APPENDIX I - BASIC BEACON PROGRAMMING GUIDANCE

The following text provides basic guidance on programming an SGB, further details can be found in document C/S G.005 and in Table 3.1 of this document.

TAC Number – The Type Approval Certificate number between 10,000 and 17,999 assigned to the beacon by the Secretariat excluding the suffixes 'M' and 'm', see document C/S T.021 Section 2.2.1 for further details.

Serial Number – A numerical serial number between 0 and 16,383 assigned by the beacon manufacturer to a beacon during production.

The TAC and Serial Number together form a unique identity for each beacon produced and shall not be capable of being changed once programmed by the manufacturer. Once a manufacturer uses up all available serial numbers, they shall apply to the Secretariat for an Extension TAC in order to continue inserting a unique identity into every beacon that they produce. Identities shall never be reused, if for example a beacon is scrapped, then that identity is not reused.

Country Code – The three-digit decimal country code based on the ITU MID related to the country of beacon registration, or the normal place of residence of the beacon owner. Note that the Country Code is not necessarily the same as the first 3 digits of the Maritime Mobile Service Identity (MMSI) that may be assigned to a beacon associated with a vessel. The country code may be changed as necessary during the life of a beacon to reflect changes of beacon registration or place of residence.

Vessel ID – If a Vessel (Aircraft or Ship) Identity is available / known then it should be included in the beacon message using one of the following options:

SHIPS – In addition to the TAC and Serial Number ships may also be coded with either the MMSI of the vessel or its Radio Call Sign, with preference being given to the former, if neither are available then these fields are set to default values.

MMSI – An identity allocated to a beacon associated with a vessel in accordance with Recommendation ITU-R M.585. This may be the MMSI assigned to a ship station as defined in ITU-R M.585 Annex 1 Section 1 or the MMSI assigned to a craft associated with a parent ship as defined in ITU-R M.585 Annex 1 Section 5. It shall not be the freeform number identity as defined in ITU-R M.585 Annex 2 Section 2, commencing with 970, 972 or 974 which is only used to identify an AIS locating signal transmitter if one is included as part of a 406 MHz beacon. However, if the beacon includes an AIS locating signal, then the AIS identity commencing with 974 should be added in bits 94-123 AFTER the ships MMSI.

Note that if during the life of a beacon a vessel on which it is provided changes flag state and as a result is allocated a different MMSI, then the MMSI in the beacon must be updated accordingly. This will not affect the identity of the AIS locating signal, however, as this is not linked to the vessel identity.

Radio Call Sign – If an MMSI for the vessel is not available then the ships Radio Call Sign may be inserted here instead. Radio Call Signs of up to 7 characters may be inserted.

AIRCRAFT – In addition to the TAC and Serial Number aircraft may also be coded with one of three forms of identity, either the Aircraft Registration Marking (commonly referred to as the Tail Number), the Aviation 24-Bit Address (as used by the ADS-B system) or the Aircraft Operator designator followed by a serial number. The Aviation 24-Bit Address may also be followed by the 3-letter Aircraft Operator Designator (3LD), which is essential for ELT(DT)s.

Aircraft Registration Marking – This identity, often referred to as the aircraft Tail Number can be encoded in up to 7 alphanumerical characters.

Aviation 24-Bit Address – This identity is becoming more common in larger aircraft as it is allocated to an aircraft for use with systems such as the ADS-B. For ELT(DT)s required to meet the Automatic Distress Tracking (ADT) requirements of the ICAO GADSS system, it is essential to code the ELT(DT) with the aircraft 24-Bit address followed by the 3-letter Aircraft Operator Designator, as both of these data items are required by the ICAO Location of an Aircraft in Distress Repository (LADR). Note that the Aircraft 24-Bit address followed by the Aircraft Operator Designator can also be used to code ELTs other than ELT(DT)s if required.

Aircraft Operator and Serial Number – This identity is less common but can be used to identify an aircraft it consists of the identity of the aircraft operator followed by a serial number allocated to the beacon by the aircraft operator to create a unique identity for that aircraft.

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