

**1090-WP26-30**  
**31 March – 3 April 2009**

**RTCA Special Committee 186, Working Group 3**  
**EUROCAE WG-51, SG-1**

**ADS-B 1090ES MOPS Maintenance**

**WG-3 Meeting #26**

**SG-1 Meeting #3**

**Joint Session**

**RTCA Headquarters, Washington DC**  
**31 March – 3 April 2009**

**Proposal for Revised SIL Encoding**

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<b>Summary</b>
This Working Paper addresses alternate encoding suggestions for SIL.

### Proposal for revised SIL Encoding – 2-bit Solution

Note: “Horizontal Position Measurement Integrity” and “System Integrity” columns are AND-gates (if displayed separately)

<b>SIL Value</b>	<b>Horizontal Position Measurement Integrity</b>	<b>System Integrity</b>
3	$10^{-7}$ /flight hour (or better)	$10^{-5}$ /flight hour (or better)
2	$10^{-5}$ /flight hour	$10^{-5}$ /flight hour (or better)
1	Both metrics at least $10^{-3}$ /flight hour but at least one metric not more than $10^{-3}$ /flight hour	
0	At least one metric “unknown” or less than $10^{-3}$ /flight hour	

### Proposal for revised SIL Encoding – 3-bit Solution

Note: “Horizontal Position Measurement Integrity” and “System Integrity” columns are AND-gates (if displayed separately)

<b>SIL Value</b>	<b>Horizontal Position Measurement Integrity</b>	<b>System Integrity</b>
7	$10^{-7}$ /flight hour (or better)	$10^{-7}$ /flight hour (or better)
6	$10^{-7}$ /flight hour (or better)	$10^{-5}$ /flight hour
5	$10^{-5}$ /flight hour	$10^{-7}$ /flight hour (or better)
4	$10^{-5}$ /flight hour	$10^{-5}$ /flight hour
3	$10^{-5}$ /flight hour	$10^{-3}$ /flight hour
2	$10^{-3}$ /flight hour	$10^{-5}$ /flight hour
1	$10^{-3}$ /flight hour	$10^{-3}$ /flight hour
0	At least one metric “unknown” or less than $10^{-3}$ /flight hour	