Summary of the GIS data structure for the NTData digital geological dataset
NTDATSTR.DOC   21 August 1998

Note: some of the terms used in this document are Arc/Info specific and may not apply to other systems.

AGSO_CODE: is the main feature code for geological elements in the GIS data. It is an integer derived from the Symbol No. in the AGSO publication *'Symbols Used On Geological Maps'* (1989). For example 5.5.1, the symbol number for an overturned anticline(p15 of the book), becomes 551 in agso_code. A look-up table (agso_code.e00) contains standard codes and their descriptions.

DESC: is the generic description of a feature based on the AGSO publication *'Symbols Used On Geological Maps'*. For more specific descriptions refer to the source map.

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● FILE NAMING CONVENTIONS

For exporting these data we have adopted separate naming conventions for **UNIX export** (double precision uncompressed), **PC export** (single precision uncompressed), and **MapInfo**. Following are examples of coverages containing line, annotation, and polygon/point features from **Bauhinia Downs (e5303)** showing the variations:

Arc Coverage	UNIX Export	PC Export	MapInfo tables		
basline	e5303bas.e00	e5303ba.e00	e5303bal	e5303baa	e5303bap
deposit	e5303dep.e00	e5303de.e00	e5303del	e5303dea	e5303dep
fossil	e5303fos.e00	e5303fo.e00	e5303fol	e5303foa	e5303fop
geol	e5303geo.e00	e5303ge.e00	e5303gel	e5303gea	e5303gep
geophys	e5303gph.e00	e5303gp.e00	e5303gpl	e5303gpa	e5303gpp
sites	e5303sit.e00	e5303si.e00	e5303sil	e5303sia	e5303sip
strlines	e5303lin.e00	e5303li.e00	e5303lil	e5303lia	e5303lip
struc	e5303str.e00	e5303st.e00	e5303stl	e5303sta	e5303stp
volcs	e5303vol.e00	e5303vo.e00	e5303vol	e5303voa	e5303vop
polygon	e5303pol.e00	**Available by prior arrangement only**			

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GEOLOGY

Coverage (theme) name :   **GEOL**
GEOL: this layer contains geological units (as polygons), geological boundaries, faults, shears, dykes etc.

Features :   **polygons, arcs, annotation**

Polygon attributes :		
	MAP_SYMBOL	coded unit label from the source map
	POLYLABEL	unique identifier used instead of -id
	ROCK_GROUP	dominant rock type of the unit: igneous/volcanic/ sedimentary/metamorphic
	UNIT_AGE	rock unit age from the source map
	GROUP	rock Group name from the source map
	UNITNAME	name of Formation or equivalent from the source map
	MEMBER	name of Member from the source map
	LITH_DESC	unit description (254 char limit) from the source map
	LITH_DESC_2	unit description continued (if necessary)
	LITH_DESC_3	unit description continued (if necessary)

Arc attributes :   **AGSO_CODE**   AGSO symbol code based on the AGSO publication
'Symbols Used On Geological Maps' (1989)

CLASS   line classification: 0-undefined, 1-accurate, 2-approximate, 3-concealed, 4-inferred, 5-inferred and concealed

DESC   description of feature based on the AGSO publication *'Symbols Used On Geological Maps'* (1989)

NAME   name of significant feature eg fault, fold

POLYBDY   Y or N flags whether this line forms a polygon boundary

UNITBDY   Y or N flags whether this line forms a boundary between different rock units (eg Qa and Pgm)

	WIDTH	width of linear features, if measured
Annotation :	ANNO.IGDS	text on Intergraph file transferred as annotation in Arc/Info

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LINEAR STRUCTURES

Coverage (theme) names :   **STRLINES**
                          GEOPHYS

STRLINES: this layer contains geological features such as folds, lineaments, trends, etc.
GEOPHYS: this layer contains geological features such as boundaries, faults, lineaments etc interpreted from geophysics.

Features :	**arcs, annotation**	
Arc attributes :	AGSO_CODE	AGSO symbols code based on the AGSO publication *'Symbols Used On Geological Maps'* (1989)
	CLASS	line classification: 0-undefined, 1-accurate, 2-approximate, 3-concealed, 4-inferred, 5-inferred and concealed
	DESC	description of feature based on the AGSO publication *'Symbols Used On Geological Maps'* (1989)
	NAME	name of significant feature eg fault, fold
	WIDTH	width of linear features, if measured
Annotation :	ANNO.IGDS	text on Intergraph file transferred as annotation in Arc/Info

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SITE DATA

These data depict various observed site data and are stored in line coverages with annotation. They are only designed for plotting or display: the lines are symbols originally captured as Intergraph cells; the annotation is the associated text (reference nos etc) from the map face. The coverage names reflect their contents.

Coverage (theme) names :   **DEPOSIT**
                          FOSSIL
                          SITES
                          STRUC
                          VOLCS

DEPOSIT: this layer contains features such as mines, mineral deposits etc
FOSSIL: this layer contains features such as fossil localities
SITES: this layer contains features such as specimen localities, type sections, drillholes etc
STRUC: this layer contains features such as strike and dip of bedding, foliation, joints, cleavage, lineation
VOLCS: this layer contains features related to volcanics events eg vents

Features :	**arcs, points, annotation**	
Arc attributes :	AGSO_CODE	AGSO symbols code based on the AGSO publication *'Symbols Used On Geological Maps'* (1989). Arcs with agso_code = 100 are linework from Intergraph cells and are for graphic representation of the feature only
	DESC	description of feature based on the AGSO publication *'Symbols Used On Geological Maps'* (1989)
Point attributes :	AGSO_CODE	AGSO symbols code based on the AGSO publication *'Symbols Used On Geological Maps'* (1989)
	DESC	description of feature based on the AGSO publication *'Symbols Used On Geological Maps'* (1989)
	AZIMUTH	bearing, measured clockwise from north, of a structural feature eg dip of bedding; azimuth is generally perpendicular to strike (**struc** theme only)
	INCLINATION	angle between a horizontal plane and inclined structural feature eg dip of bedding (**struc** theme only)
	REF_TYPE	reference identifier from source map
Annotation :	ANNO.IGDS	text on Intergraph file transferred as annotation in Arc/Info

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OTHER DATA

Coverage (theme) name :   **BASLINE**
BASLINE: this layer contains interpreted (subsurface) bedrock boundaries and labels and is only present. For the Darwin tile - d5204.

Features :   **arcs, points**

Arc attributes :	**AGSO_CODE**	AGSO symbols code based on the AGSO publication *'Symbols Used On Geological Maps'* (1989)
	CLASS	line classification: 0-undefined, 1-accurate, 2-approximate, 3-concealed, 4-inferred, 5-inferred and concealed
	DESC	description of feature based on the AGSO publication *'Symbols Used On Geological Maps'* (1989)

Point attributes :   **MAP_SYMBOL**   coded unit label from the source map

Coverage (theme) name :   **POLYGON**
POLYGON: this layer contains geological unit polygons with dangles and internal boundaries (faults, dykes etc) dissolved. It was produced to suit special client needs.

Features :   **polygons** (layer has not been built for arcs)

Polygon attributes :	**MAP_SYMBOL**	coded unit label from the source map
	POLYLABEL	unique identifier used instead of system -id
	ROCK_GROUP	main rock type: igneous/volcanic/sedimentary/metamorphic
	UNIT_AGE	rock unit age (period/era) from the source map
	GROUP	name of Group from the source map
	UNITNAME	name of Formation or equivalent from the source map
	MEMBER	name of Member from the source map
	LITH_DESC	unit lithology from the source map
	LITH_DESC_2	unit lithology continued (if necessary)
	LITH_DESC_3	unit lithology continued (if necessary)

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ADDITIONAL METADATA COVERAGE

Coverage name :   **NT_INDEX**
NT_INDEX: this layer consists of polygons representing the ninety 1:250 000 tiles in the NTData dataset and contains basic metadata for each tile.

Features :   **polygons**

Polygon attributes :	**TILE_NO**	1:250 000 tile number (map sheet number)
	TILE_NAME	1:250 000 tile name (map sheet name)
	PROJECTION	data projection
	DATUM	data datum
	CUSTODIAN	data custodian
	DATA_DATE	data date
	SOURCE_SC	scale of source map
	SOURCE_EDN	edition of source map
	SOURCE_YR	publication year of source map
	COMPILERS	compiler(s) of source map
	COMP_YEARS	compilation years of source map
	PUBLISHER	publisher of source map
	THEMES	GIS layers available for this tile
	COMMENTS	comments if any
	FORMATS	available digital formats
	PRICE	price of digital tile

GEOL: *Arc Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
AGSO_CODE	8	8	I
CLASS	2	2	I
DESC	100	100	C
NAME	64	64	C
POLYBDY	1	1	C
UNITBDY	1	1	C
WIDTH	4	5	B

GEOL: *Polygon Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
MAP_SYMBOL	30	30	C
POLYLABEL	4	5	B
ROCK_GROUP	20	20	C
UNIT_AGE	100	100	C
GROUP	64	64	C
UNITNAME	64	64	C
MEMBER	64	64	C
LITH_DESC	254	254	C
LITH_DESC_2	254	254	C
LITH_DESC_3	254	254	C

STRLINES: *Arc Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
AGSO_CODE	8	8	I
CLASS	2	2	I
DESC	100	100	C
NAME	64	64	C
WIDTH	4	5	B

GEOPHYS: *Arc Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
AGSO_CODE	8	8	I
CLASS	2	2	I
DESC	100	100	C
NAME	64	64	C
POLYBDY	1	1	C
UNITBDY	1	1	C
WIDTH	4	5	B

DEPOSIT, FOSSIL, SITES, STRUC, VOLCS*: Arc Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
AGSO_CODE	8	8	I
DESC	100	100	C

DEPOSIT, FOSSIL, SITES, STRUC, VOLCS*: Point Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
AGSO_CODE	8	8	I
DESC	100	100	C
AZIMUTH	2	5	B
INCLINATION	2	5	B
REF_TYPE	30	30	C

USER-DEFINED ATTRIBUTE SPECIFICATIONS
System generated items eg AREA, ID, #, not included

BASLINE: *Arc Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
AGSO_CODE	8	8	I
CLASS	2	2	I
DESC	100	100	C

BASLINE: *Point Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
MAP_SYMBOL	30	30	C

POLYGON: *Polygon Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
MAP_SYMBOL	30	30	C
POLYLABEL	4	5	B
ROCK_GROUP	20	20	C
UNIT_AGE	100	100	C
GROUP	64	64	C
UNITNAME	64	64	C
MEMBER	64	64	C
LITH_DESC	254	254	C
LITH_DESC_2	254	254	C
LITH_DESC_3	254	254	C

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NT_INDEX: *Polygon Attributes*

ITEM NAME	WIDTH	OUTPUT	TYPE
TILE_NO	7	7	C
TILE_NAME	20	20	C
PROJECTION	5	5	C
DATUM	10	10	C
CUSTODIAN	5	5	C
DATA_DATE	8	8	D
SOURCE_SC	10	10	C
SOURCE_EDN	6	6	I
SOURCE_YR	12	12	I
COMPILERS	40	40	C
COMP_YEARS	10	10	C
PUBLISHER	15	15	C
THEMES	100	100	C
COMMENTS	100	100	C
FORMATS	100	100	C
PRICE	50	50	C