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puter classification maps was smoothed, resulting in postprocessed maps that more closely resembled resource maps.

A NEW COMPUTER APPROACH TO MIXED FEATURE  
CLASSIFICATION FOR FORESTRY APPLICATION\*

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ABSTRACT

A new computer approach for mapping mixed forest features (i.e., classes, types) from computer classification maps is presented in both theory and application.

This approach is particularly useful and applicable to forestry stand mapping, where small areas are required to be absorbed into the surrounding to form "homogeneous" stands, and where mixed stands contain mixed proportions of different species of trees. Previous studies involving LANDSAT data show that mixed pine-hardwood stands are often erroneously classified as either pine or hardwood.

The present work utilizes a modification and an iterative application of a previously developed computer program called "CLEAN". The program CLEAN was tested on binary (2 classes, labeled 0 or 1) classification images.

The modification called "GETMIX" operates on a multi-class image and works on one prespecified class in any one application. In any iteration, small sets of pixels with labels other than the prespecified class are eliminated, while small sets of pixels of the prespecified class are retained and have their labels temporarily changed to a new unique class.

This new iterative approach was tested on LANDSAT-1 data over Sam Houston National Forest, and proved to be successful in mapping those mixed softwood/hardwood stands which were unidentifiable previously. Also due to the cleaning effect of the program GETMIX, the spotty appearance on com-

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