3GPP TSG-SA WG3 #28
Berlin, Germany, 6-9 May 2003

Tdoc ⌘S3-030274

CR-Form-v7

CHANGE REQUEST

⌘ **35.206** **CR** **CR001** ⌘**rev** **-** ⌘ Current version: **5.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [X] ME [ ] Radio Access Network [ ] Core Network [X]

Title:	⌘	Addition of missing line to Rijndael S-box listing
Source:	⌘	SA WG3
Work item code:	⌘	SEC-ALG
Date:	⌘	06/05/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	A line is missing from the S-box listing in the Rijndael block cipher specification. Rijndael is the example kernel function for MILENAGE.
Summary of change:	⌘	Addition of missing line to Rijndael S-box listing.
Consequences if not approved:	⌘	Although the full definitive specification of Rijndael is already referenced by 35.206, it is desirable to correct the Rijndael specification in 35.206 to avoid confusion among implementors.

Clauses affected:	⌘	A2.9			
		Y	**N**		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

A2.9 The Rijndael S-box

```
Sbox[256] = {
 99,124,119,123,242,107,111,197, 48,  1,103, 43,254,215,171,118,
202,130,201,125,250, 89, 71,240,173,212,162,175,156,164,114,192,
183,253,147, 38, 54, 63,247,204, 52,165,229,241,113,216, 49, 21,
  4,199, 35,195, 24,150,  5,154,  7, 18,128,226,235, 39,178,117,
  9,131, 44, 26, 27,110, 90,160, 82, 59,214,179, 41,227, 47,132,
 83,209,  0,237, 32,252,177, 91,106,203,190, 57, 74, 76, 88,207,
208,239,170,251, 67, 77, 51,133, 69,249,  2,127, 80, 60,159,168,
 81,163, 64,143,146,157, 56,245,188,182,218, 33, 16,255,243,210,
205, 12, 19,236, 95,151, 68, 23,196,167,126, 61,100, 93, 25,115,
 96,129, 79,220, 34, 42,144,136, 70,238,184, 20,222, 94, 11,219,
224, 50, 58, 10, 73,  6, 36, 92,194,211,172, 98,145,149,228,121,
231,200, 55,109,141,213, 78,169,108, 86,244,234,101,122,174,  8,
186,120, 37, 46, 28,166,180,198,232,221,116, 31, 75,189,139,138,
112, 62,181,102, 72,  3,246, 14, 97, 53, 87,185,134,193, 29,158,
225,248,152, 17,105,217,142,148,155, 30,135,233,206, 85, 40,223,
140,161,137, 13,191,230, 66,104, 65,153, 45, 15,176, 84,187, 22};
```