The MODIS Near-Real Time Processing System at Satellite Remote Sensing Services

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Through its excellent radiometric and geometric calibration and the direct broadcast capability, the Moderate Resolution Imaging Spectroradiometer (MODIS) on-board the Terra and Aqua platforms is an ideal data source for near-real time applications. Satellite Remote Sensing Services is processing MODIS data received in Alice Springs, Hobart and Perth covering Australia, New Zealand and parts of south-east Asia. It has developed an automatic near-real time processing system for applications such as fire monitoring, flood mapping and vegetation monitoring.

The system is built in a modular design. It consists of modules for active fire detection, top-of-atmosphere vegetation index generation, atmospheric parameter retrieval and atmospheric correction. The atmospherically corrected data gets fed into additional modules for flood mapping, BRDF retrieval, high resolution fire detection and burnt area mapping. Satellite Remote Sensing Services is dissemination the products generated to users via a range of web and internet services as well as a fax service.

This paper provides an overview over the processing system as well as explains some modules in more detail. It discusses the implications of availability of auxiliary data necessary for the processing. The time delays between data acquisition and product availability are shown together with some application examples. Another focus is put on the temporal coverage for different regions.