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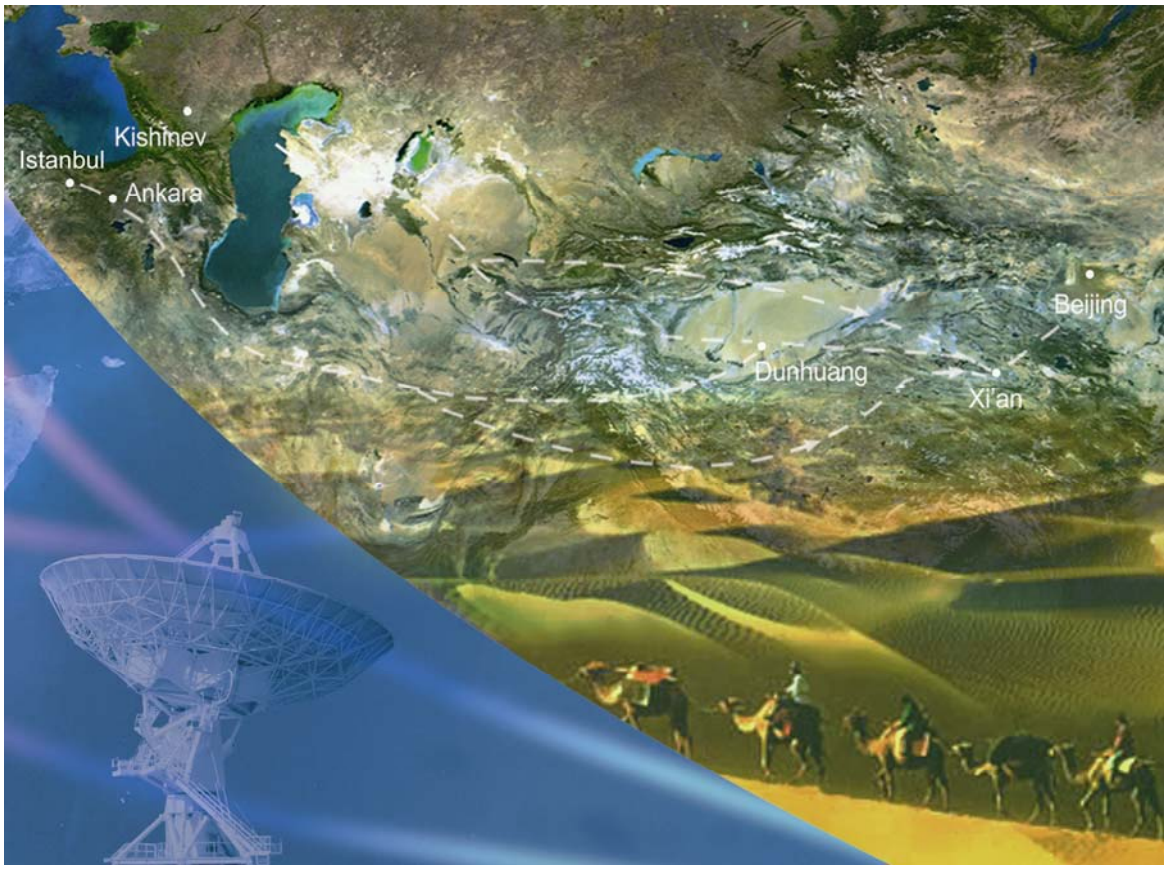

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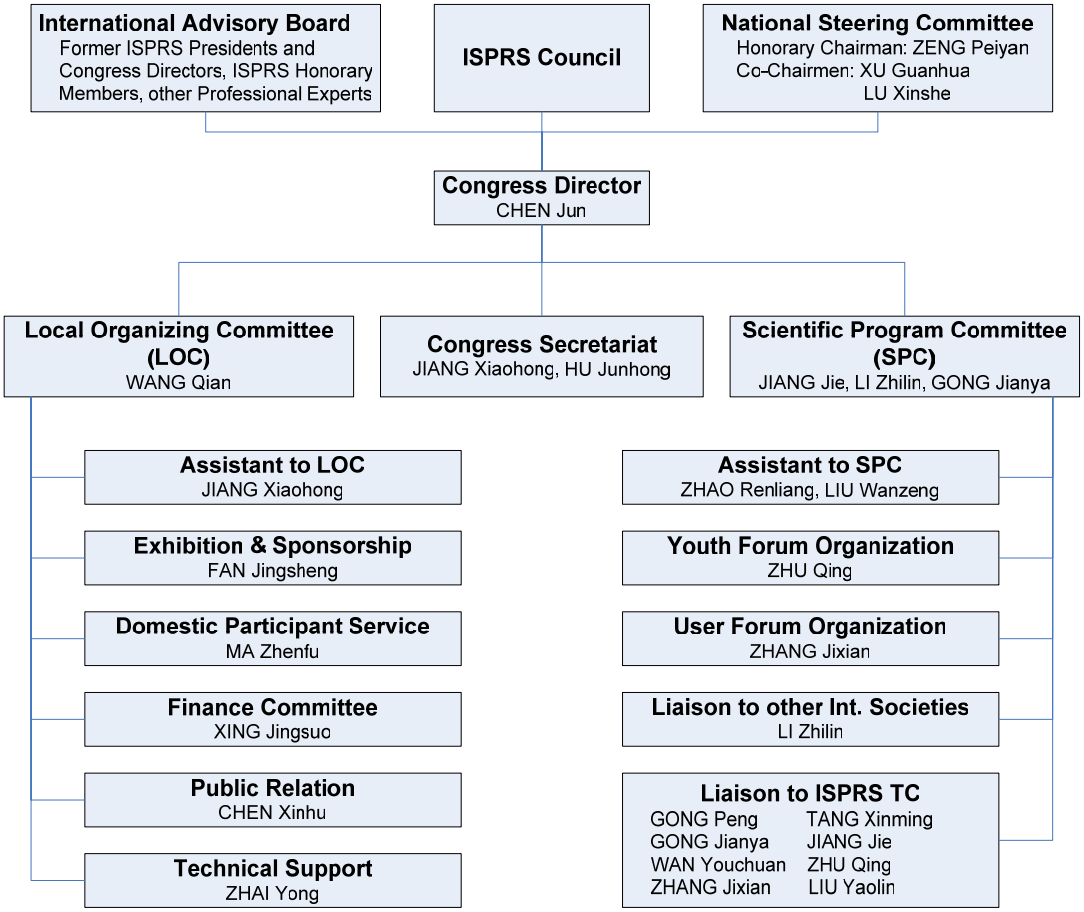

Introduction

The decision by the General Council of ISPRS taken during the Istanbul Congress to set up a brand new Technical Commission VII on:" Thematic Processing, Modeling and Analysis of Remotely sensed Data" has turned out to be a very incisive and successful one. During the past four years, this new Technical Commission has organized so many conferences and workshops resulting in the publication of hundreds and hundreds of scientific and technical papers. Also, for this Beijing Congress, TC VII has received a large number of high level papers, which are included in these Proceedings.

WG VII/1 on Fundamental physics and modeling has produced many research results advancing our understanding of the basic bio physical and biochemical principles involved in remote sensing.

The WG VII/2 on "Information Extraction from SAR Data" has made some significant advances in various aspects of SAR Technology such as interferometry, polarimetric SAR and on extracting useful information from the increasing number of high resolution SAR satellites currently available. Their results are presented in these Proceedings.

The Proceedings do not report any great breakthroughs or developments in hyperspectral data processing or information extraction,(WG VII/3) over the last four year period, but this may change in the near future, with more airborne hyperspectral systems becoming commercially available and more satellites with many spectral bands being planned for the coming years.

In the published papers from WG VII/4 on Advanced Classification Techniques, it is clear that the advent of high resolution satellites such as Quickbird and Worldview from DIGITAL GLOBE , has drastically caused a shift in emphasis from pixel-based classification algorithms to texture-based and context-based classification methods.

Probably the fields in which the most research has been carried out over the past four years as exemplified by the many high quality papers in these fields included in thee Proceedings, have been those of WG VII/5 and WG.VII/6, on "Processing of multi-temporal data and change detection" and "Remote Sensing Data Fusion" This is probably due to the direct and important applications that these methodologies have in areas such as Global Change studies, in Environmental Security fields, as well as for all forms of monitoring of the many changes occurring on our Planet, and because of the need to integrate data from an ever increasing number of data sources in order to extract relevant information for Decision Makers.

This Volume also includes some interesting papers from the work of WG VII/7 ON "Innovative problem solving methodologies for Less Developed Countries. These show that many researchers with low research budgets can develop very relevant methods to solve certain issues by using less financial resources but more brain resources!!

Of course, it is not much use developing a new algorithm or new technology without relating this to applications or problem solving. Hence there should always be a close link between the research and work carried out by TC VII and that done by TC VII on Remote Sensing Applications and Policies". Therefore the reader of this Volume, is also encouraged to read the companion Volume of TC VIII, as well as the Volume from the Inter-commission WG on "Derivation of global data, environmental change and sustainability indicators (Inter-commission VII/IV).

In conclusion, I would like to thank the Vice-President of our TC VII, Professor Andrew Skidmore, and all the authors of the papers in their support in producing this volume. Of course, the work of all the Working Group Chairs, their Co-Chairs and WG Secretaries and Regional Coordinators is also gratefully acknowledged for their help in soliciting the papers, reviewing and accepting them for this ISPRS Volume. To these, should be added the gratitude to the ISPRS Council and the Congress Programme Committee.

On a personal note, I would like to thank my organization, the ITC for its support over the past four years, allowing me to carry out the enjoyable task of TC VII President.

John van Genderen, President of ISPRS Technical Commission VII
28th May, 2008 .

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