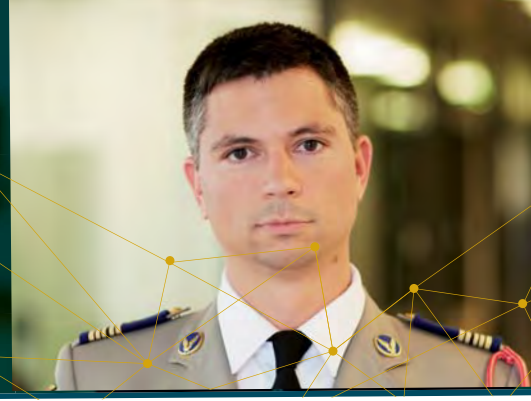
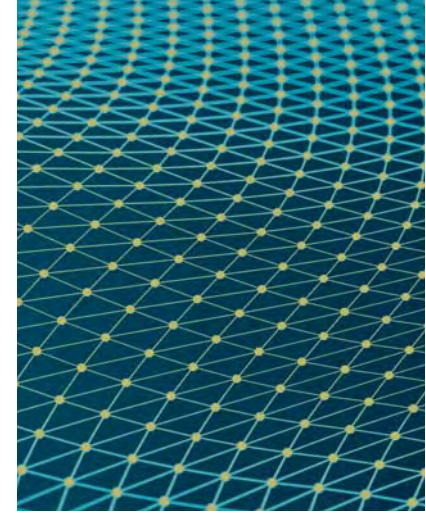




**SYSTRAN**  
beyond language





>>> This document has been entirely translated from French into English with our PNMT™ pour Pure Neural™ Machine Translation engine

*We are System, we love languages*





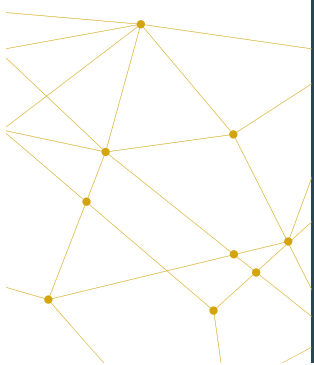
## « In the new era of artificial intelligence, we help our customers succeed in the global economy challenge »

By Jean Senellart, CEO

The myth of the Tower of Babel tells us that at origins men all spoke the same language. Determined to accomplish a feat, they started building a city. Its jewel would be a tower with a unique architecture and the summit that would touch the sky. Disproportionate ambition or fear of the unknown? Fearing to be scattered over hostile lands, these first humans perhaps relied on this tower to remain united and safe. As a divine punishment, their language was scrambled and it was now impossible for them to communicate. Not able anymore to understand each other's, they failed in their project. As an ultimate sanction, they were scattered over the surface of the earth, giving birth to the current peoples. This legend, which explains the origin of languages and countries, nicely illustrates the need to be understood to run major projects, and risks of failure otherwise.

Resolutely optimistic, I am convinced that at the end the punishment is not really one. By gaining specificity and difference, each nation has gained in wealth. Thus, the ability to communicate acquires even more value. We must be able to communicate.

EDITO



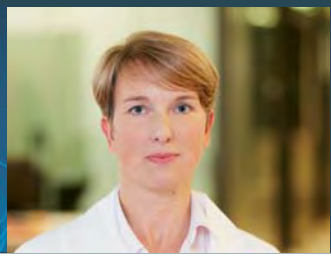
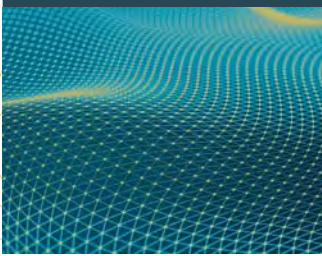
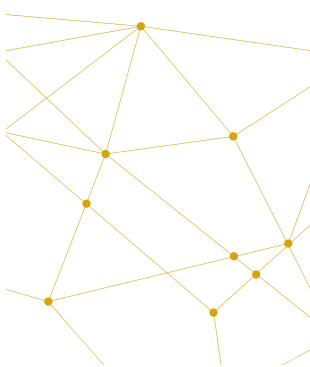
### **Abolishing borders: the dream of Internet**

With Internet, the myth and the original dream of Babel are nearby. Digital allows us to be in several places at the same time abolishing time and space. Only the boundaries of the language remain. To achieve the dream of Internet by removing these linguistic boundaries to connect Men and allow businesses to create value, this is the reason for being of SYSTRAN. As a new paradigm of business, the e-commerce revolution swept away the old models. Thanks to the Internet 2.0, companies realized that they could make their website, beyond a corporate storefront, a real online store, accessible in all places and at every moment. From this perspective, the start-ups played a major role. They brought a breath of fresh air by facilitating navigation paths and by making their products desirable with an attractive and easy to use interface. This new paradigm of ubiquity and instantaneity has created its part of legal constraints, safety standards and the quest for economic intelligence. Here too, SYSTRAN accompanied and continues to accompany its customers to enable them to innovate, to quickly deploy business models while preserving their reputation, specificity and above all their greatest asset: their own language.

### **The new era of machine translation: Big Data, Artificial intelligence and Deep Neural Network**

For over forty years, our automated translation engines have evolved continuously by integrating the most advanced technologies of their time, from symbolic systems (based on rules) to statistical models. Today, the maturity of Big Data technology, coupled with the progress made in Artificial Intelligence, bring the power and sophistication necessary to propel the translation into the new stage of deep neural network, the artificial neurons and the self-learning machine. This new technology is troubling due to the fluidity and accuracy of the translations obtained. Machine and human translation are often perceived as in competition, with the growth of the first being felt by the second as a threat. The reality is very different and technology, far from competing with man, increases productivity and allows it to concentrate its efforts on its true value. End users, for their part, have potentially access to larger volumes of content in their native languages. They can also more easily produce content in foreign languages. Is the dream of Babel finally within our reach? Perhaps. In the new era of customization and customer experience, this new generation of machines is destined to play a major role. It will allow companies to win in a high-speed and translation capacity to create the same brand experience anywhere in the world, almost instantly.

**SYSTRAN did it... Our customers have now to invent the new economic world that goes with! As we have always done, we will be and more than ever at their side to help them...**



## SYSTRAN, A HISTORY MARKED BY INNOVATION AND COMMITMENT

### World leader in machine translation technology

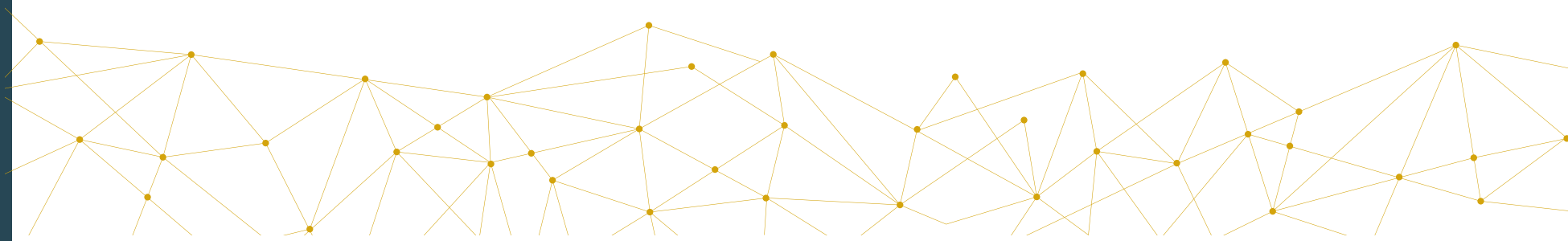
SYSTRAN is the world leader in translation technology. Created in 1968 by Dr. Toma, the company has been innovating for decades. SYSTRAN offers cutting edge products and solutions that can be deployed on the Cloud or on a company server. In 2014, SYSTRAN was acquired by CSLi, a Korean company that changed its name to SYSTRAN International. Benefiting from CSLi technologies on Asian languages, SYSTRAN continues to develop new language pairs and innovation in the field of Automatic Natural Language processing. SYSTRAN is thus able to offer solutions that meet the new needs of companies such as Mobile and the Internet of objects.

### A R&D center based in France

SYSTRAN's head office is located in Seoul. The R&D centre is located in Paris with offices in San Diego. The SYSTRAN group now has 200 employees on these 3 sites, with about 100 research and development engineers and language specialists.

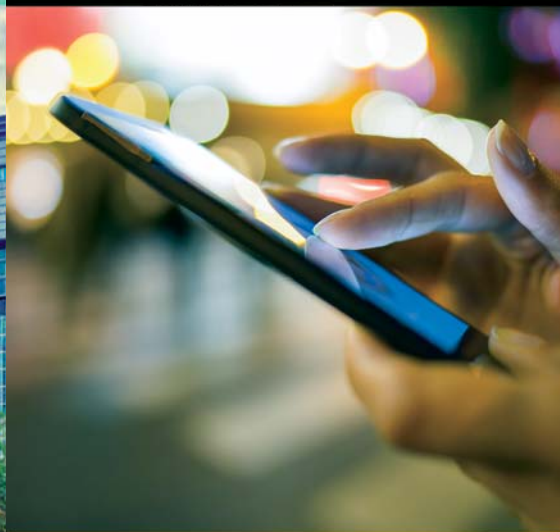
### Improving multilingual communication and productivity

SYSTRAN's automatic translation solutions enable companies to improve their multilingual communication and productivity in many areas. They are more commonly used for internal collaboration, for the management and interpretation of Big Data, search, eDiscovery, content management, customer support and e-commerce. With over 140 pairs of available languages, SYSTRAN is the reference translation technology for multinational companies, Defence and Security organizations and translation agencies. SYSTRAN translation software is quickly and easily customizable to a specific domain. Thanks to automatic learning techniques, high translation quality can be achieved at a reduced cost.



# A STORY THAT MERGES WITH THOSE OF MAJOR INNOVATIONS IN MACHINE TRANSLATION

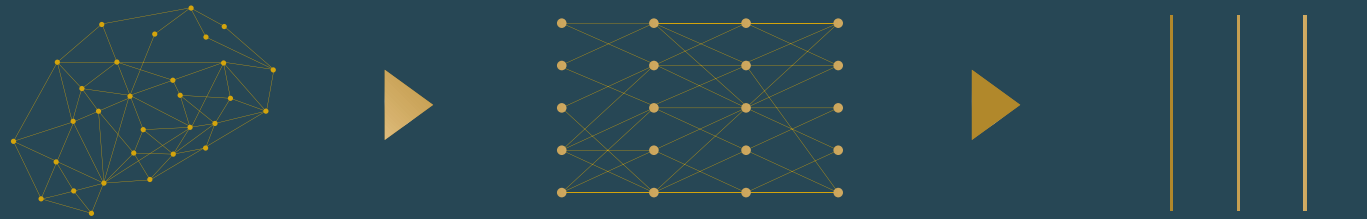
SYSTRAN has contributed significantly to the history of translation solutions. It is one of the emblematic actors:



- **1975:** SYSTRAN is the translation system used in space by the team of the Apollo-Soyuz mission.
- **1976:** SYSTRAN is chosen by the European Commission for all European language pairs.
- **1997:** SYSTRAN contributes to the creation of the legendary Babelfish, the first online translation tool.
- Between **2000** and **2007**: SYSTRAN provides the main Internet portals: Google, Altavista, Yahoo!, Lycos, Wanadoo, Voila, Free...
- **2009:** SYSTRAN innovates again by offering to the market the first hybrid translation engine combining linguistic rules with statistical treatment.
- **2013:** SYSTRAN becomes the official provider of translation solutions for the S-Translator application available with Samsung Galaxy S series and Note smartphones.
- **2014:** SYSTRAN is bought by CSLi, a Korean company, opening new markets in Asia.
- **2016:** SYSTRAN technology is embedded in the iTranslate application which is the main translation application on the iPhone.  
SYSTRAN launches the first Neural translation engine: PNMT™ for Pure Neural™ Machine Translation.

SYSTRAN PARTICIPATES IN THE NEW ERA OF **DEEP LEARNING** TO ACCOMPANY THE CHALLENGE OF CUSTOMER EXPERIENCE AT THE HEART OF TODAY BUSINESS MODELS

## neural machine translation



Since its creation, SYSTRAN has always been a pioneer in the automated processing of languages. SYSTRAN is the first software vendor to launch a neural engine available in its first version (released in October 2016) in 32 languages with a target of 60 before the end of the year. This PNMT™ translation engine for Pure Neural™ Machine Translation relies on the latest advances in artificial intelligence research and the excellence of French R & D at SYSTRAN, opening up exceptional opportunities for companies.

### Artificial intelligence: a learning translation machine

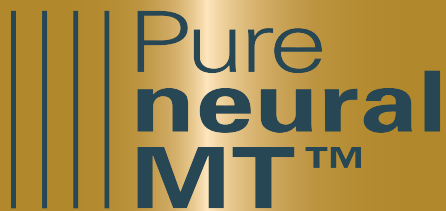
The major change of a neural engine (NMT for Neural Machine Translation) in the translation compared to current engines, statistical (SMT for Statistical Machine Translation) or rule based (RBMT for Rule Based Machine Translation) is brought by the artificial neural networks. Like the human brain, the machine learns through a learning process that can last several weeks in which it is subjected to a series of stimuli.

This training, based on complex algorithms at the forefront of Deep Learning, allows the neural translation engine to learn, to generalize the rules of a language on the basis of texts already translated, and to produce a quality of translation close to the human or even higher in some cases.

The logo for Pure neural MT™. It features a stylized graphic of vertical lines on the left, followed by the text "Pure neural MT™" in a bold, sans-serif font. The entire logo is set against a dark blue background with a gold gradient border.

Pure  
neural  
MT™

E X P E R I E N C E



### **A quantum leap in productivity gains and translation quality**

The PNMT™ engine will bring a significant improvement in generic translation quality. As a result, post-editing work, very time consuming being reduced, productivity will still be increased. This advantage is added to those who have already forged the reputation of SYSTRAN: integration of the customer's own terminology (e. g. Automotive, legal...); speed of implementation; security, data compliance and intellectual property of translated texts (which is impossible with free online translators). More than ever, SYSTRAN helps global companies to meet the challenges of globalization, by offering them a specialized translation solution and producing a quality of translation required for each domain.

### **A historic moment in machine translation**

Today, SYSTRAN provides access to the best quality of translation, next to that offered by a human, in contexts of use specific to each client: legal, automotive, manufacturing, tourism, etc. Companies can thus deploy their business strategy in several countries at the same time, dropping the language barrier and making phenomenal gains in terms of «time to market» and productivity.

### **A decisive competitive advantage to win the challenge of customer experience**

This new technology by saving time while improving the quality of translation, will enable businesses to meet the challenges of improving customer experience abroad. This well-known qualitative customer experience, based on the customization possible thanks to Big Data, is now at the heart of most commercial strategies. It is a sine qua non for business growth in the new digital era. From this perspective, with its new PNMT™ engine, SYSTRAN brings its customers a decisive competitive advantage.



## LEADING-EDGE SOLUTIONS IN RESPONSE TO THE MULTIPLE CHALLENGES OF GLOBALIZATION

If the Internet allows ubiquity, the global economy requires fluid and continuous communication with collaborators and partners scattered around the world and speaking different languages. The content broadcast via the Internet and social networks also requires permanent reactivity to offer the same brand experience in all parts of the globe. While these global structures offer many advantages, they can also present many risks, such as errors of understanding, costly delays, loss of confidentiality, or even non-compliance. Every industry faces its own challenges and requires well suited solutions. SYSTRAN helps them work smarter, faster and more productively and profitably, in 4 main applications areas:

### Multilingual collaboration

There is no magic formula applicable in all sectors. SYSTRAN helps industry and services businesses work smarter, faster and more productively and profitably. From financial institutions to car manufacturers, through legal firms, manufacturing and services, all are using SYSTRAN to better communicate and produce different types of multilingual content.

### Customer service and Productivity

By nature, technology companies and the software companies are global players, with customers and support teams spread across the planet. Responsiveness and customer experience quality are essential for them. SYSTRAN helps them optimize customer support and produce in large quantities multilingual content to shorten the time to market.

Internal translation teams or specialized agencies must ensure the same level of quality faster with smaller budgets. For these actors, reactivity and quality of content are essential. They rely on SYSTRAN to increase productivity and have a competitive advantage.

### Defence, Security and eDiscovery

The Defence and Security organizations face a multitude of threats, ranging from traditional conflicts to modern threats. For these actors, privacy and security are essential. To improve intelligence and efficiency in cross-border operations, they trust SYSTRAN to provide them with ultra-performance translation tools.



The eDiscovery processes increasingly require the processing of non-English documents (collection, analysis and consultation). The use of online translation solutions on the Internet is completely excluded for obvious reasons of confidentiality. As for human translation, it does not address the need for mass research and analysis of multilingual documents. Machine translation also responds to the budgetary constraints, the very short deadlines and the neutrality requested by this type of procedure.

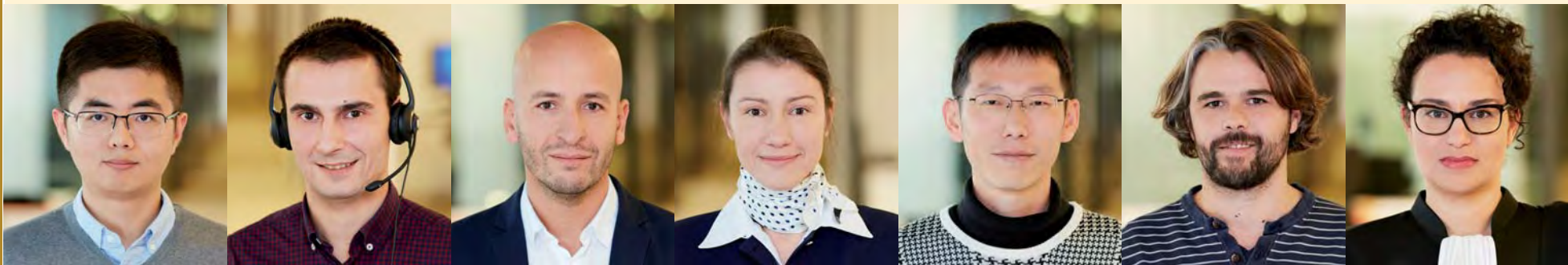
### **Embedded technology**

SYSTRAN technology can also be embedded in a third-party solution: a software or a mobile application. In particular, SYSTRAN is the official provider of translation solutions for the S-Translator application, a default application on the Samsung Galaxy smartphones of the S and Note series, and of iTranslate, the most downloaded translation application on the App Store. Another example: the software provider EXPERT SYSTEM has integrated SYSTRAN into its COGITO® software, specialized in the analysis of Big Data.

### **A unique value proposal for each customer**

SYSTRAN provides the best technology by actively contributing to the latest machine translation research to ensure the market's best of breed. This technology is a fundamental part of a complete and specialized solution for each customer. This solution is made up of an industrial software (meaning robust, tested on a large number of users, scalable, regularly updated...) associated with a unique know-how that transforms the product into a tailored solution.

We conduct a specific project in partnership with each customer to be seamlessly integrated into its IT environment in complete safety, adopted by the majority of users, and to provide the quality of translation expected.





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