

S-57 Clause	S-57 Section	S-101 Clause	S-101 Section	Comments
1	Introduction			
1.1	Definitions	1.3	Terms, definitions and abbreviations	
1.2	Contents of the document	N/A	N/A	
1.3	References	1.2	References	
2	General information	N/A		
2.1	Navigational purpose	N/A		Not applicable - TSMAD opted to remove this
2.2	Cells	4.7	Cells	
2.3	Topology	11	Data Product Delivery	
3	Objects and attributes	4.9	Geometry	
3.1	Feature object identifiers	N/A	Feature Catalogue	This will be in the Feature Catalogue
3.2	Standard object classes and attributes Objects permitted for use in ENC and their geometric primitives	4.8	Feature Object Identifier	Feature Catalogue
3.3	Meta objects	N/A	Feature Catalogue	Feature Catalogue
3.4	Geo and meta object attributes	4.3.1	Meta Feature Types	
3.5		4.5	Attributes	
3.5.1	Missing attribute values	4.5.3.1	Unknown Mandatory Attribute Values	
3.5.2	Mandatory attributes	4.5.3	Mandatory Attribute Values	
3.5.3	Prohibited attributes	N/A	N/A	S-101 does not prohibit
3.5.4	Numeric attribute values	4.5.1	Numeric Attribute Values	
3.5.5	Text attribute values	4.5.2	Text Attribute Values	
3.5.6	Hierarchy of meta data			Needs more research
3.5.7	New attribute values in Edition 3.1	N/A	N/A	
3.6	Cartographic objects			Phase 2
3.7	Time varying objects	4.4	Time Varying Features	
3.8	Geometry	4.9	Geometry	
3.9	Relationships	4.3.4	Aggregated Feature Types	
3.10	Groups	4.3.3	Theme Feature types Feature Types -> Theme Feature	
3.10.1	Group 1 (skin of the earth)	4.3.3.1	Types -> Skin of the Earth Theme	
3.10.2	Group 2 (all other objects)			To be expanded in later phases depending on use cases
3.11	Language and alphabet	12.1	Language	
3.11.1	Language	12.1	Language	
3.11.2	Use of lexical level 2			
4	Cartographic framework	5	Coordinate Reference Systems	

			Horizontal Coordinate Reference	
4.1	Horizontal datum	5.2	System	
4.2	Vertical and sounding datum	5.3	Vertical and Sounding Datum	
			Horizontal Coordinate Reference	
4.3	Projection	5.2	System	
4.4	Units	5.4	Units of Measure	
5	Provision of data	11	Data Product Delivery	
5.1	Implementation	11.1	Implementation	
5.2	Compression	N/A	N/A	
5.3	Encryption			Phase 2
5.4	Exchange set			Phase 2
5.4.1	Content of the exchange set			Phase 2
5.4.2	Volume naming			Phase 2
5.4.3	Directory structure			Phase 2
5.5	Data sets	11.3.1	Data sets	
		11.3.2	Data Set file naming	
5.6	File naming	11.3.3	ENC Cell Files	
5.6.1	README file			Phase 2
5.6.2	Catalogue file			Phase 2
5.6.3	Data set files	11.3.3	ENC Cell files	
5.6.4	Text and picture files			Phase 2
5.7	Updating	11.3.4	New Editions and Updates	
5.8	Media	11	Data Product Delivery	
5.9	Error detection	11.4	Data Integrity	
5.9.1	Implementation	11.4.2	Implementation	
5.9.2	Processing	11.4.3	Processing	
6	Application Profiles (8211)	Annex A		
6.1	General			
6.1.1	Catalogue and data set files	A1.1	Data Set files	
6.1.2	Records	A1.2	records	
6.1.3	Fields	A1.3	fields	
6.1.4	Subfields	A1.4	subfields	
6.2	Catalogue file	A1	Introduction	The new catalogue file is not in 8211
6.2.1	Catalogue file structure	A1	Introduction	The new catalogue file is not in 8211
6.2.2	Catalogue Directory Field CATD	A1	Introduction	The new catalogue file is not in 8211
6.3	EN application profile	N/A	N/A	
6.3.1	Base cell file structure	1.5	Base cell and update file structure	
6.3.2	Field content (EN)	N/A	N/A	

				S-57 DSID maps to S-101 DSID - some fields have new names. Some S-57 fields have been removed and others will need an attribute created for S-101 Phase 1.
6.3.2.1	Data Set Identification field - DSID	1.5.1	Data Set Identification Field Structure	EXPP INTU UPDN AGEN X, Y, and Z values. In addition, since this is now compliant to S-100 8211, the existing S-57 record numbers for meta, geo, collection, isolated node, connected noe, edge, and face are replaced by: Information type point multi-point curve composite curve surface feature type
6.3.2.2	Data Set Structure Information field - DSSI	1.5.2	Data Set Structure Information field structure Data Set Coordinate Reference System record structure and the following subclauses fields:	
6.3.2.3	Data Set Parameter field - DSPM	1.5.4 and subclauses	PROJ GDAT VDAT VRID is now split up into multiple fields for each type of geometry: PRID - point MRID - multi point CRID - Curve	DPSM cannot be mapped one for one. It is now split out into multiple fields. For example: S-57 subfield VDAT is now S-101 VDAT - Vertical Datum field structure - with its own set of subfields
6.3.2.4	Vector Record Identifier field - VRID	1.5.10 subclauses	CCID - composite curve etc....	

6.3.2.5	Vector Record Attribute field - ATTV	1.5.3 1.5.10 MASK	Attribute field structure	ATTR has additional subfields for indexing and instructions such as insert, delete and modify. S-57 ATTL is similar to S-100 *ATLB
		1.5.10.9 ORNT	Masked Spatial type field structure	Not a one to one match - these subfields are either a new field or a subfield on a different field such as curve component and ring association.
6.3.2.6	Vector Record Pointer field - VRPT	1.5.10.11 USAG	ORNT is on Curve component (CUCO) USAG is now on the Ring Association (RIAS)	
6.3.2.7	2-D Coordinate field - SG2D	1.5.7	2-D Integer Coordinate Filed Structure	S-57 SG2D -> S-100 C2DI
6.3.2.8	3-D Coordinate (Sounding array) field - SG3D	1.5.8	3-d Integer Coordinate Field structure	NOTE that the VE3D does not exist in S-10 and is replaced by the ZCOO coordinate on the Z-axis (height or depth)
6.3.2.9	Feature Record Identifier field - FRID	1.5.11	Feature Type Record Identifier Field Structure	Missing from S-100: PRIM --> This is replaced by new fields for the geometry GRUP -- This is replaced by the Theme Association field (THAS)
6.3.2.10	Feature Object Identifier field - FOID	1.5.12	Feature Object Identifier field structure	OBJL --> new attribute needed for phase 1 Maps one to one
6.3.2.11	Feature Record Attribute field - ATTF	1.5.3	Attribute field structure	ATTR has additional subfields for indexing and instructions such as insert, delete and modify. S-57 ATTL is similar to S-100 *ATLB
6.3.2.12	Feature Record National Attribute field - NATF	N/A	N/A	
6.3.2.13	Feature Record to Feature Object Pointer field - FFPT	1.5.14	Feature Association Field	Not a one to one match - The subfields are different and it is modelled as an association

		1.5.1b MASK	
		1.5.10.9	Masked Spatial type field structure
		ORNT	
		1.5.10.11	ORNT is on Curve component (CUCO)
6.3.2.14	Feature Record to Spatial Record Pointer field - FSPT	USAG	USAG is now on the Ring Association (RIAS)
6.4	ER application profile	N/A	
6.4.1	Update cell file structure	N/A	
6.4.2	Field content (ER)	N/A	
6.4.2.1	Data Set Identification Field - DSID	N/A	
6.4.2.2	Data Set Structure Information field - DSSI	N/A	
6.4.2.3	Vector Record Identifier field - VRID	N/A	
6.4.2.4	Vector Attribute field - ATTV	N/A	
6.4.2.5	Vector Record Pointer Control field - VRPC	N/A	
6.4.2.6	Vector Record Pointer field - VRPT	N/A	
6.4.2.7	Coordinate Control field - SGCC	N/A	
6.4.2.8	2-D Coordinate field - SG2D	N/A	
6.4.2.9	3-D Coordinate (Sounding array) field - SG3D	N/A	
6.4.2.10	Feature Record Identifier field - FRID	N/A	
6.4.2.11	Feature Object Identifier field - FOID	N/A	
6.4.2.12	Feature Record Attribute field - ATTF	N/A	
6.4.2.13	Feature Record National Attribute field - NATF Feature Record to Feature Object Pointer	N/A	
6.4.2.14	Control field - FFPC Feature Record to Feature Object Pointer field -	N/A	
6.4.2.15	FFPT Feature Record to Spatial Record Pointer	N/A	
6.4.2.16	Control field - FSPC Feature Record to Spatial Record pointer field -	N/A	
6.4.2.17	FSPT	N/A	

Not sure how this is modelled in the S-100 8211  
This is now modelled in the main S-100 8211 and is indicated by a Coordinate Update Instruction and an Attribute Instruction - Insert, delete , modify