

E7.4-10169

CR-136296

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PROGRESS REPORT 10

AUTOMATIC PHOTOINTERPRETATION FOR
LAND USE MANAGEMENT IN MINNESOTA

(E74-10169) AUTOMATIC PHOTOINTERPRETATION
FOR LAND USE MANAGEMENT IN MINNESOTA
Progress Report (Honeywell, Inc) 2 p
HC \$3 00

N74-14037

CSCL 08B

Unclas

G3/13 00169

ERTS

Proposal Number MMC 257

Principal Investigator Number PR.202

Contract Number NAS 5-21742

December 1973

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We have trained and tested an automatic classifier on extractive-forest areas in Northern Minnesota. Training weights obtained over the Pineville, Minnesota area were used in a test area at Virginia about 20 miles west of the training area.

The digital data was extracted from image 1057-16311, a September 18, 1972 coverage. With six classes, a classification accuracy of 86.5 to 89% was obtained. This image contained banding in MSS-4 and MSS-6. Channel 2 in MSS-4 and Channel 5 in MSS-6 produced data lower than their remaining five channels. To compensate for this, separate training weights were obtained for channel 2, channel 5 and channels 1, 3, 4 and 6.

A typical confusion matrix for the Pineville area is shown below.

		K-Class Assignments					
GROUND TRUTH	Hardwood	89.9	4.3	.6	5.2	0	0
	Conifer	3.0	89.7	0	.4	.4	6.5
	Residential	0	0	95.7	3.2	1.1	0
	Open	33.7	1.2	9.3	55.8	0	0
	Extractive 1	0	.9	6.5	.9	89.8	1.9
	Extractive 2	0	7.5	0	0	2.5	89.9