Geophysical Research Abstracts
Vol. 17, EGU2015-12522, 2015
EGU General Assembly 2015

Real time data acquisition of a countrywide commercial microwave link network

Christian Chwala (1), Felix Keis (1), Harald Kunstmann (1,2)

(1) Institute of Meteorology and Climate Research (IMK-IFU), Karlsruhe Institute of Technology (KIT), Garmisch-Partenkirchen, Germany, (2) Institute for Geography, Regional Climate and Hydrology, University of Augsburg, Augsburg, Germany

Research in recent years has shown that data from commercial microwave link networks can provide very valuable precipitation information. Since these networks comprise the backbone of the cell phone network, they provide countrywide coverage. However acquiring the necessary data from the network operators is still difficult. Data is usually made available for researchers with a large time delay and often at irregular basis. This of course hinders the exploitation of commercial microwave link data in operational applications like QPE forecasts running at national meteorological services.

To overcome this, we have developed a custom software in joint cooperation with our industry partner Ericsson. The software is installed on a dedicated server at Ericsson and is capable of acquiring data from the countrywide microwave link network in Germany. In its current first operational testing phase, data from several hundred microwave links in southern Germany is recorded. All data is instantaneously sent to our server where it is stored and organized in an emerging database. Time resolution for the Ericsson data is one minute. The custom acquisition software, however, is capable of processing higher sampling rates. Additionally we acquire and manage 1 Hz data from four microwave links operated by the skiing resort in Garmisch-Partenkirchen.

We will present the concept of the data acquisition and show details of the custom-built software. Additionally we will showcase the accessibility and basic processing of real time microwave link data via our database web frontend.