates Armed Forces to supply **GATR (Ground Air Transmit Receive) military communications network**.

At the end of 2000, Thales has been selected to equip the F16 of the UAE Air Force with on-board communication systems, part of the **GATR** network.

Thales is also working in a number of civil fields in the United Arab Emirates.

Contracts include :

Air traffic system for Abu Dhabi international airport,
ASDE radar (Airport Surface Detection Equipment) for monitoring ground movements at Dubai airport,
Navigation and landing aids for various civil airports, (Dubai, Sharjah)
TV transmitters and digital TV studios for Abu Dhabi, Dubai and Sharjah TV.

NEWS

3

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Thales in the Middle East: A reliable partner

More than 30 years of presence and partnership in the Middle East and Gulf Region

Thales has developed outstanding relations with the countries of the Middle East and the Gulf region and is a reliable partner for local companies. Thales' Middle East regional office is located in Dubai. Thales' aim is not only to provide systems and equipment that will help customers to enhance their security and defend themselves, but also to reinforce, through technology and industrial development, and training of technical personnel and engineers from the Middle East and Gulf region, the foundations of a progressive cooperation.

Thales is a key partner of Middle Eastern companies. Thales is able to study in close cooperation their projects and makes its customers benefit from its complete multi-domestic network (Australia, South Africa, UK, The Netherlands...).

Thales has been a long-standing and trusted partner of the Qatari armed forces. The Group supplied the electronic equipment of the Qatari Navy's corvettes and Mirage 2000. More recently, civil projects have become important, like air traffic equipment for the Doha new international airport, secure identification systems and site security.

Thales' commercial successes in the region include the major Shahine and Crotale contracts in Saudi Arabia, as well as air traffic control, professional broadcasting and simulation systems for the national carrier Saudia. In 2003, Thales and DCN presented the frigate H.M.S. Makkah, the second vessel under the Sawari II contract, to its Saudi Arabian customers.

Thales has also built on a long-standing presence in the United Arab Emirates, dating back more than 30 years. Addressing both defence and civil markets, Thales has supplied tactical radios (PR4G), ground-to-air communication systems (GATR), air defence systems (Crotale), on-board electronic systems for the Mirage 2000-9, combat systems of the S-Frigates, as well as civilian ATC systems for the en-route control centre and thousands of electronic payment terminals to UAE banks.

In 2002, Thales and Gulf Aircraft Maintenance Co (Gamco) announced the creation of Gamco Thales Systems, a joint venture company based in the United Arab Emirates (UAE) with the ability to locally manage the integration of high tech electronic systems for defence and aeronautics as well as providing maintenance and after-sales support of systems and training of system users. Thales won contracts throughout the region for Air Traffic Control (Egypt, Iran), Communications (Egypt, Oman, Qatar, UAE), Radars and Air Defence systems (Egypt, Kuwait, UAE, Yemen), and Naval systems (Kuwait, Oman, Qatar). Thales also supplied radio and TV broadcasting equipment to a large number of countries, particularly Saudi Arabia and Oman.

Thales at IDEX 2005

Battlespace transformation centre

Transformation of the armed forces involves the redefinition of operational requirements. To meet this challenge, Thales has set up a centre of excellence for network-centric systems. Drawing on know-how and experience across the Thales Group, this centre provides unparalleled expertise in operational analysis, system architectures and new operational concepts. It is key to the Group's response to the growing demand for network-centric capabilities and C4ISR solutions (Command, Control, Communications, Computing, Intelligence, Surveillance, Reconnaissance) with enhanced system interoperability.

Close cooperation between system designers, operational users and industry is needed to ensure a smooth transition from legacy systems to future network-centric systems. The different partners are drawing on a broad range of skills and services to evaluate the incremental introduction of network-enabled capabilities (NEC) in an approach based on joint experimentation. Thales offers dedicated "battlelabs" designed to simulate new technical and operational scenarios. These enable operational users to assess the technical capabilities of the solutions proposed and to develop new concepts of operations (**CONOPS**) to establish links between legacy and future systems.

Integration centres combine system demonstration, testing and integration capabilities, making it possible to merge numerous technologies and study future system-of-system architectures. Thales implements these centres in close partnership with its customers to provide simulated operational environments. Operational users and industry partners also benefit from new services solutions covering architecture design, systems engineering and operational analysis to help them make the best possible use of new technologies and collaboration procedures. Thales works with its customers to develop solutions that meet their operational needs as closely as possible (allied interoperability, dual technologies, joint operations), enabling collaborative planning and decentralised execution to produce synchronised operational effects.

In turn, command and combat simulators make it possible to integrate new technologies and develop new **CONOPS** in an incremental approach. The validity of these concepts is demonstrated in the field through operational analysis of combat operations.

Thales proposes an innovative approach and works in close partnership with its customers to support them in the transformation of their operational needs.

Towards Cooperative Fighting systems

In mid 2004, French defence minister gave the go-ahead for the French Army's **future cooperative fighting system** Bulle Opérationnelle Aéroterrestre (**BOA**) by announcing the development of a **BOA demonstrator**. Thales leads the consortium which includes GIAT industries and Sagem in partnership with MBDA and EADS.

BOA introduces innovative concepts of network-centric war fighting that will be critical to the success of future land force missions. It ties together all the assets in the air-land theatre - including armoured vehicles, radars, UAVs and infantry soldiers, indirect fire support and helicopters - to speed up the operational tempo, improve protection of units and enable commanders to maintain the initiative in all circumstances.

The system satisfies a capability requirement for rapid out-of-area deployment of a light force equipped for a broad range of missions particularly in urban areas.

A dedicated technical and operational laboratory or "battlelab" will be set up, which will provide a collaborative workspace where operational users and industry partners can work together to manage the system design.

Key references : **BOA** simulator , known as **SIM EC3**, to baseline potential architectures for the **BOA**. It will be delivered to the French Defence Procurement Agency in early 2005. It will be incorporated into the **BOA** battlelab.

Naval Systems

Thales is a leading Prime Contractor in naval markets throughout the world, assuming overall responsibility as program prime contractor for all classes of naval vessels. Thales has a total combat systems capability for design, build and integration of the most advanced combat systems. Thales also provides equipment using the latest developments in technology. Thales expertise is also demonstrated in modernisation, upgrading and overhaul operations. Thales supplied more than 400 ships to 50 navies.

At **IDEX 2005**, Thales is particularly demonstrating its surface ship combat & surveillance capabilities and its maritime surveillance capacities.

Combat Management System

Tacticos

Key capabilities of the **Tacticos** CMS include surveillance and picture compilation using the on-board sensors and tactical data links. Anti-air warfare, Anti-submarine warfare and Electronic Warfare are supported by threat evaluation, manual and automatic sensor and weapon assignment and kill assessment. Further support services include decision making support, planning tools, built-in training and maintenance support. With over 80 naval ships equipped with **Tacticos**, it is one of the most successful combat management systems world-wide.

Surface ship combat & surveillance systems

Naval radar systems

Being the most innovative developer of radar systems in the technology's long history, Thales is proud to offer a comprehensive range of surveillance and fire control radars.

Herakles

The **Herakles** multifunction radar is designed to be the main radar on high value vessels. It may be used for extended self-defence and medium to long range surveillance purposes. The system meets operational requirements of air-defence ships while optimising acquisition and life cycle costs.

MRR-3D NG

To meet the operational requirements for surveillance and the deployment of self-defence systems, Thales has designed and developed the medium-range 3D air and surface surveillance radar **MRR-3D NG**. The effectiveness of **MRR-3D NG** in a combat system is demonstrated by its capacity to contribute to the establishment of the air and surface situations and to generate highly accurate data on threatening air targets, thus enabling fast, reliable deployment of the self-defence weapon system.

Smart-S MK2

This radar, optimized to provide medium-to-long range situational awareness and target designation in complex environments such as the littorals, is an excellent candidate as main surveillance radar for the future Multi Role Support Ship for the RMN. **Smart-S Mk2** has recently been sold to the Danish Navy after a heavy competitive selection process. The system has been designed for minimum maintenance and easy installation. Maintenance-free mission capability is ensured by the use of solid-state transmitter technology and parallel processes. This and more make **Smart-S Mk2** the most modern, flexible and reliable 3D-radar system of choice for littoral operations.

Scout MK2

Frigates nowadays need a solid state, second generation, Low Probability of Intercept (LPI) surveillance and tactical navigation radar. **Scout Mk2** uses FMCW transmissions with a maximum peak power of only 1Watt and is therefore extremely effective during covert operations.

Fire Control Radar

Lirod Mk2

Thanks to its stealthy shape and low weight, **Lirod Mk2** radar and optronic director highly suitable for small platforms. It has been designed for applications such as a primary gun and missile control system onboard of smaller ships, against both surface and air targets, and as a secondary systems in larger configurations.

Coastal Surveillance Radar

SuricateMk2

Suricate Mk2 is an autonomous medium to long- range radar station designed for maritime surveillance and optimised for long- range detection and accurate localisation of small surface or low- altitude air targets in difficult sea conditions, with automatic initiation and tracking of surface targets. These features make the radar particularly efficient in guiding aircraft or helicopters during search and rescue (SAR) or police operations.

Optronic naval systems

Mirador

Mirador is a compact, electro-optical, surveillance, tracking and fire control system that performs rapid and accurate target acquisition and tracking. Its stealthy design incorporates the latest technological features such as carbon fibre shell structure and a direct-drive servo system. The system is equipped with a comprehensive sensor suite and combines optical surveillance and tracking capabilities.

Teoss 350

The **Teoss 350** is a night and day optronic surveillance instrument designed for continuous operation during long periods of time under severe maritime conditions. The system is reliable and user-friendly and developed to minimize operational costs.

Naval Services

Thales' expertise is also demonstrated in services. This naval support capability is tailored to meet individual needs and budgets, and to make maximum use of existing infrastructure and local skills. This extends from basic spares provisioning, in-service repairs and technical support to comprehensive maintainer and operator training, long-term Contractor Logistic Support (CLS) arrangements and turnkey dockyard and facilities management. Modernization, upgrading and overhaul operations are other support activities that Thales has experience in.

Air Mission Systems

At IDEX 2005, Thales will be presenting its expertise in air mission systems. The confidence of the United Arab Emirates and the other Middle East and Gulf region countries such as Saudi Arabia, Kuwait, Bahrain and Egypt in Thales' military and civil air navigation systems has lasted for more than thirty years. Highlights in 2004 were a contract awarded by The Presidency of Civil Aviation (PCA) of Saudi Arabia for the supply of seventeen Instrument Landing Systems (ILS) with Distance Measuring Equipment (DME) at Jeddah King Abdulaziz, Riyadh King Khaled International and other Saudi Arabian airports. The Egyptian National Air Navigation Services Company (NANSC) has awarded Thales a contract to supply en-route navigation equipment which will be installed at Cairo, New Valley El-Kharga and Assuit International Airports as well as at a training site.

Air Navigation Systems

Thales is the world leader in Air Traffic Management Systems and provides the full range of Communication, Navigation and Surveillance (CNS/ ATM) solutions.

The **Tactical Air Navigation system (TACAN)** is used for en-route and approach navigation for military aircraft. The system can be collocated with Very High Omnidirectional Radio Range (VOR) and Doppler-VOR (DVOR) systems for combined civil and military en-route and approach navigation. Thales' VOR AN-431, DVOR AN-432 and **TACAN AN-453** beacons can be easily collocated and housed in one single shelter. A battery/generator stand-by system enables autonomous operation. Remote control and status information is possible via telephone line and/or radio link.

The solar-powered VORTAC system allows totally autonomous operation. Thales also offers the **High Power TACAN system AN-453** in two special versions, for **naval and mobile applications**. The naval **TACAN** model AN-453/N, complete with the lightweight **TACAN** antenna AN-454/N suits the more stringent naval requirements for shock, vibration and EMC and is provided with specific interfaces for gyrocompass slaving and for connection with the

ship control bus. The mobile **TACAN** system's main advantages are the mobile shelter for quick and easy transport and installation, the lightweight antenna AN-545 installed on an extendable telescope mast for full coverage and approach function together with the incorporated battery charger and optional diesel generator for fully autonomous operation. For the air side Thales offers the **TACAN airborne interrogator** model AN-490. This is a modern solid state and microprocessor controlled generation system which due to the use of advanced technologies and components including multilayer printed circuit boards, SMC or gate arrays, features very compact size (1/4 ATR), low weight (5 kg), limited power consumption and high peak power output (750 Wp). It is presently operational on several aircraft and helicopters such as TORNADO, EFA or EH 90.

The Thales **Microwave Landing System (MLS)** of the type 480 is especially suitable for military usage. The system offers flexibility in approach procedures enabling curved or computed approaches and very fast availability due to short in-service times. Therefore, MLS 480 is predestined for short-term out-of-area operations. As a member of the NATO, the Italian Airforce has introduced MLS along with the Tornado combat aircraft which is equipped with the Multi Mode Receiver (MMR) with MLS functionality. MLS is operational at four Italian Airforce NATO airbases. In addition, the Italian Airforce uses military mobile MLS for flexible military operation.

Thales' Cat. III **Dual Instrument Landing System (ILS)** is an indispensable aid to approach and landing under poor visibility conditions. The Thales ILS of the type 420 is the most advanced ILS in the market today and surpasses the requirements of the world's aviation authorities for Cat. III signals and precision landings. In addition, Thales' ILS 420 is the first ILS worldwide to fulfil and surpass the requirements of the DO-178B/ED-12 software safety certification issued by EUROCAE/RTCA providing additional assurance to service providers.

At IDEX 2005, there is a presentation on the Thales stand of TACAN's capabilities together with a survey on the Dual Landing Systems Instrument Landing System (ILS) and Microwave Landing Systems (MLS).

Air Defence Systems

Thales provides global solutions offering a complete response to the operational needs of Governments in extended air defence and security. Thales delivers high-tech electronic equipment and systems through Ground Based Air Defence radars, Air Command and Control systems, Missile Defence and service solutions, achieving the appropriate level of integration and through-life support. As a world leader in systems integration we are committed to developing and setting up systems and services tailored to our customers' needs.

At IDEX 2005, ThalesRaytheonSystems is presenting its range of extended air defence products and systems, notably the Master radar family, a comprehensive and adaptable range of radars designed for identification of all types of threat, Air Command and Control solutions from recognized air picture establishment to air battle command.

Digitized Battlespace

Thales offers long-term soldier system solutions for all types of missions, from peace keeping to high intensity combat, for all environments from open to urban areas and for all weather conditions.

Thales is recognised as the world's leading soldier systems company and is already contributing to major soldier modernisation programmes for NATO countries (United Kingdom, Germany, Netherlands and Norway) and is working on major projects all over the world.

Such an international experience, allows a wide scope of offering ranging from consultative selling (PCMO- Prime Contract Management Office with the customer) to a system solution compatible with legacy equipment.

Key references : UK's **FIST** programme – Thales is prime of the assessment phase. To conduct this phase a PCMO (Prime Contract Management Office) has been set up with an MoD/Thales team. The team is studying and evaluating the different configurations and their impact on operational capabilities, in addition to the associated costs & risks. This is an innovative & attractive partnership with a growing interest among numerous customers. **IdZ**, the system for German forces- Thales is involved in the architecture phase and the communication sub-system; already fielded more than 2200 soldier systems have been ordered end of 2004. **D2S2**, the Dutch Digitised Soldier System for which Thales was awarded a contract to develop and deliver operational prototype systems related to the communication system. These prototypes will be tested mid 2005. **Normans**, for the Norwegian forces- Thales has equipped soldiers for trials with the C4I sub-system.

At IDEX 2005, Thales is also presenting its Battlefield Identification Systems (BIS) product line, designed to provide Combat ID solutions for all types of platforms and to interface smoothly with combat management systems. BIS interoperability with US systems was demonstrated in 2004 during an operational exercise held in Camp Lejeune (North Carolina, USA).

At IDEX 2005, Thales is showcasing its Sophie night vision camera. Sophie cameras operate in the thermal infrared portion of the spectrum, making them undetectable and enabling day and night observation of camouflaged targets in all weather conditions. **Sophie** is perfectly suited to the needs of infantry soldiers and enables tank recognition at ranges of over 3 km. The band used makes **Sophie** immune to fire, smoke, fog and reflected sunlight. These characteristics make it ideal for battlefield conditions and peacekeeping and security missions.

Additional new products of the **Sophie** family also include a multi-function version, which is already available. As it incorporates a GPS, an eye-safe laser rangefinder, direction finder and laser pointer, the multi-function version is a complete system for target acquisition, location and designation for the Armies, Air Forces, Navies, and special forces. To date, Thales has sold over 6,000 **Sophie** infrared cameras in 45 countries for surveillance, combat and peacekeeping missions.

At IDEX 2005, Thales is presenting LION ADVANCE, its latest uncooled hand held thermal imager. With some 1,500 units sold worldwide, the **Lion** thermal imager is field-proven and is a market leader in its segment. It is widely used in surveillance, peacekeeping, security and combat missions. Non-detectable thanks to its thermal infrared operation, it can be used to observe targets, both day and night, under all weather conditions. Its lightweight design and ease of operation makes it ideal for use by infantry soldiers, border guards, marines and special forces. Operating in the 812 micron spectral band, its operation is unaffected by obscurants such as fog, smoke and fire, making it suitable for battlefield environments and law enforcement missions.

At IDEX 05, Thales is presenting its Driver's Vision Enhancer 2 – Digital. DVE2-D is the first fully digital DVE thermal imager in the industry. It provides state-of-the-art solutions to night vision for land vehicles and is presented fitted to the Leclerc Wing Tank and BMP-3 Vehicles. **DVE2-D** provides drivers with the capability of continuing operations during conditions of daylight, darkness (without the use of active light sources), adverse weather, and dirty battlefield conditions, and aids the driver in negotiating obstacles such as ditches, craters, railways, and water. **DVE2-D's** predecessor is currently integrated on Future Combat Liaison Vehicles (FCLV); over 400 units will be delivered.

At IDEX 05, Thales is presenting LF28, which is a lightweight and compact man portable Laser Rangefinder Designator (LRF/D); one of a long line of successful, rugged and highly specified military lasers, designed and manufactured by Thales in the UK. This highly successful product has now been sold to a number of overseas armies including Germany and the Netherlands.

TDA

At IDEX 2005, **TDA**, an equally owned subsidiary of EADS and Thales, is presenting the 120 mm Recoiled Rifled Mounted Mortar (120 2R2M). Derived from the 120 mm rifled mortar, the 120 2R 2M vehicle-mounted mortar marks the arrival of a new generation of mortars and meets all the requirements of modern ground-to-ground fire support missions. It is equipped with automatic firing aids, and offers high mobility, short deployment and withdrawal times, the same firing precision as an artillery system, and enhanced crew protection. In 2004, **TDA** has won an important contract on the US market. The consortium led by General Dynamics Ordnance and Tactical Systems (GD-OTS) has been selected by the US Marine Corps to develop and produce the future Expeditionary Fire Support System (EFSS). **TDA** will supply the EFSS weapon system, comprising its 120 mm rifled towed mortar, the 120 RT, already in service with the armed forces of twenty-four countries, including four NATO members, and the associated family of ammunition. The Marine Corps' selection of the **TDA** mortar confirms the competitive capability of **TDA's** products.

Land Systems

With more than 30 years experience serving over 100 customers worldwide, Thales offers all the key capabilities required for land operations. In land systems, Thales generates more than 2.3 billion euros in revenues and is N°1 in Europe.

Thales brings together all the key Land competencies & expertise needed to provide Forces with mission capabilities tailored to their operational requirements; capabilities rather than assets covering missions ranging from:

- Reconnaissance, Surveillance, Targeting Acquisition (RSTA),
- Direct & Indirect combat ,
- Command & Control,
- Local Area Control.

Working in close cooperation with its customers, Thales develops solutions that are modular, network-enabled and interoperable. These solutions contribute to the operational superiority required for mission success whatever the type of operation (peace keeping, high-intensity conflict, coalition warfare, etc.). Solutions can be integrated onto various platforms, manned or unmanned; vehicles, soldiers, UAVs / UGVs. Committed to teamwork with its customers & industry partners, Thales can propose a case by case approach, taking into account the legacy, and providing the best trade-off choices between required performance, reliability, services and cost. Thales' experience & approach ranges from mission package provider & integrator, platform prime to PCMO (Prime Contract Management Office) and LSI (Lead System Integrator) capabilities to monitor the definition & acquisition of a full combat mission capability. With its multi-domestic network of companies and partnerships, Thales offers the strong local presence enabling it to work in **closer partnership** with its customers. This local presence is part of the Thales value proposition and underpins its ability to support customers throughout the entire life process with rapid response times.

Reconnaissance Surveillance Targeting Acquisition

Gathering data just in time for Common Operational Picture, early warning, decision support and action is key to building the information superiority required for mission success.

Taking into account your legacy, Thales proposes a case by case approach from mission packages to full mission capabilities, from a stand-alone platform, multi-platform **RSTA** system to full cooperative capabilities taking into account a global ISTAR integration.

In order to contribute to the incremental build of the information superiority required for mission success. Thales may offer:

- different kinds of key mission packages integrating sensors such as optronics, radars, electronic warfare, NRBC, acoustic, seismic, identification etc.,
- all the data processing & communication resources required to combine multi-sensor, multi-platform capabilities,
- integration platform capabilities,
- optimisation of the global mission by networking the different required components (sensors, platforms, etc.),
- Prime Contract Management Office (PCMO) and Lead System Integrator (LSI) capabilities to monitor the definition & acquisition of a full **RSTA** mission capabilities.

Some key RSTA references,

The major references in this field include **Legar**, a battlefield surveillance radar system fitted on light Mercedes vehicles with a deployable radar (BOR-A) and integrated radios & comserver. **Hors**, for the Greek Army, a tactical recce system equipped with radar or optronics sets fitted on Hummer vehicles and easily interchangeable. **Mors**, for the UAE Army artillery, an artillery forward observation & battlefield surveillance system, with multi-sensor capabilities (radar & optronics) mounted on a mast and fitted on M 113 vehicles.

Combat systems

Defeating targets earlier, at greater distances, in larges areas, with direct or indirect fire while affording better protection for friendly forces is key to providing rapid & accurate effects adapted to different operational contexts just in time.

Taking into account your legacy, Thales proposes a case by case approach from mission packages to full mission capability, from a stand-alone platform, multi-platform combat system to full cooperative capabilities.

Thales proposes integrated combat systems covering direct combat, dismounted combat (soldier), and indirect combat systems.

Thales may offer different kinds of key mission packages such as:

- Fire Control Systems (FCS) which include commander & gunner sights, ballistic computers, sensors & BMS (Battlefield Management System),
- Soldier Information Control System (SICS), a bodynet system, adaptable to customer needs & to legacy systems, which offers a set of services (Situation Awareness, positioning, etc.) for soldiers
- turrets (manned and unmanned),
- armaments (towed & mounted mortars, active protection systems, etc)
- jammers,
- all the data processing & communication resources required to combine platform, multi-platform capabilities,
- integration platform capabilities,
- optimisation of the global mission by networking the different required components (platforms, etc.),
- Prime Contract Management Office (PCMO) and Lead System Integrator (LSI) capabilities to monitor the definition & acquisition of a full combat mission capability.

Key combat systems references:

The major references include the Battle Group Thermal Imaging system (**BGTI**) for the British Army, which includes gunners & commander's sights, Inertial Navigation System & Driver's Display, fitted on Warrior & Scimitar vehicles. Six hundred systems will be installed. **Swarm** a remote weapon systems, selected by the British Army MoD and which will enter service in 2006. SWARM can be fitted onto wheeled or tracked vehicles. **EFSS**, for the US Marine Corps, an Expeditionary Fire Support System comprising a prime mover vehicle, 120 mm mortar, ammunition supply vehicle and trailer, fire control support and a complete family of ammunition. Thales will provide the EFSS weapon system, the **120 RT**, already in service with the armed forces of twenty-four countries, and the associated family of ammunition. **Bushmaster**, an infantry transport vehicle which offers high level of protection & mobility; this vehicle produced by Thales through its JV ADI has been selected by the Australian forces. The **Bushmaster vehicule** can be seen on the ADI stand.

C3I/C4I solution

At IDEX 2005, Thales is showcasing **Atlas**, a fully interoperable C4I solution for all artillery missions and resources. It performs real-time firing sequence management and provides the applications needed to conduct manoeuvre and command artillery regiments in the field, as well as collecting intelligence data.

Local Area Control systems

Saving people and assets round the clock, anywhere in the world, in open or urban environments is becoming more and more crucial for armed forces. By using local area control systems, we ensure that your forces detect, identify, classify alert & neutralize various threats (personnel, vehicles).

We offer tailored solutions in close partnership with customers and provide the best trade-off choices between various required missions and budgets.

Our modular & adapted solutions range from:

- Fixed intrusion detection systems based on COTS sensors,
- Mobile intrusion detection systems based on MOTS & COTS sensors suite,
- Wide area protection systems including lethal & non lethal effectors with adaptable communication network and Command & Control means.

Major key references

Thales' solutions have already been sold to Australia, Germany, Italy, UK, USA. They have been in operation in Kosovo, Djibouti, etc.

Vehicle Systems

The land business is changing; vehicle electronic packages are becoming more and more important, the networking (NEC) of platforms (vehicles, soldiers) is becoming key to mission optimisation and platforms are becoming more and more complex systems. **Thales will be presenting its vehicule systems offer at Idex 2005.**

Thales offers vehicles solutions for all kind of missions – Reconnaissance, Surveillance, Targeting Acquisition (**RSTA**), Indirect & direct combat, Command & control- from mission packages, vehicle integrator to a full mission capability.

The offering covers all types of vehicles, wheeled or tracked, retrofit or new. Thales' experience in vehicles ranges from the design, integration, manufacturing through to the delivery of fully equipped platforms. Over 25,000 platforms of 150 different types have been delivered to date by Thales through its industrial integration-on-vehicles capabilities across the world (France, UK, Netherlands, Germany, Spain, Australia, etc.).

The major references in this field include the Bushmaster, infantry transport vehicles in Australia, combat systems (2R2M, BGTI , etc.), RSTA systems (HORS, MORS, LEGAR, SAEC, NRBC, etc. ...) and dedicated platforms for Command & Control and its associated communications (RITA Valo, RAP tank, Atlas, Carthage, etc.).

Border and Critical Infrastructure Security

During IDEX 2005, Thales is **particularly demonstrating its maritime surveillance capacities** with a wide range of systems covering both sensitive area protection and coastal surveillance activities. Thales provides integrated solutions on a turnkey basis, for maritime surveillance systems such as :

Modular Area Protection Systems (MAPS) -: Thales has developed a multi-level, modular protection system consisting of four surveillance layers interlinked to a central command and control post. Based on a flexible, low-cost open architecture, **MAPS** typically comprises both above-water and underwater sensors and provides protective surveillance against threats such as divers, swimmer delivery vehicles and submarines.

Maritime Traffic Surveillance systems.

Coastal surveillance systems based on multi-sensors integration with detection and tracking capabilities contribute to fight against illegal immigration, smuggling and illicit product traffic, to control fisheries, to perform on Search & Rescue and antipollution missions.

Thales Securing your future

Thales is a global electronics group serving professional markets in three main areas: **defence**, **aerospace** and **security**. Its activities include prime contracting for large-scale programmes, complex system architecture, and the supply of equipment and systems and related support services. With 2003 revenues of €10.6 billion and 61,500 staff in 50 countries, Thales is recognised as a world leader in high technology. The Group's engineers draw on a **solid foundation of generic and dual civil/military technologies** centred on real-time management and distribution of information.

The other distinctive characteristic of Thales' businesses is their **international dimension** in terms of both the markets they serve and their countries of operation. With industrial operations in nearly 30 countries, Thales is pursuing a unique "multi-domestic" strategy, which is of particular relevance in defence markets. This strategy is designed to provide the Group with the local presence it needs to serve both civil and military customers effectively, anticipate demand and propose the right technical solutions at the right price to meet their requirements.