A6. Cover sheet.

1. **NUSH Hash1**

2. One-Way Hash functions. Proposed security level:

     a) *High.* Security level equals to $2**(L/2)$ elementary operations, where L is the hash value length (bits), i.e. at least $2**128$. An elementary operation is equivalent to hash computation, writing to (reading from) memory and comparison of hash values. Regular birthday attack.

     b) *Normal.* Security level equals to $2**(L/2)$, where L is hash value length (bits), i.e. at least $2**64$. An elementary operation is equivalent to hash value computation, writing to (reading from) memory and comparison of hash values. Regular birthday attack.

     Proposed environment: An eavesdropper knows all the details of the algorithm, can get and write down in memory as many as $2**(L/2)$ different hash values. He can also search through the memory in an efficient way such as a dichotomic search, lexicographic search etc.

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