

ANSI X9.31-1998 - Appendix A.2.4:

Let $ede^*X(Y)$ represent the DEA multiple encryption of Y under the key *X. Let *K be a DEA key pair reserved only for the generation of pseudo random numbers, let V be a 64-bit seed value which is also kept secret, and let ^ be the exclusive-or operator. Let **DT** be a date/time vector which is updated on each iteration. I is an intermediate value. A 64 bit vector **R** is generated as follows:

$I = ede^{K}(DT)$

 $\mathbf{R} = \text{ede}^*\mathbf{K}(\mathbf{I} \wedge \mathbf{V})$ and a new \mathbf{V} is generated by $\mathbf{V} = \text{ede}^*\mathbf{K}(\mathbf{R} \wedge \mathbf{I})$.

Successive values of **R** may be concatenated to produce a pseudo random number of the desired length.