

Preface

In the era of globalisation, the future success of the railway industry depends significantly on the worldwide sharing of knowledge. That exchange is the only way to find the most effective solutions and to avoid unnecessary parallel developments. Railway signalling is still one of the very few sectors of technology in which national solutions differ substantially.

Up to now there have been no common terms and definitions, and there is a corresponding lack of understanding of the underlying principles. Also, adapting new technologies to different national practices is very costly. In the technical literature, descriptions of railway signalling principles concentrate on the railways of a single country, or group of countries. Even at universities, students learn almost exclusively the signalling technology of their own country.

In the 21st century, this is extremely disappointing. Just to compare different national solutions is not sufficient. What is really needed is a generic description of railway signalling principles that allows the reader to look outside the restrictive national point of view.

This textbook was written with that intention in mind. A team of railway signalling and operations experts from six countries and three continents have written this, the first generic signalling textbook in the world. Instead of beginning with the technical elements, it starts with an analysis of railway operation processes. Due to very different operating philosophies, an understanding of these practices is essential for an understanding of signalling principles. The chapter on operations is followed by a chapter on basic interlocking principles. These two form the basis for the remaining chapters, which describe technical components, signalling and train control systems.

The authors hope that this textbook will become a valuable resource for students at universities and colleges, and for practitioners in the railway environment alike. Comments from readers to be considered in future editions are always welcome. The authors wish to thank the editorial staff of Eurailpress for their support in this venture.

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