



HARRIS CORPORATION
Maritime Communication Services

1025 West NASA Boulevard
Mailstop D-11D
Melbourne, FL USA 32919
phone 1-321-674-4750
fax 1-321-674-4751

www.mcs.harris.com



18 January 2010

European Radiocommunications Office
Peblingehus
Nansensgade 19-3
DK-1366 Copenhagen
Denmark
Attention: Alexander Gulyaev, gulyaev@ero.dk

Ministero delle Comunicazioni - DG SCER
viale America, 201
00144 Roma (ITALY)
Attention: Antonella Zolferino: antonella.zolferino@comunicazioni.it

Re: RENEWAL ESV Declaration of Harris Corporation for **Ku Band** Services

Dear Mr. Gulyaev and Ms. Zolferino:

Pursuant to Annex C of the Decision of the Electronic Communications Committee ("ECC") of 24 June 2005 on the free circulation and use of Earth Stations on board Vessels operating in fixed satellite service in frequency bands 14-14.5 GHz (Earth-to-space) and 11.45-11.70 GHz (space-to-Earth), ECCDEC/(05)10, Harris Corporation (the "Company"), through its Maritime Communications Services ("MCS") subsidiary hereby declares that the parameters for the Company's system of earth stations on board vessels operating in Europe, and that the Company's system complies with the requirements of the Decision, Resolution 902(WRC-03), and any restrictions notified to the European Radiocommunications Office (the "Office") by CEPT administrations under Decides 5 and 6 of the Decision.

This is a renewal application. The original approval for our ESV Declaration is attached, and dated 13 July 2009. Should any questions arise concerning the attached parameter or this declaration, please contact the undersigned directly.

Sincerely,

Richard Simonian

President
Harris Maritime Communication Services
+1 321 724 3015 direct
+1 321 536 2698 mobile
richard.simonian@harris.com
www.mcs.harris.com

5 Attachments

Attachment 1

MCS ESV Network Operator Details

Network operator name	Maritime Communication Services, Inc
Network operator address	1025 W. NASA Blvd Mailstop D-11D Melbourne, FL 32919 USA
Contact name	Don White
Contact telephone number	+1-321-674-4752
Contact e-mail address	Don.white@harris.com
Network Control Facility (NCF) designated point of contact	Bill Dawkins
NCF Contact telephone number	+1-321-726-5555
NCF Contact e-mail address	tss_nmc@harris.com

Attachment 2

Declarations of Conformity for Orbit AL-7103 "OrSat" Ku Antenna



Declaration of Conformity

We,

Orbit Technology Group Ltd.
8c Hatzoran St. P.O.B 8657
Netanya 42504, Israel

Declare under our sole responsibility that our product

ORBIT AL-7103 Stabilized Marine Satellite Communication System (ESV),

To which this declaration relates is in conformity with the appropriate standards:

ISO 12100-2:2003

EN 60204-1:1997

EN 614-1:1995

IEC 60945:2002

ETSI EN 302340

Following the provisions of R&TTE Directive **1999/5/EC – Article 3.1a, Article 3.1b** and **Article 3.2** with essential requirements covering Low Voltage Directive **2006/95/EC** (replaces **73/23/EEC** as Amended) and Safety of Machinery Directive **98/37/EC** as Amended by **93/68/EEC** and **93/465/EEC**, EMC Directive **2004/108/EC** (replaces **89/336/EEC** as Amended), **ESV Satellite Regulations** regarding all needed functions and The Allowed EIRP per Bandwidth (limited spectral density toward adjacent satellites).

Netanya, Israel, January 2008.



Erez Shabirow.

Erez Shabirow
Senior Vice President R&D and Engineering



EMC Test Certificate



Certificate No	Page	Date of Issue
K70440.00	1	11 December 2007

Applicant	Orbit Technology Group
-----------	------------------------

Tested to	IEC 60945: 2002	
	IEC 61000-4-2: 1995	Air Discharge, 8kV
		Contact Discharge, 6kV
	IEC 61000-4-4: 1995	2kV Power Lines, 1kV Signal Lines
	IEC 61000-4-5: 1995	COM. Mode; 1kV, Dif. Mode; 0.5kV
	IEC 61000-4-6: 1996	(0.15-80 MHz) 3VRMS, 80% A.M. by 1kHz
		(2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) 10VRMS, 80% A.M. by 1kHz
		Power and Signal Lines
	IEC 61000-4-11: 1994	V reduc >95%
		Duration 60 sec.

Notes:

- The above list of tests was performed according to the TCF process coordinated with Nemko, Norway.
- The TCF is in the process of preparation.

Certified Product

E.U.T.	V.S.A.T.
Model:	AL-7103
Serial No.:	001

This is to certify that the product specified herein has been tested and found compliant with the requirements noted above.

Signature:
Y. Mordukhovitch
EMC Test Engineer

Signature: For/
I. Raz
EMC Laboratory Manager

ITL091 Rev 1.6 26/06/05

I.T.L. (Product Testing) Ltd.

HEAD OFFICE & PRODUCT SAFETY LAB
1 Bakhava St. P.O. 87
Lod 71100 ISRAEL
Tel: 9720-9153100 Fax: 9720-9153101

EMC LABORATORY

Kfar On Noy 99700
ISRAEL
Tel: 9720-9797799 Fax: 9720-9797702

משרד ראשי ופיקוח אבטחת מוצרים

99700 ק"מ 9797799
9720-9797702 ק"מ 9797702

א.י.ט.ל. בדיקת מוצרים (בע"מ)

משרד ראשי ופיקוח אבטחת מוצרים
07.1 ק"מ 9153100
9720-9153101 ק"מ 9153100



EMC Test Certificate

Certificate No	Page	Date of Issue
K70440.01	1	07 January 2007

Applicant	Orbit Technology Group
------------------	-------------------------------

Tested to	IEC 60945: 2002	
	IEC 61000-4-2: 1995	Air Discharge, 8kV Contact Discharge, 6kV
	IEC 61000-4-4: 1995	2kV Power Lines, 1kV Signal Lines
	IEC 61000-4-5: 1995	COM. Mode; 1kV, Dif. Mode; 0.5kV
	IEC 61000-4-6: 1996	(0.15-80 MHz) 3VRMS, 80% A.M. by 1kHz (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) 10VRMS, 80% A.M. by 1kHz Power and Signal Lines
	IEC 61000-4-11: 1994	V reduc >95% Duration 60 sec.

Notes:

1. The above list of tests was performed according to the TCF process coordinated with Nemko, Norway.
2. The TCF is in the process of preparation.

Certified Product

E.U.T.	V.S.A.T.
Model:	AL-7103
Serial No.:	009

This is to certify that the product specified herein has been tested and found compliant with the requirements noted above.

Signature:
Y. Mordukhovitch
EMC Test Engineer

Signature:
I. Raz
EMC Laboratory Manager

ITL091 Rev 1.6 26/06/05

I.T.L. (PRODUCT TESTING) Ltd.
PRODUCT SAFETY, EMC & TELECOMS LAB.
Bat-Sheva St., POB 87 LOD 71100 ISRAEL Tel. 972-8-9153100 Fax. 972-8-9153101
Email: standard@itl.co.il Web Site: <http://www.itl.co.il>

Attachment 3
Original ESV Declaration Approval

MCS Proprietary Information

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DGSCER MAR

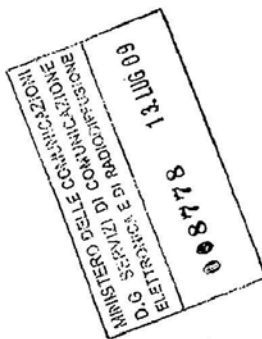
PAG 01/02



Ministero dello Sviluppo Economico

DIREZIONE GENERALE PER I SERVIZI DI COMUNICAZIONE ELETTRONICA E DI RADIODIFFUSIONE
Ufficio 1° - Servizi di comunicazione elettronica ad uso pubblico

MCS Maritime Communication Services, Inc
1025 West NASA Boulevard
Mailstop D-11D
Melbourne, FL USA 32919
Att.ne Mr Richard Simonian



p.c. Costa Crociere S.p.A.
Att.ne Paolo Bertolini
Communication Manager
Corporate Information Technologies
Via XII Ottobre 2
16121 Genova
FAX 010 5483355

OGGETTO: Autorizzazione generale per servizi di rete via satellite per stazioni terrene a bordo di navi ESV, ai sensi dell'art. 25 del Codice delle Comunicazioni Elettroniche - Soc. MCS Maritime Communication Services, Inc

Si comunica che dal 2 luglio 2009 è stata conseguita l'autorizzazione via satellite per stazioni terrene a bordo di navi ESV, all'interno della "minima distanza di sicurezza dalla costa" (125 Km), in accordo con la Decisione ECC/DEC/(05)10 (libera circolazione ed uso delle stazioni terrene a bordo di imbarcazioni che operano nelle reti del servizio fisso via satellite nelle bande di frequenza 14,00 - 14,50 GHz (T-s), 10,70 - 11,70 GHz (s-T) e 12,50 - 12,75 GHz (s-T), recepita con il PNRF 2008). La rete è costituita da stazioni di tipo VSAT in collegamento con il satellite TelStar 12 a 15°W e offrirà agli utenti del corrispondente servizio di comunicazione la possibilità di trasmettere dati voce e accesso ad internet. Le VSAT sono conformi alla Direttiva 99/05/EC (R&TTE Directive).

Detto servizio potrà essere effettuato soltanto alle seguenti condizioni:

- L'uso delle ESV è consentito su base di non interferenza e senza diritto a protezione.
- Quando l'imbarcazione si trova all'interno della "minima distanza di sicurezza dalla costa" l'uso delle ESV è soggetto al rispetto dei requisiti tecnici contenuti nell'annesso 2 della Risoluzione 902:

Viale America, 201 - 00144 Roma
tel. +39 06 54442908/08/09 Fax 06 5942181/54221670
e-mail dgscer@sviluppoeconomico.gov.it
www.sviluppoeconomico.gov.it

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97%

P. 01



- dimensioni della parabola.
- Stabilità di puntamento della parabola.
- Flusso di potenza verso l'orizzonte.
- Flusso di potenza fuori asse.
- Le ESV devono essere equipaggiate di dispositivi per la immediata cessazione del servizio in caso d'interferenza.
- L'operatore ESV ha fornito il proprio punto di contatto in modo da poter essere reperito dall'Amministrazione ogni qualvolta si verificano interferenze nocive: MCS 1025W.NASA Blvd - Mailstop D-11D Melbourne, FL 32919 USA Tel. + 1-321-674.4752 e-mail tss_nmc@harris.com
- I terminali ESV sono conformi allo standard ETSI EN 302 340
- I terminali ESV operano sotto il controllo della rete satellitare.
- L'uso delle ESV all'interno delle distanze di separazione dalla costa di altri Paesi sarà subordinato a preventivi accordi con i Paesi stessi.

Le ESV saranno installate sulle navi:

- Allegra, Atlantica, Europa, Fortuna, Classica, Concordia, Magica, Marina, Mediterranea, Romantica, Serena, Victoria, Pacifica e Luminosa della flotta Costa Crociere.

L'importo relativo al contributo per i diritti amministrativi di cui all'allegato 10, art. 1, comma 1, lettera d), punto 2 del Codice è già stato versato dalla Società MCS nella misura di Euro 5550,00. Per gli anni successivi tale importo dovrà essere versato entro il 31 gennaio di ciascun anno a partire dal 31 gennaio 2010.

Alla presente autorizzazione viene assegnato il nr. DGPGR-III/0640R/2009.

Si rappresenta che per il conseguimento dell'autorizzazione generale per il servizio di comunicazione espletato mediante l'autorizzazione di rete di cui in oggetto, è propedeutico aver conseguito l'autorizzazione generale di cui all'art. 183, comma 2 del D.L.vo nr. 259 - Codice delle Comunicazioni Elettroniche.

La suddetta autorizzazione generale ha validità 20 anni, in virtù dell'art. 25, comma 6, del Codice medesimo, ed è rinnovabile.

Il Direttore Generale
(Dott. Michele Borelli)

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Attachment 4

Technical Specifications of Ku-Band ESVs in MCS Network

Vessel	Antenna Type, Size	Transmit Freq Bands	ESV Antenna Transmit Peak Gain	Effective Transmitted Power*	Max e.i.r.p. per Carrier	Min Operating Elevation	Pointing Accuracy	Number of Carriers	Max Occupied Bandwidth Per Carrier (Khz)	Modulation	Access Scheme Downlink / Uplink	Satellite Used (in Europe)	Transponder Downlink Center Freq (Mhz)	Transponder Downlink Bandwidth (Khz)	Transponder Uplink Center Freq (Mhz)	Transponder Uplink Bandwidth (Khz)
Costa Atlantica	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Classica	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Concordia	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Deliziosa	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Fortuna	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Magica	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Marina	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Mediterranea	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Romantica	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Serena	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Victoria	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Allegra	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	1 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Pacifica	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800
Costa Luminosa	1.15m OrSat AL-7103 MKII	14.0 - 14.5 GHz	42.5dBi @ 14.25Ghz	8 watts	51.5dbW	0 degrees	0.1 deg RMS	1	800	QPSK	MCPC / TDMA	TelStar 11	11500.620	800	14051.425	800

****Operating Details of Satellite:**

Telstar 11 at 37.5 degrees West
Horizontal Uplink
Vertical Downlink

Attachment 5 Telstar 11 Coverage Map

COVERAGE

Telstar 11 is designed to be a Ku-band satellite with a North American beam that covers the US (as far West as Denver, Colorado), Central America, the Gulf of Mexico and the Caribbean; A European beam that covers all of Europe and parts of North Africa; an African beam that covers the majority of the sub-Saharan continent, with focused power over South Africa and a majority of West Africa. Telstar 11 will have the capability to provide service within each coverage region or between coverage regions. Telstar 11 will also feature an Atlantic Ocean beam connected to the North American beam.

