

**WIRELESS TELEGRAPHY: ITS
ORIGINS, DEVELOPMENT,
INVENTIONS, AND
APPARATUS**

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Wireless Telegraphy: Its Origins, Development, Inventions, and Apparatus by Charles Henry Sewall

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CHARLES HENRY SEWALL

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PREFACE

THE aim of this book is to present a comprehensive view of wireless telegraphy, its history, principles, systems, and possibilities in theory and practice. In considering inventions controversy has been avoided, although the claims of individual inventors have been carefully defined. Because of the complexity of the subject a certain amount of allusion in one part, to matters dealt with in another, has been inevitable; but it is hoped that such repetition may prove helpful to the reader. The book itself is designed to be of use both to the general public and to the technical student.

The author begs to acknowledge to the publishers his obligation for kind co-operation; to the *Century Magazine* for extracts from the article by Mr. McGrath of St. Johns; and to the *Scientific American* for extracts and diagrams from an article by Mr. A. F. Collins.

CHARLES H. SEWALL.

NEW YORK, September, 1903.

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for ensuring transparency and accountability in financial operations.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It highlights the need for consistent and reliable data sources to support informed decision-making.

3. The third part of the document focuses on the role of technology in modern data management. It discusses how advanced software solutions can streamline data collection, storage, and analysis processes, leading to improved efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data security and privacy. It provides insights into best practices for protecting sensitive information and ensuring compliance with relevant regulations.

5. The fifth part of the document explores the future of data analytics and its potential impact on various industries. It discusses emerging trends and technologies that are expected to shape the data landscape in the coming years.

6. The sixth part of the document concludes by summarizing the key findings and recommendations. It emphasizes the importance of ongoing monitoring and evaluation to ensure that data management practices remain effective and up-to-date.

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WIRELESS TELEGRAPHY.

PART I.

PROPHECY.

"Canst thou send lightnings, that they may go, and say unto thee, 'Here we are?'" — JOB, 38th chapter, 35th verse.

IN 1632 Galileo wrote a dialogue of which a Latin translation appeared at Leyden in 1700. Mr. Robert Sabine, in his work on the *Electric Telegraph*,¹ rendered into English a paragraph from the Latin version, wherein Sagredus, one of the colloquists, is made to say :

"You remind me of one who offered to sell me a secret art, by which through the attraction of a certain magnet needle it would be possible to converse across a space of two or three thousand miles. And I said to him that I would willingly become the purchaser provided only that I might first make a trial of the art, and that it would be sufficient for the purpose if I were to place myself in one corner of the sofa and he in the other. He replied that in so short a distance the action would be scarcely discernible : so I dismissed the fellow, and said that it was not convenient for me just then to travel into Egypt or Muscovy for the purpose of trying the experiment, but that if he chose to go there himself I would remain in Venice and attend to the rest."

In the sixties of the nineteenth century Mr. Sabine supposed this expression to be a prescient description of telegraphy with wires. In 1877 it could be better associ-

¹ D. Van Nostrand, New York, 1869.

ated with telephone transmission over a conductor. Today, however, we can readily see that Galileo wrote of "Wireless Telephony," an art not quite arrived. It will be observed that as translated the words are "to converse," not "to signal"; and the correctness in translation is corroborated by the fact of the action at short distance being undiscernible. Readers of this generation will understand that between two persons sitting upon the same sofa, telephonic action is not palpable; whereas nearness of sender and receiver is no bar to the observation of signals.

It may be that Galileo had read the "Prolusiones Academicæ" of Strada, published in 1617, and which described communication at a distance by means of two needles that had been touched with lodestone. These needles were mounted upon pivots. If either of them were moved it caused its mate to turn and to point in the same direction as itself. Possibly Galileo had an independent vision of wireless communication, seeing farther than Strada, and dared make of it but guarded mention. It is only necessary to read Galileo's biography to realize how disastrous in 1632 might have been the consequences of an announcement in scientific discovery.

A work entitled "Voyage du Jeune Anacharsis" by the Abbé Barthélemy, published in 1788, mentions alphabetic dials, having hands or pointers which were electrically magnetized; these hands on the clock faces being analogous to Strada's description one hundred and seventy years before.

James Bowman Lindsay in 1854 made calculations to demonstrate that stations in England and Scotland could, without wires, signal across the Atlantic to stations in America.