LAUNCH OF GLOBAL SOLUTION INTELLIGENT SYSTEMS

Intelligent Systems
(pronunciation: /ɪntəˈlɛdʒənt ɪnstəmz/, noun)
New generation of embedded and real-time systems that are highly connected, with massive processing power and performing complex applications.
Keith Williams, Executive Director, Intelligent Systems / Altran

“We define intelligent systems as a new wave of embedded and real-time systems that are highly connected, with massive processing power, and performing complex applications – often with advanced user interfaces. This new generation of intelligent systems is a real market opportunity. With 30 years of expertise, Altran is able to address complex technologies in a safe and secure way as well as usage to gain user acceptance and market share – all in a cost-effective, sustainable way, including support of new business models. Our cross-industry insights and know-how are a real asset in this fast-moving market. This is an exciting area in which Altran is naturally placed as a global integrator, in order to better serve its customers.”
Press release
05/03/2013

Solutions

Automotive, aeronautics, defense, healthcare… Altran integrates intelligent systems all over the world

With 450 billion intelligent interactions per day expected in 2020, intelligent systems are set to transform the world we live in and break down the boundaries between industrial players. These systems mean that we can stay connected wherever we are; at home, in the car, on a plane.

Altran believes that the three factors underpinning the success of the intelligent systems of tomorrow will be greater user focus, the safe and secure integration of technologies and profitability.

To illustrate the potential of intelligent systems, the Altran group is unveiling two prototypes that it has developed within the context of its R&D programme. These prototypes demonstrate the feasibility of high-tech systems that are offering new users’ experience.

- Immersive ATM\(^1\): this prototype tests new usages for air traffic control which are operated by gesture and voice recognition, are in 3D format and interact with iPad-type tablets.
- Open & Connected Car: this prototype gives access to a platform of applications, new services and new usages (eco-driving, personalisation, social networks, etc.), and can be customised to meet the specifications of users’ smart phones and tablets in a safe and secure manner for drivers and passengers alike.

Bringing our own smart world into the car

The launch of Altran’s global Intelligent Systems solution will be the opportunity for the Group to present the digital world of the connected car. With the ongoing transformations in the automotive sector, the digital world is undoubtedly becoming an integral part of the car and, as such, an essential communication tool for the driver; a perfect example of the importance of being connected to one’s environment.

For Intelligent Systems / Altran the key challenges that need to be addressed are three-fold: Technology, Usage and Profitability.

- Technology: regarding complex-technology integration, safety and security are critical factors
- Usage: Intelligent Systems must be appealing (design), efficient (advanced ergonomics) and accessible for all
- Profitability: Intelligent Systems make for profitable business models that are cost-effective and sustainable.

\(^1\) ATM: Air Trafic management
Altran’s user-centred approach ensures the seamless integration of technologies and benefits players throughout the value chain.

A booming market

According to IDC the number of intelligent systems worldwide will reach 2.6bn in 2016. IDC expects this market to grow by 16% over the next three years and to generate estimated revenues of $1.400bn in 2016, three times more than the slowing traditional embedded systems market.

Intelligent Systems / Altran

With 30 years experience in embedded and critical systems, Altran, a pioneer in the sector and forerunner in global intelligent systems, is pursuing its vision by focusing on Intelligent Systems solutions.

Altran’s global network of 3,000 experts, spread across 13 countries throughout Europe, Asia and the US, are working to address the challenges related to intelligent systems.

The Group has thus created the first premium solution geared to provide synergy of expertise, transversality and the understanding of the issues involved. This 6-package solution covers:

- Systems engineering
- Software engineering
- Electronics
- Safety
- Security
- Connectivity

As an intelligent systems integrator, Altran has set up an organisation based on a network of Excellence Centres accredited with certifications such as ISO 9001, ISO 27001, EN9100 and CMMi ML3.

Given the quest for fresh talent in this fast-growing market, Altran realises the need to train its own engineers for the future, and has thus set up an academy to provide standardised training and build up Intelligent Systems tailored to meet client needs.

International Data Corporation (IDC) « Intelligent Systems Pave the Way to a Smart World », February 2013

Pictures on demand to our press department

Download the pictures (©Altran):
Open & Connected car exterior
Open & Connected Car interior
Immersive ATM

Visit Altran’s dedicated site and download the IDC white paper “Intelligent Systems Pave the Way to a Smart World” http://intelligent-systems.altran.com
Open & Connected Car

“Are you ready for a digital ride?”

What is it?

Open & Connected Car Platform is a technology block enabling Intelligent Systems / Altran to work with clients delivering next-generation IVI (In-Vehicle Infotainment) systems. It showcases advanced services such as application download, web radio and social networking as well as conventional features including hands-free telephony, media player connectivity and navigation.

These services can be accessed and controlled via a multimodal HMI supporting voice commands, vehicle specific controls (e.g. rotary push button and steering wheel controls) as well as a touch screen.

Integration of devices such as smartphones or tablets are supported via DLNA - Digital Living Network Alliance (streaming of video, music etc.) and our proprietary TDI (Transparent Device Integration) technology for more specific application. For example, it enables control of the headunit with a tablet, or adapted versions of applications to be used in the car context.

The demonstrator is based on an open source GENIVI compliant software platform and has been integrated into a real car, also demonstrating secure access of vehicle data by downloaded, certified applications.
What are the benefits?

Intelligent Systems / Altran's Open & Connected Car Platform provides a time and cost optimized way of developing and test-driving new concepts.

Today, people usually spend more than 10% of their time in a car, either as a driver or as a passenger. When being on the move, they want to be as connected as they are at home with computers or smart phones: connectivity features have become a major buying factor. Car makers have thus set out to build connected services into their vehicles – either by enabling users to connect their mobile phones and CE devices into the vehicle or by directly integrating connected services into the head unit.

While fully integrated services provide superior user experiences and help to minimize driver distraction, the significantly longer development and life cycles of cars compared to nomadic devices (e.g. tablets and smart phones) constitute a major challenge for car manufacturers. They need to find ways to deal with the growing consumer demand for connected services while taking into account specific safety constraints and interaction paradigms.

Serving the supply chain

Solving tomorrow’s connected car challenges requires OEMs, Tier1 suppliers and Telecom/Telematics Service providers to team up today with a partner capable of taking an end-to-end approach, from ideation and business model elaboration through to development and system integration.

Telematics Service Providers can benefit from teaming up with Intelligent Systems / Altran as our Open & Connected Car Platform provides them with a customisable in-car client to develop, test and demonstrate their back-end solutions, including all aspects of data harvesting, processing and cloud storage.

For OEMs and Tier1s, Intelligent Systems / Altran's Open & Connected Car Platform provides them with a detailed view of our capabilities to support them in all aspects of developing next generation in-vehicle infotainment products and services.

The Connected Car Platform is offered along with various technology blocks paving the way for time and cost optimized development and drive-test of new concepts. These blocks are:

- End-to-end engineering (system, software, electronics)
- Discipline integration (HMI and usability, safety and security)
- Integration of reusable technology blocks (e.g. TDI)
- Open source GENIVI compliant software platform
- State-of-art HW platform for IVI
Advanced User Experience Platform

“Speak, watch, touch and move: the next generation of User Experience”

What is it?

Intelligent Systems / Altran’s Advanced User Experience Platform (AUX-p) is a collection of frameworks and IP to enable human interaction with intelligent systems to be carried out by increasingly diverse and natural means – speech, gesture, movement, gaze. AUX-p is offered to the market as part of the Intelligent Systems / Altran’s Advanced User Experience packaged offer.

Emerging technologies offer the capability to present radically new ways of interacting with intelligent systems. AUX-p provides designers, ergonomists and developers with the capability to realize these new user experiences from conception through to delivery. AUX-p includes:

- 3D visualization, communicating information with minimal use of menus and lists
- Gestural interface technology to support communication to a system without contact through a keyboard or touch screen
- Seamless integration between fixed and mobile devices (TDI – Transparent Device Integration)
- Advanced speech recognition to allow operation in noisy environments without the use of special training and without requiring a specific speech recognition start trigger
- Automated generation of HMI code, based on an abstract specification to maximize portability and flexibility
What are the benefits?

AUX-p, as part of the Advanced User Experience packaged offer, enables clients to rapidly prototype new desirable and efficient solutions in their market. The benefits to clients are:

• Provides a tangible product vision
• Provides confidence in product
• Reduces development and market risk

Usability is key to success for new intelligent systems whether in constrained environments (for instance a surgeon operating on a patient with a need to interact with a therapy delivery system), in a collaborative setting (systems that support interaction with multiple end-users such as crisis management displays and interfaces), or where mobility or flexibility is limited.

Such systems enable various demographics to be supported (from professional users through to populations with special needs, such as the aged) and allow adaptive behavior as interaction priorities change.

AUX-p features which enable these benefits are:

- Designed to address the specific challenges of constrained environments
- Demonstrates collaborative working in real-time situations
- Enables integration of multiple devices
• Enables fast-prototype of solutions

AUX ATM – exploring advanced usage for Air Traffic Management

Intelligent Systems / Altran has developed a concept demonstrator of new HMI technologies applied to the management of civil air traffic. The application includes 3D visualization and collaboration between a team of controllers using mobile devices. It integrates voice and gesture control, combining a shared workspace with a personal scratchpad on mobile devices.

The demonstrator development programme has resulted in successful implementation of novel technology integration, a demonstration positively reviewed by industry stakeholders, and has delivered a framework and technology available for deployment.
Pascal Brier
Executive Vice-President, Industries & Solutions Business Development

Pascal Brier, 49, joined the Altran group in August 2005 after 10 years at Microsoft. Graduating from EDHEC, Pascal Brier began his career with NCR before joining AT&T as Director Multimedia Southern Europe. In 1995, he joined Microsoft France where, in turn, he was Product Marketing Director, Marketing and Communication Director and Business and Marketing Officer. He is also Vice-President of Syntec Numérique and President of the Technology Consulting Committee.

Keith Williams
Executive Director  Intelligent Systems / Altran

Keith Williams, 45, has over 20 years’ experience in the embedded and real-time systems industry. He began his career working on the Channel Tunnel Project, and has held a range of technical, business and leadership roles. He has experience across many industries including automotive, aerospace, railways and medical devices, working for clients such as Siemens, Alstom and BAE SYSTEMS. Keith has a First Class Honours degree in Computer Science, is a Chartered Engineer, a Freeman of the City of London, Liveryman in the Worshipful Company of Engineers, Fellow of the British Computer Society, Fellow of the Institute of Engineering and Technology, Member of the Safety and Reliability Society and a Chartered IT Professional.
About Intelligent systems / Altran

Intelligent systems are the next generation of embedded and real-time systems that are capable of operating complex applications thanks to their high degree of connectivity and tremendous processing power. Intelligent Systems / Altran, the Group’s dedicated intelligent-systems division, offers packaged solutions designed to help clients in all industrial sectors create new business opportunities as well as novel experiences for their users in areas such as autonomous systems, smart phones, smart meters, medical devices, connected cars, advanced air traffic control and smart sensors.

Intelligent Systems / Altran believes that the key challenges in this sector are not just of a technological nature (integration, security and safety) but also involve the design, ergonomics and creation of profitable economic models. To better understand these challenges, Intelligent Systems / Altran offers an expert programme of six global practices that provide the consecutive technology blocks involved in these intelligent systems. These six practices (Systems Engineering, Software engineering, Security, Safety and Connectivity) pool some 3,000 engineers worldwide to form a network of international Excellence Centres making it possible to implement projects in Asia, Europe and North America. These Excellence Centres are accredited with a number of general, solution and industry specific accreditations (ISO 9001, ISO 27001, EN9100 and CMMi ML3, etc.)

intelligent-systems.altran.com
About Altran

As global leader in innovation and high-tech engineering consulting, Altran accompanies its clients in the creation and development of their new products and services... Altran’s Innovation Makers\(^1\) have been providing services for thirty years to key players in the Aerospace, Automotive, Energy, Railways, Finance, Healthcare and Telecoms sectors. Covering every stage of project development from strategic planning through to manufacturing, Altran’s offers capitalise on the group’s technological know-how in four key areas: Product Lifecycle Management, Mechanical Engineering, Intelligent Systems, and IT Systems. In 2012, the Group generated revenues of €1456m. Altran now has a staff of 20,000 employees in more than 20 countries.


\(^1\) Collaborators of the Altran Group

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