

**Testimony
before the
House of Representatives
Committee on Science, Space, and Technology
on H.R. 3614**

Mr. Chairman, members of the Committee, thank you for this opportunity to testify on H.R. 3614. My name is Kass Green. I am the President of Pacific Meridian Resources, a natural resource consulting firm headquartered in the San Francisco Bay area, with offices in Portland, Oregon, and Salt Lake City, Utah. The firm's services include (1) forest management, (2) economic and political analysis of resource issues, (3) image processing and geographic information systems (GIS) analysis, and (4) training in the integration of satellite imagery and GIS into natural resource management. While the company has completed many projects, we are most known for the production of maps of old growth forestlands on National Forest and Park lands in western Oregon and Washington. I have brought examples of those maps with me and have appended a short description of the firm to this testimony.

We have studied H.R. 3614 and, while we can support the bill in spirit, we cannot support the bill's passage or implementation as it now reads. First, we completely agree with the various portions of the bill which ensure the continued existence of the Landsat program. It is clear that this rich source of earth resource data will become increasingly important in the management of our environment. In addition, we also strongly support the initiation of a long-term study of options for creating a competitive system for the commercial marketing and distribution of Landsat data. We believe that the fostering of a truly competitive market will accelerate the commercialization of the technology and enhance the competitiveness of the United States. However, we cannot support the bill's language on data pricing. Our reasons are simple. At least seven times the language of the bill states that data generated from land remote sensing satellites funded by the U.S. government should be made available to non-profit organizations at the marginal costs of acquisition, reproduction, and transmission on the condition that such data not be used for commercial purposes. Yet, nowhere in the bill are commercial purposes defined. Only once does the bill mention enforcement of this pricing structure, and only then in vague terms. We believe that the emphasis of the bill on lower prices for universities, public interest groups, and government agencies without a corresponding emphasis on protecting commercial entities from unfair competition from those same universities, public interest groups, and government agencies will (1) suppress any further commercialization of this technology, (2) result in commercial price increases to offset Eosat losses created by the new pricing structure and (3) may well destroy our company.

I would like to place this opinion within the context of our intimate knowledge of the market for Landsat data. Three years ago, Pacific Meridian Resources was started with six people. We started the company with the belief that we could create a commercial success in a field where others had repeatedly failed over the last twenty years. We saw two trends converging:

First, technological changes in hardware, software and satellite data created the potential for a whole new suite of value added products. Computers became faster, software became much more sophisticated, and, most importantly, the spatial and spectral resolution of Landsat data increased substantially.

Second, the demand for accurate, inexpensive, and quickly produced data for geographic information systems exploded. Political conflict over land use has steadily intensified over the last twenty years. Because land use issues are spatial issues, geographic information systems are powerful tools for analysis of the impacts of land management alternatives. There has been a mad rush to create data for GIS analysis.

All the market needed was good people who could put the fruit of the technology together with those in need of the data. We were lucky enough to employ those people.

Over the last three years Pacific Meridian Resources has:

1. Increased our staff from 6 to 45 employees with four additional positions presently open. On average, we create a new job every month.
2. Opened two new offices - one in Portland, Oregon and one in Salt Lake City. We are hoping to open an office on the East Coast in 1992.
3. Pioneered research in a wide variety of applications including the integration of GIS into image processing, map accuracy assessment, and change detection. The results of this research have been presented at over 60 professional meetings and have been published, or are in press, in professional journals and application notes.
4. Completed, or are in progress on, projects using satellite imagery to produce detailed vegetation maps of over 100 million acres of forest and wild land in Oregon, Washington, California, New Mexico, Alaska, Idaho, and Missouri.
5. Earned the respect of a diverse clientele including open space groups, federal agencies, forest products companies, NASA, state agencies, local governments, and others.
6. Reinvested all of the firm's profits into the company's continued growth through capital expenditures and employee bonuses and benefits.

Pacific Meridian has, in short, turned the use of Landsat imagery in forestry from a technological "pipe dream" into a reality.

Through our three years of existence we have faced healthy and fair competition from both commercial and non-profit organizations including universities and public interest groups. We welcome such competition. However, we have also faced the following:

1. The loss of a competitively bid project to a public university that was able to lower its cost estimate because its overhead was subsidized by taxpayers and because it received a non-profit research grant.
2. The loss of a competitively bid project to a U.S. government subsidized Center for the Commercial Development of Space Technology that refuses to publish the results of its subsidized work.

3. The continuing loss of projects to universities and government agencies because it is procedurally easier for a government agency to enter into a cooperative agreement with an university or into a memorandum of understanding with another agency than it is for them to contract with the private sector.

We would be the first to agree that the use of Landsat data is not fully commercialized and that problems exist with the current system. However, it does not follow that the best way to maintain U.S. leadership in this technology is to subsidize non-commercial organizations to the detriment of commercial firms. We honestly do not understand the link. The greatest barrier to commercialization of space technology is the continued government subsidy of non-profit organizations who are actively competing for commercial projects. This is not to say that Pacific Meridian Resources believes that these organizations should lose their government support or should not receive price reductions on Landsat data. We merely ask that you keep the commercial playing field level. We ask that if non-profit organizations are to receive yet another subsidy, that they be required to show that their subsidies are not being used to unfairly compete in the commercial market against non-subsidized private firms.

The process of defining what is and is not commercial would likely lead to prolonged and unproductive debate. Rather we ask that the following concepts be included in the language of the bill:

1. That non-profit organizations receiving Landsat price reductions be precluded from competing for private or public agency contracts.
2. That a mechanism be implemented whereby non-profit organizations desiring a reduction in Landsat pricing must submit a written petition to Eosat which (1) specifies the work to be done with the discounted imagery, and (2) states that the non-profit organization has searched for and found no commercial entities which could perform this work. Eosat would accept or reject the petition based on their knowledge of the industry.
3. That only Landsat data at least two years old be eligible for price reduction.
4. That Eosat be compensated through public funding for any losses created by the preferred pricing program, and that Eosat be precluded from increasing prices to commercial users to offset such losses.

We believe that the above requirements would allow non-profit organizations to obtain Landsat data for research and public interest work without allowing them to use the price reduction to unfairly compete in commercial markets. I hope these comments have been useful. Thank you for this opportunity to testify.