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Reprinted from

Symposium on

Machine Processing of

Remotely Sensed Data

and

Soil Information Systems

and

Remote Sensing and Soil Survey

June 3-6, 1980

Proceedings

The Laboratory for Applications of Remote Sensing

Purdue University West Lafayette Indiana 47907 USA

IEEE Catalog No. 80CH1533-9 MPRSD

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NASA'S APPLICATIONS DATA SERVICE

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Applications are evolving in the 80's from an era of exploration and inventory into an era of "exploitation". Atmospheric and earth scientists are collecting data to develop models and an understanding of natural phenomena. These models will be applied to research for nationwide problems such as pollution monitoring and control, water resources management, energy resources exploration and allocation, or natural disaster warning/alleviation. This means that discipline scientists in agriculture, oceans, atmospheres and others are tackling applications which require the timely access and integration of data from a dozen or more sources.

To meet these data access and integration challenges, the NASA Office of Space and Terrestrial Applications is planning an Applications Data Service or ADS. The ADS will provide a common service to electronically locate and access applications data as well as integrate the cross-correlative data sets required by multiple users. Its catalog and network services will increase data visibility as well as provide the data in a more timely manner, a more useable form.

Over the past year, we have explored the requirements, feasibility, potential scope of an ADS. Because of the complexity and scope of the OSTA data access problem, an ADS pilot implementation/ evaluation activity is considered an essential precursor to any full-scale system implementation.

Therefore, we are presently defining 2 to 3 small ADS pilot systems, in the research areas of atmospheres, oceans and potentially agriculture. These act as test beds to test and evaluate alternative ADS cataloging and networking concepts, data access and integration techniques, etc. Common interface and data format

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standards will allow future interconnection of the independent pilot systems into an "integrated" ADS pilot system.

Pilots presently are being defined for implementation and evaluation in the FY 1981-82 timeframe. Full-scale ADS implementation by NASA is planned to start in the mid-80's. This paper will describe the ADS (full-scale ADS) concept and plans; it will discuss how the ADS fits into the future "Overall OSTA Data System"; it will describe the pilot systems, their architecture and purpose.

1980 Machine Processing of Remotely Sensed Data Symposium