

The Olympic Communications Network

by **Sandra Ortiz**
Jack Stewart

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In 1984, Pacific Telephone and Telegraph Company (PT&T) will be the world's window to the greatest sporting spectacle of man — the Summer Olympics.

It will be the second time that the City of Los Angeles has hosted the Olympics, the first took place in 1932. But, it will be the third time PT&T will provide the necessary communications. PT&T provided the link-ups in 1932 and also in Squaw Valley for the Winter Olympics held in Lake Tahoe in 1960.

This time an estimated 2.5 billion people, more than one-half of the world's population, are expected to view the XXIII Olympiad events on television. In addition, the written press, security agencies, and

Olympic committees from around the world will all require special communication linkage. More than 26,000 circuits will have to be installed to meet these needs, many of them complex audio and video hook-ups.

Under an agreement between PT&T, American Telegraph and Telephone, and the Los Angeles Olympic Organizing Committee (LAOOC), the Bell Systems will provide the necessary communications facilities and networks.

Bell's Western Electric Company has plans to install thousands of computer terminals across the Olympics area capable of electronically receiving, storing, and sending vital messages without the use of paper. This electronic mail system will permit the instantaneous transmission of different types of information. Journalists will have all the data they need for an in-depth story, athletes will have a message center at their fingertips, and urgent messages will be coordinated with electronic beepers for key Olympic officials, enabling communications to be fast and efficient.

A new PT&T lightwave communications system, already being installed in Los Angeles and neighboring areas to meet growing customer needs, will serve as the backbone for

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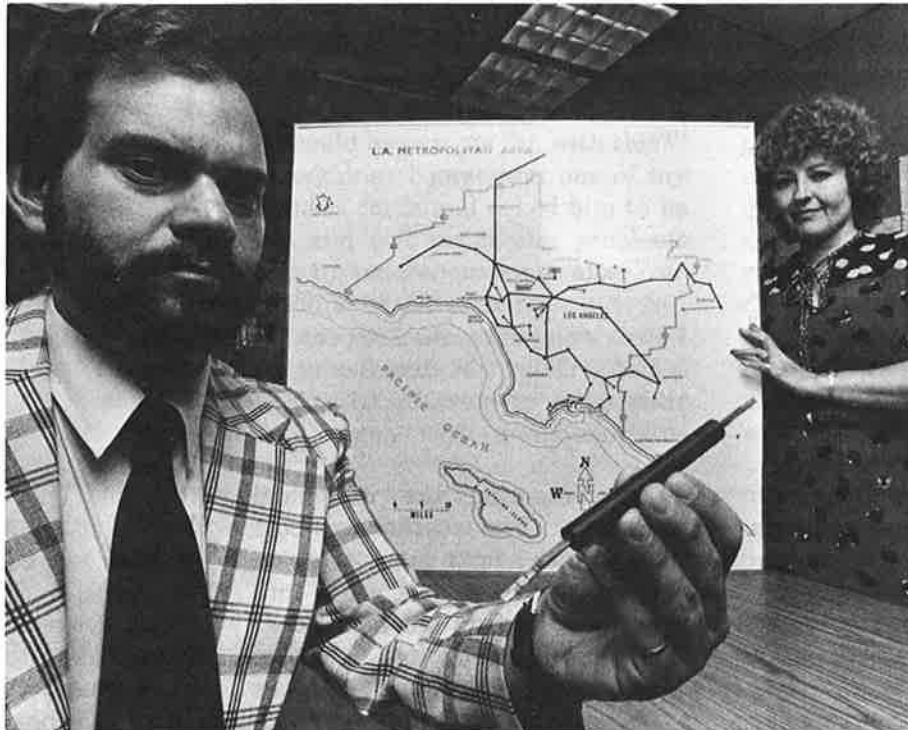
all Olympic transmissions. This futuristic system will eventually encompass 630 miles of California's coastline and 300 miles of its interior, making it the longest laser-powered telecommunications network in the world.

According to John Donner, Staff Manager for PT&T in charge of Olympic Coordination, "Special lightwave feeder cables will be installed at ten of the twenty-two Olympic sites so we can bring the words and pictures to the listening and viewing public." Although most of these feeder lines will be pulled out at the conclusion of the Games, some areas will be permanent, forming an informational network for area business.

Lightwave technology, also called Fiber Optics or Lightguide, was pioneered by the Bell Laboratories. It involves the transmission of information via bursts of laser light along glass fibers one-half thick as a human hair. As many as 144 of these tiny silicon-extruded fibers can be strung into a single lightwave cable barely one-half inch in diameter. A cable this size has a capacity three times a conventional copper cable the size of a man's wrist.

Other advantages of the light cables is that all information is transported digitally, providing a higher





Pacific Telephone's Olympic Engineering Manager Steve Copoloff shows off lightguide cable similar to that being installed to meet growing customer needs as well as the 1984 Olympics. Associate Staff Manager Maria DeGott holds up a map detailing the lightwave network that will bring the words and pictures of the Olympics to a global audience.

quality at a faster speed. Cost savings of light cable over copper cable are also quite substantial.

PT&T faces the challenge of providing telecommunications for 10,000 athletes and coaches, 24,000 governmental officials, 10,000 media representatives, and two million visitors to the Games in a 4,500 square mile service area. Centered at the Los Angeles Memorial Coliseum, where opening and closing ceremonies will take place, as well as the track and field events, the communications network will stretch out in all directions, extending as far north as beautiful Lake Casitas in Ventura County for the rowing and canoeing events, and as far south as Orange county where a variety of events at different sites will be held.

To serve all twenty-two site facilities, PT&T has made a sizeable commitment. Twenty-eight people are

presently assigned full-time to the Olympic Project Team. These are key marketing and engineering staff who interface with twenty-six other PT&T departments.

PT&T is using existing rights-of-way to serve a majority of the sports venues. In most cases, lightwave cable will be merely added to in-place conduits filled with coaxial cable. However, some of the more remote venues will not be part of the lightwave system. Instead they will be served by conventional aerial cable traversing temporary pole lines. The right-of-way for these lines are now in the process of being acquired.

A case in point is Coto de Caza, the planned site for all five of the Modern Pentathlon events. This 5,000 acre exclusive resort community is located at the base of the

Saddleback Mountains, in Orange County, 56 miles from the Olympic Press center. To connect it to the existing network, 16,410 feet of aerial cable will have to be strung over 81 temporary poles, and another 2,122 feet of cable will have to be buried.

This will cost the company \$200,000, and require the acquisition of temporary easements across undeveloped land from five intervening major landholding companies.

Even though much of this project, from a right-of-way viewpoint is routine, the scope and purpose for the establishment of the communications network make it highly unusual and exciting. For in 1984, the world will come to Los Angeles to view the greatest spectacle in sports in the world today, and the right-of-way professionals involved helped make it happen.