Maritime Mobile Services Identities (MMSI) Allocation in Papua New Guinea

MMSI in PNG

PROPOSED PNG MMSI NUMBERING FORMAT

1. INTRODUCTION

MMSI is the acronym for Maritime Mobile Service Identity.

A MMSI number is a series of nine digits. The nine digits uniquely identify ship stations, coast stations, crafts associated with a parent ship, aircraft participating in search and rescue operations, and automatic identification system (AIS) aids to navigation (AtoN).

The nine digit MMSI number, always consists of the MID, which is assigned by ITU. MID stands for Maritime Identification Digits. The MID is assigned regionally, and is unique to a specific country. The MID for Papua New Guinea is 553.

The MMSI therefore, takes the form:

M	**I**	**D**	**x**	**x**	**x**	**x**	**x**	**x**

x can be any digit from 0 to 9.

The current Papua New Guinea MMSI number is of the form:

M	**I**	**D**	**1**	**1**	**1**	**x**	**x**	**x**

x can be any digit from 0 to 9.

This current format may change with respect to detailed MMSI formation as outlined here in this paper.

2. MMSI FORMATION

a. Ship Station Identities

A ship station is a radio station onboard a ship for communications with coast stations and other ship stations.

Basically, the MMSI for a Papua New Guinea administratively assigned ship station comprises of six digit number preceded by 553.

5	**5**	**3**	**x**	**x**	**x**	**x**	**x**	**x**

x can be any digit from 0 to 9.The proposed identification format for Papua New Guinea, to be applied to vessels covered by the Small Craft Act is shown here on the following table, taken after the National Numbering fixed line allocation model. The fourth identification digit represents the region of vessel location of registration, and the fifth number represents the province.

This arrangement will create 9999 available MMSI per province.

Table 1

Region	Province	ID Format
Southern	**National Capital District***	**55333xxxx**
	Central Province	**55334xxxx**
	Milne Bay	**55360xxxx**
	Oro	**55361xxxx**
	Gulf	**55362xxxx**
	Western	**55363xxxx**
Momase	**Morobe**	**55340xxxx**
	Madang	**55341xxxx**
	East Sepik	**55343xxxx**
	Sandaun	**55344xxxx**
New Guinea Islands	**East New Britain**	**55390xxxx**
	West New Britain	**55391xxxx**
	Autonomous Region of Bougainville	**55392xxxx**
	New Ireland	**55393xxxx**
	Manus	**55394xxxx**

x can be any digit from 0 to 9.

*The National Capital District may be referred to as a province as it has its own provincial administration which is the National Capital District Commission.

Ships that will travel international voyages requiring international terrestrial radio communications access through coast stations of countries they will be sailing through or by, as well as are equipped with INMARSAT Standard B and M systems, requires that the MMSI has three trailing zeros.

5	**5**	**3**	**x**	**x**	**x**	**0**	**0**	**0**

x can be any digit from 0 to 9,

The three trailing zeros in all circumstances, should only, and always be assi~~s~~gned to vessels intended for international voyages.

A daughter craft, or craft associated with a parent ship equipped with AIS and DSC equipment must also have nine identification digits. The first two digits of the identification number is **98**, followed by the MID and the rest.

9	**8**	**5**	**5**	**3**	**x**	**x**	**x**	**x**

x can be any digit from 0 to 9.

(The three trailing "x" shall not be '000' for the case of an international vessel daughter craft and all circumstances hereinafter, unless otherwise stated)

b. Group Ship Station Identities

For group ship station call identities to call more than one ship, simultaneously, the first figure must be 0 (zero). The group ship call identity takes the format:

0	**5**	**5**	**3**	**x**	**x**	**x**	**x**	**x**

x can be any digit from 0 to 9.

(The trailing three "x" shall not be '000')

c. Coast Station Identities

The two leading digits of a coast station identity are always zero. In Papua New Guinea, coast station identities take the form:

0	**0**	**5**	**5**	**3**	**x**	**x**	**x**	**x**

x can be any digit from 0 to 9

The trailing three 'x' shall not be '000'

Using the ITU-R Recommendation M.585-7 as a guideline, further distinction can be made for coast station identities. The sixth digit may be used to differentiate between different coast stations. This is as shown here:

Table 2

Stations	ITU Format Example	PNG Format Example
1. Coast radio stations	**00MID1xxx**	**005531xxx**
2. Harbour radio stations*	**00MID2xxx**	**005532xxx**
3. Pilot stations	**00MID3xxx**	**005533xxx**
4. AIS repeater stations	**00MID4xxx**	**005534xxx**

x can be any digit from 0 to 9.

*Harbour radio stations or limited coast stations

With respect to the three regions of the fifteen Maritime Provinces in Papua New Guinea, the seventh identification digit may represent the region of the coast station.

d. Group Coast Station Identities

Group coast station call identities to call more than one coast station, similarly; have the same format as individual coast station identity.

0	**0**	**5**	**5**	**3**	**x**	**x**	**x**	**x**

x can be any digit from 0 to 9.

With reference to the ITU-R Recommendations M.585-7, the combination **00MID0000** must be reserved for a Group Coast Station Identity and must address all **00MIDxxx** stations within the country. Furthermore, the combination **009990000** is reserved for all coast stations identity, regardless of MID and should address all VHF **00xxxxxxx** stations. It is not necessarily applicable to MF or HF stations.

e. Search and Rescue Aircraft

In Papua New Guinea, when an aircraft is required to use MMSI for the purposes related to maritime communications with stations in the maritime mobile service, the format is as follows:

1	**1**	**1**	**5**	**5**	**3**	**x**	**x**	**x**

x can be any digit from 0 to 9.

With reference to the ITU-R Recommendations M.585-7, the combination **111MID0000** must be reserved for a Group Coast Aircraft Identity and must address all **111MIDxxx** stations within the country.

f. Automatic Identification Systems Aids to Navigation Identities

Where AIS is used as an aid to navigation, the first two digits of the identification number is **99**, followed by the MID and the rest. The format is as follows:

9	**9**	**5**	**5**	**3**	**x**	**x**	**x**	**x**

x can be any digit from 0 to 9.

Using the ITU-R Recommendation M.585-7 as a guideline, further distinction can be made for assignment of identification to automatic identification systems aids to navigation. The sixth digit may be used to differentiate between a physical AIS AtoN and a virtual AIS AtoN.

Table 3

AIS AtoN	ITU Format Example	PNG Format Example
1. Physical AIS AtoN	**99MID1xxx**	**995531xxx**
2. Virtual AIS AtoN	**99MID6xxx**	**995536xxx**
3. Synthetic AIS AtoN	**99MID1xxx**	**995530xxx**

x can be any digit from 0 to 9.

Papua New Guinea has fifteen (15) Maritime Provinces, including the National Capital District. These Maritime Provinces are grouped into three (3) regions; the Momase region, Southern region and the New Guinea Islands region.

The seventh digit of the identification number of either the physical or virtual AIS AtoN can be used to distinctively identify it with respect to its provincial region of location. This arrangement will create 99 available identification numbers, for physical or virtual AIS AtoN per region, respectively.

The following table depicts the proposed format for AIS AtoN in Papua New Guinea.

Table 4

Region	Province	AIS AtoN Type	ID Format
Southern	**National Capital District*& Central**	**Physical**	**9955313xx**
		Virtual	**9955363xx**
	Milne Bay, Oro, Gulf & Western	**Physical**	**9955316xx**
		Virtual	**9955366xx**
Momase	**Morobe, Madang, East Sepik & Sandaun**	**Physical**	**9955314xx**
		Virtual	**9955364xx**
New Guinea Islands	**East New Britain, West New Britain, Autonomous Region of Bougainville, New Ireland & Manus**	**Physical**	**9955319xx**
		Virtual	**9955369xx**

x can be any digit from 0 to 9.

*The National Capital District may be referred to as a province as it has its own provincial administration which is the National Capital District Commission.

3. FORMATION OF OTHER MARITIME COMMUNICATION DEVICES

With reference to the ITU-R Recommendations M.585-7, consideration (*f*), states that *the identities used for other maritime devices for special purposes to the Recommendation are not necessarily unique and are **not** MMSI assignments*.

These other maritime communication devices are such as: handheld VHF transceivers with digital selective calling (DSC) and global navigation satellite system (GNSS), AIS-search and rescue transmitter (AIS-SART), man overboard (MOB) and emergency position indicating radio beacon fitted with AIS (EPIRB-AIS).

Previously, only vessels of 24m or longer in length are issued MMSI. However, after the 911 incident, there became a need to identify every vessel regardless of size and length, and area of operation. Hence the introduction of AIS.

a. Handheld VHF Transceivers with DSC and GNSS

Handheld VHF transceivers with DSC and GNSS used in the maritime mobile service should also be assigned a unique nine digit identification number. The first digit of the identification number is **8**, followed by the MID and the rest of the identification number. Such handheld VHF transceivers identity takes the format:

8	**5**	**5**	**3**	**x**	**x**	**x**	**x**	**x**

x can be any digit from 0 to 9.

Papua New Guinea has fifteen (15) Maritime Provinces, including the National Capital District. These Maritime Provinces are grouped into three (3) regions; the Momase region, Southern region and the New Guinea Islands region.

The fifth and sixth digits of the identification number of a handheld VHF transceiver can be used to distinctively identify a vessel with respect to its provincial registration. This arrangement will create 999 available identification numbers per province.

The proposed identification format as shown here on the following table, takes after the National Numbering fixed line allocation model. The fifth identification digit represents the region of vessel location of registration, and the sixth number represents the province.

Table 5

Region	Province	ID Format
Southern	**National Capital District***	**855333xxx**
	Central Province	**855334xxx**
	Milne Bay	**855360xxx**
	Oro	**855361xxx**
	Gulf	**855362xxx**
	Western	**855363xxx**
Momase	**Morobe**	**855340xxx**
	Madang	**855341xxx**
	East Sepik	**855343xxx**
	Sandaun	**855344xxx**

New Guinea Islands	**East New Britain**	**855390xxx**
	West New Britain	**855391xxx**
	Autonomous Region of Bougainville	**855392xxx**
	New Ireland	**855393xxx**
	Manus	**855394xxx**

x can be any digit from 0 to 9.

*The National Capital District may be referred to as a province as it has its own provincial administration which is the National Capital District Commission.

b. AIS Search And Rescue Transmitter

AIS-SART is categorized under devices that use a freeform number identity. This means that they do not necessarily have the MID within their identification number. The AIS-SART takes the form:

9	**7**	**0**	**x**	**x**	**y**	**y**	**y**	**y**

xx can be any digit from 01 to 99.
y can be any digit from 0 to 9.

Where: xx is the transmitter manufacturer ID
y are sequential numbers allocated by the manufacturer. The manufacturer starts the sequence again when it reaches 9999.

With respect to the fifteen Maritime Provinces in Papua New Guinea, the sixth identification digit represents the region of AIS-SART registration, and the seventh number represents the province as in the earlier identification formation examples.

c. Man Overboard

MOB is categorized under devices that use a freeform number identity. MOB takes the form:

9	**7**	**2**	**x**	**x**	**y**	**y**	**y**	**y**

xx can be any digit from 01 to 99.
y can be any digit from 0 to 9.

Where: xx is the transmitter manufacturer ID
y are sequential numbers allocated by the manufacturer. The manufacturer starts the sequence again when it reaches 9999.

With respect to the fifteen Maritime Provinces in Papua New Guinea, the sixth identification digit represents the region of MOB registration, and the seventh number represents the province as in the earlier identification formation examples.

d. Emergency Position Indicating Radio Beacon

EPIRB fitted with AIS is also categorized under devices that use a freeform number identity. EPIRB-AIS takes the form:

9	**7**	**4**	**x**	**x**	**y**	**y**	**y**	**y**

xx can be any digit from 01 to 99.
y can be any digit from 0 to 9.

Where: xx is the transmitter manufacturer ID
y are sequential numbers allocated by the manufacturer. The manufacturer starts the sequence again when it reaches 9999.

With respect to the fifteen Maritime Provinces in Papua New Guinea, the sixth identification digit represents the region of EPIRB-AIS registration, and the seventh number represents the province as in the earlier identification formation examples.

Personal Locator Beacon

5	**5**	**3**	**x**	**x**	**x**	**0**	**0**	**0**

X can be any number from 0 through 9

4. LIST OF ABBREVIATIONS

AIS	Automatic identification system
AtoN	Aid to navigation
DSC	Digital selective calling
EPIRB	Emergency position indicating radio beacon
GNSS	Global navigation satellite system
HF	High frequency
MF	Medium frequency
MID	Maritime indication digit
MMSI	Maritime mobile service identity
MOB	Man overboard
SART	Search and rescue transmitter
VHF	Very high frequency

List of References

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2. Recommendation ITU-R M.585-6
3. Recommendation ITU-R M.585-7
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5. AMSA GMDSS Handbook 2013
6. Malaysian Communications & Multimedia Commission, MMSI
7. PNG National Numbering Plan
8. PNG Proposed MMSI Draft by Newman Ewada, NICTA, 2014