Technology Profile Fact Sheet

Title: Method of Generating a Non-Deterministic Random Number

Aliases: None.

Technical Challenge: To provide a method of generating a truly random number that is compatible with computer technology and that is easy to implement.

Description: This method describes a way to produce uniformly random numbers on a deterministic computer. Truly random numbers are needed for secure communications and most are generated based on a naturally occurring noise. However, naturally occurring noises may be expensive, may be sensitive to ambient conditions, and may require great precision for extraction. They also may not be compatible with computer technology since some are too slow or may be unsafe for consumer use.

This algorithm utilizes a voice file to generate random numbers. If a 1,000 bit randomized string is desired, then the file must contain at least 1,000 bytes of voice data. Any method of producing the voice file is valid, including the simple recording of someone talking into a microphone.

Demonstration Capability: There is no current way to demonstrate the algorithm.

Potential Commercial Application(s): Any computer application where non-deterministic random numbers are needed -- such as secure communications, games, and lotteries.

Patent Status: A patent application has been filed with the USPTO.

Reference Number: 1457