

Type I Progress Report

ERTS-1

1 July 1972 - 31 August 1972

a. Land Use Mapping and Modelling for the Phoenix Quadrangle. (ERTS-A Proposal SR-186)

b. IN-057

c. Statement and explanation of any impedance:

We have not yet received any ERTS images showing south central Arizona.

d. Accomplishments during the reporting period and those planned for the next period:

Experiments have been conducted using ERTS-simulation photographs of Phoenix mounted in a I²S color additive viewer. Different intensities of light have been tried in each of the ERTS wave length bands in order to determine the optimum enhancement setting for interpreting different types of land use. A hand-drawn map has been compiled showing changes in land use within the Phoenix 1:250,000 scale quadrangle detected in the ERTS-simulation photographs. Similar interpretation will be attempted in ERTS images when received.

e. Scientific results and practical applications:

Experimentation with multiband ERTS-simulation photographs in an I²S color additive viewer has indicated that high intensities of light in the infrared band greatly enhance the interpretability of vegetation patterns, including landscaping within urban areas. Non-vegetative, man-made patterns are emphasized in the red and green bands. Interpretation of those photographs allowed compilation of a map of land use change in the Phoenix area. (Category 2H, Land Use Survey and Mapping, General)

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f. Published reports or talks:

None.

g. Recommendations for improvement:

It would be advantageous to distribute greater numbers of the color composite transparencies from the ERTS MSS. These would have a great flexibility of use for geographic research.

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LAND USE MAPPING AND MODELLING FOR THE PHOENIX QUADRANGLE

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