

NIST Special Publication 800-121
Revision 2

Guide to Bluetooth Security

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C O M P U T E R S E C U R I T Y

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Abstract

Bluetooth wireless technology is an open standard for short-range radio frequency communication used primarily to establish wireless personal area networks (WPANs), and has been integrated into many types of business and consumer devices. This publication provides information on the security capabilities of Bluetooth and gives recommendations to organizations employing Bluetooth wireless technologies on securing them effectively. The Bluetooth versions within the scope of this publication are versions 1.1, 1.2, 2.0 + Enhanced Data Rate (EDR), 2.1 + EDR, 3.0 + High Speed (HS), 4.0, 4.1, and 4.2. Versions 4.0 and later support the low energy feature of Bluetooth.

Keywords

Bluetooth; information security; network security; wireless networking; wireless personal area networks

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The authors, John Padgette of Accenture, John Bahr of Bahr Engineering (representing Philips Healthtech), Mayank Batra of Qualcomm, Marcel Holtmann of Intel, Rhonda Smithbey of Spanalytics, Lily Chen of the National Institute of Standards and Technology (NIST), and Karen Scarfone of Scarfone Cybersecurity, wish to thank their colleagues in the Bluetooth Security Experts Group (SEG) who contributed technical content and reviewed drafts of this document. The authors greatly appreciate the comments and feedback provided by Mark Nichols of Spanalytics, and the contributions of Alan Kozlay of Biometric Associates, LP. The authors would also like to acknowledge Catherine Brooks of the Bluetooth SIG technical staff for providing the new graphics.

Note to Readers

This document is the second revision to NIST SP 800-121, Guide to Bluetooth Security. Updates in this revision include an introduction to and discussion of Bluetooth 4.1 and 4.2 security mechanisms and recommendations, including Secure Connections for BR/EDR and low energy.

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