Dear colleagues,

Trescal had a very good 2013 with the arrival in July of a new shareholder, Ardian, and significant growth, thanks to several key acquisitions (in California, the United Kingdom, Austria and Italy) and to the seizing of commercial development opportunities.

With the support of our new shareholder, we aim to continue to expand in 2014 and to transform ourselves by becoming even more industrialised and professional.

We rely on the commitment, know-how and professionalism of every employee, in order to achieve our ambitious growth objectives.

I wish you all an excellent 2014.

Editorial

Damien Chauveinc
C.O.O. & REGIONAL DIRECTOR UK

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“Microwave” metrology applies to measuring devices whose overall frequency is between 3 and 50 GHz, but that can reach 300 GHz. The boom in this field came with the advent of radar during World War II. This discipline involves relatively complex physical phenomena, requiring highly cumbersome mathematical tools: its development has been closely connected to the increase in IT systems’ calculating power. Frequency is measured in Hertz: 1 Hz corresponds to one oscillation per second and wavelength is measured in metres. The shorter the wavelength, the higher the frequency. In this field the different “bands” used are defined and recorded: the Ku band from 12 to 18 GHz, or Ka for example, from 26.5 to 40 GHz. Note that the RF band (between 500 MHz and 3 GHz – see Metrics #2) involves very close technologies in the bottom part of the field, used for radio communications, including mobile telephone, data communications, terrestrial TV broadcasting, radio navigation, etc.

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TRESCAL TAKES OVER AEROFLEX’S CALIBRATION SERVICES

SEPTEMBER 2013, TRESCAL ACQUIRED AEROFLEX’S CALIBRATION AND REPAIR BUSINESS: ATES (AEROFLEX TEST EQUIPMENT SERVICES) AND ITS TWO LABORATORIES IN THE UNITED KINGDOM.

ATES provides calibration and repair services for Aeroflex and other companies’ test and measurement equipment. Aeroflex wanted to concentrate on its core business, the manufacture and sale of micro-electronic components and testing equipment and Trescal seized the opportunity to acquire the ATES business. It is highly complementary to its own due to its high level of skills, innovative services offer and large corporate clients, particularly in the Defence sector.

ATES’ laboratories in Scotland (Donibristle) and London (Stevenage) are highly specialised and provide excellent service quality. ATES’s skills and accreditations are focused on the electronics field, from DC to 26.5 GHz in Donibristle up to 40 GHz in Stevenage with some very lucrative specificities: - Repair of all types of electrical instruments and maintenance of obsolete products; – Calibration of electromagnetic field measuring devices up to 40 GHz, a unique capability in the group, enabling most of the outsourcing in this segment to be re-internalised.

ATES also has highly specific know-how in optical measurements (visible and Infrared): - Power, attenuation, wavelength, reflection and distance for instruments and applications concerning transmission by fibre; – Laser energy measurements for characteristic wavelengths.

In addition to these technical capabilities, there is the “asset management” service supported by proven but constantly evolving IT tools and data reference points.

Trescal now manages a new 90-strong team and has begun to merge those of its laboratories located in the same areas: Hitchin was therefore transferred to Stevenage in September, and Glenrothes will be transferred to Donibristle in 2014.

The acquisition of ATES reinforces Trescal’s position in major sectors such as Defence, with clients like Thales and Selex.

> GROUP

HUMAN RESOURCES

“GIVING TRESCAL A COMMON DNA”

TRESICAL IS EXPANDING AND TRANSFORMING. MARIE-ZOÉ BEAUGRAND, HUMAN RESOURCES MANAGER, EXPLAINS HER VISION AND THE GROUP’S PROJECTS.

What is the role of Human Resources at Trescal?
Our country managers and senior management teams are attached to the idea that to grow sustainably the company must focus primarily on its people. Our aim is to structure Human Resources, placing the employee at the heart of our processes. We seek above all to provide a safe, motivating working environment, enabling staff to become more professional and take on new responsibilities. We want to give Trescal a common DNA. Bringing 1,800 employees together under the same banner is a challenge for a company growing internationally with a high rate of acquisitions. Our entrepreneurial spirit and our commitment to technical excellence form the basis of our identity. Our ambition is to find the right balance between the strength of being a coordinated group and the agility of being autonomous at local level. We have thus brought in transversal processes that were lacking before and are gradually fine-tuning our methods to structure the organisation into a “group” mindset, aiming at technical and human excellence.

How do you organise the management of talent in the group?
Trescal’s philosophy is to offer career opportunities for those who see themselves as entrepreneurs of their positions. Our HR strategy is to support the building of a group undergoing a transformation, providing tools and methods for recruitment, induction, annual performance and career follow-up. With the “people review”, each Steering Committee member reviews his/her team’s organisational structure and draws up an overall and individual development plan, shared, where appropriate, with the employee in question.

And what about knowledge transfer?
Knowledge transfer has always existed at Trescal, primarily from generation to generation: young technicians joining the company are mentored by an experienced one, enabling them to find practical applications for their theoretical knowledge. Placing staff at the heart of our processes means focusing on their training and we are currently structuring training plans per country. We have therefore set up an extremely promising tool in France and the UK: the Trescal Institute. These training centres serve to formalise requirements per area of competence (technical, IT, commercial, finance, managerial, etc.), good practices, and value our experts, the teachers who transfer their knowledge. We also provide technical training courses to our customers to promote Trescal’s expertise. The development of the Trescal Institute testifies to the stress we put on training and the development of our teams in general.

I would like to take this opportunity to thank the group’s operational teams with whom we have worked over the last 12 months. Thanks to your involvement in HR projects, we are improving our human relations every day. A happy 2014 to all of you!
VARIABLE APPLICATIONS

Microwave systems are everywhere and an absolute necessity in our technological world: the field covers a variety of civil and military applications such as satellite TV broadcasting, radar (detection, side looking airborne, guidance, meteorology), satellite positioning systems, electronics/IT (speed of processing of operations linked to the processor operating frequency), speed measurements (speed cameras and police radar), health (medical devices that monitor the vital signals emitted by the human body), and more... These technologies require specific frequency, power, attenuation, reflection and noise measurements and adapted, complex instruments whose costs tend to be proportional to the frequencies in question. Therefore, according to Thierry Feuvrier, Technical and industrial support manager (France), the field has very high technical and economic stakes, which explains why most of Trescal’s big customers, such as Airbus, Alcatel-Lucent, Astrium, STMicrowelectronic, Texas Instruments, Thales, and several countries’ MoD are part of it.

ACKNOWLEDGED KNOW-HOW

Spectrum analysers, vector network and phase noise analysers, signal generators (analogue, digital), noise source measuring devices: the field covers a wide variety of instrument families, which require different procedures.

By way of example, the telecommunication (civil and military) sector involves systems generally comprised of an emitter and a receiver. The emitter is comprised of a signal generator (combined with an amplifier), a transmission line and an antenna. The receiver is configured as a complementary, with an antenna, a transmission line and a receiver or analyser enabling information restore. Operating and maintaining of this type of configuration requires power measurements at the generator output using a power meter and its probe: losses in the transmission line will be assessed by a scale network analyser and finally, to optimise transmissions, a vector network analyser will be used to measure the reflection coefficients.

“Trescal can provide calibrations up to 50 GHz, and 110 GHz for certain measurements in the Paris and London (Yateley) laboratories”, Thierry Feuvrier explains. Trescal has recognised know-how, based on very low levels of uncertainties. The Yateley laboratory can carry out UKAS-accredited calibrations on S-parameter measurements in amplitude and phase. Jim Luff, laboratory manager, says: “by combining power and attenuation measurements, Trescal performs accredited spectrum analyser sensitivity calibrations at -120 dBm and with an uncertainty of ± 0.6 dB”.

In Toulouse (France), at another of the group’s leading laboratories in this field, Claude Hourman and his teams also perform accredited calibrations: attenuation, reflection and power up to 38 GHz, frequency up to 50 GHz, and noise factor up to 18 GHz. The Paris laboratory has capabilities up to 50 GHz (including phase noise measurement). In Denmark, the Silkeborg laboratory is the nation’s reference laboratory and is accredited for “in situ” operations. The United States is also highly skilled in this field, especially in Dallas, and now at the new San Francisco laboratory (Santa Clara), in California, with capabilities up to 50 GHz.

Repair of the instruments involved is also one of Trescal’s specificities, with a coverage rate for delivered material of over 80%, a great deal of experience in France (total sales of nearly 2 million Euro per annum), but also in Denmark and the United Kingdom, especially in the new Stevenage and Donibristle laboratories.

INVESTMENT AND AUTOMATION

“Despite very high costs, Trescal regularly invests in different systems to add to its skills” Thierry Feuvrier explains. The Toulouse laboratory, for example, has a TEGAM power probe bench enabling calibration with updating of the probes’ correction factors up to 50 GHz. Trescal has very high-level Agilent test benches in Paris and in California at the new Santa Clara laboratory. Bryan Wilkerson also explains that the United States has decided to make a significant investment in 2014 in test bays designed for in-situ operations from the Detroit laboratory, due to the growing demand in this sector.

In Denmark, Bo Severinsen’s team responsible for the Silkeborg laboratory are working to improve their uncertainties and capabilities for S-parameter measurements (reflection and attenuation coefficient); they are therefore using the VNA Tools II software developed by the Swiss National Laboratory, the METAS. The automation issue is very present. It means using software developed internally, in certain laboratories such as Silkeborg and Yateley. In France, Trescal has harmonised its test systems in all its laboratories and introduced the C-CAD Microwave software, providing automated checking of over 250 signal analyser and generator models with the opportunity to choose standards from among 50 type of instruments. Local partnerships or agreements with certain manufacturers such as Agilent, Rohde & Schwarz, Anritsu, Tegam and National Instruments (whose product range is evolving towards this field), affording different teams access to the best external software as well, as David Minesinger from the Dallas laboratory observes. Microwaves is the field in which Trescal, technologically, stands out most from the competition (capabilities, accreditations, repair) in several very high-level laboratories each covering different geographical areas and offering great opportunities for in-situ operations.

The latest acquisitions in the United Kingdom and in the United States and the 2014 projects in investment and automation will further strengthen this unique position in the market.
At the end of December 2013, John Adams left Trescal after 44 years in the metrology business. It’s time to focus on a great career that led him from working in the Ministry of Defence (UK) to being the UK technical manager for Trescal.

After studying Electrical & Electronic Engineering at Portsmouth Polytechnic (now known as University of Portsmouth), John kept furthering his training through university distance-learning programs. He joined the Ministry of Defence as an apprentice in the dimensional and physical parameters laboratory, such as dimensional and physical parameters, the supervisory and management ladder, improving his skills, beginning in DC low frequency work, and spending more time with his wife and dog.

During his years with Trescal, John’s focus has been on insuring good technical competency across the UK group, which holds the largest ISO/IEC 17025 accreditation in Europe. He is very keen on bringing young trainees to the team, and finds it satisfying that a number of them have gone on to become excellent engineers and contributors to Trescal’s growth.

After retiring, John will keep working with Trescal in a consultancy role, and will also take time for his hobbies: photography, golf, and wood-working, not forgetting spending more time with his wife and dog.