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An Experimental Encapsulation of IP Datagrams on Top of ATM

Status of this Memo

This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

Abstract

This RFC describes a method of encapsulating IP datagrams on top of Acoustical Transmission Media (ATM). This is a non-recommended standard. Distribution of this memo is unnecessary.

Overview

The modern laptop computer of today often contains the hardware needed to perform wireless communications by using Acoustical Transmission Media, i.e. sound waves. Until this moment there has been no standard on how to run IP on such media. This document is an attempt to fill this silence.

Frame transmission

The IP datagram is divided into four-bit chunks, in network beep order, and converted to characters according to the table below. A single "b" character is prepended as a frame start signal, the characters are then transmitted in ordinary morse code by modulating a steady tone on and off. The frequency of this tone is also known as the Acoustical Signature (AS number) of the sender.

Bits	Character	Bits	Character
0000	"i"	1000	"u"
0001	"t"	1001	"m"
0010	"s"	1010	"v"
0011	"a"	1011	"f"
0100	"n"	1100	"w"
0101	"h"	1101	"l"
0110	"d"	1110	"k"
0111	"r"	1111	"g"

To allow more than one Local Acoustical Network (LAN) to coexist the use of different AS numbers for different LANs is suggested. This document proposes seven standard AS numbers to be used, see the table below for details.

Name	Frequency
"a"	440 Hz
"b"	494 Hz
"c"	523 Hz
"d"	587 Hz
"e"	659 Hz
"f"	698 Hz
"g"	784 Hz

It is assumed that for normal operation AS number "a", 440 Hz will be used.

Frame reception

The above process is simply performed backwards.

Security Considerations

The author assumes that the users take whatever precautions that are necessary before attempting to use this protocol in any crowded area.

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