

## EDITORIAL

From the first aerial photograph taken by Nadar over Paris more than 150 years ago to the launch of the very high resolution Pléiades satellite, it has been a long and rich story that has taken place in France in the field of Earth observation, and a permanent and significant contribution to ISPRS activities.

In 1849, Aimé Laussedat was the first person to use terrestrial photographs for topographic map compilation. He is often considered as the "Father of Photogrammetry", although he himself called this technique *metrophotography*. He displayed the first known phototheodolite and the plan of Paris he had derived from his photographic surveys in the 1867 Paris Exhibition.

In the area of photogrammetry and remote sensing, the French scientific community has always been organized into a national society. The pioneers created the Laussedat section within the photography society. They published a bulletin and their major success was the organization of the ISP Congress in Paris in 1934, under the leadership of Prof. Henri Roussilhe (ISP Secretary general, 1930-1934). After World War II, the Geographic Service of the Army that had just been transformed into the civilian IGN (French Mapping Agency), made a wide use of photogrammetric techniques for topographic mapping and cultural heritage studies, mainly in France and in the former colonies. Prof. Georges Poivilliers, whose famous stereo plotters have been used worldwide for several decades, chaired several ISP commissions from 1938 to 1952. In 1959, in order to strengthen the French community, he brought together 180 photogrammetrists and founded the SFP (Société Française de Photogrammétrie) and the quarterly Bulletin now known as RFPT (Revue Française de Photogrammétrie et de Télédétection). This journal published high quality papers on theoretical photogrammetry, photo-interpretation and their applications, contributing to the promotion of aerial imagery towards the professional communities in which it could be useful. In the early sixties, the private companies involved in aerial photography acquisition and restitution created the SNEPPIM (Syndicat National des Entreprises Privées de la Photogrammétrie et de l'Imagerie Métrique). In the seventies, French scientists developed applications of the new Landsat images in their respective areas and contributed to the international research in image processing and remote sensing of the environment, often within ISPRS working groups. This research was a valuable support to the French Space Agency (CNES) and the IGN for the design of the SPOT program. The first SPOT satellite launched in 1986 was the first operational cartographic satellite designed for 3D mapping due to its stereoscopic capacities (after the Metric Camera, flown on Spacelab in 1983, was used for only a few weeks). More recently, the HRS sensor flown on SPOT-5 in 2002 was the first high resolution stereoscopic camera with a large coverage capacity. This camera was tested by ISPRS through a joint ISPRS-CNES assessment program, from 2003 to 2004

and the results were presented at the Istanbul Congress. These technological innovations and related research contributed to unify photogrammetry and remote sensing into a single area, and therefore to make a society for "photogrammetry and remote sensing" more meaningful than ever.

After 150 years the present technological trends also consist in building bridges between communities :

- Strengthening the link between computer vision and photogrammetry has been one of the major results of Commission III under French presidency ;
- The launch of the first Pléiades satellite in December 2011 has offered extremely high resolution and acquisition capabilities that are no longer tributaries of orbital constraints, so that remote sensing users will not detect any difference between aerial and satellite imagery.

Parallel to its outstanding developments in high resolution optical imagery, the French community has been involved in the design and applications of wide field radiometers and imaging radar sensors, mainly in the framework of ESA (European Space Agency) programs.

Hundreds of PhD theses are prepared and published every year in research labs where Earth observation techniques are either developed (sensors, algorithms...) or applied to a variety of environmental fields (forestry, geo-science, urban studies, coastal monitoring, risk management and many others).

Although the two major French cities in the field of Earth observation are Paris and Toulouse, several regional scientific and industrial poles have long been developed in medium size cities such as Lyon, Marseille, Strasbourg or Brest, some of them having thematic specificities such as mountain environment studies in Grenoble or agricultural landscape modelling in Rennes or Montpellier.

In order to illustrate the achievements of this wide and dynamic national community, we decided to publish an overview of the research and development carried out by French teams in the main areas of photogrammetry and remote sensing. While our journal is generally dedicated to publishing papers that are written in French and read in French speaking countries, this special issue number 200 is exceptionally written in English to reach a broader international community.

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