

# Preface

The Electronic Navigation Research Institute, ENRI, is a national laboratory in Tokyo, Japan. ENRI specializes in air traffic management, communication, navigation, and surveillance, i.e., ATM and CNS, for aviation. As one of its contributions to aviation, ENRI organizes a workshop titled “ENRI International Workshop on ATM/CNS (EIWAC)” to develop civil aviation by exchanging and sharing updated information about ATM/CNS in the world. The third EIWAC, EIWAC2013, was held in February 2013 in Tokyo. The agenda of EIWAC2013 included keynote speeches by opinion leaders in civil aviation, a panel discussion, and technical presentations by specialists. In addition, the exhibitions by institutes or companies from the aviation field provided good opportunities for exchange and discussion of samples or data.

This book is designed to provide a view of current and future ATM and related systems discussed at EIWAC2013. The topics that appear in this book span a wide area, ranging from the EIWAC keynote speeches and mathematical models of aircraft trajectory to error analysis of systems in the field. The technical topics were selected from the proceedings presented in the technical sessions for EIWAC2013. The presentations were appreciated for their usefulness by attendees from the areas of ATM and CNS. In addition, the presentations were recognized by reviewers as works with significant contributions on new proposals, methods, experience, or surveys summarizing essential papers in related areas. After the selection process, the articles were compiled for this book.

An introduction to EIWAC2013 is provided in Part I. The papers on ATM such as conflict detection, separation assurance, trajectory prediction, and optimization are included in Part II. Papers on tools and evaluation for ATM are in Part III, and those on theory and experience for improving CNS are in Part IV. More than ten papers in the CNS area were presented at EIWAC2013 but only two of those are found in this Part. Most contents of the papers not in this book will appear in other publications such as related project reports on CNS systems. Finally, Part V contains a paper that is refined material for a tutorial session.

I hope that this book will be a good record of what researchers achieved at EIWAC2013 in the way of drafting the future for ATM and CNS. I hope, also, that

this book will be distributed so as to allow these excellent research results to be accessible to readers throughout the world.

I would like to express my deep appreciation to the members of the EIWAC2013 Technical Program Committee and the Associate Editors for their special support in drafting the editorial policy. They are listed in this book with special thanks.

Tokyo, Japan

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