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## FOREWORD

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### Special Section on Position Papers Exploring Innovative Intelligence and Technologies in Communications

Expansion of the field of communications has unlimited boundaries, and research and development (R&D) has been continuously pursued to support this expansion. A lot of new key ideas are emerging and open up novel research areas, which become driving force of further development of communications technologies. Aiming at the world's best performance has been also one of the major driving forces of R&D, and its resulting outputs lead to the stimulation of the R&D itself in turn. We planned in this special section to publish *position papers* which exhibit novel ideas and/or significant achievements leading to such innovative technologies.

We define *position paper* as a technical paper having at least one of the following features:

- Introduction of novel viewpoints, frameworks, and/or paradigms,
- Proposal of technologies or methods based on innovative ideas (not just extension of existing technologies),
- Novel ideas with the potential to bring about innovative technologies, and
- Prototyping or experimental results with noteworthy features, such as achievement of the world's best performance or the world's first realization.

We accept papers having the significant feature(s) above, while we do not require comprehensive evaluations of the performance or the effectiveness which are requested for regular papers.

Submissions of papers on whole research areas covered by the IEICE Transactions on Communications were accepted in this special section. In order to invite many submissions from the wide fields, we set two deadlines of the submission. Correspondingly, this special section is published in two separate issues in January and March 2015. This is the first shot of the two.

Responding to Call For Papers, we received 10 submissions before the first deadline. It was quite a tough work to pick out such novel and innovative ideas, however the editors of the special section gave of their time and effort to discuss "what a *position paper* should be" and judged the paper in line with the discussion. Please note that *position papers* in this special section are in the PAPER rank, not in the previously-existing LETTER rank. The review was carried out fully complying with the decision criteria of the PAPER category. More than two reviewers were assigned to a paper and careful and strictly-fair reviews were done. Marathon discussion was devoted to every single submitted paper for its decision. In the discussion, we highly rated pregnant papers with new ideas and suggestions. Finally we accepted 3 papers for publication. The number of the accepted papers is not great however I believe all of them are great stimulant to the readers to "explore innovative intelligence and technologies."

As closing my message, I would like to express my sincere appreciation to all of the people supporting this special section, the authors, the reviewers, the editors, and the IEICE publishing office.

#### Special Section Editorial Committee

**Guest Editors:** Kazunori Hayashi (Kyoto Univ.), Takahiro Matsuda (Osaka Univ.)

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Hisato Iwai, Guest Editor-in-Chief

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**Hisato Iwai** (*Member*) received the B.E., M.E., and Ph.D. degrees from Kyoto University, Kyoto, Japan in 1987, 1989, and 2001, respectively. In 1989, he joined KDD R&D Laboratories, where he was engaged in research on antennas and propagations in radio communication systems. He is currently a professor at Doshisha University, Kyoto, Japan. His current research interests include propagation models in various radio communication systems, radio transmission system, applied radio systems and so on. He received the Young Researchers' Award of IEICE in 1994 and the Best Paper Award from IEICE 2008. He has participated for more than 10 years in editing activity of the IEICE Transactions on Communications and is currently being in charge of Editor-in-Chief of the transactions.

