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Preface

Globalisation of network and services is stimulating a new awareness about the role of satellites and related applications. Even in case "*becoming global*" is "just" seen as a convergence of technologies, it implies the effective exploitation of all components (terrestrial, air and space-based) and media (wired, wireless) in a fully integrated and, in perspective, seamless way to the end-users.

A new and important integration strategy concerns *Navigation* and *Communications* architectures and services. The vision involves an "active" integration, proposing services, applications, integrated business opportunity able to merge two worlds – communications and navigation - that have been considered apart for years.

The *2006 Tyrrhenian International Workshop on Digital Communications (TIWDC'06)* was purposely devoted to the topic of *Satellite Navigation and Communications Systems*, addressing specifically their integration in the satellite scenario.

TIWDC'06 offered to the international satellite navigation and communications community an opportunity of exchanging results and perspectives towards the implementation of the global integrated vision. The workshop activities have been developed under the technical co-sponsorship umbrella of the IEEE AESS (Aerospace and Electronic Systems Society) and the ComSoC (Communication Society), that are gratefully acknowledged for their trust and support.

This volume, that gathers the contributions presented at *TIWDC'06*, includes the state-of-the-art of system concepts, envisaged services and applications as well as enabling technologies for future satellite integrated navigation and communications systems. The contributions come from leading international experts and researchers in the field.

Chapter I *Trends of Communications and Navigation System Integration* deals with the vision of the integration concept, including dual use, based on current and foreseen satellite systems.

Chapter II *Navigation Satellite Technologies* addresses the enabling technologies for future navigation systems.

Chapter III *Satellite Navigation: Perspectives and Applications* describes the envisaged applications and proposals of new navigation services.

Chapter IV *Advanced Satellite Communications Systems & Services* deals with architecture and technologies for near future communication systems.

Chapter V *Perspectives in Satellite Communications* addresses the medium-to-long-term trends in satellite communications.

The Editors would like to express their sincere and grateful appreciation to the session organisers, whose dedicated and enthusiastic effort has rendered the *TIWDC'06* an event of highly scientific value and importance, to the Technical Programme Committee chair Prof. G. Galati and valuable members for their support and to all authors for their state-of-the-art contributions.

Finally, the Editors would also like to thank the members of the Organising Committee for their highly appreciated and dedicated work, that gave a deep contribution to the success of *TIWDC'06*.

Enrico Del Re
Marina Ruggieri

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