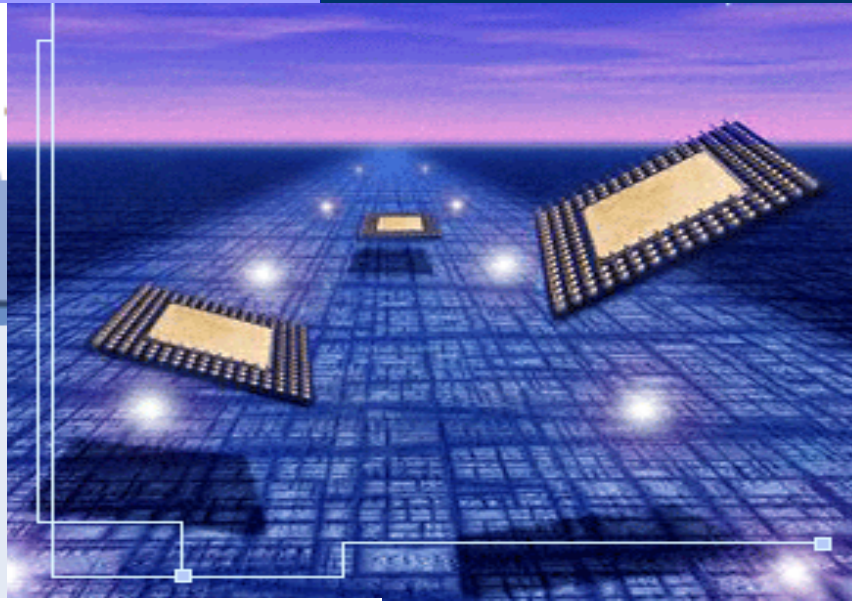




TELNET GROUP PRESENTATION



TELNET GROUP

Over 16 years
of operations



2009 Group
revenues of
over \$17,5
million USD



Over 450
employees
with more
than 400
engineers



Offices in
Tunisia and
France



- Telnet Group reputed for its **Stability, Ethics, Quality and Shareholder value**
- **Group Companies: Telnet Inc, Telnet Technologies, Telnet Consulting, PLM Systems, DataBox, DataBox France & Altran Telnet Corporation (ATC)**
- **Partnerships with international brands such as SAFRAN, SAGEMCOM, ALTRAN, VALEO, THOMSON, JCAE, TEKELEC, PATTON ELECTRONICS, DASSAULT SYSTEMES**

TELNET GROUP



Les Berges du Lac site, Tunis
Start Date: Q3 – 2009
 Current Seating Capacity: 150
 Maximum Seating Capacity: 250



Ennour site, Tunis
Start Date: 2002
 Current Seating Capacity: 100
 Maximum Seating Capacity: 140



El Ghazala site, Tunis
Start Date: 2005
 Current Seating Capacity: 120
 Maximum Seating Capacity: 160

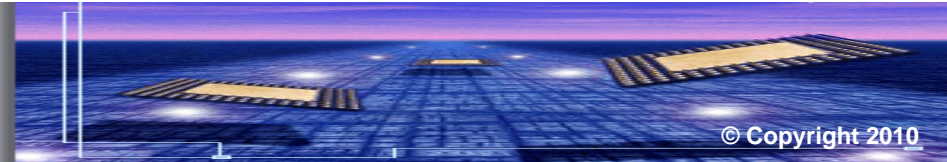


Sfax site
Start Date: Q2 - 2007
 Current Seating Capacity: 60
 Maximum Seating Capacity: 120

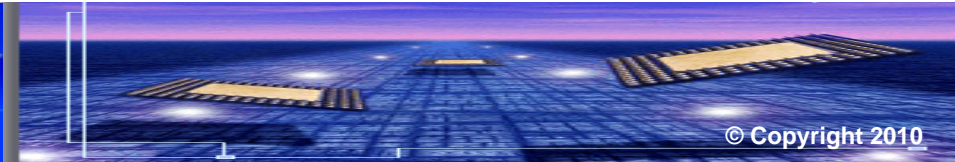
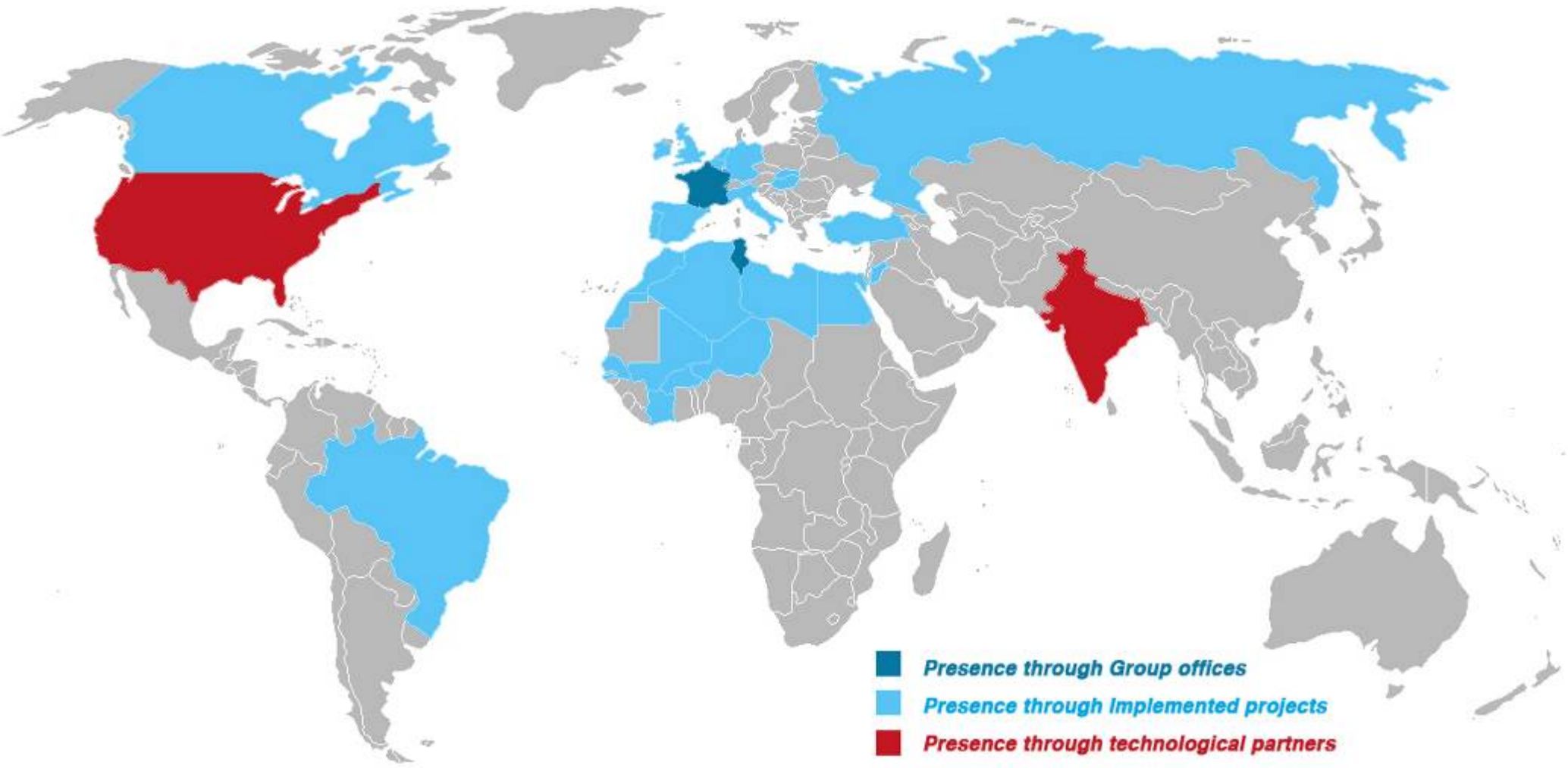
- Established in 1994
- Global provider of Offshore/Nearshore Product Development
- Partnering approach to servicing its customers in Europe
- Proven and established outsourcing models
- SEI CMMi Level 5 & ISO 9001v. 2008 certified development centers
- Over 10 active large multi national customers
- Business partnership with US and European companies



Paris site
Start Date: Q4 - 2007
 Current Seating Capacity: 20
 Maximum Seating Capacity: 25



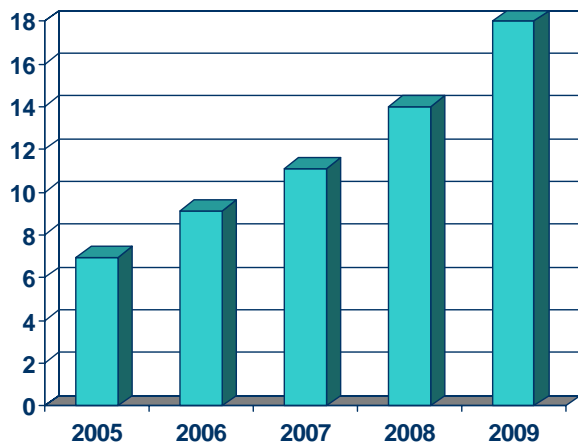
Our Global Footprint



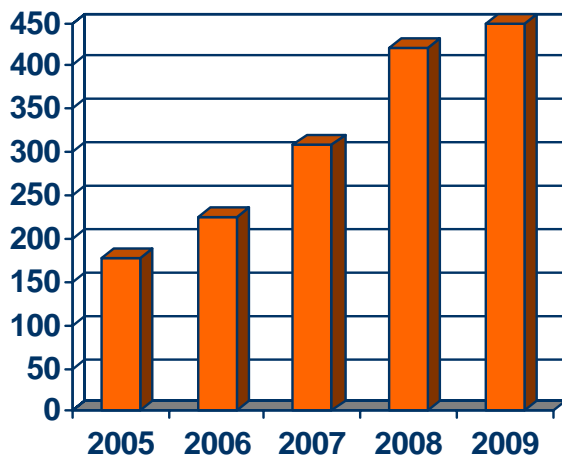


TELNET evolution

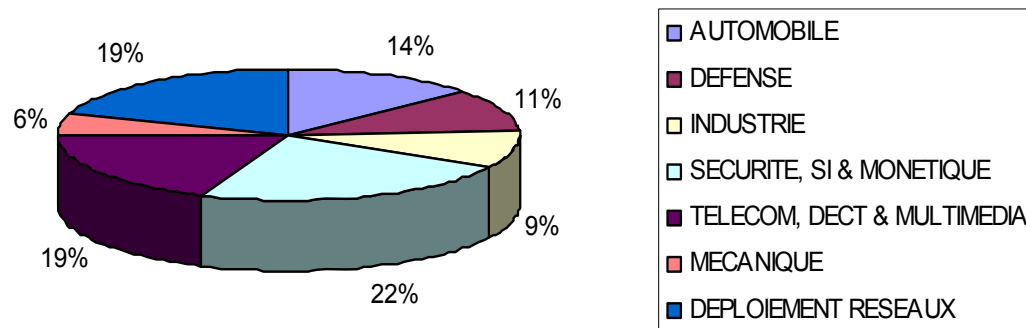
TELNET Turnover for 2005-2009 (M \$)



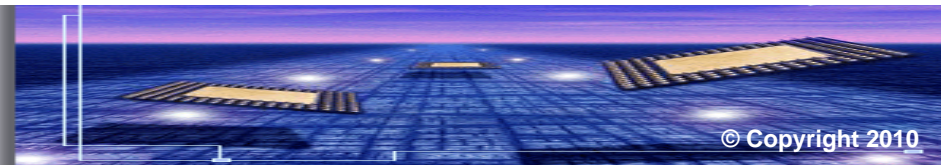
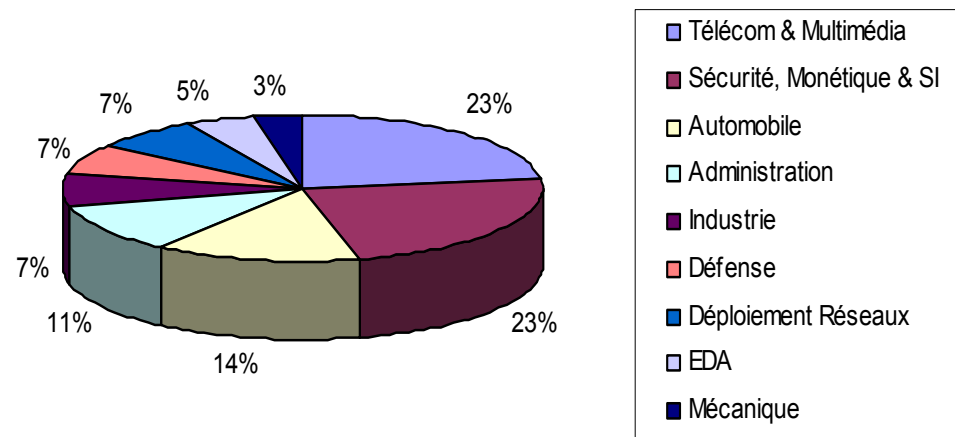
TELNET Manpower for 2005-2009



Turnover by activity (%) 2009

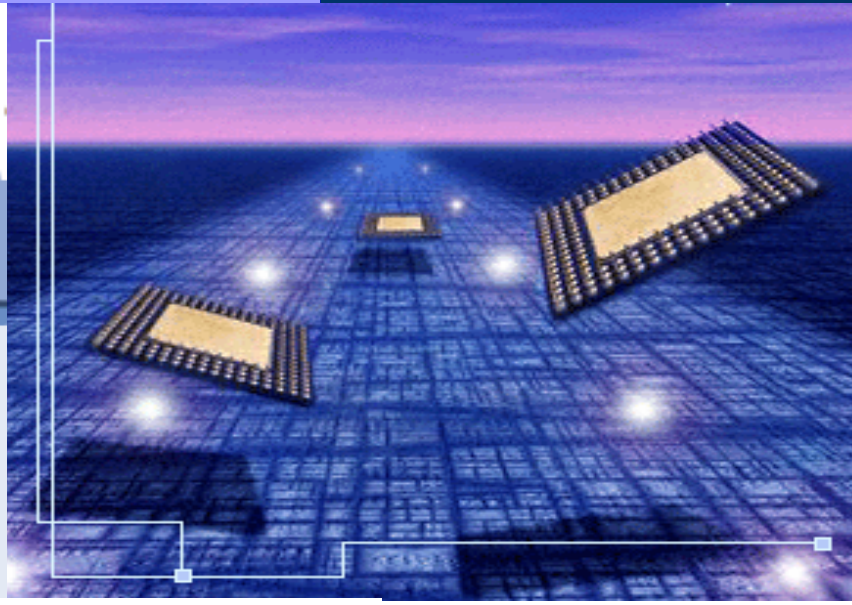


Number of employees by activity 2009





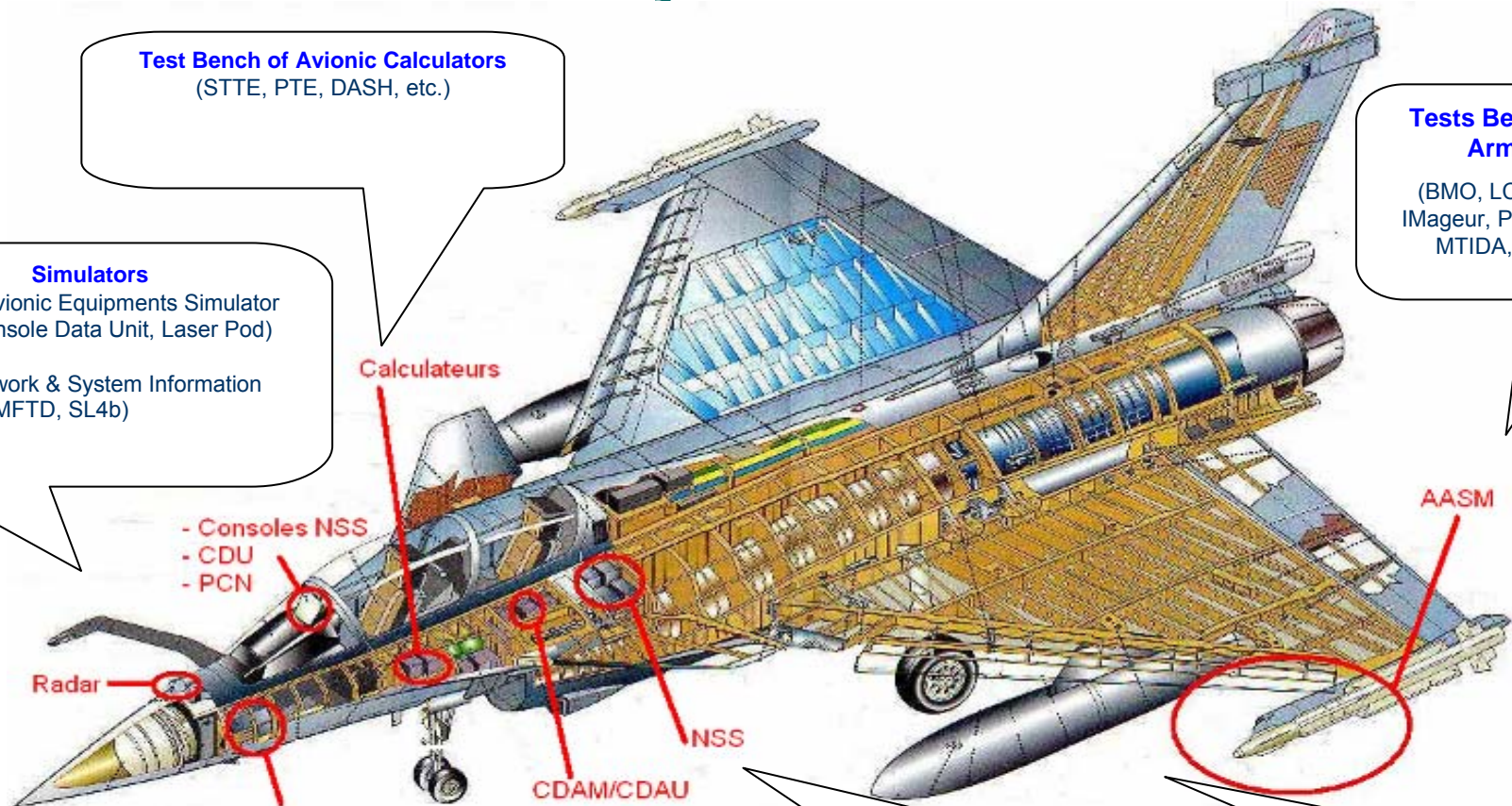
Product Engineering Capabilities



Product Engineering (PE)

- **Expertise – Services**
 - Embedded Software
 - Integrated Systems Development / Computing Platforms
 - Electronic & Microelectronic Design Services
 - Mechanical R&D
- **Expertise – Domain**
 - Telecommunication
 - Multi-Media
 - Automotive
 - Security
 - Defense / Avionics
 - Payment Point of Sale (POS)
 - Industry
 - Information System (IS)

Avionics & Defense Activity



Test Bench of Avionic Calculators
(STTE, PTE, DASH, etc.)

Tests Bench of Arms
(BMO, LCBC du Imageur, PEGASE, MTIDA, etc.)

Simulators
- DASH : Avionic Equipments Simulator (Radar, Console Data Unit, Laser Pod)
- A380 Network & System Information Simulator (MFTD, SL4b)

- Consoles NSS
- CDU
- PCN

Radar

Calculateurs

NSS

CDAM/CAU

AASM

Centrale Inertielle

Control Data Units of Inertia Centrals
(CDU30, CDU40, CDU2G, PADS, etc.)

Test Bench of Inertia Systems
(BIVA)



Embedded Development
- Avionic A380 Reports,
- CDAM Test Module (PTE)
- Helmet Sights (UT)
- DO178B
- RTRT

Data flight Examination Tools
(ANITGONE, MAGALI, EXTRACTM, etc.)



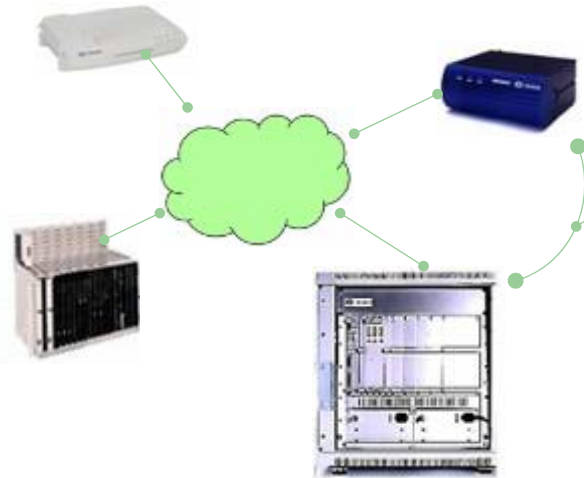
Telecom Activity

Voice-Data enterprise Gateways
 Embedded systems development
 SNMP supervision
 Various IP services

2G/3G
 Mobiles Qualification
 Software and complementary
 modules validation for 2G/3G
 phones
 Qualification of Mobile software
 tools
 Conception of test sheets plans

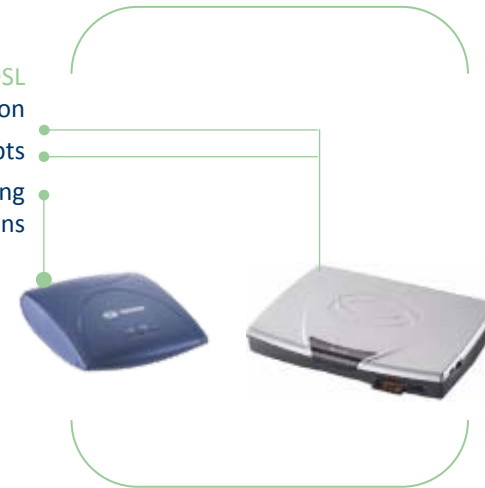


IOT tests and Field Tests on 2G/2,5G
 Field Tests campaigns on the main European/Middle-
 east/African cities
 Validation and Certification of New SAGEM handsets
 according to GCF recommendations



Multi-protocols Switches/Routers
 Embedded development of various protocols
 (IP, TCP, UDP, X25, Frame relay, RNIS, ...)
 Supervision agents development (SNMP – NMS)
 New routing techniques development
 Evolutive supervision for the main customers
 (STNA, EDF, FT, ...)

Home Gateways and Modems XDSL
 Product validation
 Automatical Test scripts
 Elaboration of test basis according
 to customer specifications



DECT Activity



infineon & Philips (BlueBird, VegaLite & VegaOne) platform

1- Drivers (LCD, keypad, Flash // and SPI, EEPROM I2C, UART)

2- DSP/Audio

3- Radio DECT

4- Battery management

5- Power Management

6- RTOS (Nucleus, RTK)

1- Drivers (keypad, Flash // and SPI, EEPROM I2C, UART)

2- DSP/Audio

3- Radio DECT

4- Line interface

5- USB

6- SIM card


7- Voicemail

8- RTOS (Nucleus, RTK)



Multimedia Activity

Test & Measurement



Tachometer
MSP 430 / LCD / EEPROM / Knobs
Buzzer / USB / Power Management

Consumer Electronics





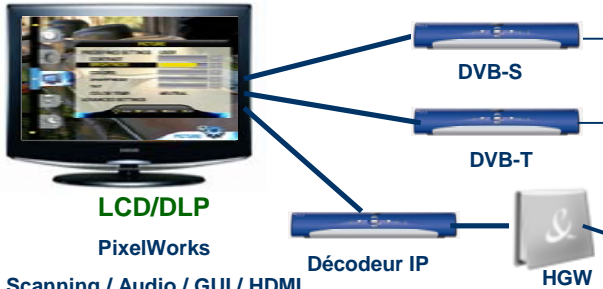
Photo Printers
PhotoEasy
JPEG / TIFF / BMP / PNG / NexGen GUI
Bluetooth BPP / USB Mass Storage
MMS



Electrical Oven
PIC 18Fxx / LCD / Flash / Knobs
Buzzer / D-BUS

STB


ST & PowerPC Chips
SI / PSI / Teletext / Subtitles / ECM / EMM / GUI / MPE
/DSM-CC /Hardware Design /OpenTV / MediaHigway



LCD/DLP
PixelWorks
Scanning / Audio / GUI / HDMI

DVB-S
DVB-T
Décodeur IP
HGW


Studios




Modular Products
Video processing: SDI,
Conversion SD/HD
Audio Processing: AES
Embed/De-Embed

Operators


Encoders/Transcoders
AVDEC





Control & supervision
XMS/XMU
NetCentral
MuxConfig & SNMP


Multiplexers

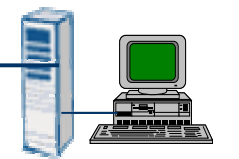


Video Server
MPEG Scan
DV, MXF, GXF

NFP 9010/30/40
Service
Processing/Splicing/
Transrating
Redundancy

Modulators
Sat / Terrestrial
.... to xDSL





Analyzers / Monitors
AVC Analyzer/Granite
Sentinel/Copper G2
MPEG-2, H264, DVB

Automotive Activity

Embedded software
 CAN Network
 Automotive diagnosis
 OSEK/VDX standard
 MISRA standard
 Software design

- Platforms: Hitachi 7055, ST10, Siemens infineon
- Vector suite : CANalyzer, CANoe, CANape
- Testing tools: ATTOL, RTRT
- Validation on simulation benches

Engine management systems for:
 RENAULT cars (fuel)
 PSA cars (fuel and bicarburation)
 FIAT cars (fuel)

Knowledge

Engine management calculator

Skills

Projects carried out



Cluster and multimedia

knowledge

Skills

Projects carried out

Embedded software
 CAN network
 Automotive diagnosis
 Functional aspects for multimedia unit
 Validation process for car clusters
 Interaction multimedia unit / car environment

CAPL Language
 Vector suite : CANalyzer, CANoe, CANape
 Bus CAN communication tools
 Redaction of validation scripts

Validation of the multimedia unit for Daimler Chrysler – Mercedes and BMW cars

Validation of several clusters for RENAULT, PSA...

Implementation of embedded softwares of many car clusters LOGAN, SCENIC, C4..

Security

- **Development Activities**

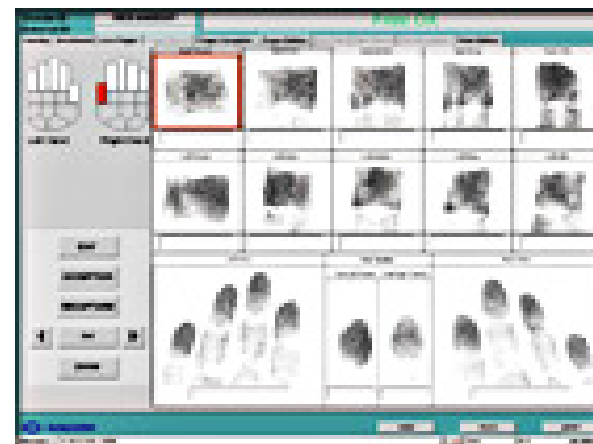
- Automatic Fingerprint Identification Systems (AFIS)
 - Civil Security application (Biometric Passports, ID cards)
 - Criminal Security application (Biometric matching)
 - Maintenance of AFIS application



- Facility Access Control Systems (MEMS)
- Border Access Control Systems (MEMS)

- **Testing & Validation Activities**

- Certification & Deployment of AFIS based systems



POS Terminals, Access Control & Smart Cards

Smart Card Solutions

- :
 - E-Government
 - E-Health
 - E-Passport
 - E-ID

JavaCard Technology



Banking Applications

JCB-EMV, Diners, KNET, Sovac, Sovac Fidelity, Credipar, Fintrax, FranFinance, Moneo, Proton, CB, Sofinco, Moneo, Proton

....

Protocol : ISO-8583, SPDH, APACS-40, CB2A, CBSA, CBPR

Smart Card Solutions

Access Control & Biometric System :

- Morpho Touch 2nd Generation
- Time attendance Applications
- Morpho SDK 2nd Generation
- MEMS System



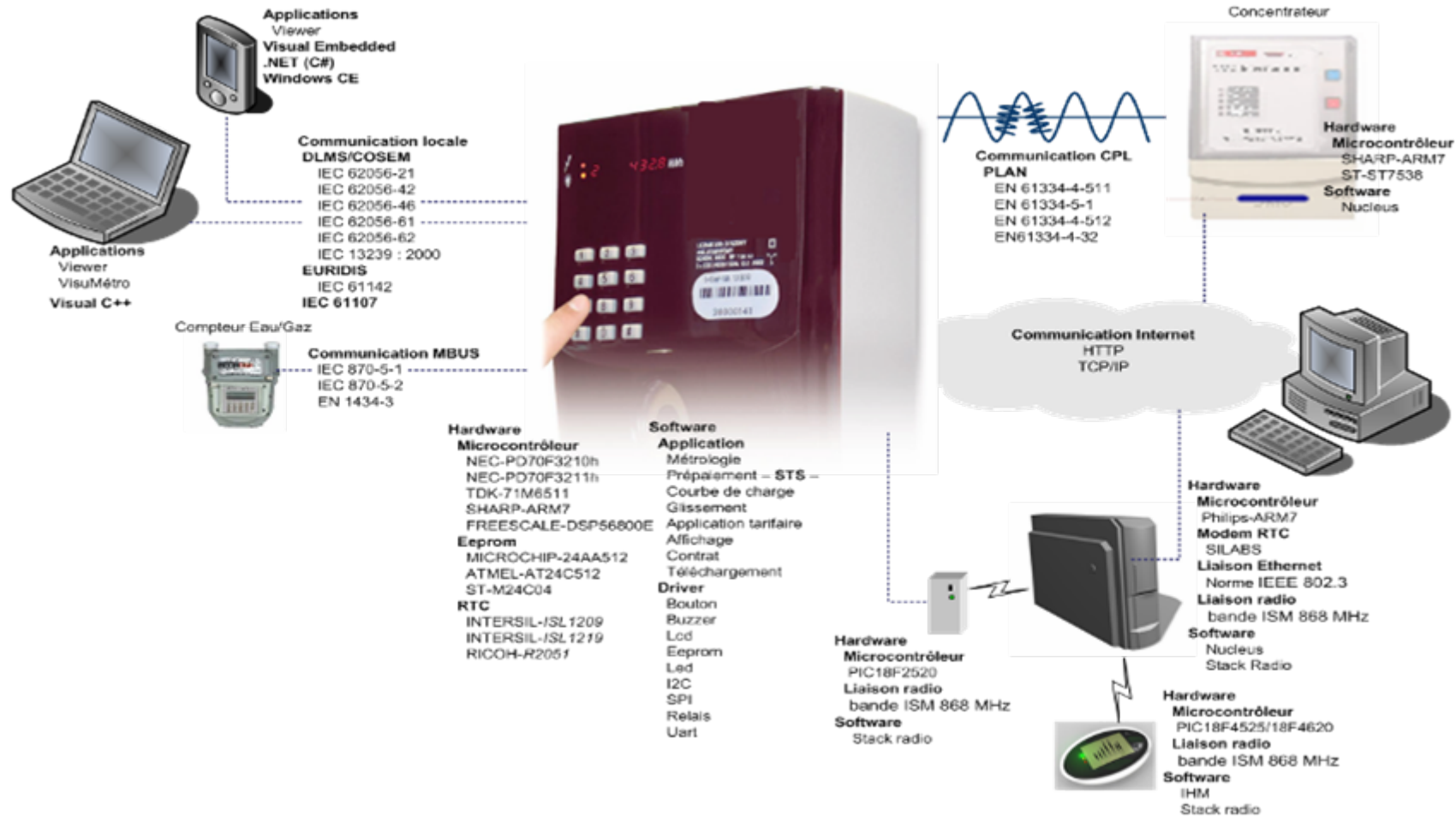
Desktop Applications

- Smart Card Personalization Tool
- Smart Card Configuration Tool
- Authentication tool
- Simulation and Testing tools
- Reporting Tools



Industry activity

Electricity Meters



Information systems Activity

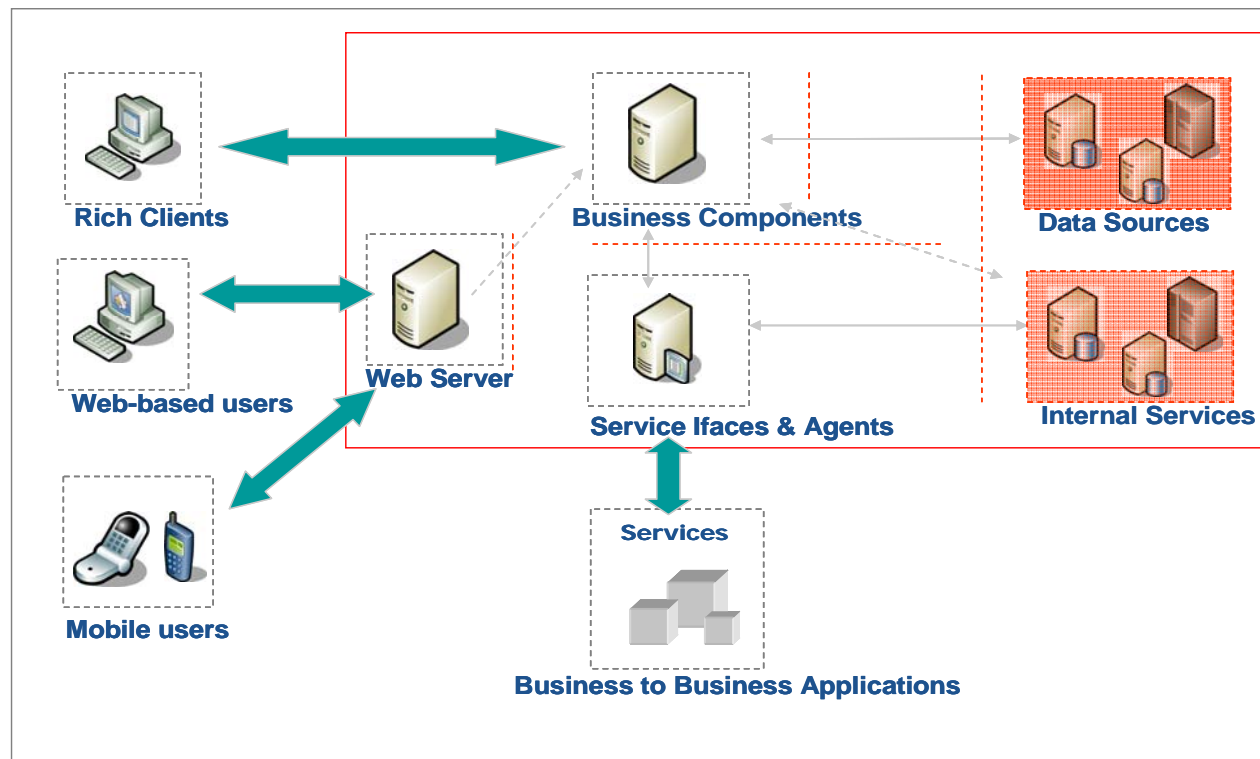
➤ Development activities :

- Web solutions development & Desktop Design
- Internet / Intranet applications
- Full life cycle application specific software



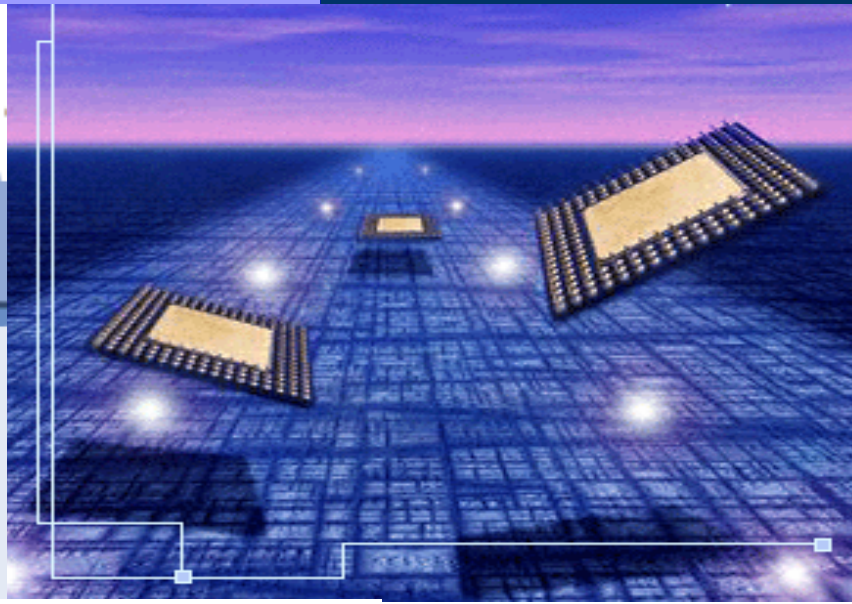
➤ Know-how & Skills:

- **Architectures** : object oriented, client-server, Web, n tiers architecture , J2EE, Dot NET
- **Various environments**: UNIX (Solaris, HP/UX, Linux, Aix), WINDOWS (NT, 2000, XP)...
- **Applications servers**: Apache, Weblogic,...
- **DataBase expertise**: Oracle, MySQL, SQL Server
- **Languages expertise**: C/C++, C#, VB.Net, Java, ASP.Net, JSP, PHP, HTML, XML, XSL, Visual Basic





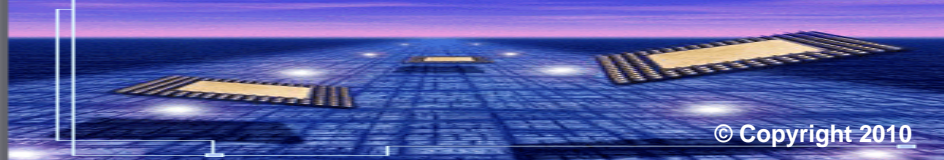
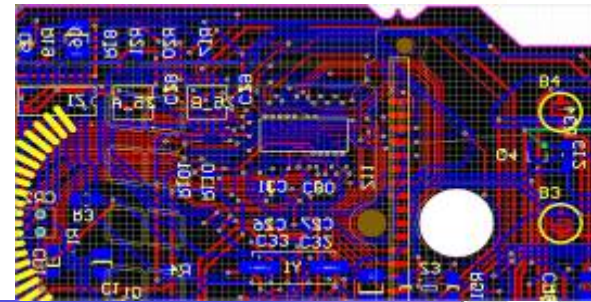
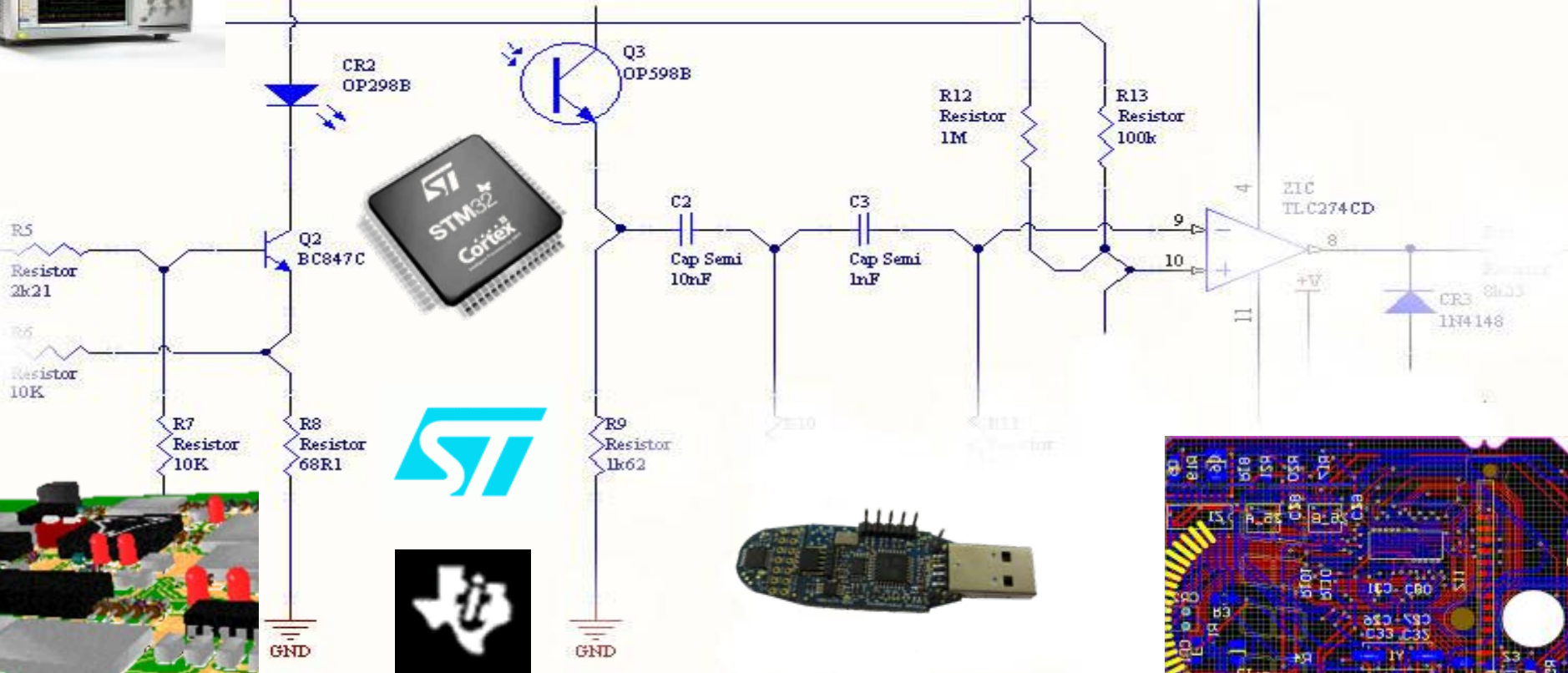
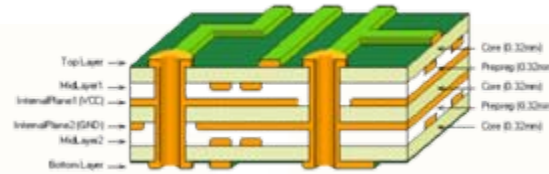
Electronic & Microelectronic Design Services





Electronic Design Automation

- Digital, analog and mixed Electronic Design
- High speed and RF board design
- Schematic Capture and editing
- Electrical rules checking
- EMC compliance , SI verification
- Components footprint drawing
- PCB-manual and automatic multi-layer Routing
- CAM, gerber Manufacturing output files



Digital Microelectronic Activities

➤ Main Activities :

- IPs Design
- SoC Co-Design
- FPGA Based Circuit & System Integration
- Structured ASIC Design Porting
- Embedded Software

➤ Various technical expertise including:

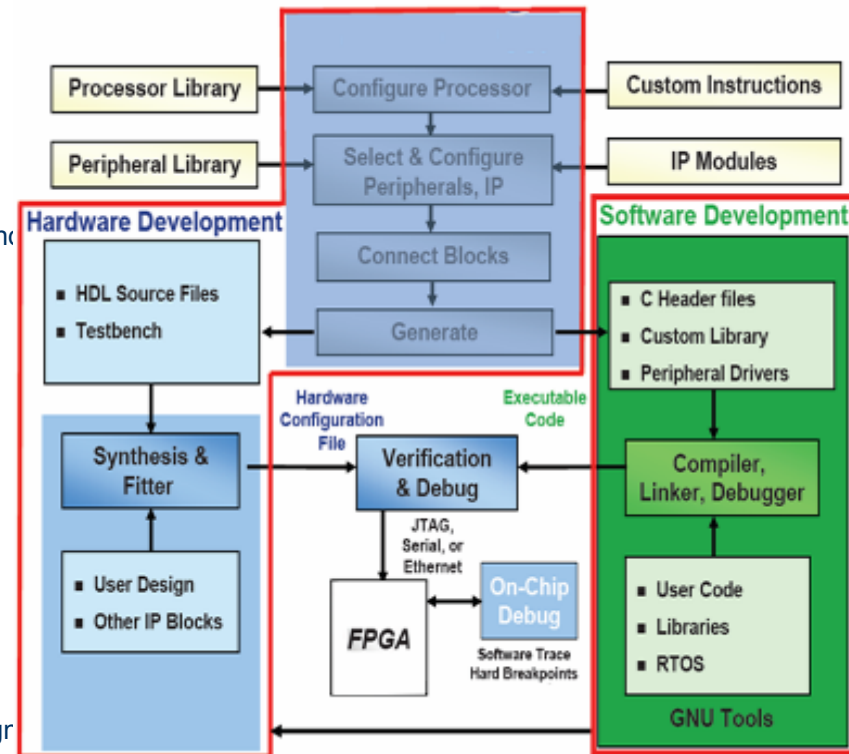
- **Front-End Activities** : specification, architecture, Modelling, RTL Coding and simulation, static and dynamic functional verification, Pre-Layout verification
- **BackEnd Activities** : Synthesis, P&R, Static Timing Analysis, architecture exploration and optimisation, verification Post –Layout
- **Soft IPs Development** : Video (Acquisition, processing & displayer) , Telecom (MIMO System)
- **Embedded Software** : Image processing (« Automotive Infotainment », « Lane Departure », « Traffic Sign Recognition »), TCP/IP com, Web server, etc.
- **Embedded OS & RTOS** : µClinux, embedded Linux, MicroC/OSII

➤ Used language

VHDL, Verilog, SystemC, e-language, TCL, PSL, embedded C, C++

➤ Mastered Tools :

Quartus II, ModelSim, Specman Elite, Emacs, IAR Workbench, NIOS II IDE, Visual Studio.Net, Design Compiler, PrimeTime.



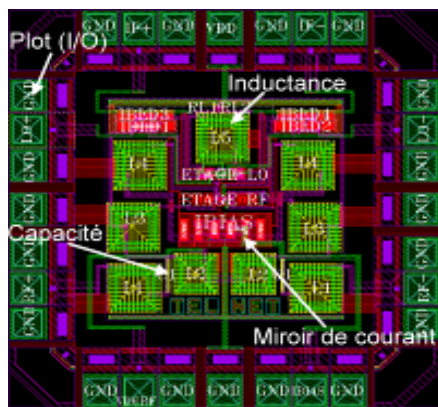
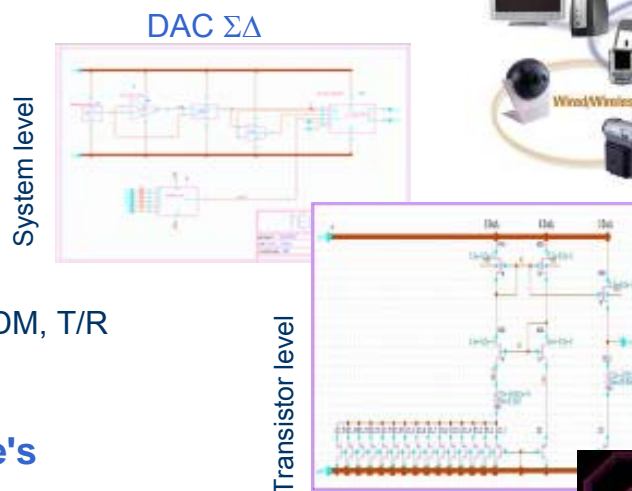
Analogue and Radio frequency Activities

Engineering Skill-Set

- Design of analogue IPs
- Analogue Front-End.
- Analogue Back-End.
- Design of mixed signal circuits : DAC-ADC- $\Sigma\Delta$.
- Design of CMOS RF IPs : LNA, Mixer, Oscillator.
- Design of RFID chip.
- Design of Digital IPs for Communications: T/R MIMO-LP-OFDM, T/R MIMO-MC-CDMA.



Communication



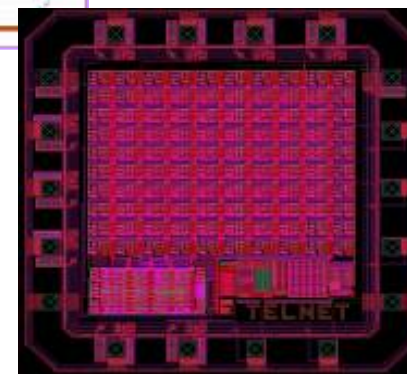
RF Circuit : Mixer

Tools and Software's

- CADENCE
- MATLAB
- ADS
- ASITIC
- VHDL
- VHDL-AMS



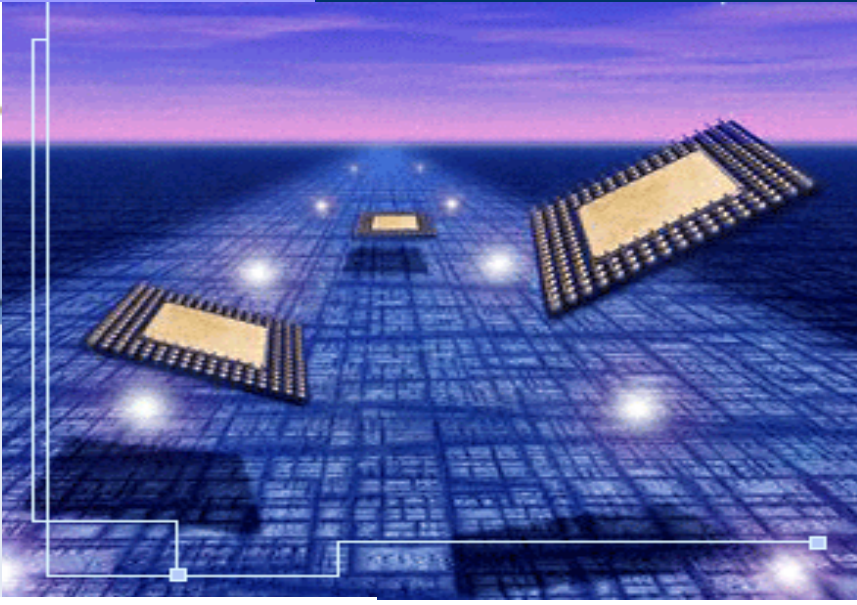
RFID chip



Layout level

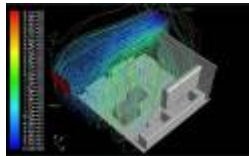


Mechanical R&D



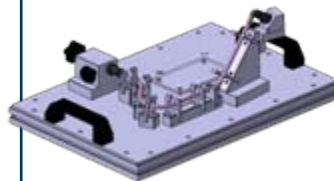
CAD & Simulation

- Mechanical Design & Engineering ;
- Design & Style ;
- Reverse Engineering ;
- Meshing ;
- Structural Analysis;
- Rheological Simulation ;
- Computation Fluids Dynamic (CFD)
- Digital Mock-up & Animation.



CAM & Industrialization

- Special Machines Design & Manufacturing;
- CAM Simulation ;
- Design & Manufacturing of Controlling Tools ;
- Design & Manufacturing of Machining Fixtures & Assemblies;
- Rapid Prototyping.



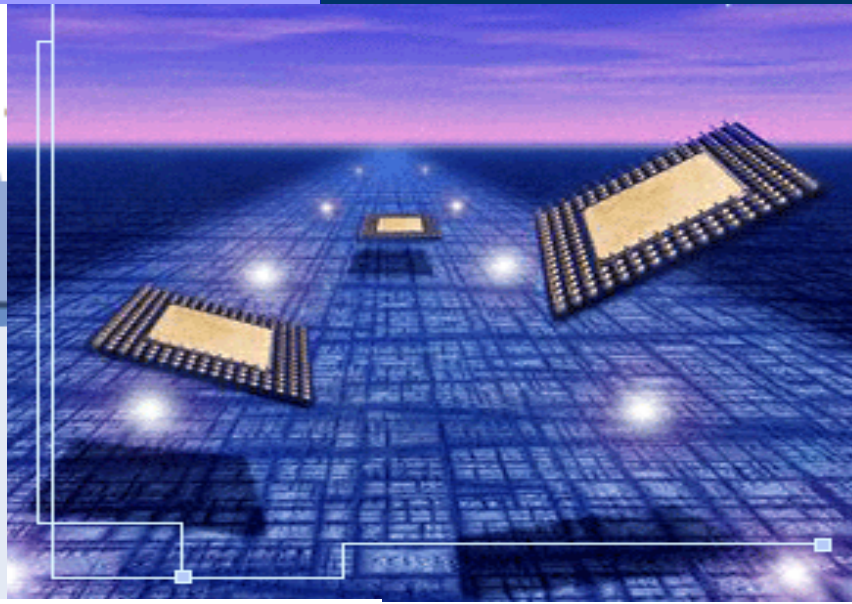
Three-dimensional Metrology

- CMM Programming ;
- Three dimensional Control ;
- Digitalization ;
- CMM installation & certification





Carrier/Corporate Network Integration & Deployment



Infrastructure Integration & Deployment (IID)

IID Expertise & Engineering Services related to:

- Turn Key Solutions for LAN/WAN/MAN Corporate networks
- Consulting Services for Intranet/Internet Network Solutions
- Technical Assistance in Corporate Network Management & Setup of new value added service activities
- Deployment of fixed and mobile carrier grade networks for local and international markets.
- Subcontracting of telecommunication network deployment and Installation Services in partnership with equipment manufacturers
- Training on State of the Art ICT, Networking Technologies and Solutions

IID Expertise & Engineering Services for Corporate customer:	IID Domain Expertise for Carrier customer:
<ul style="list-style-type: none"> •Supply, Installation and Commission for Corporate Networks •Auditing of Corporate Networks •Consulting and Technical Assistance in CRM & BPO activities •In country sale and distribution of corporate network products and solutions. 	<ul style="list-style-type: none"> •xDSL Access Technology •ISDN Access Networks •PDH/SDH/DWDM Transmission •Synchronization PRC/SDU •SS7 Switching & Monitoring •OSS & Mediation •Testing & Monitoring of: PDH, SDH, DWDM, VoIP, GSM & UMTS networks •STP implementation

Institutional Relations



Visit of H.E.M **Gordon GRAY**, the US Ambassador to Tunisia, April 28th, 2010



Visit of **Mr. Charlton ADAMS**, IEEE Standards Association President, April 26th, 2010



Visit of H.E.M **Kgalema Motlanthe** , the South African Vice President, April 14th, 2010



Dr Elias ZERHOUNI, U.S President special envoy for science and technology in visit March 09th, 2010



French Prime Minister **Mr. François Fillon** visit in Technological Park TELNET site, April 24th 2009



Dr Hamadoun I. Toure, Secretary General of the International Telecommunication Union, November 28th 2008

Participation in International Fairs and Events



TELNET in the Embedded Real Time Software and Systems in Toulouse – France May 19th to 21st, 2010



TELNET participate in the FORTRONIC 2010 –International Forum for Electronics April 15th, 2010 in Tunis



TELNET at the world’s biggest embedded exhibition: the **Embedded World 2010** in Nuremberg, Germany, March 1st to 3rd, 2010



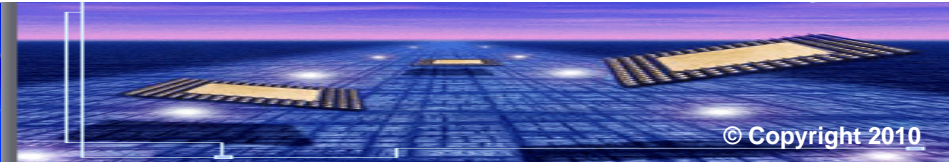
TELNET at the Paris Air Show 2009 in Le Bourget in France June, 15th to 21st 2009



TELNET takes part of the international IT exhibition & conference “**INDIASOFT 2009**” in Kolkata February 2009



TELNET in the « ICT 4 ALL » Forum in Hammamet November 24th, 25th 2009



Multilateral Cooperation in R&D



Visit of the pole **SCS** (Solutions Communicantes Sécurisées) piloting committee from France and the Tunisian technological poles to **TELNET Sfax** site the November 22th, 2007



Since 2009, TELNET is an associate member of the **International Telecommunication Union**, ITU-T Standardization sector



Since March 2009, TELNET is an associate member of the **Arab Information and Communication Technologies Organization (AICTO)**



TELNET Consulting is one of the rare subsidiary of a south Mediterranean group becoming member of a French competitiveness cluster « **SYSTEM@TIC Paris-Region** »



TELNET delegation visit to Indian technological partner **BLUE STAR INFOTECH** February 2009



TELNET

ALTRAN

ALTRAN TELNET CORPORATION



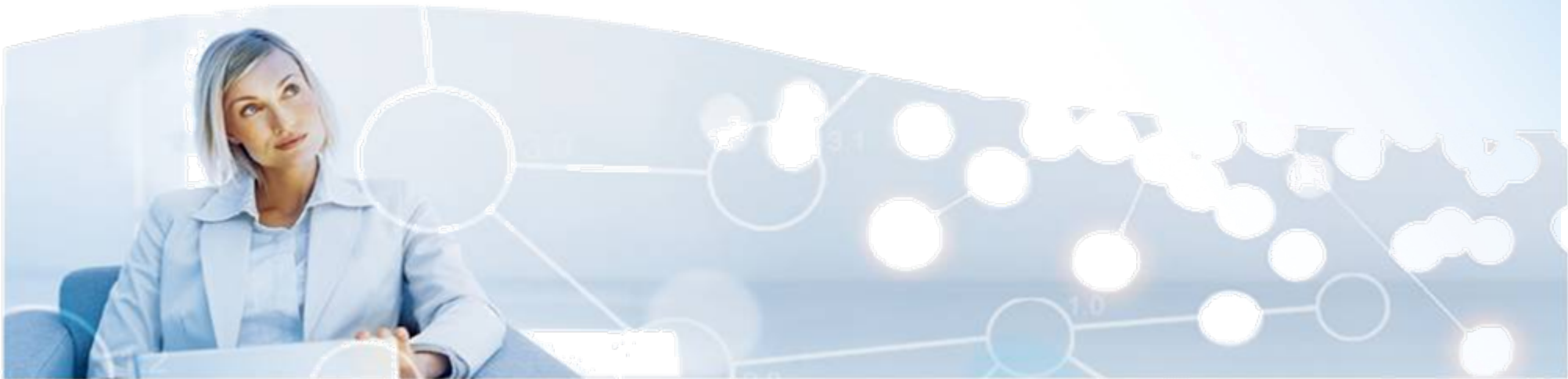
Creation of a Joint-venture between the ALTRAN Group and the TELNET Group on July 10th, 2008



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ALTRAN Group Presentation



Group profile

■ Vision

As a worldwide technology leader solving critical issues,

we bring our customers' ideas and projects to life and increase their performance, through technology and innovation.

Date founded: **1982**

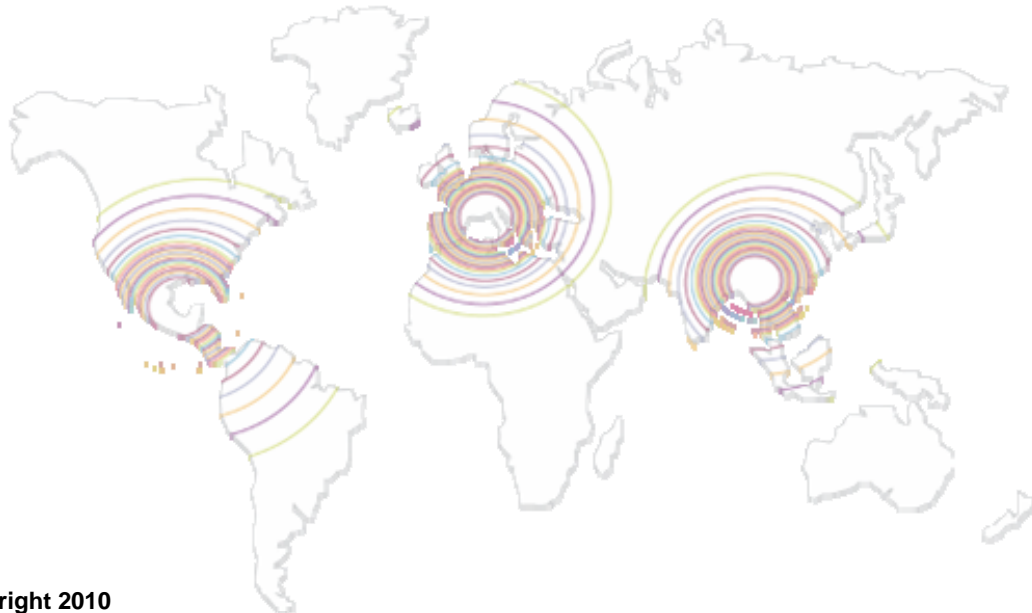
Turnover in 2009: **1,403.7 M€**

Turnover outside France in 2009: **55.2%**

Staff (December 2009): **17,149**

Consultants (December 2009): **87%**

500 Key accounts in more than **26** countries



Bringing our customers' ideas
and projects to life

The pathway to innovation

■ Altran and innovation

For over 25 years, Altran has been a key innovation partner.

Wherever a creative concept arises, Altran consultants are ready with an innovation initiative to further technological progress.

Altran has been instrumental in developing some of the great breakthroughs of recent decades, including speed, precision, safety, communications, practicality, interoperability, artificial intelligence... and mastery of past innovations.

Altran:
technological partner
of Renault F1



Altran foundation for Innovation



« Sustain and promote technological innovation for ones general interest »

Altran Research: a step beyond



“Increase our in-house R&D and reinforce our understanding our expertise in term of sustainable innovation »

Technological partner of the Renault F1 team, Altran consultants are implicated in engine and car frame developments in Viry-Châtillon (France) and Enstone (UK).

Altran, the Solar Impulse project:



Achieve a take off and flying day and night of a plane only propel by solar energy in order to make a world tour without energy or pollution.

Altran is working on the plane conception (energy, cockpit systems), project management and the modeling program and flight simulators.

Etre un partenaire
de l'innovation

Three business lines

R&D and technology consulting

56.2%
Calling upon all of the engineering disciplines to support the design, development, industrialisation and production of products and services for our customers.

Organisation and information systems consulting

28.3%
Providing the customers with an in-house intelligence capacity, enhancing its organisational flexibility and assisting with internal restructuring.

Strategy and management consulting

9.1%
Enabling our customers to gain control over their environment and anticipate changes that will determine their long-term potential for success.



6.4%
Originates from other activities

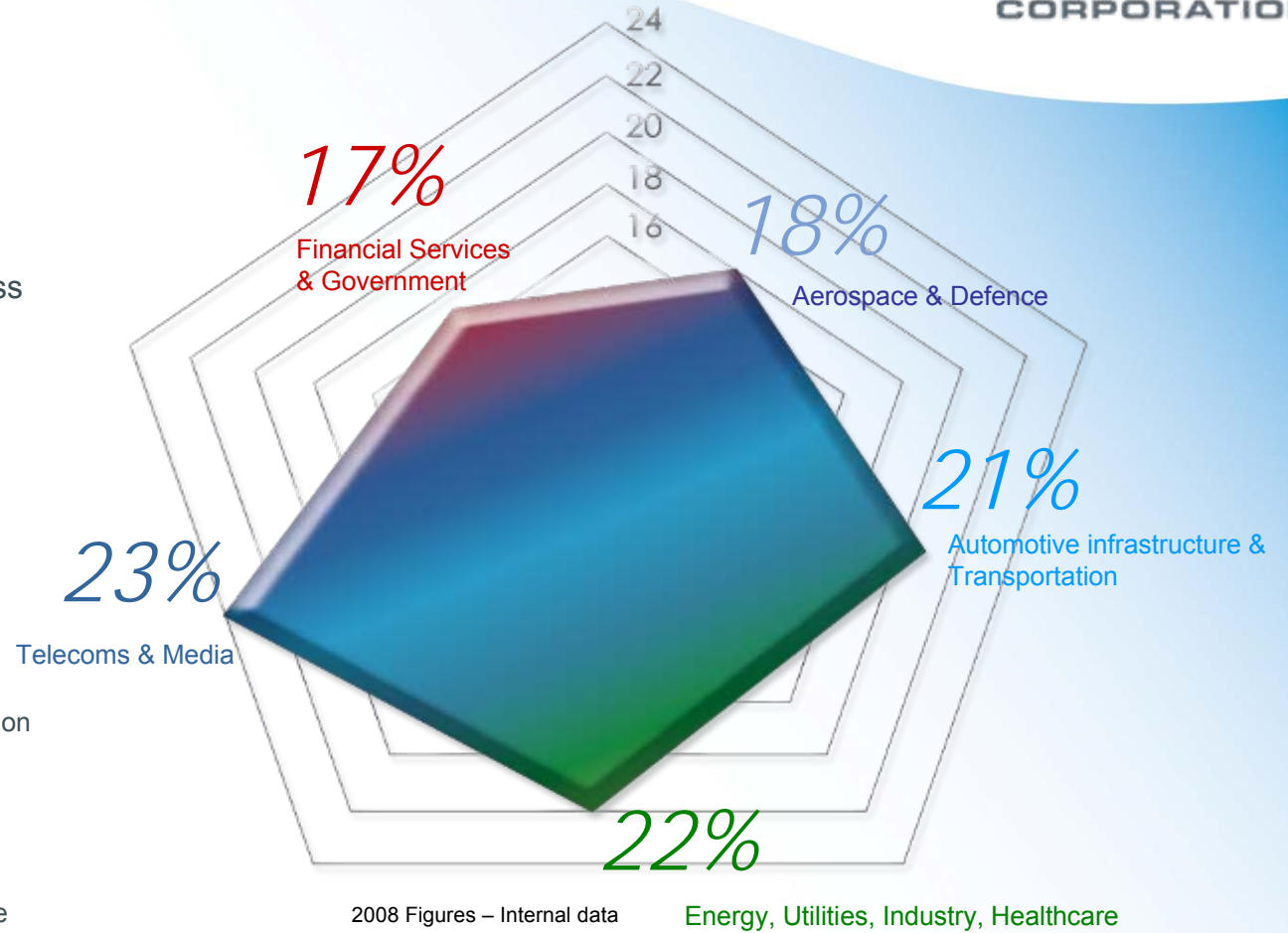
Expertise
in innovation consulting

Our activities

■ Reach

The 5 Industries cover all the business sectors in which Altran is a player

- ▶ Aerospace & Defence
- ▶ Automotive infrastructure & Transportation
- ▶ Telecoms & Media
- ▶ Energy, Utilities, Industries & Healthcare
- ▶ Financial Services & Government



Covering all sectors

- TELNET & ALTRAN received the “**Best Investment Award**” in the 7th “**World Investment Conference**” at La Baule in France June, 3rd to 5th 2009
- The Award’s ceremony which took place in presence of **Mr Afif Chelbi**, represented the coronation of the Tunisian promoting campaign in this conference « **Looking for Growth, Think Tunisia** ».





Thanks



www.groupe-telnet.net

