

# International marketing of IRS-1C data

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**The partnership of EOSAT and India – with EOSAT's international marketing experience and global sales distribution network and India's experience in satellite development and operations, and the applications expertise of both – combines capabilities ideally suited to meeting the needs of the international market.**

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THE global market place is seeking affordable, high-quality digital data to displace other technologies, to augment existing data sets and to support innovative, new applications currently under development. The IRS programme is the most robust remote sensing constellation planned and has the capabilities to fully meet these market needs.

The IRS programme, designed in the context of India's dedication to sustainable development combined with its experience in operational remote sensing, will provide a reliable continuous stream of high-quality data. Just as the United States Landsat and the French SPOT programmes have served as the backbone of international remote sensing in the past, the IRS programme will be central to international remote sensing in the next quarter century.

This paper provides a brief overview of the global remote sensing market, describes EOSAT's experience in global data sales, and then discusses marketing of IRS-1C data.

## The global remote sensing market

In the commercial space market, remote sensing is one of the fastest-growing international commercial markets. The rapid growth is a result of the convergence of technology trends in computer processing and storage, global positioning satellites (GPS), and geographic information systems (GIS). The advances in these technologies are creating ever increasing demand for the kinds of information provided by remote sensing data.

## Regional outlooks

Distinct regions will provide different opportunities for IRS data sales. The United States and Europe will continue to provide large opportunities due to a generally healthy economy and to technological infrastructure already in place. In Europe, as in the United States, innovation will be a key factor that continues to drive growth upward.

Developing countries, particularly in Australasia, will hold the most promise for growth. Established and successful programme in India, Japan, Thailand and Australia will continue to flourish. Several existing remote sensing programmes in this region are expected to experience some rejuvenation, while some relatively new programmes will become established (e.g. in Singapore, Malaysia and Korea).

The most promising emerging opportunities in the satellite imagery market are found in developing countries where the necessary infrastructure to build a national satellite imagery programme is likely to develop further. Many countries in the Asian, Pacific, African and South American regions are likely targets for this opportunity. The operational use of IRS data within India demonstrates the contribution it can make to the viability of development projects.

## EOSAT's experience in global data sales

Through its ten years as the exclusive operator of the Landsat satellites, EOSAT has established channels to deliver satellite data to an ever-expanding international market. IRS data will be sold through EOSAT's direct sales network, distributor network and ground stations.

The direct sales force is structured to support clients and distributors on a regional basis. The philosophy of the EOSAT Direct Sales Force is to assist clients by helping them solve their problems no matter what data source is to be utilized. We have found that developing long-lasting relationships with our clients fosters the building of a strong future for all in the remote sensing and GIS industry.

Our sales leads are developed through a variety of methods, including seminars, conferences, advertising, direct mail and referrals. These leads are qualified through a specific pattern of follow-up contacts. Meetings are held with clients where there is a complex project opportunity. Such meetings may take a period of years, and the sales cycle is not expected to shorten significantly in the near future.

Once the sales are made, we provide the client on-going sales support through marketing communications and regular telephone calls and visits by the regional managers and directors.

Customer services will play an integral part in the distribution of IRS data. EOSAT understands that excellent customer service is a cornerstone of its first ten



years of commercial distribution success and will play the same role in the marketing of IRS-1C data.

The team environment which encompasses the EOSAT customer services department is well suited to support IRS products and services. The representatives are professionals who have many years of experience working with remotely sensed data. Since the availability of digitized Russian data, EOSAT representatives have gained first-hand knowledge of high-resolution panchromatic stereo data, as well as our well-known multispectral data. This knowledge is a tremendous asset in the introduction of IRS data.

With ever changing technology and enhancements to our product line EOSAT knows that even customers proficient in the use of Landsat data sometimes require the special care given to a first-time user. As the company's 'front line', all customer service representatives at EOSAT are adept at handling a variety of calls and callers, both domestic and international. EOSAT anticipates that the inquiries we will receive about IRS data will be similar to those we have already received about data from other satellites which are currently offered. Calls range from 'What is remote sensing?' to specific concerns over scene coverage and usage. Those in the customer service department are adept at leading the customer through all phases of ordering data – from scene search to expected delivery date.

EOSAT anticipates building upon its current staff to handle inquiries and orders generated by the new IRS product line. To assure that our representatives are working with the same information, all EOSAT representatives are being extensively trained on the IRS product line. Thorough training also enables the representative to discuss the product with the customer to solve the customer's needs and to suggest the right product for a particular application. EOSAT is confident that its current and future customer service department will provide the necessary framework to satisfy the customer and ensure strong, continuous market growth.

EOSAT believes that strong Applications and Training Department is essential to maintaining leadership in remote sensing data distribution. Our staff works with data and the information it provides to develop new products and applications for satellite imagery. We give technical support to our clients – the satellite remote sensing data user community – and support data distribution efforts worldwide. This support ensures early market acceptance.

To support innovative research and applications our staff uses more than a dozen of the most advanced image processing system and GIS programmes available. Computer hardware includes VAX, Sun Workstations and powerful personal computers. Staff in EOSAT's Applications and Training Department have been at the forefront of remote sensing, including multispectral appli-

cations, even before the launch of Landsat 1 in 1972. They have participated in the development of image processing techniques and applications for all of the Landsat satellites. Most recently they have been developing new applications and markets for the high-resolution digitized Russian photography and for radar data from various sources.

Their experience is not limited to multispectral applications, but includes extensive work with other types of remote sensing systems, including aerial photography, radar, thermal scanners and stereo. Thus, they bring to bear their vast practical and academic backgrounds in developing applications and markets for remote sensing data. The expertise of the Department staff include scientific backgrounds, as well as academic and practical experience, in change detection, geology, landuse analysis and planning, urban studies, agriculture, botany, geomorphology, forestry, hydrology, soils, wildlife, oceanography, mineral exploration, GIS and computer applications, and many others. The Department also teaches courses in remote sensing that range from basic theory, concepts and applications, to more advanced training on a variety of image-processing systems.

With many of the leaders in the field of remote sensing on our staff, EOSAT is fully qualified to promote the many uses of IRS data.

A most critical distribution channel is our global network of representatives. This network was developed to build EOSAT's reputation as the world's premier provider of data and will be utilized to do the same for IRS.

Our distributor network has provided us with a broader market reach than can be achieved through direct sales alone. Focusing on distributors who provide services to specific markets has deepened our market penetration. EOSAT provides the distribution network extensive marketing and sales support. Regional Sales Managers and International Directors are responsible for EOSAT's relationship with the distributors in their region, to assist them in accomplishing their commitment to EOSAT and data distribution.

In order for our Global Distribution Network to be successful we must provide them with product knowledge and sales and marketing expertise. Programmes in sales training, market development, strategic planning, and technical training were developed and are provided to our distributors worldwide.

The ground receiving stations comprise a third distribution channel. Through the meetings of the Landsat Technical Working Groups (LTWG), EOSAT technical staff have developed and maintained good working relationships with the technical staff of the ground stations. Similarly, the meetings of the Landsat Ground Station Operators Working Group (LGSOWG) have provided a forum for EOSAT staff to receive regular



reports on the marketing and administrative activities of the ground stations. And, most importantly, EOSAT has organized meetings of the ground stations in the Landsat Data Distribution and Marketing Working Group (LDDMWG). The sales reports and product information presented by the stations have kept EOSAT informed about global and regional trends. The attendees at LDDMWG meetings are industry leaders in the transition from a technology-driven to a market-driven business, and will lead the industry in the adoption of IRS data.

The programmes identified above in sales training, market development, strategic planning and technical training are also available to the IRS ground receiving station network.

### Marketing of IRS-1C data

In 1993/94, EOSAT commissioned a research firm to assist in the implementation of a marketing study that would identify marketing targets with the greatest market potential. The results of the study have been used to identify the target market strategy for the sales and marketing of IRS products. The strategy provides the ultimate framework for developing highly effective marketing programmes for EOSAT. An overview of the target market strategy is provided here.

The satellite imagery data segment can be broken into at least 16 different broadly defined markets; oil and gas, environmental, utilities, urban planning, forestry, geology/mining, hydrology, agriculture, mapping, oceanography, real estate, media and entertainment, insurance, health, law enforcement, and military/defense.

The potential number of applications for each market listed above is large. For example, applications in the agriculture market can include: yield projections, fertilizer/irrigation assessment, pollution detection, pest detection, crop distribution, vegetation mapping, land productivity assessment and soil moisture assessment.

After studying all of the applications under the 16 major markets, the following markets are identified as having the greatest market potential for IRS data sales: military, oil and gas, forestry, urban planning, mapping, geology, agriculture, utilities and environmental.

In addition to market potential, the results of EOSAT's marketing study also provide a critical profile of each market that includes market definition and overview, market size and growth potential, ideal product attributes, key delivery/distribution requirements, price sensitivities, competitors, barriers to entry, critical success factors, technologies displaced.

### Market development

To secure rapid market acceptance and market share

for data from the IRS Constellation, the initial priority has been to establish capability to receive and process IRS data in the developed markets of North America and Europe. EOSAT's ground receiving station in Norman, Oklahoma is a flagship station, the first station outside India to routinely receive IRS data. In Europe, Euromap is bringing a station in Newsrelitz, Germany online. Other stations expected to join the network soon are Australia, Ecuador, Japan, Thailand and South Africa.

Once acquisition and processing capabilities have been established throughout the International Ground Station (IGS) network, the next objective is to make the IGS's IRS data archive of metadata and quick-looks available for review by the international user community through an on-line systems as described below:

### Image browse – EOSAT's On-line Network

To support international marketing of IRS data, EOSAT's on-line network (EON) will be expanded to include IRS data from all IGSs participating in the programme. This on-line system will include the following features and capabilities:

- metadata and digital quick-looks from all IGSs participating in the IRS programme
- product and services catalogue information
- ordering procedures and product format information
- digital WRS maps for each satellite in the IRS constellation
- an information bulletin board with industry-related information and/or promotions
- account and order status
- additional information added as required to support market development.

EON is accessible through direct dial up or through Internet [<http://www.eosat.com>]. EOSAT's international Sales Representatives and customers are provided access to EON on a limited cost basis.

Information on customers using EON will be incorporated into marketing research for further market development and related activities in support of the IRS programme.

Market development will occur in phases. The payloads on IRS-1C and 1D will establish market leadership for IRS in multispectral, panchromatic and frequent regional looks and in a later phase, market-driven payloads on multiple satellite will provide data with the spatial, spectral (including thermal and radar) and temporal characteristics required by the market.

### Products and services

The global market place is seeking affordable, high-

quality digital data to displace other technologies, to augment existing data sets and to support innovative, new applications currently under development. The following products have been identified and defined for immediate introduction. Product refinement and development will continue as feedback from our marketing efforts is assimilated.

- Quick-looks, on-line browse
- Path-oriented data
- Map oriented data – choice of ellipsoids, projections
- Mosaiced data
- Merged PAN and multispectral data
- Stereo
- Electronic delivery of WiFS data within 24 hours of acquisition.

### **Continued marketing thrust**

Marketing is integral to the success of IRS data sales. The overall marketing effort includes responsibility for the following activities: marketing communications and promotions, strategic marketing, product management and planning, technical marketing and market research.

*Marketing communications and promotions* will define and implement promotions, advertising, media relations and other communication programmes.

*Strategic marketing* will define market opportunities, market priorities and market objectives.

*Product management and planning* will define customer requirements for data products to facilitate and development and delivery of data products which meet or exceed customer requirements and thereby optimize market opportunities.

*Technical marketing* will provide technical services and support and training.

*Market research* will develop statistically sound sampling strategies and implementation tactics to ascertain consumer preferences in the delivery of spatial information developed from remote sensing data, to track global trends influencing IRS data sales.

Methods for communicating the chosen messages to the target audiences include advertising, trade show exhibits, speeches and presentations, article placement, press conferences and press releases, direct mail campaigns and telemarketing campaigns, collateral materials (e.g. corporate brochure, product flyers), seminars and workshops, sales tools (e.g. catalogue, sample data, EOSAT corporate presentations in slide, Vu-graph and Powerpoint form) and the EOSAT home page on the World Wide Web. The marketing plan includes a mix of these elements designed to generate both breadth of coverage and repeat exposure to specified segments for continued market growth.