COMSAT

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The Promise of 1992

By Irving Goldstein

In future history, 1992 is certain to be marked as one of the watershed years. In telecommunications, efforts are underway in the European Economic Community (EEC) to establish new policies that will enable a more liberalized environment — one that will stimulate growth and create many new business opportunities. The road to more liberalized policies and procedures has not been smooth in the U.S., and it can not be expected to be so in the EEC.

Contributing to the Global Community

After a first few brave nations established a global satellite communications system, came change. The changes wrought and the technologies and services created by our partners and customers diminished global separations and divisions.

Intelsat. The transition was not achieved without lumps and bruises. But it has adapted from being simply an order taker to a nimble competitor. We have learned to emphasize customer service, to stimulate markets and to embrace financial innovations.

Sir Leon Brittan, Vice President of the European Commission, concentrates on competition policy and speaks out regularly on the Commission's determination to foster competition. He told a Washington audience in April 1989, "Competition is the key to economic progress; it drives the engine." Later, in July 1989, he told how the Community's drive for competition serves as a "champion of the common man."

On telecommunications services, Brittan noted the twin-track approach to change. On one hand, the Open Network Provision Directive establishes common norms and standards, creating harmonization; and the Services Directive will remove from national telecommunications authorities the complete monopoly on services. Sir Leon envisioned the results as "a right of access to the networks which will be of immense benefit to consumers throughout the Community."

These excerpts are from an article by COMSAT Chairman and CEO Irving Goldstein which appeared in the January, 1990 edition of *Single Market Communications Review*, a European publication. It spells out his vision for the telecommunications industry, and COMSAT, in the post-1992 global economy.

Technology Leads the Way

The next lesson is that technology develops faster than legislatures or corporations expect, or even predict. I have said that technology is not a slave to bureaucracy, or to inertia, or to business as usual. Not only does technology create change, it also creates opportunities and opens new markets, or makes more efficient use of existing capabilities.

The Commission of the European Communities (CEC) has noted that only one telecommunications service existed in 1847: telegraphy. Thirty years later, in 1877, telegraphy had been joined by telephony. After another 40 years, sounds could be transmitted by wireless. Then telecommunications technology cascaded. By 1930, facsimile and television were feasible. Then came mobile tele-

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Exxon Says Thanks for COMSAT's Role In Oil Spill Clean Up

Exxon officials recently praised COMSAT Mobile Communications and COMSAT General's Santa Paula, Calif. earth station for their role in the clean-up of the Exxon Valdez Alaskan oil spill.

"We want to thank you for the help your organization provided in meeting the tremendous challenge of providing outstanding telecommunications support for the 1989 Valdez oil spill cleanup," said Exxon's Robert Black. "What was accomplished was unparalleled in the telecommunications industry."

Exxon was already a major Maritime Services customer when it turned to COMSAT for help in managing its communications needs in the wake of the March 23 oil spill.

Exxon said it needed full time, uninterrupted access to the satellite. Normally, maritime service through Inmarsat is provided on a dial-up, demand assigned basis. Providing the full time service Exxon requested would have presented a change in Inmarsat operations.

Maritime Services Director of Engineering Dan Swearingen and COMSAT General's Bob Smith presented a plan to COMGen vice president Larry Westerlund and Ron Mario, vice president and general manager of COMSAT Mobile Communications.

The plan called for augmenting Santa Paula's capacity and using a Marisat satellite. By modifying an antenna used for telemetry, tracking and control of the Marisat Pacific Ocean satellite and by installing four modified ship terminals at Santa Paula, COMSAT provided Exxon with four full-time channels to handle traffic to and from key locations. By using the Marisat satellite, the special traffic needs could be met without interfering with normal Inmarsat traffic.

At that point, teams at Santa Paula and L'Enfant Plaza went to work. Three weeks later, they put the plan into action. Soon, Exxon had four vessels working the waters off the coast of

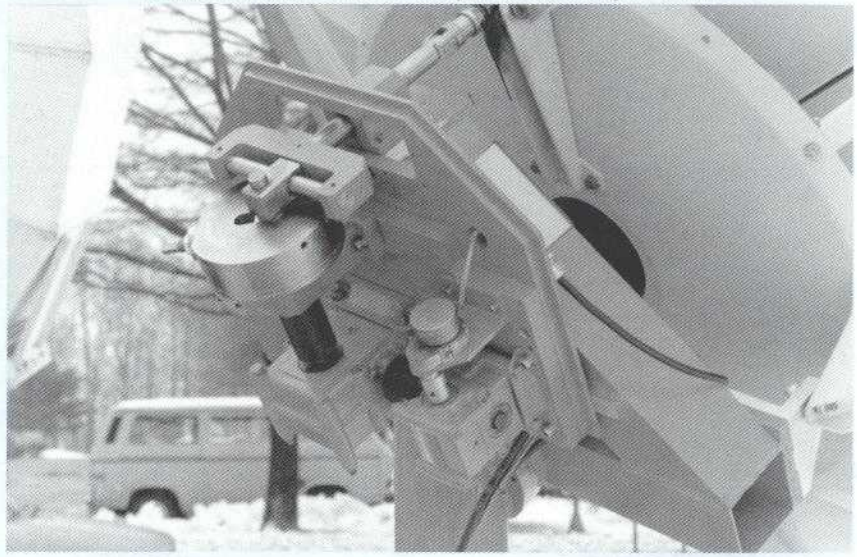
Alaska equipped for the full-time service the company requested.

"This project really demonstrated just what a tiger team our staff can be when presented with a problem," said Santa Paula earth station manager Dan Geer.

Mario said Exxon appreciated COMSAT's quick response to their needs.

"We're pleased our people pulled together and were able to provide a timely response to this emergency," he added. ■

COMSAT General "Tracker" Helps Satellite Keep In Touch



COMSAT General has developed a tracking antenna mount for use with "COMSAT Maneuver" satellites operating in inclined orbits. The mount is intended for use with small aperture antennas and is suitable for C or Ku band operation.

A prototype, called "Tracker I", was built and installed at COMSAT's Clarksburg facility in December. So far, the tracking performance has exceeded the design expectations.

"Numerous tracking techniques have been developed in the past," says COMSAT General's Vice President and General Manager Larry Westerlund. "This design addresses the small antenna market. The unique aspect of this implementation is its simplicity. It is a purely mechanical system, with a single clock motor driving the antenna."

Without any electronics," he added, "this mount requires the absolute minimum of service and maintenance, keeping the life cycle costs low."

The antenna mount has been demonstrated to both domestic and international customers, and the response has been enthusiastic, according to COMSAT General's Senior Director of Engineering Paul Palmiter.

"The next phase is taking the design to production, and efforts are already underway," he adds. "Prospective manufacturers have shown great interest in the system.

Over the next few months, this system will be brought to market, and development will continue on the next generation tracker.

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Black History Month Celebrates "The Real McCoy"

Part of Washington's celebration of February's Black History Month is a fascinating exhibit highlighting African-American inventors and their inventions at the Anacostia Museum.

The Real McCoy

One of the inventors honored by the exhibit is **Elijah McCoy**, who, according to legend, was the original "Real McCoy."

McCoy (1843-1929) was one of the most prolific 19th-century black inventors. Working primarily on advances in railroad technology, his biggest breakthrough was the invention, and subsequent improvement, of the hydrostatic oil lubricator. He began receiving patents for his work in 1872.

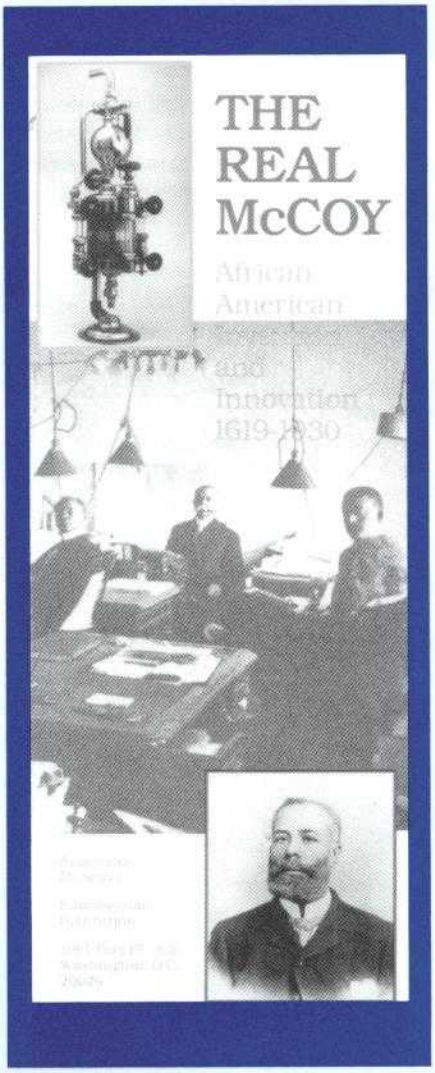
McCoy's device regulated the flow of oil into moving machine parts. It has been a vital piece of equipment, in one form or another, on millions of machines all over the world. A very advanced version of McCoy's invention even went along for the trip to the moon, 100 years after his original invention.

In the late 19th-century, McCoy's lubricator was used on ships, oil rigs, locomotives, and saw mill equipment, as well as mining and construction machinery. According to one historian, customers concerned with getting authentic McCoy parts would look for the words "The Real McCoy" stamped on the product.

McCoy went on to receive over 75 patents for lubricating and other mechanical devices. He even lent his inventive genius to helping people around the house, receiving patents for the ironing board (1874) and the lawn sprinkler (1899). All of these products are "The Real McCoy."

Other Prominent African-American Inventors

In the late 1940's, **Frederick McKinley Jones** revolutionized the way produce is delivered to supermarkets when he invented and patented the first air conditioning unit for the refrigerated truck (1949) and the refrigerated boxcar (1954). Jones, a grammar school dropout, used his experience in building race cars to solve the problem of shock proofing, which had thwarted other inventors. These breakthroughs eliminated the problem of food spoiling while being hauled over long distances.



The Real McCoy

Later, Jones used his expertise to design field kitchens for the U.S. Army and Marine Corps. He also designed the first portable X-ray machine.

Australian-born **Granville T. Woods** (1856-1910) immigrated to the United States when he was 16. He spent his early years working as a mechanic on the western railroads, and eventually became a chief engineer. In 1880 he established his own shop in Cincinnati, Ohio. Ten years later he received his first patent for an improved steam-boiler furnace.

Known as "The Black Edison," Granville also perfected many breakthroughs in telephone, telegraph and electrical technology. These were purchased by Bell, Edison and the Westinghouse Company. In fact, in two celebrated patent cases against Thomas Edison, Granville proved that he had earlier rights to inventions claimed by Edison.

The prolific Granville went on to patent over 150 devices throughout a prodigious career.

Some patents were earned by black women. In 1896 **Julia Hammond** received a patent for a device that held yarn for knitting. **Archia Ross** held three patents, including one 1899 patent for a device that kept trousers from wrinkling. **Claytonia Dorticus** operated a small photographic studio in Newton, N.J. and received four patents in the 1890's relating to photography.

The Exhibit

Sponsored by the Smithsonian Institution, the exhibit at the Anacostia Museum will run throughout the month of February. The museum is at 1901 Fort Pl. S.E. in Washington, and admission is free. For more information, call 357-2700. ■

The Promise of 1992 *(continued from page 1)*

phones, color television data transmission, photo facsimile by 1960.

Technological advances compressed the time for change to occur, and expanded its applications. Comparing telecommunications in 1984 with the prospects for the year 2000, the CEC forecasts an increase from 17 identifiable services to 31.

The march of technology knows no borders. With the stimulus of EC 1992, we can foresee and predict a surge of technological developments to come from the single market, or to be developed elsewhere to exploit opportunities

the single integrated market has created.

At the same time competition in telecommunications has increased, so has cooperation. In many cases, cooperation is invisible. Customers do not know—or care—who or what has enabled them to call or send a fax anywhere, from the slopes of Mt. Everest to a ship at sea or an aircraft high above the earth. They simply want quality service at the best price.

Cooperation in telecommunications shows signs of accelerating as rapidly as technology. The cases are too numerous to list here, and the list grows daily. But an example will suffice to point the trend. AT&T recently acquired Istel, the UK information services group. Istel gains the financial support and AT&T name in order to expand its high value added telecom

What is the European Community?

The European Community-often known as the 'Common Market'- was formed after World War II to unite the nations of Europe and create the conditions for economic recovery and growth. Twelve countries are now members of the European Community, with a total population of more than 320 million.

The process of unification has changed much of the way Europe works and lives. Trade barriers between the member nations are being removed, which Europeans hope will allow post-war economic growth to continue.

Who are the member nations?

The twelve members of the European Community are; Belgium, Denmark, France, West Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom.

What are some of the most significant dates in the history of the European Community?

1952 - Six countries - Belgium, West Germany, France, Italy, Luxembourg and the Netherlands - created the European Coal and Steel Community (ECSC) by pooling their resources and industrial activities in the coal and steel sectors into a single market. This agreement was administered by an independent authority.

1958 - The "Rome Treaties" set up the European Economic Community (EEC) and the European Atomic Energy Community (Euratom). The accord extended the common market to all economic sectors in the EC countries.

1973 - The United Kingdom, Ireland, and Denmark joined the European Community.

1979 - The first direct elections to the European Parliament were held. The European Monetary System was established, linking the EC currencies together in a zone of monetary stability.

1981 - Greece became the tenth member of the Community.

1986 - Spain and Portugal became the 11th and 12th member states.

. . . And the Future. . .

1992 - The nations in the European Community achieve an open market without barriers. Goods, services, labor and capital move freely between the member states.

How is the European Community governed?

- The Community is governed by its own democratic institutions.
- **The Commission** proposes policies and legislation, and is responsible for the administration of the EC It consists of 17 Commissioners, appointed by unanimous consent of the member nations.
- **The Council of Ministers**, representing the member states, acts on Commission proposals and is the final EC legislative body.
- The 518-member **European Parliament** scrutinizes proposed community laws and acts as the EC's public forum.
- **The Court of Justice** interprets the founding treaties and is the "Supreme Court" for European Community law.

services into the Single Market. AT&T gains Istel's expertise in such services and an additional point of entry into post-1992 Europe. This is but one of dozens of cooperative activities building between the US, Europe and Japan.

As competition, technology and cooperation cause and exploit change, so do markets tend to converge. Take Inmarsat as an example. When it was founded nearly eleven years ago, maritime service was considered mobile and land-based was considered fixed. But now the distinctions are blurred, with Inmarsat able to proffer every service offered by land-based providers. Again the user of the telecommunications services does not care how the markets are defined; he simply wants the best service possible at the lowest price.

Attitudes as Barriers

What are the barriers to open markets and innovation, if technology and policies are knocking them down? Negative attitudes and frame of mind are the most formidable. In the US, attitude surveys and opinion polls have highlighted the fears that post-1992 Europe will be "Fortress Europe". It is perceived as a monolithic Europe that is organized and focused on competing with the US and Japan while keeping them out. Although the perception is erroneous, it is strong enough to raise concerns. President Delors of the European Community and other European statesmen devote a good deal of their time and energies to knocking down the fallacious stereotype, but it persists. As US officials and businessmen and tourists see the liberalization of services in the EC develop, and they gain experience with non-discriminatory access to the EC networks, negative perceptions will fade. Then it may be truly said that the borders have disappeared, and the promise of 1992 is real.

Telecommunications is the nervous system of the national and international bodies on this planet Earth. Efficient telecommunications services are essential for economic development to occur. Indeed, the introduction of satellite telecommunications by the US and the success of Intelsat were precursors to the 1992 movement. Perhaps partly because satellite footprints do not recognize geopolitical boundaries, satellite telecommunications have stimulated a frame of mind that made a single integrated market plausible and achievable.

The policies for EC 1992 integration and competition are clear and sensible. The technologies are at hand to increase markets and services. Corporations and governments are harmonizing their efforts and finding new ways to cooperate and compete at the same time within an open framework where artificial barriers have dropped.

We welcome the challenge of coping with the changes that lie ahead, confident that EC 1992 will be the beginning of a new and exciting era in global telecommunications. ■

How the European Community and the United States Match Up