

13th TSMAD MEETING

18 to 22 September 2006 – Wellington, New Zealand

ENC Encoding Bulletin Proposals Relating to S-58**1) Proposed new ENC Encoding Bulletin relating to S58 - check 1721**Explanatory statement:

Check 1721 will be changed in the next S58 edition, because in certain circumstances current checking softwares ask the encoder to use a prohibited attribute (...and so, to create an error).

Actually, PILPNT and DAYMAR are structure objects which may be fitted with a radar reflector and for which the attribute CONRAD is not allowed.

There is a need for an ENC encoding bulletin to clarify the encoding rule for a radar reflector when its support has been encoded using the object PILPNT or DAYMAR.

S58 check 1721 (proposed change in red characters):

*Check that no RADRFL object is attached to a navigational aid (except when the master object is a **PILPNT or DAYMAR**) (The navigational aid must use CONRAD = (3) [radar conspicuous (has reflector radar)]).*

UOC clause 12.1.1:

Radar reflectors must not be encoded as separate objects when attached to navigational aids. If it is required to encode their existence, it must be done using the attribute CONRAD = 3 (radar conspicuous (has radar reflector)) on the structure object.

UOC clause 12.12:

12.12 Radar conspicuous objects (see M4 - §485.2)

The attribute CONRAD (conspicuous, radar) is used to encode whether or not an object is radar conspicuous.

Remarks:

- *If it is required to encode an object which has no radar reflector, but is radar conspicuous, it must be indicated using attribute CONRAD = 1 (radar conspicuous) on the object.*
- *If it is required to encode an area or point object which is radar conspicuous because it is fitted with a radar reflector, it must be indicated using CONRAD = 3 (radar conspicuous (has radar reflector)) on the object.*
- *If it is required to encode radar reflectors on line objects (e.g. overhead cables), this must be done using the object class RADRFL.*

Proposed S-57 Encoding Bulletin

UOC clauses 12.1.1 Geo objects forming parts of navigational aids, and 12.12 Radar conspicuous objects

Clause 12.1.1 of Edition 2.1 (April 2002) of the Use of the Object Catalogue (S-57 Appendix B1, Annex A) states: "*Radar reflectors must not be encoded as separate objects when attached to navigational aids. If it is required to encode their existence, it must be done using the attribute CONRAD = 3 (radar conspicuous (has radar reflector)) on the structure object*".

The second bullet point of clause 12.12 states: "*If it is required to encode an area or point object which is radar conspicuous because it is fitted with a radar reflector, it must be indicated using CONRAD = 3 (radar conspicuous (has radar reflector)) on the object*".

PILPNT and DAYMAR are structure objects which may be fitted with a radar reflector, and for which the attribute CONRAD is not allowed. So, in such cases, the only way to describe the radar reflector is using a RADRFL object.

Encoders are advised, therefore, that using a RADRFL object is allowed for a radar reflector when its support has been encoded using the object PILPNT or DAYMAR.

FAQ

- Q How do you encode a radar reflector when its support has been encoded using the object PILPNT or DAYMAR?
- A See ENC encoding bulletin number #

2) Proposed new ENC Encoding Bulletin relating to S58 - checks 1722 and 1725

Explanatory statement:

Checks 1722 and 1725 will be changed in the next S58 edition, in order to clarify the encoding of a master/slave relationship when a DAYMAR object is concerned.

The rule to be applied in the checking softwares needs to be explained in the new check wording. Due to the presence of DAYMAR object in both (structure and equipment objects) lists, different and inconsistent interpretations currently exist. For instance, some softwares do not accept a relationship where a DAYMAR is the master object and a LIGHTS is a slave object.

There is a need for an ENC encoding bulletin to clarify the encoding rule for a master/slave relationship for the two following situations:

- When two objects (including DAYMAR) contained in the list structure objects are part of the navigational aid. In this situation the DAYMAR object must be considered as equipment (slave).
- When only objects (including DAYMAR) contained in the list of equipment objects compose the navigational aid. In this situation the DAYMAR object must be considered as structure (master).

S58 check 1722 (proposed change in red characters):

Check that any navigational aid equipment object is a slave to a navigational aid structure object or another navigational aid equipment object.

When two objects (including one DAYMAR) contained in the list of structure objects are part of the navigational aid, then the DAYMAR object must be considered as an equipment.

NOTE: for example BRIDGE, CRANES, FLODOC, FORSTC, FSHFAC, HULKES, PONTON, OBSTRN, PYLONS, SILTNK and WRECKS objects must be considered as possible structure objects, in addition to the list given in Annex A (12.1.1).

S58 check 1725 (proposed change in red characters):

Check, for a group of navigational aid equipment objects that point to the same point spatial object (if there are only objects contained in the list of equipment objects that points to this spatial object), that a DAYMAR object (if one exists) is encoded as the master object else a LIGHTS object (if one exists) is encoded as the master object.

UOC clause 12.1.1

12.1.1 Geo objects forming parts of navigational aids

Aids to navigation are composed of fixed or floating structures carrying equipment objects.

The most common structure objects are: BCNCAR, BCNISD, BCNLAT, BCNSAW, BCNSPP, BOYCAR, BOYINB, BOYISD, BOYLAT, BOYSAW, BOYSPP, BRIDGE, BUISGL, DAYMAR, LITFLT, LITVES, LNDMRK, MORFAC, OFSPLF, PILPNT, SLCONS.

Equipment objects consist of: DAYMAR, FOGSIG, LIGHTS, RADSTA, RDOSTA, RETRFL, RTPBCN, SISTAT, SISTAW, TOPMAR.

UOC clause 12.1.2

12.1.2 Relationships

A master to slave relationship must be created in order to relate the different objects comprising a navigational aid.

When the navigational aid contains a structure object (from the above list), this object must be the master object, and the equipment objects must be the slaves.

When the nature of the base structure is unknown or there is no structure object, one of the equipment objects must be chosen as the master object, giving priority to a LIGHTS object, if one exists.

Proposed S-57 Encoding Bulletin

UOC clause 12.1.2 Relationships

The second bullet point of clause 12.1.2 of Edition 2.1 (April 2002) of the Use of the Object Catalogue (S-57 Appendix B1, Annex A) states:

"When the navigational aid contains a structure object (from the above list), this object must be the master object, and the equipment objects must be the slaves.

When the nature of the base structure is unknown or there is no structure object, one of the equipment objects must be chosen as the master object, giving priority to a LIGHTS object, if one exists."

Due to the presence of DAYMAR object in both lists (structure and equipment objects), different and inconsistent interpretations currently exist.

So, the encoding rule must be clarified for the situations where a DAYMAR object is part of a navigational aid.

Encoders are advised, therefore, that the following rules must apply when encoding a master/slave relationship where a DAYMAR object is part of a navigational aid:

- When two objects (including one DAYMAR) contained in the list of structure objects are part of the navigational aid, then the DAYMAR object must be considered as equipment (slave).**
- When only objects (including one DAYMAR) contained in the list of equipment objects compose the navigational aid, then the DAYMAR object must be considered as structure (master).**

FAQ

Q How do you encode a master/slave relationship when a DAYMAR object is part of a navigational aid?

A See ENC encoding bulletin number #