

## XXXII. ADVANCED COMPUTATION SYSTEMS

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### RESEARCH OBJECTIVES

The objectives of this group are to develop and evaluate devices, languages, and programming systems in order to facilitate on-line communication and creative interaction between researchers and computers.

Although the effort is meant to provide results that are generally applicable to many research areas, present study is centered about the specific application areas of linear systems analysis, discrete systems analysis, and plasma physics simulations.

Device development is proceeding on a graphical input table for entry and recognition of hand-drawn symbols and figures. Study continues on a multiplexed display and reproduction system for storage and retrieval of analogue and digital pictorial data, with television and facsimile reproduction technique utilized.

To round out the picture, studies are under way on issues of definition of computer capacity, and translation of problem statements into information processing requirements.

Doctoral thesis work is also under way on computer-system simulation techniques and program analysis.

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