Moreover, these controls are done at a distance of several meters, therefore without contact with the parts being inspected, and at angles up to plus or minus 45 degrees. This makes the technology ideal for parts having complex geometric shapes or large surface areas which cannot be inspected using conventional techniques. Other sectors achieved, or targeted, include nuclear power, utilities, environment, research centres, and defence.

In the world of cable-based systems, radio communications and computer-based applications, **DTI Telecom Inc.** is extremely active on the international scene, particularly in Latin America and Africa.

For example, the Company conducted a feasibility study concerning the application of cellular radio technology for rural telephony in the South of Chile. The study led to the implementation of the recommended system, which was completed in 1992 by a Canadian company.

In Africa, DTI recently completed a market and engineering study to assess the feasibility of implementing rural telephone services in the remote areas of Togo, as well as cellular telephone services in Lomé, the capital. Recently completed is a 9-1-1 system in San José, Costa Rica, again based on DTI studies.

Another rapidly growing enterprise is TECSYS Inc., a leading Open Systems provider of software solutions to the distribution and manufacturing industries. International in scope, its clients include mid-sized and Fortune 500 corporations in North America and around the world.

The Company's flagship product, the ELITE series, is Informix-4GL based, and offers the most comprehensive and broadest set of capabilities in the market it serves. Multilingual, it is fully operational in English, French, Spanish, Portuguese and Arabic.

Also synonymous with developing leading edge products and technology is Saint-Rémi-based **Synergistics**, one of North America's largest non-integrated compounders of flexible and rigid PVC plastics, as well as a producer of other speciality polymer compounds.

Synergistics' team of scientists, for example, refined the process to produce Syncure, a moisture-curable crosslinkable polyethylene. This allows customers to make a higher use temperature polyethylene insulation at normal thermoplastic processing speeds. By using Syncure, wire and cable producers can significantly reduce their operating costs compared to other crosslinking procedures.

As one of Canada's major consulting engineering firms, Geophysics GPR International Inc. has established itself as a world leader in innovation in terms of geophysics, geology, and data interpretation.

In mining exploration, for example, costs are rising constantly as previously undiscovered deposits are generally buried under thick layers of overburden and unproductive rock that make conventional prospecting methods obsolete and inadequate. As a result, locating mineral zones today requires advanced scientific expertise.

Such expertise has been perfected by GPR researchers who have developed ultra-precise methods of interpreting seismic data and using filters that ensure a high degree of reliability, even in complex geological conditions. Indeed, the company was the very first to use high-resolution seismic measurement instruments and techniques for mineral exploration in Québec and it remains an uncontested leader in this exacting field.

Finding drinking water anywhere in the world, another increasingly difficult challenge, is also a speciality of GPR. In industrialized countries, where the growing problem arises from increasing density of population and pollution, higher yielding wells that are often at greater depths must be reached below the polluted levels.

And in third world countries, there is more sensitivity to local population needs in terms of closeness to villages, good yields even during drought, and cleanliness of water.

These increased constraints call for a higher level of expertise in siting the boreholes to ensure effectiveness of the funds spent on drilling. Here, GPR has demonstrated one of the highest success rates in the world in locating drilling targets.

TRANSPORTATION

Innovation in the rail and public transit industry is the strength of **AMF Technotransport**, a former wholly-owned division of CN, which became an autonomous incorporated company in late 1993 determined to do things differently.