

The International Surface Temperature Initiative: An overview

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The Surface Temperature Initiative was instigated at a meeting at the UK Met Office in September 2010 following a UK submission to the WMO Commission for Climatology. It aims to create a new suite of surface temperature datasets that meet the challenges and demands of the 21st Century and augments pre-existing efforts. The initiative is seen as an end-to-end process from creation of a comprehensive databank to the provision of data and products to end users. 1. Databank The databank effort is already substantially advanced bringing together numerous sources of data from very many diverse sources - several of which were previously not publicly available. Key aspects of the databank revolve around version control and provenance tracking allowing data users to search back to the raw value itself or as near as the provenance trail permits. There is also a concerted push to augment existing data rescue efforts and ensure pull-through to the databank. 2. Creation of a suite of products The only way to truly ascertain the uncertainty in a given climate parameter is to solicit multiple independent efforts that undertake different methodological choices. The initiative will promote the production of new estimates starting from the databank so that any differences can be ascribed solely to the chosen methodology rather than choice of raw data sources. To meet the varied demands on the data, products at varying spatial and temporal resolutions will be required. 3. Verification through common benchmarking To avoid subjective decision making and to enable iterative improvements all product creators will be encouraged to run their algorithms not only through the databank but also a set of analogs. These synthetic cases provide an opportunity to learn about fundamental performance as, unlike in the real-world, the truth is known a priori. There will be a multi-year cycle to ensure benchmark relevance and gain maximum scientific benefit from regular assessment meetings. 4. Data and product provision Once the initiative is sufficiently mature it will be necessary to provide a portal for the products, user-interface and decision support facilities to ensure optimal decision making by end users, matching products to user requirements. This presentation will expand on these principles and provide a high level overview of the progress to date. Further information can be found at www.surfacetemperatures.org and the associated blogs and sites or in the Initiative posters in session C13: From Global Observations to Integrated Climate Information.