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**Digital cellular telecommunications system (Phase 2+) (GSM);
Specification of A8_V MILENAGE Algorithm:
An example algorithm for the key generation function A8_V
(3GPP TS 55.236 version 14.0.0 Release 14)**



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Foreword

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1 Scope

The present document contains an example algorithm which may be used as the VSTK key generation function A8_V as described in TS 43.020 [4]. (It is not mandatory that the particular algorithm specified in this document is used - the A8_V function is operator-specifiable rather than being fully standardised.)

Clause 4 introduces the algorithm and describes the input and output parameters. Clause 5 defines the algorithm. Clause 6 provides test data.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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- [1] 3GPP TS 35.206: "3G Security; Specification of the MILENAGE algorithm set: An example algorithm Set for the 3GPP Authentication and Key Generation functions f1, f1*, f2, f3, f4, f5 and f5*; Document 2: Algorithm specification".
- [2] 3GPP TS 35.207: "3G Security; Specification of the MILENAGE Algorithm Set: An example algorithm set for the 3GPP authentication and key generation functions f1, f1*, f2, f3, f4, f5 and f5*; Document 3: Implementors' test data".
- [3] 3GPP TS 35.208: "3G Security; Specification of the MILENAGE Algorithm Set: An example algorithm set for the 3GPP authentication and key generation functions f1, f1*, f2, f3, f4, f5 and f5*; Document 4: Design conformance test data".
- [4] 3GPP TS 43.020: " Security related network functions".
- [5] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [5], TS 35.206 [1] and TS 43.020 [4], and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [5], TS 35.206 [1] or TS 43.020 [4].

3.2 Symbols

- = The assignment operator.
- || The concatenation of the two operands.
- X[i] The *i*th bit of the variable **X**. (**X** = **X**[0] || **X**[1] || **X**[2] ||).