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Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046

Timco Engineering Inc
849 N.W. State Road 45
PO Box 370
Newberry
Florida 32669

Re: U89SDB680AC01 Certification:

6.25 kHz Equivalence Attestation.

To Whom It May Concern:

The Simoco SDB680 series of Base Stations are designed to operate in accordance with the ETSI TS102 361 Digital Mobile Radio Systems standard.

The ETSI DMR standard is based on two-slot TDMA technology utilising 4FSK digital modulation operating at 9600 bps on 12.5 kHz channel spacing with a time slot durations of 30 ms.

The SDB680 base station uses the AMBE+2 half-rate vocoder to provide two independent voice traffic channels operating in alternating 30 ms time slots on a single 12.5 kHz physical channel. Each slot consists of two 108-bit payload fields and one 48-bit synchronization field. Each slot has a total length of 30 ms but only 27.5 ms are used for the 264 bits content, which is sufficient to carry 60 ms of compressed speech using 216 bits payload.

The base station manages both time slots providing slot time synchronization and content to the network mobile and portable stations. Slot one or slot two can be assigned to groups of mobiles and portables or slots can be made available depending on whether there is an available slot.

In summary the implementation of the DMR TDMA technology described above in the SDB680 AC 01 base station shows that it complies with 47 CFR Part 90.203 (j) (4) and (5) requiring the one voice channel per 6.25 kHz bandwidth or equivalence by using two voice channels per 12.5 kHz bandwidth.

Yours sincerely,
Simoco EMEA Ltd

Richard Stimson

Development Manager



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