

PRIP-TR-4

July 26, 1995

## Multispectral Classification of Landsat-Images Using Neural Networks

*H. Bischof*<sup>1</sup>  
*W. Schneider*<sup>2</sup>  
*A. Pinz*

### Abstract

Recent progress in neural network research has demonstrated the usefulness of neural networks in a variety of areas. In this work we report the application of three-layer backpropagation networks for classification of Landsat TM data on a pixel by pixel basis. The results are compared to Gaussian maximum likelihood classification. It is shown that the neural network is able to perform better than the maximum likelihood classifier. In an extension of the basic network architecture it is shown that textural information can be integrated into the neural network classifier without the explicit definition of a texture measure. The usage of neural networks for postclassificational smoothing is examined.

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<sup>1</sup>H. Bischof is with the Institute of Surveying and Remote Sensing of the University of Bodenkultur, Peter Jordanstr. 82, A-1190 Vienna. He is currently working towards his Ph. D. at PRIP.

<sup>2</sup>W. Schneider is with the Institute of Surveying and Remote Sensing of the University of Bodenkultur, Peter Jordanstr. 82, A-1190 Vienna