

# Communications Inshore and on the High Seas

*GVF Broadband Maritime South East Asia: 2010  
Marina Mandarin Hotel, Singapore  
23 & 24 February 2010*

*Paddy Costanzo  
Principal and Director  
Canberra Office  
CGP solutions*



# Outline

1. Introduction
2. Territorial Waters
3. Concerned Administrations
4. Current Global Regulatory Situation
5. Regulation in the Americas
6. Regulation in Asia Pacific
7. Regulation in Europe
8. Adoption of Decisions in to Law
9. Current Situation in Europe
10. C-band Regulatory Restrictions
11. Ku-band Regulatory Restrictions
12. Conclusion

# Introduction

This presentation seeks to provide an overview of the relevant regulatory and licensing frameworks affecting maritime satellite communications with a particular emphasis on Europe.



# Territorial Waters

- The United Nations Convention on the Law of the Sea (UNCLOS)
  - sovereign nations have sole rights to the exploitation of natural resources within their Exclusive Economic Zone (EEZ)
  - EEZ extends 200 nautical miles from the coastline
- The EEZ concept was arrived at to prevent disputes over seabed mineral resources and fishing rights.
  - Not absolutely clear that definition of natural resources does not include spectrum rights
  - Appears to be no examples of jurisdictions that have sought to extend their sovereignty over spectrum throughout their EEZ
  - the issue, however, remains vague and untested
- UNCLOS defines territorial waters as extending 12 nautical miles from the coastline and national jurisdiction, including spectrum rights, as extending throughout territorial waters.

# Concerned Administrations

- WRC 03 adopted Resolution 902 which requires operators of C-band and Ku band ESVs to obtain prior consent from “concerned administrations” when operating ESVs within 300Km or 125Km from shore respectively
  - The C-band restriction applies globally. The Ku-band restrictions apply as indicated in the table below

Frequency bands	Ku-band Concerned Administrations
14.0 -14.25 GHz	Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Botswana, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lesotho, Lebanon, Malaysia, Mali, Morocco, Mauritania, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, the Dem. People’s Rep. of Korea, Singapore, Somalia, Sudan, Swaziland, Tanzania, Chad and Yemen
14.25 -14.3 GHz	Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Egypt, the United Arab Emirates, France, Gabon, Germany, Guatemala, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kuwait, Lesotho, Lebanon, Libyan Arab Jamahiriya, The Former Yugoslav Republic Rep. of Macedonia , Malaysia, Mali, Montenegro and Slovenia, Morocco, Mauritania, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, the Dem. People’s Rep. of Korea, Singapore, Slovenia and Serbia, Somalia, Sudan, Swaziland, Tanzania, Chad, the United Kingdom, and Yemen
14.3 -14.4 GHz	Regions 1 and 3, except Cyprus, Greece and Malta
14.4-14.5 GHz	All countries, except Cyprus, Greece and Malta



# Current Global Regulatory Situation

Zone of Operation	Type of Authorisation Required
International waters (beyond 125 Km for Ku-band and beyond 300 Km for C-band)	VSAT must be included in ship's radio licence and service provider must be licensed in country where gateway is located
Between 12 nm and: <ul style="list-style-type: none"><li>• 125 Km from shore for Ku-band</li><li>• 300 Km from shore for C-band</li></ul>	As above, PLUS prior consent from "concerned administrations" (Middle East, Africa and Asia)
Within 12 nm from shore	As above, PLUS authorisation to operate a maritime satellite system in the territory of that administration
In port	As above, PLUS some administrations may have additional requirements for in-port operation

# Regulation in the Americas

- Following WRC-03, CITELE moved quickly to adopt a similar resolution and recommendation regarding the authorisation of maritime VSATs at a national level.
  - Also requested that each administration authorising VSAT operations submit information to it for inclusion into its VSAT database.
- CITELE's aim is to permit maritime VSAT systems to operate safely by protecting other radio users operating in the same radio frequency bands
  - Most countries in the Americas have yet to adopt national rules governing VSAT services

# Regulation in Asia Pacific

- Unlike Europe and the Americas there is no generally recognised regional umbrella authority to standardise regulation and coordinate between countries
- APT serves as a focal organisation for communications and information technology in the region and coordinates policy among its members on spectrum and telecommunications matters even though its resolutions are non-binding
- Following WRC-03, APT has urged its members to use the WRC-03 guidelines to authorise maritime VSATs at a national level

# Regulation in Asia Pacific

- The majority of “Concerned Administrations” are within the Asia Pacific region
  - Prior consent must be obtained before operating in the 14.0 – 14.25 GHz and 14.25 – 14.3 GHz bands
- Prior consent is required by all Asia Pacific countries in the 14.3 – 14.5 GHz band

# Regulation in Europe

- Unlike CITELE and APT, CEPT provides a regularly updated, transparent regulatory regime that is closely followed by its 48 member states
- Harmonised licensing decisions adopted by CEPT are mandatory for the 27 members who are also members of the European Union
- European Common Decisions regarding a specific radio technology, create a single regulatory regime applying equally in all European administrations that adopt it.
  - Greatly facilitating the authorisation process and assuring a common, stable regime for users

# Regulation in Europe

- Following WRC-03, CEPT created a common licensing regime for both C- and Ku-band ESVs that came into force in 2006
- The C-band and Ku-band Decisions provide a straightforward rational regime for licensing maritime VSATs in Europe:
  - Recognise the WRC-03 decisions recommending that maritime VSATs comply with minimal technical requirements;
  - Require maritime VSATs used in Europe to be tested against a European (ETSI) standard; and
  - Create a central registry of maritime VSAT operators authorised to operate their service in Europe



# Adoption of Decisions in to Law

- The C-band Decision has been adopted in to law by 13 European administrations while the Ku-band Decision has been adopted in to law by 15 administrations
- Only 5 operators to date have, however, registered under the central registry required by the Decisions (one being the now defunct Connexion by Boeing)

# Current Situation in Europe

- Lack of registrations to date, implies that the vast majority of maritime VSATs operating in Europe are not complying with existing regulations
  - Mainly because of a lack of enforcement – a policy that could easily change at any time
    - especially if there are cases of interference in the C and Ku bands as both are heavily used in Europe
- Moreover, there are large areas around the UK and Sweden where C-band operations are not permitted
  - C-band VSAT is therefore not as truly global as often claimed

# C-band Regulatory Restrictions

- The chart below illustrates the impact of the 300-kilometre zones around the UK & Sweden (in red) and the neighboring Arab states (in yellow) for C-band.
- Operation in the red areas is not allowed, whereas operation in the yellow area is only allowed with prior permission.



Regulatory restrictions on C-band VSATs in Europe

# Ku-band Regulatory Restrictions

- In Ku-band the situation is much less complicated
  - VSAT system operators must register and comply with local authorisation requirements within 12nm of any coastline

# Conclusion

- The licensing process is not difficult, particularly in Europe
- Ship owners and operators should not be put in the position of risking liability for unauthorised maritime VSATs
  - Many administrations will not accept licence applications directly from ship owners and operators as the licence holder has to be able to control the network
- Maritime VSAT users need to demand that their service providers obtain all necessary authorisations prior to the service being offered

# CGP solutions

## SEATTLE, USA:

**Craig Holman**

**+1 206 786 1625**

**[rch@cgpsols.com](mailto:rch@cgpsols.com)**

## GENOA, ITALY:

**Guy Christiansen**

**+39 346 579 2678**

**[gtc@cgpsols.com](mailto:gtc@cgpsols.com)**

## CANBERRA, AUSTRALIA:

**Paddy Costanzo**

**+61 417 694 964**

**[pc@cgpsols.com](mailto:pc@cgpsols.com)**

CGP solutions offers a “one-stop shop” for global regulatory strategy, execution and risk mitigation

