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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 (3)  23.05.2018  -------------------------  ITEM 2.6  ENGLISH ONLY |

New editions of Table-Driven Code Forms

**Overlay Template URL**

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**Summary and Purpose of Document**

Template and template component to define an external overlay GRIB message to be retrieved with a URL is proposed.

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**ACTION PROPOSED**

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

**DISCUSSIONS**

In GRIB 3 the concept of overlay was introduced to be able to extend the bitmap used in GRIB 2 to provide information that a value is missing in the field. The aim was to be able to superimpose a field as a land/sea mask, a vegetation or type of soil map. These are all overlays that can be applied to many fields and encoding them with all the relevant GRIB messages is very inefficient from the volume point of view. We propose a way to uniquely locate the overlay GRIB with a URL.

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**

***Overlay Template Component 9.1 – 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 9.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 9.x** – *Verification checksum algorithm*

Code figure Meaning

0 CRC32

1 MD5

2 SHA1

3-191 reserved

192-254 reserved for local use

255 Missing

***Overlay Template 9.1 – URL***

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