

Geospatial Transmission Management System - GGT

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ABSTRACT – This study aims to present the Geospatial Transmission Management System as a way to monitor the burning and forest fires that occur under power transmission lines. Burns contributes very severely to forced shutdowns, becoming during 2017 the main cause of this type of event. The agents of the electric sector are required by Aneel Normative Resolution 669/2015 at least once a year to inspect the safety bands, which are bands where the size has been defined in the respective operating licenses by the competent environmental agency. Despite that, shutdown events with consequent blackouts are recurrent during the dry season in Central Brazil, from July to November of each year. This planned maintenance is precisely to ensure system security and prevent fire shutdowns. That is why, in 2017, an Agreement was signed between Aneel and the Inpe. The system uses geospatial technologies in satellite imagery to monitor safety bands. The Normalized Difference Vegetation Index (NDVI) index detects maintenance by the difference in values between images on T1 and T2. The lower the value, the greater the certainty that the company performed the maintenance. Experts in the field have developed research using this index satisfactorily, which allows the development of expertise in the field of fire monitoring research. Preliminary published results demonstrate that the developed methodology is adequate to detect changes in the landscape and to prevent future forest fires and burns and to prevent disconnections.

Keywords: fire monitoring, safety lanes, GGT.