Foreword

This book edited by Prof. Pattarasinee Bhattarakosol, “Intelligent Quality of Service Technologies and Network Management: Models for Enhancing Communication”, is an excellent reference for QoS administrators, developers, graduate students, research workers, or anyone who needs to understand QoS technology and network management. This book is comprehensive in its coverage of QoS technologies and network management, providing enough theories, models and practical examples in each chapter.

Each chapter in this book is independent of each other. Nevertheless, there is a common theme through all chapters. QoS and network management are the link that holds all chapters. Also, this book deals with various QoS subjects very thoroughly and considers many aspects even though it discusses QoS technologies and network management at large.

This book covers a diversity of QoS research fields, environment and systems. Especially, as a case study, research and academic networks, which are supported by GEANT and which encompasses multiple independent NRENs(National Research and Education Networks) and other international and national R&D networks, are a distinguished example.

The effective bandwidth management and data loss probability allow us to guarantee the QoS parameters required by the traffic flows. This book includes estimation concepts and approaches based on network traffic modeling.

The network of today requires a flexible and a scalable QoS management mechanism in order to handle traffic flows throughout multiple domains, like IPv6 domain, mobile domain and private domain. The manager in charge of QoS management communicates with other domains managers to ensure that traffic flows are guaranteed. This book introduces the mechanism of QoS manager to process and reserve QoS inside a domain.

The optimization of network carrier and traffic flow using routing decision system presented in this book enables dynamic admission control to admit user flows into the network. Also, it creates a management environment in which it is easy to deploy network policies that benefit both network carrier and user traffic flows.

In addition, this book involves principal QoS issues with relation to heterogeneous networks, pricing scheme, various routing methods, traffic modeling, QoS case studies, intra/inter domain management, and so forth. Also, although a reader is not a well-informed person, they can get the point because this book describes primary issues clearly and concisely.

To sum up, “Intelligent Quality of Service Technologies and Network Management: Models for Enhancing Communication” will put the reader inside QoS technologies and network management us-
ing diverse ideas and approaches in each high quality chapter. Experts who have interests in QoS and Network Management will find this book very helpful.

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