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| WORLD METEOROLOGICAL ORGANIZATION  COMMISSION FOR BASIC SYSTEMS  -----------------------------  SECOND MEETING OF  INTER-PROGRAMME EXPERT TEAM ON CODES MAINTENANCE  OFFENBACH, GERMANY, 28 MAY - 1 JUNE 2018 |  | IPET-CM-II / Doc. 2.6 (2)  23.05.2018  -------------------------  ITEM 2.6  ENGLISH ONLY |

New editions of Table-Driven Code Forms

**Horizontal domain URL**

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**Summary and Purpose of Document**

Horizontal domain template and template component to refer to an externally defined horizontal domain are proposed.

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**ACTION PROPOSED**

The Team is asked to review the proposal and accept it for validation.

**DISCUSSIONS**

Some of the horizontal domain templates defined can have a size comparable to the data section. We propose a mechanism to refer to externally defined templates to be able to omit the grid description in the GRIB message by providing a Uniform Resource Locator (URL). This is a special URI (Uniform Resource Identifier) which in addition to being a unique identifier is also providing location and retrieval mechanism for the sample GRIB providing the missing template. The URL section will replace any of the horizontal domain sections and the decoding software should be able to locate a GRIB pointed by the URL and to get the horizontal domain section from it to replace the URL template which is only a place holder and a pointer.

Data producers must guarantee that the URL is valid and points to a valid GRIB with the expected information. To improve the security during the transfer and to guarantee that the GRIB message is not corrupted nor counterfeit, a file verification checksum can be optionally included in the template.

**PROPOSAL**

***Horizontal Domain Template Component 4.14 – URL***

|  |  |
| --- | --- |
| Byte No. | Contents |
| 1-2 | NURL - number of bytes used by the URL |
| 3 - 3+NURL | URL (note 1) |
| 4+NURL | verification checksum algorithm (code table 4.x) |
| 5+NURL - 5+NURL+NN | checksum (note 2) |

Notes:

(1) A URL is a Uniform Resource Locator that is identifying a web resource and is used in this context to locate and retrieve a GRIB message providing the template to be used.

The syntax of the URL is:

**scheme://**[**host**[**:port**]]**/path**[?**query**]

where port and query are optional and can be missing.

(2) the number of bytes NN is dictated by the verification checksum algorithm. Note that NN=0 if the checksum algorithm is set to "missing".

**Code table 4.x** – *Verification checksum algorithm*

Code figure Meaning

0 CRC32

1 MD5

2 SHA1

3-191 reserved

192-254 reserved for local use

255 Missing

***Horizontal Domain Template 4.9 – URL***

|  |  |
| --- | --- |
| Component Code | Component Name |
| 4.1 | URL |