



An integrated forecast production system

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The Meteorological Service of Canada (MSC) has recently migrated its national forecast production system to a more flexible and efficient data format capable of fulfilling a wider collection of meteorological needs. The use of an Interactive Expert System called SCRIBE is at the heart of this change.

Numerical and statistical models data are included as input to the SCRIBE system which will extract the meteorological events for a suite of Canadian forecast regions. In each forecast office, operational forecasters can analyse the SCRIBE guidance and through the SCRIBE interface make modification to the weather elements. SCRIBE is also capable of ingesting hourly surface, radar and lightning observations and nowcasting model data to present an hourly nowcasting guidance. The forecasts are then issued in a digital format called METEOCODE that populate a national database from which a multitude of different products are automatically produced in both official languages and for many users. Among these users we can mention the MSC official web site, Regional and National specialised users and many external clients who can use the official MSC forecast in an XML format.

Currently the Public SCRIBE version is at the core of the Canadian Public Forecast program. A Marine SCRIBE version for marine forecasts will be in service this fall to support the Marine Forecast Program. This new version will be able to produce all marine forecasts and warnings for the Canadian lakes and oceans.

The public forecast period which currently covers the first five days, will be extended to 10 days this winter. This pilot project will utilize the Canadian Ensemble Prediction System to which a clustering algorithm will be applied (Bourgouin P., *Developing*

operational uses of the Canadian ensemble prediction system).

The integration of additional data to the system is currently under development to support the Air Quality Forecast Program, the Canadian Agriculture and the 2010 Winter Olympics Games in Vancouver.

In this session a description of the current and future state the SCRIBE system will be presented and how it supports the Canadian forecast production system.