


Technical Working Party on Testing Methods and Techniques**TWM/4/11****Fourth Session****Cambridge, United Kingdom, June 2 to 5, 2026****Original:** English**Date:** May 8, 2026

UNITED KINGDOM SOFTWARE INNOVATIONS: DUST AND COYUS*Document prepared by an expert from the United Kingdom**Disclaimer: this document does not represent UPOV policies or guidance*

The annex to this document contains a copy of a presentation “United Kingdom software innovations: DUST and COYUS”, to be made by an expert from the United Kingdom, at the fourth session of the TWM.

[Annex follows]

	
	<h2>United Kingdom software innovations: DUST and COYUs</h2>
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<h1>What is DUST?</h1> <ul style="list-style-type: none">• Distinctness, Uniformity and Stability Trial Analysis System• For analysis of DUS data, particularly for COYD and COYU (combined over-years distinctness/uniformity)• Software used by several UPOV members• Maintenance is the responsibility of the UK group of statisticians at BioSS, AFBI and Niab• Update proposed: DUSTNG (DUST Next Generation)	
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Why are we building DUSTNG?



DUSTNT (DUST New Technology)

- Old and **difficult to maintain**
- Adding new features is very difficult
- **Integration** with other systems is hard
- Errors opaque, plotting and output options are limited

DUSTNG (DUST Next Generation)

- Aims to address these concerns by **moving into R**
- R packages easier to maintain and adapt
- Any competent user of R can **extend the functionality**
- Clearer error messages, more plotting and input/output options

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Project status



Available in DUSTNG:

- **Initial analysis functions** – pipeline for COYU splines from plot level
- **Data conversion** e.g. reading/writing csv/excel files
- Package **vignettes** for initial functions

UK DUS centres are:

- **Testing**
- Providing **feedback**, especially on usability
- Providing **test cases/data** we can make part of the test suites

Phased project, aiming to keep both DUSTNG and DUSTNT usable at all times

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What happens next?

- **Incorporate feedback** from UK DUS centres
- Move **other modules** into DUSTNG
- **Improve user interface** based on feedback
- Make **available to all**

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UK Implementation of COYU(s)

- Improved method for **uniformity**: COYU using splines (COYUs)
 - Meant to **replace current method** COYU using moving averages
 - Progress discussed over many years within UPOV TWPs
 - E.g. see TWM/3/5

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COYU(s)

UK is on a path to **implementation of COYUs:**

- UK test centres **parallel running** old COYU and COYUs for 2 years so far
- Cases where **decisions differ** are highlighted and discussed
- UK protocols will be updated very soon to use **COYUs as standard** and will apply to new candidates
- Guidance provided on dealing with **extrapolation**

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THANK YOU

Any questions?



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