

802.11 Security Overview and Master Resource Page

Bernard Aboba has organized the very extensive "The Unofficial 802.11 Security Web Page" which has links into the current research literature, commentary and standards work at: <http://www.drizzle.com/~aboba/IEEE/>. This is the best starting point to learn about 802.1X and all 802.11 wireless security.

Books of Interest

"**Wireless Security: Models, Threats and Solutions**," by Randall K. Nichols *et al.*; McGraw-Hill Telecom Professional Books, 2002 [ISBN: 0-07-138038-8]

"**Applied Cryptography**," by Bruce Schneier, John Wiley & Sons, 1996 [ISBN:0-471-11709-9]

"**802.11 Wireless Networks: The Definitive Guide, 2nd Edition**" by Matthew Gast; O'Reilly Networking, 2002 [ISBN: 0-596-10052-3]

Design and Deployment

Wireless LAN Deployment and Security Basics:

http://www.extremetech.com/print_article/0,3428,a%253D13521,00.asp

802.1X/Wireless deployment with Windows XP:

<http://www.microsoft.com/technet/prodtechnol/winxppro/deploy/wlandply.mspx>

Standards and Futures

IEEE 802.11i. This standard will eventually cover 802.1X and its application in the wireless arena, and fill in some holes with 802.1X and EAP; <http://grouper.ieee.org/groups/802/11/>

Protocol for carrying Authentication for Network Access (pana). This group is attempting to develop a general protocol to be used by a user's device when wanting network access. All current protocols are tied to the underlying access type, such as PPP: <http://www.ietf.org/html.charters/pana-charter.html>.

Various Wireless Tools and Hacks

AirSnort: <http://sourceforge.net/projects/airsnort/>

Snort: <http://sourceforge.net/projects/snort/>

WepCrack: <http://sourceforge.net/projects/wepcrack/>

Homebrew antenna shootout: <http://www.turnpoint.net/wireless/has.html>

Hacking with a Pringles tube: <http://news.bbc.co.uk/1/hi/sci/tech/1860241.stm>

News

Glenn Fleishman's Wi-Fi Networking News (<http://wifinetnews.com>)

802.11 Planet (<http://www.wi-fiplanet.com/>)

Papers and Articles

Arbaugh, William A., Narendar Shankar, and Y.C. Justin Wan. "Your 802.11 Wireless Network has No Clothes." March 30, 2001. Paper available from <http://www.cs.umd.edu/~waa/wireless.pdf>.

Borisov, Nikita, Ian Goldberg, and David Wagner. "Intercepting Mobile Communications: The Insecurity of 802.11." Published in the proceedings of the Seventh Annual International Conference on Mobile Computing and Networking, July 16-21, 2001. Paper is at <http://www.isaac.cs.berkeley.edu/isaac/mobicom.pdf>.

Fluhrer, Scott, Itsik Mantin, and Adi Shamir. "Weaknesses in the Key Scheduling Algorithm of RC4." Presented to the Eighth Annual Workshop on Selected Areas in Cryptography, August 2001. Available online from many locations; see http://downloads.securityfocus.com/library/rc4_ksaproc.pdf

Gast, Matthew. "Seven Security Problems of 802.11 Wireless." May 24, 2002. (<http://www.oreillynet.com/pub/a/wireless/2002/05/24/wlan.html>)

Karygiannis, Tom, and Les Owens. "NIST Special Publication 800-48: Wireless Network Security 802.11, Bluetooth and Handheld Devices." NIST, November 2002. http://csrc.nist.gov/publications/nistpubs/800-48/NIST_SP_800-48.pdf (may be better to cite the short URL of <http://csrc.nist.gov/publications/nistpubs/>)

Marshall, Trevor. "Antennas Enhance WLAN Security".

http://www.byte.com/documents/s=1422/byt20010926s0002/1001_marshall.html

Mishra, Arunesh, and William Arbaugh. "An Initial Security Analysis of the IEEE 802.1x Security Standard." February 6, 2001. Paper available from <http://www.cs.umd.edu/~waa/1x.pdf>.

Wi-Fi maps: (<http://www.netstumbler.com>, <http://www.wifimaps.com>)