The International Surface Temperature Initiative was instigated in 2010 and aims to oversee an end-to-end process leading to the creation of a suite of open, transparent and verified surface temperature products to meet 21st Century requirements. This poster summarizes the major identified work areas.

### OVERVIEW

The International Surface Temperature Initiative was instigated in 2010 and aims to oversee an end-to-end process leading to the creation of a suite of open, transparent and verified surface temperature products to meet 21st Century requirements. This poster summarizes the major identified work areas.

#### 1. International surface databank

Efforts are underway to create as complete as possible a repository of meteorological data and serve this in a usable manner.
- Provenance is key – retain all information as to source and make the full processing chain available.
- Raw data undoubtedly contain artifacts from instrumental and operational changes.
- There is no definitive right way to go about adjusting for such effects.
- Only through undertaking multiple methodologically distinct and independent efforts can we gain a realistic estimate of this uncertainty.
- Redundancy of effort is scientifically important – cannot leave the task to just one group no matter how expert they are.

#### 2. Creating multiple independent datasets

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#### 3. Benchmarking performance

- With real world data we do not have the luxury of knowing the truth – we cannot measure performance of a specific method or closeness to real world truth of any one data-product.
- Consistent synthetic test cases, simulating real world noise, variability and spatial correlations potentially enable us to do this.
- Create c.10 analog-error-worlds
  - Climate model basis (maintains plausible far field correlation structure) tweaked with real station climate characteristics
  - Add in random and systematic errors to approximate the real world error structures which may exist
  - Error structures should enable answering a range of questions / assumptions regarding the true error to avoid over-tuning.
- Analogs to be made available Nov. 2012 based upon version 1 release of databank.

#### 4. Serving data products to end-users

- There are many and varied demands on the data for very many end users.
- Need to provide easy use and user support based upon scientific findings.
- Once precursor steps are sufficiently advanced we will start to serve products, tools and advice based upon Initiative outputs through a one-stop site.

#### 5. The Initiative and you

The International Surface Temperature Initiative will only work effectively if there is buy in from the science community. Not just climate scientists but in keeping with the instigation meeting also statisticians, metrologists, software engineers, and citizen scientists etc.. You can help in any of data rescue, databank management, creating new data products, benchmarking the efforts, or data product provision.

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**References**


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**Resources**

general.enquiries@surfacetemperatures.org

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