



Contribution ID: 236

Type: Oral presentation

NOAA image data acquisition to determine soil moisture in Arequipa-Peru

Wednesday 14 October 2020 13:55 (20 minutes)

In recent years, irrigations have been built on dry areas in Majes-Arequipa. Over time, the irrigations water forms moist areas in lower areas, which can have positive or negative consequences. Therefore, it is important to know in advance where the water from the new irrigation will appear. The limited availability of real-time satellite image data is still a hindrance to some applications. Data from NOAA's environmental satellites are available fee and license free. In order to receive data, users must obtain necessary equipment. In this work we present a satellite data acquisition system with an RTL SDR receiver, a 137-138 Mhz Turnstile antenna with Balun, WXtoImag and MatLab software).

We have designed a Turnstile Crossed dipole antenna with Balun, which is easy to manufacture and at low cost. The antenna parameter measurements show very good correspondence with those obtained by simulation. The RTL SDR RTL2832U receiver, combined with our antenna and WXtoImag software, forms the system for recording, decoding, editing and displaying Automatic Picture Transmission signals. The results show that the satellite image receptions are sufficiently clear and descriptive for further analysis

Minioral

Yes

IEEE Member

Are you a student?

Authors: CHILO, JOSE (University of Gavle); ARGUME, Abel; COAGUILA, Ronald; YANYACHI, Raul

Presenter: CHILO, JOSE (University of Gavle)

Session Classification: Oral presentations RTA01

Track Classification: Real Time System Architectures and Intelligent Signal Processing