GDF - description

Generic Data Format structure contains 9 variables, where *d* is the most essential one, because it contains the data which can be further processed. The other variables are used for the correct data description – units, coordinate system, fields etc.

GDF file name following the scheme: *GDF_EPISODENAME_file_description*.

The structure of Generic Data Format

Variable name	Type	Description
CRS	char	Coordinate Reference System EPSG code (or local) mapping surveying (http://epsg.io), standard WGS84 (EPSG: 4326). If not applicable input 'n/a'.
d	struct	The variable containing the data. The data may be as a single variable, a vector or an array. Data name following the scheme: *Name_of_parameter* or *NAME* (for shortcuts, chemical formulas etc.)
Description	char	The text description of the data contained in the file
FieldDescription	cell	Description of the fields. An array contains two columns: the first contains the name of the field/column of data, the second contains a description of them. All data must be specified

<table>
<tr><td>FieldType</td><td>cell</td><td>An array contains two columns: the first contains the name of the field/column of data, the second contains the data type number. All data must be specified. The Numbers of Data type:

1 – the real data without limits,

2 – the integer data,

3 – text value,

4 – the real number rounded to 0.1 (shown as 11),

5 – time in Matlab format serial time – the time display format; seconds with accuracy 1/10,

• 5a - time containing only year value e.g. '2010', the time display format: year '2010'
• 5b - time containing only year and month value e.g. '2010-01', the time display format: year month e.g. '2010 Jan'
• 5<pattern> - time read from string with the provided pattern, specified according to the table:

<table><tr><td>symbols:
year: 'y'
month: 'M'
day: 'd'
hour: 'H'
minute: 'm'
second: 's'
mili- , micro-second: 'S'</td><td>examples:
"5yyyy MMM dd HH:mm:ss"
result: "2010 Jan 23 14:15:20"
"5yyyy-MM-dd"
result: "2010-01-23"
"5HH:mm:ss.SSS"
result: "14:15:20.454"
"5HH:mm:ss.SSSSSS"
result: "14:15:20.454323"</td></tr></table>
6 – the real data display in an engineering manner with one decimal place, e.g.: 3.5E6, (obsolete, recommended 2cd)

7 – the real data display in an engineering manner with two decimal place, (obsolete, recommended 2cd)

bc – (b and c are code digits) the real data is displayed in fix-point manner with at minimum b places before decimal and c decimal place,

e.g. For number 3.149.

10: „3”

11: „3.1”

12: „3.15”

20: „03”

23: „03.149”

1bc– the same manner as bc, but with place for a sign (space for sign „+”, sign ‘-’ for sign „-”),

2cd– (c and d are code digits), the real data is displayed in an engineering manner, with place for a sign (space for sign „+”, sign ‘-’ for sign „-”), with c decimal place and exponent expressed by d places. The sign in exponent is always displayed.

<table><tr><td>e.g. For number 0.001
211: „1.0E-3”
221: „1.00E-3”
212: „1.0E-03”
222: „1.00E-03”</td><td>e.g. For number 1000
211: „1.0E+3”
221: „1.00E+3”
212: „1.0E+03”
222: „1.00E+03”</td></tr></table></td></tr>
<tr><td>FieldUnit</td><td>cell</td><td>Description of units for individual data, e.g. m/s. An array contains two columns: the first contains the name of the field/column of data, the second contains the unit. All data must be specified.</td></tr>
<tr><td>Format Name</td><td>char</td><td>Name of data format GDF (Generic Data Format).</td></tr>
</table>

Format Version	double	When changing/expansion of the format change its version. It can have one number after the decimal point.
TimeZone	char	Acronym of Time Zone (http://en.wikipedia.org/wiki/List_of_time_zone_abbreviations) from the episode of origin. If not applicable input ‘n/a’.