Remotely Sensed Data: Technology, Management and Markets

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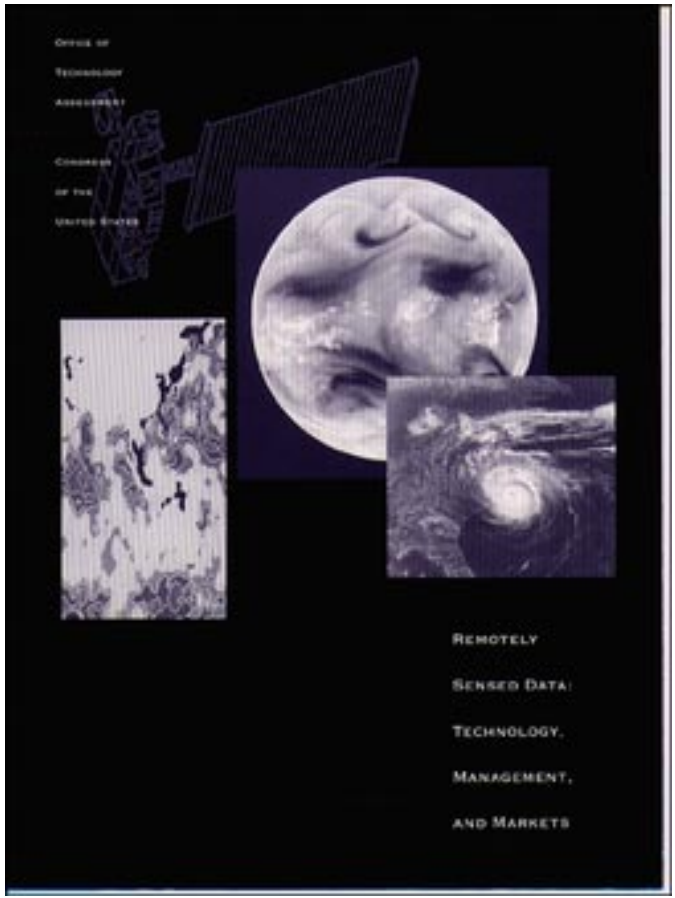

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Foreword

The increasing volume of data about the Earth collected using spacecraft poses a challenge to U.S. data archiving and distribution facilities. The value of these data will depend on how effectively the data can be employed for scientific and other uses. As this report notes, turning remotely sensed data into useful information will 1 require adequate data storage and computers systems capable of managing, organizing, sorting, distributing, and manipulating the data at exceptional speeds. Efficient data management will be assisted by the large and fast growing information industry, which includes computer hardware and software and electronic data networks.

This report examines U.S. plans for managing the prodigious quantities of data expected from current, planned, and future remote sensing satellites. In particular, it explores the Earth Observing System Data and Information System, which NASA is developing to manage and process the data from its Earth Observing System of satellites. It also analyzes the factors affecting the growth of the market for privatel y generated remotely sensed data. The recent entry of private firms into the development and operation of remote sensing systems affords U.S. firms the opportunity to develop a new space industry, supplying high-quality data to worldwide markets. This circumstance raises questions about the appropriate role of the U.S. government in assisting this fledgling industry in competition with foreign governments and companies.

In undertaking this effort, OTA sought the contributions of a wide spectrum of knowledgeable individuals and organizations. Some provided information; others reviewed drafts. OTA gratefully acknowledges their contributions of time and intellectual effort. OTA also appreciates the help and cooperation of officials with NASA, NOAA, and the Department of Interior. As with all OTA reports, the content of this report is the sole responsibility of the Office of Technology Assessment and does not necessarily represent the views of our advisors or reviewers.

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