



The British Columbia

Forest Service

Newsletter

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October 1994

Research branch wins national award



Winners of the Canadian Productivity Award for software development (from left to right): Bruce Enns, Marvin Eng, Don Morgan and Rick Page.

A giant leap forward in the use of GIS mapping as a land-use planning tool has earned four members of the research branch a prestigious national award.

The Canadian Productivity Awards, sponsored by Ernst & Young and Maclean Hunter Limited, are presented to a handful of organizations each year to recognize outstanding contributions to Canadian productivity through the use of information technology.

Scientist Rick Page accepted the award on behalf of his colleagues — Ecologist Bruce Enns, Landscape Ecologist Marvin Eng and Ecologist Don Morgan — and the Commission on Resources and Environment at a Toronto gala in September.

Their work on the "spatially explicit planning tool" (SEPT) was undertaken to help CORE streamline development of the Cariboo-Chilcotin land use plan. SEPT enables planners to test land use designations

on a site-specific basis, projecting impacts that incorporate all resource and economic data available.

Facing considerable pressure to accelerate the process, CORE had asked the Forest Service for technical assistance.

Page began a secondment to CORE in early 1993, embarking on 18 months of intensive software development. Not only did the research branch have cutting edge expertise

in GIS and resource mapping, staff had already begun work on SEPT for Forest Service applications.

With the added incentive of CORE's demands, software development that had been scheduled to take five years was completed in 18 months.

Page noted that the system proved invaluable in the completion of CORE's Cariboo-Chilcotin land use plan. The software enables planners to electronically overlay detailed resource maps to pinpoint potential conflicts and project the impact of land-use options for all values.

The program, using SUN workstations and PAMAP GIS, joined 640 individual maps covering the entire Cariboo-Chilcotin region — eight million hectares — without losing any detail. The database eventually grew to

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New chief forester brings vision of harmony

We're in a highly charged environment . . . dealing with fast-moving policy changes and working with the legacy of how things were done in the past.

— Larry Pedersen

Taking over the responsibilities of chief forester would present a formidable challenge at any time, but in today's environment of change . . .

Larry Pedersen, who became B.C.'s 13th chief forester in early October, candidly acknowledges it's all a bit overwhelming.

"I'd be inhuman if I wasn't overwhelmed," he says, adding with a smile that only eight weeks ago his biggest worry with the Forest Practices Code was how to deliver it at the regional level.

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Pedersen charts course for the future

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"It's quite a different feeling that comes from implementing someone else's decisions and having to make those decisions yourself," he says.

After only six days on the job, Pedersen acknowledges he's on a steep learning curve. But already the pieces are beginning to fall into place, and he is starting to define his own solutions to some of the questions.

Pedersen brings all the right credentials to the job: 17 years as a professional forester and lots of management experience. Having served as regional manager of the Prince Rupert forest region for three years, he is well-acquainted with the territory.

He has identified four priorities that will consume most of his energy during in the coming months:

- Finalize the Forest Service reorganization. "It's critical that staff know as soon as possible what the final structure will be," he says.
- Adapt to the Forest Practices Code.

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Sustainable forestry hinges on two key accomplishments: the completion of land-use designations to resolve conflicts, and development of an information base to define ecological sustainability.
.....

"I need assurance that there is sufficient organizational capacity to support the chief forester's new responsibilities under the Code. We also need to bring to closure some outstanding technical issues of the Forest Practices Code."

- Evaluate progress on the timber supply review.

"My intent is to get a better understanding

that the project is achievable and is being managed on a reasonable schedule. I need a comfort level that the objectives can be met along with other initiatives and not at the expense of other initiatives."

- Develop a cohesive frame of reference for all resource use initiatives (such as the Forest Renewal Plan, CORE, Protected Areas Strategy, land use coordination office, and land and resource management plans) which affect the Forest Service.

"We need to tie together all the high-level government initiatives that affect resource sectors to ensure there is optimal balance among them."

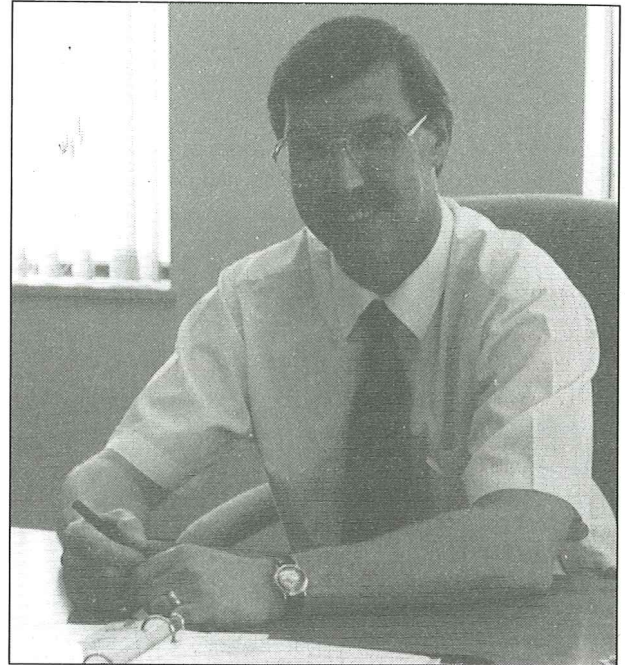
Pedersen welcomes the challenge.

"I'm intrigued by the opportunity and look forward to developing ways to tie these initiatives together in a way that is efficient for the Forest Service and effective for the resource."

The transition will not be easy, for himself and other members of the Forest Service.

"We're in a highly charged environment," he says. "We're dealing with fast-moving policy changes and working with the legacy of how things were done in the past. Now we have to integrate the new initiatives into our day-to-day business."

Pedersen has a personal vision of how the new era of sustainability and cooperation will look. It hinges on two key accomplish-



Larry Pedersen

ments: the completion of land-use designations to resolve land use conflicts, and development of an information base to define ecological sustainability and manage for all biological resources.

"These are key steps in developing the future vision of how our natural resources will be managed," he says.

He is convinced the direction prescribed by new initiatives within the Forest Service — and other land-use planning agencies — will achieve that vision. Everyone has a contribution to make.

Pedersen, 42, is married and the father of three boys. Despite a strong commitment to his family, he acknowledges his new job will exact its toll, at least temporarily. For several months, he says, he'll totally immerse himself in his job as he climbs the learning curve. Then he'll be seeking to restore some balance.

The love of sports and music that he shares with his family — and the time they spend together in related activities — will be put on hold. While his family is fully supportive, Pedersen says they are anxiously awaiting the completion of his transition into his new job.

Office staff tour forestry sites

What did you do at the office today, dear?

For office staff at the Squamish forest district, the frequently-asked question would have elicited an unusual response.

With the support of the district management team, administrative staff were treated to day trips with field staff to help gain a better understanding of harvesting and silviculture activities.

One tour was of the Whistler Interpretive Forest, which shows operational forestry practices to thousands of tourists every year. Tour guide **Steve de Melt**, field operations supervisor, explained the practices being undertaken in demonstration forests, such as bio-solids fertilization, alternate silviculture systems and landscape management.

Harvesting tours were conducted in smaller groups, during which administration staff viewed road rehabilitation in the Mamquam River area, activities on dry land sorts in the Ryan River area and road deactivation in Wasp Creek. Staff were also present during a Forest Practices Code review of old versus new logging techniques in the Mamquam River and Indian River areas.

"I found it very interesting because I didn't really know what the technicians did. We write about it, and hear about it, but now I got to actually see it," said Office Assistant **Judy Campbell**.

The tours gave **Brenda Partridge**, office services supervisor, an opportunity to see the Forest Service in action. "It was great," she said.

Acting Resource Clerk **Carolyn Wold** had never before seen an active logging operation.

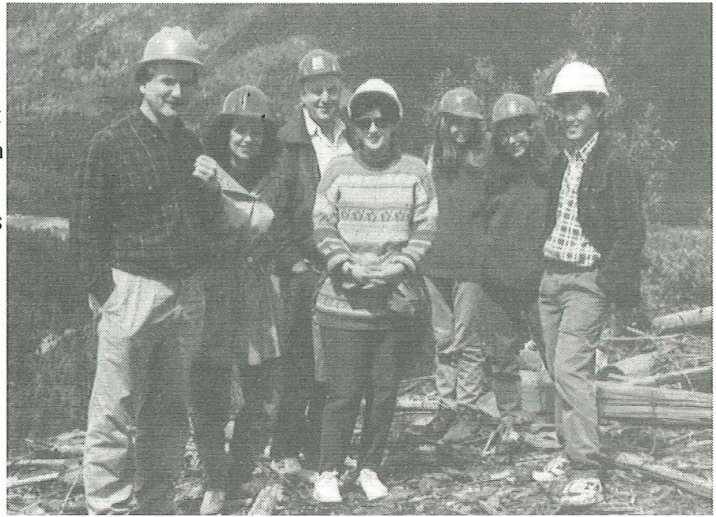
"After everything I've read in the newspaper, I was surprised at how good the clearcut areas actually looked," she said.

"I was also fortunate to be present when our SBFEP engineering technician conducted a

tour of road and bridge inspection at Hixon Creek and Meslilloet Creek, just off the road to Indian Arm. One of the highlights for me was to see areas of the district where I have sent members of the public during my seven-and-a-half years here.

As a receptionist, I was often asked where to find a good spot to camp or to fish. It was easy to pull out a brochure and suggest different locations.

When I return to reception this November, and someone asks about the road to Norton Lake or Indian Arm, I can honestly say we recommend four-wheel drive because I have travelled a portion of it."



Squamish forest district staff tour the Whistler interpretive forest. From left, Steve De Melt, Marilynne Chapman, John Van Dijk, Pamela Lokken, Carolyn Wold, Brenda Triance and Wayne Sakamoto.

Administration staff appreciated the time spent by field technicians, who provided a better understanding of their work. Thanks again to all who participated.

— Submitted by *Ailsa M. Siemens*, full-time receptionist, part-time protection clerk

Deputy approves new policy on harassment

Deputy Minister **Gerry Armstrong** has approved a new sexual harassment and discrimination policy to take effect immediately.

The document is a plain language version of the policy and procedures negotiated by the employer and unions. It defines harassment and describes procedures for handling complaints.

All regional and district managers and branch directors are requested to ensure every supervisor has a copy of the new policy, and to post a copy in all offices.

Offensive, unacceptable and illegal, harassment creates an unpleasant work environment and negatively affects the lives of everyone involved: the person who is harassed, the harasser and co-workers.

If you would like to talk about harassment, call your human resources officer, your union steward or the employment equity section of the human resources branch at 387-3231.

— Submitted by *Claire Handley*, employment equity section

THOUGHTS ON RANGELAND RESOURCES:

An aesthetic and personal overview

I'm sitting on a ledge overlooking the Fraser River to the north and the Fraser and Chilcotin rivers' mouth to the south. A steep drop of 300 feet or more is below, with the sun shining brightly, radiating heat between gusts of wind. I consider myself fortunate, blessed with an opportunity to study and learn in such a breath-taking area.

It is a mosaic of rugged side cuts, rock valley banks and draws with soft, smooth upper ledges and terraces of Douglas-fir, grasses and sage mixed in.

It seems that I could see at least 25 miles north and south with this rugged and smooth mosaic following the valley, with the Fraser at the bottom. Below, I see circular patches of juniper made as if by a gardener painstakingly pruning the shrubbery.

My family and I moved from Saskatchewan three-and-a-half years ago so I could start work as a forest officer with the Forest Service. My background was in resource law enforcement, which meant dealing with recreational users in various outdoor settings, including back-country and wilderness. Little did I know that I would be placed in a setting of similar natural wilderness for my new employer.

The landscapes I have worked in have been wondrous. There is a huge contrast from the parkland and boreal forests of northern Saskatchewan to the 6,000-foot mountains and glaciers of B.C. At times, I miss the prairie sun sets and rises, but the grayling, salmon and trout fishing of B.C. make up for the loss.

I was fortunate to have been placed into the recreation and range programs within the Forest Service, a sought-after and rare position.

In the Fort Nelson forest district, my function is primarily dealing with the guide/out-fitter and packer tenures which relate to

wilderness and back country recreation.

Horse grazing permits and licences are a form of management tool to allow for Crown range utilization, while maintaining wildlife forage capacity.

The northern Rockies and the Chilcotin are so vastly different in so many ways, yet similar in their aesthetic appeal. In both locations, not only do we allow for grazing opportunities but we also allow access to enjoy the tranquil and relaxing environment that more and more people are seeking.

People in my line of work should be grateful to be working in this environment.

Recreationalists pay thousands of dollars to get the same view or climb the same ridge that I get paid to climb as part of my job.

This is why I take my job so seriously. I have a duty to the province to maintain and, when required, improve rangeland resources. This means searching out and investigating back country abuse and determining corrective action by assisting in developing standards and indicators. This monitoring and enforcement of regulations will allow for continued appreciation of our wilderness and back country treasures.

As I sit here and record my thoughts, I recall the frustration I feel at times when trying to explain to my wife and children what I have seen today or, for that matter, what I have experienced in my work in the last few years. The camera does not capture the same images of what my eyes and mind absorb. I think I now know where my family will go for our next summer vacation.

One more upsetting thought, I forgot my fishing gear back at camp.

— Submitted by Dean Cherkas, Fort Nelson district research assistant, range recreation. This essay was written as part of a course at UBC leading toward professional agrologist status.

Mid-term report card commends FRDA's progress

The Canada-British Columbia Partnership Agreement on Forest Resource Development (FRDA II) is on track, according to a mid-term evaluation recently completed by the private accounting firm of Deloitte and Touche.

The five-year forestry agreement between Natural Resources Canada and the provincial Ministry of Forests was created in 1991 to promote sustainable development of forest resources in British Columbia, and to encourage future growth and stability of forestry communities and economies.

Deloitte and Touche's evaluation shows that between January 1991 and June 1993 the agreement created 569 person-years of employment. In addition, it fostered silvicultural activities in over 24,700 hectares of B.C.'s forests, with an expected net gain of \$46 million.

The report also indicates that the FRDA II is addressing many crucial questions in the forest sector. It praises the timeliness of FRDA II's programs, such as those researching new silvicultural systems, creating an inventory of B.C.'s forest resources, and looking at new ways of integrating resource management. And it recommends that some particularly successful programs be further emphasized.

Research from the hardwood management sub-program, for example, showing how hardwoods like alder and cottonwood contribute to the biodiversity of B.C. forests and could be better used in wood manufacturing, may lead

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Crowd checks out inventory methods



From left, Bob Murray, of Hugh Hamilton Ltd., Gerry Davis of the Vancouver forest region, and David Kilshaw, resources inventory branch, sample coarse wood debris during a training session. Photo by Trudy Chatwin, Ministry of Environment, Lands and Parks.

One hundred specialists, including representatives of most major forest licensees and inventory contractors, got a preview of new, integrated resource inventory standards and methodologies during a recent one-day presentation and field tour near Chilliwack.

During a morning of presentations, Dave Gilbert provided an introduction to the resources inventory committee process and stressed how much of the work presented that day would be mandatory through referencing in Forest Practices Code guides. Next, Mike Bonnor discussed what's new and different about the inventory design, including the grid-based sampling component, while Kim Iles described the polygon-based sampling component.

They were followed by representatives from working groups and task forces testing various inventory components: Tim Salkeld and Norm Shaw (vegetation working group), Alan Banner (ecosystems), Trudy Chatwin (elements of biodiversity), Paul Matysek (earth sciences), Pete Lewis and Dave Tredger (aquatic ecosystems), and Ted Murray (culture and recreation). Rick

Page wrapped up the morning with examples of GIS outputs and decision-support tools.

Buses then whisked everyone away to two field sites near Foley Creek where crews

have been pilot testing the inventories this season. At the first stop, Verne Sundestrom, Tim Salkeld, Alex Inselberg and Bob Green demonstrated the rigorous procedures followed at the vegetation sample plot. Maureen Ketcheson explained how an ecosystem survey in the same areas was carried out.

At the next stop, Dave Tredger, Pete Lewis, David Coombes, Vicki Blann and Tom Turtle put on a display of stream habitat assessment, complete with electronic fish stunning gear. Ted Murray pointed out recreation features, followed by river otter specialist Jenny Balke and Pacific giant salamander researcher, John Richardson.

During an informal evening session, suggestions were gathered about training and implementation needs. As well, Scott Aikenhead from Facet Division Systems provided a demonstration of GIS modelling used at the Cariboo-Chilcotin CORE table.

— Submitted by Bruce Batchelor, communications consultant for resources inventory committee

FRDA

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to the opening up of new resource bases in the province.

Finally, the report identifies the agreement as an important means of getting both Natural Resources Canada and the Ministry of Forests to "communicate, co-operate and coordinate on forestry matters in British Columbia" — a crucial step in the guardianship of the province's forests.

For those involved in FRDA II, Deloitte and Touche's mid-term evaluation provides a clear idea of what they are doing well and how to make their services and research even more dynamic over the next two years.

"The report gives us some really useful

information," says Elaine Teske, acting director of forestry development with Natural Resources Canada, and one of four management committee members responsible for directing the agreement. "There are so many people and initiatives involved with FRDA that it has been essential to stand back and get a comprehensive view of how all of the parts are coming together."

Henry Benskin, director of silviculture branch and another member of the management committee, sees the suggestions for fine-tuning FRDA II's programs as "quite practical and realistic." He expects the committee will be able to use the advice to make the next two years of FRDA II increasingly worthwhile to both foresters and the public.

— Submitted by the Canadian Forest Service

Seed services manager retires



Jenji Konishi

Things have changed since Jenji Konishi joined the Forest Service 33 years ago.

Back then, for example, under 10 per cent of harvested areas in B.C. were being replanted. Today, the figure has risen to 65 per cent, and 230 million trees are planted annually.

The dramatic changes Konishi saw during his long career have been the reduction of the backlog of Not Satisfactorily Reforested (NSR) land that had accumulated in B.C. by the late 1960s.

"At that time we relied primarily on natural regeneration of harvested areas," he says. "But natural regeneration takes too long, and is unreliable in many instances." Efforts to catch up on the backlog involved not only increased replanting, but also major improvements in tree seed quality.

The manager of seed services, silviculture branch, who retired on October 14, had a hand in many of these efforts. Although he is modest about his accomplishments, col-

leagues say Konishi played a major role in the development of B.C.'s tree improvement, seed orchard production, seed processing and seedling production programs. He helped bring the highest quality materials into use in reforestation, ensuring that B.C.'s forests remain healthy and productive.

Konishi began his career in 1961. The UBC forestry graduate did short stints in the surveys division and timber management before settling into silviculture in 1963.

Over the years he served as administration officer for the Vancouver Island forest nurseries and the tree seed centre in Duncan, forester in charge of seed production in Victoria, and manager for tree seed and

nursery operations, before becoming manager of seed services in 1992.

In all of these roles, Konishi made significant contributions to silviculture in B.C. He was instrumental in laying the foundations of the seed orchard industry, for example, which has become a large industry in the province. Currently producing 11 per cent of the trees planted annually, seed orchards will produce

50 per cent by the end of the decade.

He also played a key part in the establishment of a world-class tree seed centre in Surrey in 1986.

At the heart of both developments is improved seed quality. Better timing of cone collection, handling of cones and processing of seed have improved the physiological quality of tree seed, increasing germination to an average rate of 90 per cent.

And genetic improvements have resulted from the identification of superior geographical sources of seed, and guidelines for how far the seed can be moved, both geographically and in terms of elevation, to ensure new forests are adapted to their site. Superior parent trees are also being used in the establishment of seed orchards, to produce superior seed.

New NSR sites are no longer being incurred in B.C., Konishi says, and he estimates most of the NSR backlog will be eliminated by the year 2000. The use of the best physiological and genetic material, along with the increases in replanting, will also help to mitigate the reduction in the allowable annual cut, he adds.

Meanwhile, Konishi's plans for his retirement include a period of dormancy, followed by plenty of golf and fishing, building his dream house, and travelling to far-away and not-so-faraway places.

Model forests aim for sustainability

A signing ceremony in Port Alberni this fall marked the official debut of the Long Beach Model Forest, completing Canada's coast to coast network of 10 model forests.

The signing designates 400,000 hectares on the west coast of Vancouver Island — including Clayoquot Sound and Meares Island — as a working exhibit of sustainable forestry.

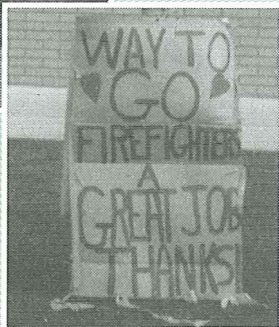
More than 80 partners have been involved in developing the forest, which will use the newest forest management techniques and consensus management concepts to find a balance between sustaining old growth forests and resource-based industries.

The model forest program was established in 1991 after provincial forest ministers

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You know you're doing something right when . . .

The fire season is over, and as predicted, the total number of fire starts broke the 1970 record. Firefighting crews and support teams put in a Herculean effort, keeping the number of hectares burned to a fraction of the record set in 1961. Firefighters' efforts earned the gratitude of B.C. residents everywhere — both within and outside of the fire areas. People chose different ways of expressing their thanks.



Andrew Petter
Minister of Forests
Parliament Buildings
Victoria, B.C.

Dear Mr. Petter:

Recently my husband and I were vacationing at Christina Lake. During one of the many lightning storms, a tree caught fire behind our cabin. We, along with some of our neighbors, took off up the hill, shovels in hand, in an effort to stifle the fire.

We arrived at the fire site, and within minutes, the Rap Attack crew arrived by helicopter. We were extremely impressed with how quickly they were able to be flown in and dropped directly at the site — fully equipped to deal with the fire. The firefighters were prompt and professional in their action and had the fire under control within 20 minutes of their arrival.

I, as well as neighbors, wish to thank you for supporting such a worthwhile program. It was impressive, given the thousands of fires burning throughout the province, just how quickly and efficiently Rap Attack staff responded.

Kimberley Colpman

Model forests — continued from page 6

agreed to cooperate to achieve sustainable forestry.

Ten model forests, each with different physical, social, environmental and economic conditions, were chosen by competition. Each is a managed partnership which includes industry, labour, environmental and conservation groups, First Nations communities, educational institutions, private landowners, and all levels of government.

The Long Beach Model Forest is the second in B.C. The McGregor Model Forest, established in 1993, is located 25 kilometres

northeast of Prince George, on the western slopes of the Rocky Mountains.

Eighty-eight per cent of its 181,000 hectares are managed for timber production, but the forest also has many non-timber uses for people in the surrounding communities, such as fishing, hunting, trapping, and recreation.

The aim of the McGregor program is to develop an information management system which will help planners and managers make better decisions about the forest.

"Sustainability in the McGregor Model

Forest means forest practices that are ecologically sound, socially acceptable and economically viable," says General Manager Bruce MacArthur.

One of the innovative technologies being developed by the program is a computer-generated model of what actually happens in the forest. Natural processes such as fire, wind, and insect damage, as well as the human influences of harvesting, hunting and recreation will be integrated in the model. It will allow people to make informed decisions, ensuring that forest management practices are sustainable.

Employee returns from Czech technology transfer

Michal Lodin, remote sensing specialist, forest inventory branch, is back at his desk in Victoria after completing a high-profile technology transfer to the Czech and Slovak Republics.

With remote sensing/geographic information system (GIS) technology installed in four sites in the former Czechoslovakia, Lodin spent nine months conducting intensive training, overseeing actual applications of the technology, and designing a university curriculum.

The project, initiated by the department of external affairs task force for eastern and central Europe and the Canadian Commercial Corporation, was delivered by the Ontario-based company, Geomatics International.

Before joining the Forest Service in 1992, Lodin had submitted a bid on the project under his company, Geodat Information Ltd. Although he didn't win, Geomatics invited Lodin to participate because of his expertise and his fluency in both Czech and English.

Lodin's involvement, made possible by the Forest Service releasing him temporarily from his duties, was a unique example of cooperation between two levels of government and the private sector.

Remote sensing is the science of obtaining information without actual physical contact, through processes such as satellite imagery and aerial photography. The GIS technology makes correlations between numerous layers of these data that would otherwise be almost impossible to make.

"These technologies are extremely useful in making complex decisions about environmental problems, for example," Lodin says. "They allow us to integrate data from different sources and evaluate the contribution of various factors to the problem."

"Tools like this are badly needed in Eastern Europe, where governments are tackling severe environmental problems inherited from the communist regime."

One application of the Canadian technology in the Czech Republic is in Krusne Hory, where LANDSAT satellite images

are being used to assess degrees of forest damage. Causes of the damage, ranging from air pollution to chemical contamination and soil erosion, are also being investigated.

The technology transfer project has been highly successful, Lodin says. The equipment and technology is being used extensively. And the curriculum will be taught in a major Czech university on a long-term basis.

But there are benefits for Canada in the deal as well, including a boost for our growing reputation in these technologies. A business environment has also been created, and Geomatics International has opened a branch office in Prague.

Talks given by Lodin in Germany and the Czech Republic have raised the profile of the B.C. Forest Service. "Audiences were pleasantly surprised by the advanced technologies used in B.C.," Lodin says.

Lodin, who grew up in Prague, says he also benefitted from the project, by gaining new insights into the different ways of doing forest inventory in a very different part of the world.

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Contributions are welcome. Please send your comments, suggestions and contributions to: **Paul Lackhoff**, editor, (phone: 953-3142, PROF PTLACKHO) at Public Affairs Branch, or **Ken Kolba** (360-2213 or fax 382-7631).

National award

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more than five gigabytes representing 100 layers of information.

Its effectiveness was amply demonstrated at one meeting of the regional round table. A federal fisheries officer was telling the group about potential conflicts between forestry and federal fisheries objectives. He explained that specific information and maps to demonstrate

the point would take about two weeks to produce in Vancouver.

A few months earlier, it would have. However, with the new technology, Morgan simply entered the criteria into the computer and within minutes the group was looking at full-color, detailed maps of conflict areas.

Page said discussions are already underway on how to maximize SEPT's effectiveness in the implementation of the Forest Practices Code.

