

PREFACE

This book has been written to present a comprehensive overview of the worldwide development of telecommunications in a single volume. Ample information on the evolution of various domains of telecommunications in specific countries is preserved in numerous specialized books, magazines, and other publications in libraries of universities and museums, but a single book in the English language covering the entire field of worldwide telecommunications does not exist. To fill this gap, I have collected, evaluated, interpreted, and cross-checked almost a hundred books and even more journals over the last 15 years. Based on my experience and knowledge of telecommunications, I have condensed their contents into a chronological story of the worldwide development of telecommunications. In the interest of truly worldwide coverage, I give information on telecommunications events that took place in over 100 countries and include statistics for over 200 countries. Writing the worldwide history of telecommunications necessarily means using information already published by many experts in their fields. George P. Oslin spent 35 years researching telecommunications documents and interviewing the pioneers or their descendants before, at the age of 92, submitting the manuscript for his fascinating book *The Story of Telecommunications*. Oslin's book, which he relates to his nation's history, was a great inspiration and a valuable resource for me to write this book related to worldwide history. Instead of interviewing pioneers, I have endeavored to find the best published sources available for each subject covered in my book, and thus I could reduce the manuscript preparation time to about five years.

Numerous statements in the book are the result of combined information found in two or more sources and occasionally, cross-checked with a third or even a fourth source. Making reference to all those sources within the text would have a negative effect on readability, so I have cited the references at the end of each chapter. I have mentioned the source directly in the text only in the few cases where a larger portion was based on a single source.

I cover telecommunications starting with optical telegraphy at the end of the

eighteenth century; followed in the nineteenth century by electrical telegraphy of coded signals, images, and written text transmitted via open wires and terrestrial and submarine cables; followed by telephony and telephone switching and by radio transmission. Then follows the entire range of new technologies developed in the twentieth century: intercontinental radio, mobile radio, radio-relay, cryptography, satellites, coaxial and optical fiber, terrestrial and submarine cable networks, telex, telefax, electronic switching, cellular radio, and the convergence into multimedia of most of those technologies via a global information infrastructure. To enable adequate coverage of this wide range of technologies within the scope of a single volume, I have excluded the domains of radio and television broadcasting, navigation, telemetry, and computers. This book covers the history from the end of the eighteenth century up to the end of the twentieth century. Some events that happened between January 2001 and December 2002 which were relevant to the status described in the text are covered in footnotes.

I took special care to present the evolution and development of telecommunications as a human achievement attained thanks to the perseverance of many ingenious pioneers who had the vision and capability to turn the discoveries and inventions of contemporary scientists into new and useful applications. Wherever appropriate and available, I include personal information about the major pioneers and protagonists. Applications of the new telecommunication devices have been introduced by several newly founded companies, manufacturers, and service providers, which grew, merged, and still exist or have disappeared. Those companies made telecommunications happen and, again, wherever appropriate and available, I include briefly the relevant industrial history.

For those readers who are not familiar with telecommunications technologies and want to obtain a better understanding of the subject matter, I have included Technology Boxes, which give a concise description of the underlying technologies in more technical language. Numerous footnotes give additional related details.

I have written this book without sponsorship or obligation to any company. Moreover, I have endeavored to present the history in an objective way with balanced coverage of significant events in several countries without overemphasizing the achievements of particular companies or specific countries.

Telecommunications is a nonpolluting employment-generating industry which plays an ever-increasing role in our human relations. It is an indispensable tool for economic growth and better distribution of wealth. My hope is that this book will contribute to the preservation and greater awareness of the worldwide heritage of telecommunications and to responsible future applications.

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Todtnauberg, Germany
April 2002