Abstract

In this paper, we discuss a Markov Random Field (MR) modeling for multisource and multitemporal remotely sensed image fusion and classification. Satellite images provided by individual sensor are incomplete, inconsistent or imprecise. Additional sources may provide complementary information and the fusion of multisource data can create a more consistent interpretation of the scene in which the associated uncertainty is decreased and the reliability of analysis results is increased. Also, a temporal data from a single sensor can be considered as separate information sources. The combination of multitemporal data over the same scene enhances information on changes that might have occurred in the area observed over time. Using these available data through a fusion and classification process, our objective is to extract
more information to achieve greater accuracy in assigning pixels to thematic classes. The best methodological framework which allows the realization of this process is a Markov Random Field (MRF).

References

- Wald, L. 1999. Some terms of reference in data fusion. IEEE Transactions on...

Index Terms

Computer Science

Image Processing

Keywords

Markov Random Field (mrf)  Satellite Images  Fusion  Classification