Italy

FOCAL POINT REGARDING CORRESPONDENCE ON THIS QUESTIONNAIRE (PARTS I AND II)

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*To be returned no later than **31 January 2000** to:*
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Section IV – Table of Frequency Allocations (extract from the RR, 1998)

Read only			To be completed	
Allocation to services				
Region 1	**Region 2**	**Region 3**	**National Allocation**	**Remarks**
137-137.025	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.208A S5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208			**ORBCOMM (LEOTELCOM-1)** **See attached characrteristics**
137.025-137.175	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-satellite (space-to-Earth) S5.208A S5.209 Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208			**ORBCOMM (LEOTELCOM-1)** **See attached characrteristics**
137.175-137.825	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.208A S5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208			**ORBCOMM (LEOTELCOM-1)** **See attached characrteristics**

137.825-138	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-satellite (space-to-Earth) S5.208A S5.209 Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208		**ORBCOMM (LEOTELCOM-1)** **See attached characrteristics**
148-149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) S5.209 S5.218 S5.219 S5.221	**148-149.9** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) S5.209 S5.218 S5.219 S5.221		**ORBCOMM (LEOTELCOM-1)** **See attached characrteristics**
149.9-150.05	MOBILE-SATELLITE (Earth-to-space) S5.209 S5.224A RADIONAVIGATION-SATELLITE S5.224B S5.220 S5.222 S5.223		**ORBCOMM (LEOTELCOM-1)** **See attached characrteristics**
235-267	FIXED MOBILE S5.111 S5.199 S5.252 S5.254 S5.256		**SICRAL Satellite Network** **See attached characrteristics**
267-272	FIXED MOBILE Space operation (space-to-Earth) S5.254 S5.257		**SICRAL Satellite Network** **See attached characrteristics**
272-273	SPACE OPERATION (space-to-Earth) FIXED MOBILE S5.254		**SICRAL Satellite Network** **See attached characrteristics**

Read only			To be completed	
Allocation to services				
Region 1	**Region 2**	**Region 3**	**National Allocation**	**Remarks**
273-312	FIXED MOBILE S5.254			**SICRAL Satellite Network** **See attached characrteristics**

Characteristics of the ORBCOMM Satellite Network

The LEOTELCOM-1 System, named ORBCOMM, is a wide area, packet switched, two-way data communication system. Communications to and from Mobile Earth stations (MESs) and Gateway Earth stations (GESs) are accomplished through a constellation of low-Earth orbit (LEO) satellites. LEOTELCOM-1 Gateways are connected to dial-up circuits, private dedicated lines or the Internet.

The LEOTELCOM-1 System consists of a Network Control Center (NCC) that manages the overall system worldwide and three operational segments:

- A space segment consisting of 48 LEO Satellites;
- A ground segment consisting of GESs and control centers located throughout the world; and
- A subscriber segment consisting of MESs used by LEOTELCOM-1 System subscribers to transmit and receive information to and from the LEO Satellites.

RF communication within the LEOTELCOM-1 System operates in the very high frequency (VHF) portion of the frequency spectrum between 137 and 150 MHz. The LEOTELCOM-1 Satellites have a subscriber transmitter that provides a continuous 4800 or 9600 bps stream of packet data. Each Satellite also has multiple subscriber receivers that receive short bursts from the MESs at 2400 bps. The ORBCOMM System is capable of providing near real-time wireless data communications service around the world.

All communications within the LEOTELCOM-1 System must pass through a Gateway. A LEOTELCOM-1 Gateway consists of one Gateway Control Center (GCC)—the facility that houses the computer hardware and software that manages and monitors message traffic—and a GES. The GES provides the link between the Satellite constellation and an ORBCOMM GCC.

MAIN TECHNICAL CHARACTERISTICS	
Up-link designated bands	148-150.05 MHz
Down-link designated bands	137-138 MHz
Multiple access method	FDMA
Modulation method	Narrow band Frequency or Phase modulation
Maximum MESs e.i.r.p. spectral density	10 dBW/4kHz
Technique to avoid causing interference from MESs	Dynamic channel avoidance assignment system (DCAAS as described in Annex 2 of ITU-R Recommendation M.1039) such that mobile earth stations avoid transmitting on the same frequency being actively used by terrestrial fixed or mobile stations
Maximum burst duration for MESs transmission	500 msec
Maximum duty cycle for MESs	Not greater than 1% in any 15 minute period for any single channel
Maximum duty cycle for system control bursts	Not greater than 1% in any 15 second period for any single channel
All MES traffic with the exception of the system control bursts	Consecutive transmissions from a single earth station on the same frequency shall be separated by at least 15 seconds

Characteristics of the SICRAL Satellite Network

The SICRAL satellite system is a military interforce communications system which operates in different frequency bands (UHF, 7/8 GHz, 20/44 GHz). In particular the UHF service, with a near-hemispherical coverage, is for connections between mobile means and fixed centres. It is divided into three sections: Navy, Air Force and Auxiliary Services.

MAIN TECHNICAL CHARACTERISTICS	
Up-link designated bands	293.1875 - 293.3625 MHz 299.1375 - 299.3125 MHz 308.0875 - 308.2625 MHz
Down-link designated bands	252.1875 –252.3625 MHz 258.1375 – 258.3125 MHz 267.0875 – 267.2625 MHz
Multiple access method	FDMA, TDM/TDMA, SCPC/FDMA
Modulation method	Narrow band Frequency or Phase modulation
Maximum MESs e.i.r.p.	21.5 dBW
Maximum Satellite e.i.r.p.	33.9 dBW
Satellite antenna gain	18 dB