

Preface

The use of a natural language to describe the functionality in transmission networks and transport equipment will lead to misinterpretation of the written requirements and cause equipment not to interoperate. The growth in complexity of the functionality and diversity of the optical transport network capabilities to be described, and the number of different users, for example, system engineers, marketing, customers, developers, standards representatives, meant that it was necessary to develop and define a common language.

In this book I describe this language, i.e. the methodology that is used to model the functionality of transport networks and transport equipment. The functional modeling methodology is applicable in connection-oriented networks, e.g. PDH, SDH, SONET, OTN, as well as connectionless networks, e.g. Ethernet, MPLS. The emphasis in this book is on the explanation of the functional modeling methodology and its use as a description tool. Examples are provided to help the reader in understanding modeling technique.

Based on my experience with the use of functional models over the past ten years, I expect that many readers of this book will be System Engineers and Functional Architects who are employed by Optical Transport Network operators, Optical Transport equipment manufacturers and device manufacturers, especially those who are responsible for transport-related functionality at Networking or Network Element level. It will help them to use and develop functional models in the area of their responsibility.

I assume that optical network, equipment and device development engineers as well as system verification, system test and interoperability test engineers will use this book as a guideline.

Finally, I hope that this book will be used by students in telecommunications technology and by members of the IEEE community as a reference to acquire the skill of functional modeling.

