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MIGRATION TO TABLE-DRIVEN CODE FORMS

BUFR Migration Tool

*Submitted by David Berry*

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**Summary and Purpose of Document**

This document describes a BUFR migration tool for reading BUFR 4 files and exploring their structure.

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**ACTION PROPOSED**

None, for information purposes.

**ANNEXES:**

1.

**DISCUSSIONS**

To help with the migration process a simple online web application is under development by David Berry and is available at:

<https://inglis.shinyapps.io/bufR/>

The web application currently only reads BUFR 4 files without Table C operators. This feature will be added in the future. To aid with developing BUFR templates and sequences custom BUFR tables can be uploaded in the same format as the machine readable tables from the WMO, see:

<http://www.wmo.int/pages/prog/www/WMOCodes/WMO306_vI2/LatestVERSION/LatestVERSION.html>

By default, BUFR version 24 files are loaded. The Tables can also be extended for testing of new sequences and descriptors using extension files in the same format as the WMO provided versions. Once uploaded, the tables are fully searchable on any of the fields.

At present a single BUFR version 4 file can be uploaded and the application displays the file header (BUFR sections 0 – 3), the decoded data and a report displaying the full BUFR message. To aid with understanding the structure of a BUFR message the bit offsets for each element are also displayed.

The application remains under development in an unofficial capacity and is provided on a best efforts basis. The application has not been optimised for performance, runs via a free cloud based service and can subsequently be slow, especially for larger BUFR files. Future plans include making the source code available through Git Hub (or similar) and implementing support of Table C operators.