

# The Teleport: telecommunications and urban growth

by Joseph A. Fogarty

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Teleport is a project conceived by the Port Authority of New York and New Jersey combining the need for economic development in an urban area with the ever-increasing demand created by the communications industry to employ the latest state-of-the-art technologies.

Key members of the Teleport's development team in addition to the Port Authority includes the City of New York, Merrill Lynch and the Western Union Corporation. This project is a first-of-its-kind in economic development and will call for an investment of approximately \$300 million which will be generated mostly through the private sector. The project will answer a demand which has been created by a burgeoning communications industry and will employ the latest state-of-the-art technologies.

The Teleport will have two distinct but interrelated components: an office park and an advanced telecommunications

network employing fiber optics and satellite technologies for intraregional and long-distance communications. Although each of the components may operate independently, it is the planned interdependence of real estate and communications services that makes the Teleport unique. The Teleport is regarded by its sponsors as an economic development venture, designed to retain business activity and jobs in the New York/New Jersey metropolitan region. To the extent that this approach shows promise, the Teleport can serve as a model for replication and adaptation in cities nationwide.

By extending the concept of "port" to the promotion and management of electronic information—just as seaports and airports encourage and facilitate vessel and aircraft traffic—the Teleport model may also assist local officials in relating existing development programs to needs and opportunities in the information economy.

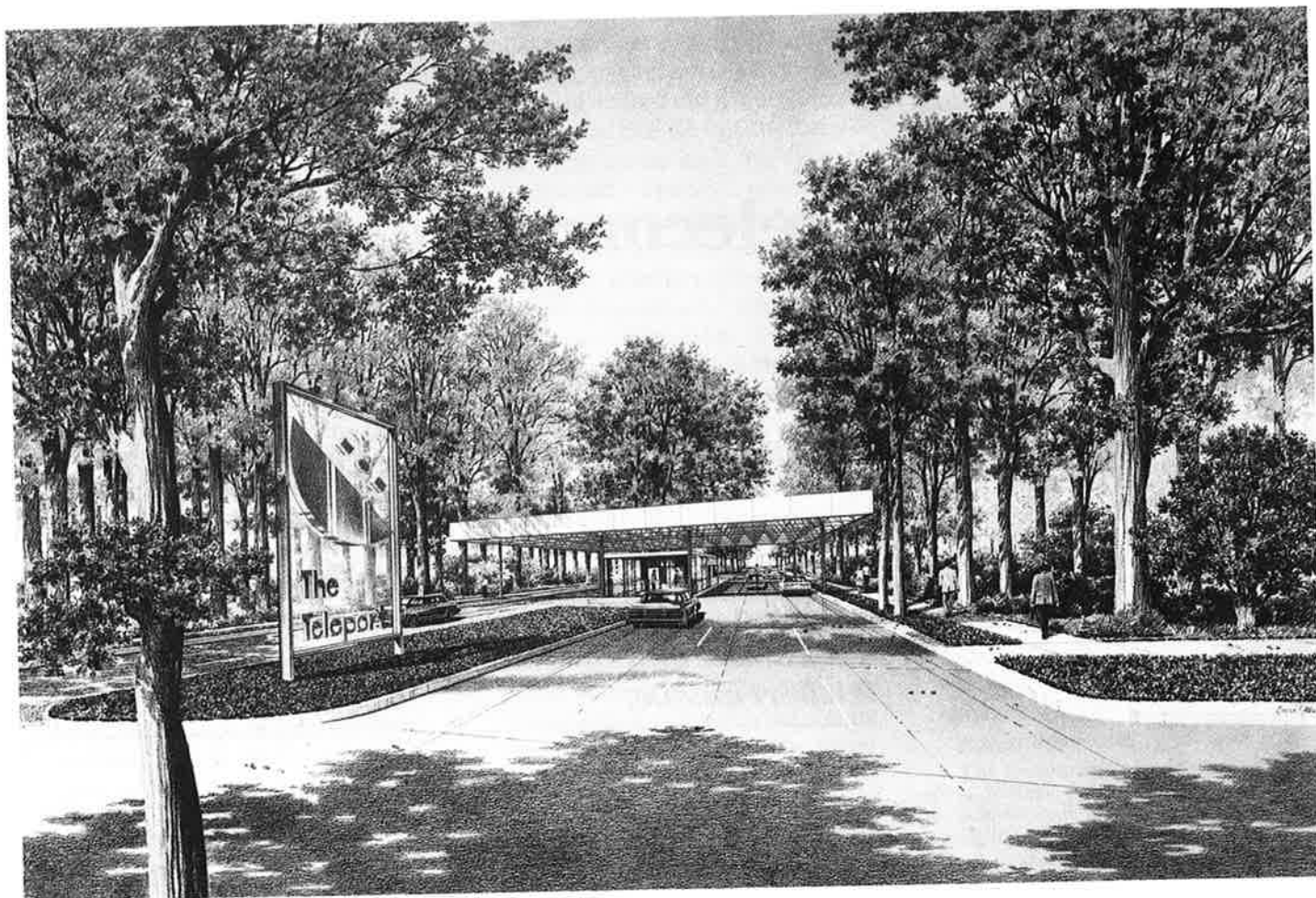
## **Project's history**

In 1977, the Port Authority of New York and New Jersey began to examine whether telecommunications could be used to strengthen the economic base of the New York/New Jersey area that it

serves. This was a time when its World Trade Center complex had brought the Port Authority to the forefront of commercial real estate development. It was also a time of growing recognition that the same computer and communications equipment that led to the growth of the information industry and subsequently contributed to urban economic growth also permitted widespread decentralization of work.

A study of the economic development potential of telecommunications services was undertaken by the Port Authority's Business Development Program, with the assistance of COMSAT, the Diebold Group and Arthur D. Little, Inc. In addition to exploring the demand for advanced telecommunications services by New York City companies, the Port study sought to identify barriers to the provision of those services. These barriers would have to be overcome if the information industry was to be cultivated for its contribution to the region's job market and tax base. The four types of barriers identified in the Port study were:

1. Radio frequency interference.
2. Unreliability of electric power.
3. Broadband communication needs.
4. Inadequate facilities for back-office functions.



### Project's site and infrastructure

The Teleport is being built on a vacant City-owned parcel on Staten Island. The site includes 350 acres of vacant, undeveloped land, of which 200 acres will be developed as an office park. The remaining 150 acres are wetlands and will be maintained as a park. The site, one of 29 investigated by the Port and COMSAT, was selected because of minimal radio frequency interference in the area. Owned by New York City's Public Development Corporation, the site, which will be leased to the Port Authority, is served by primary and secondary highways providing access to regional airports, Manhattan and other business centers. The site's frontage and interior roads are presently being constructed and improvements to the highway network will be completed in 1985.

The Teleport site also adjoins recently built communities of single-family homes and condominiums. Consequently, homeowners' concerns about vehicular traffic and the effects of electromagnetic radiation from the earth

stations had to be considered in the project design and in New York City's Uniform Land Use Review Procedure governing environmental impact.

Development of the site will involve its infrastructure; the office structures; and the telecommunications facilities, including the fiber-optic network, which will extend beyond the Teleport site to business centers in the region.

The infrastructure and office structure portions of the project will be developed and managed by the Port Authority. Basic Teleport infrastructure will consist of routine utilities, water and sewer service, access roads and parking facilities.

Design criteria for the office structures were specified to overcome barriers to the growth of information industry activity. They call for affordable space and state-of-the-art services to meet the specific needs of companies with large-scale information-handling functions. In addition to its interference-free environment, the Teleport will provide building and office designs geared to meet the spatial needs of computer and communications personnel and equipment; an emergency power system with a 30-day

supply of fuel to provide electrical service in the event of power outages; and heating, ventilation and air conditioning services suited for the 24-hour operation of computer facilities. Furthermore, site and building design will provide maximum physical security, and full security services will be assured by Port Authority police and private guard services.

The Teleport's infrastructure and office park will be developed in two phases of about 100 acres and 1 million square feet of office space each. The Port Authority committed \$38 million for the first phase, which began in the Spring of 1983 and will be completed over a five-year period. The full master plan will require 10 years to complete.



## The Teleport's concept

As noted, the Teleport provides two separate but interrelated services:

1. It will provide a state-of-the-art office complex, park and telecommunication center which will include available space for a variety of private business uses, and
2. It will provide a futuristic communication network throughout the greater New York City, Long Island, and New Jersey areas. The network will employ fiber optics which is at the leading edge of today's communication systems. This network will allow immediate access to the Teleport and the world beyond.

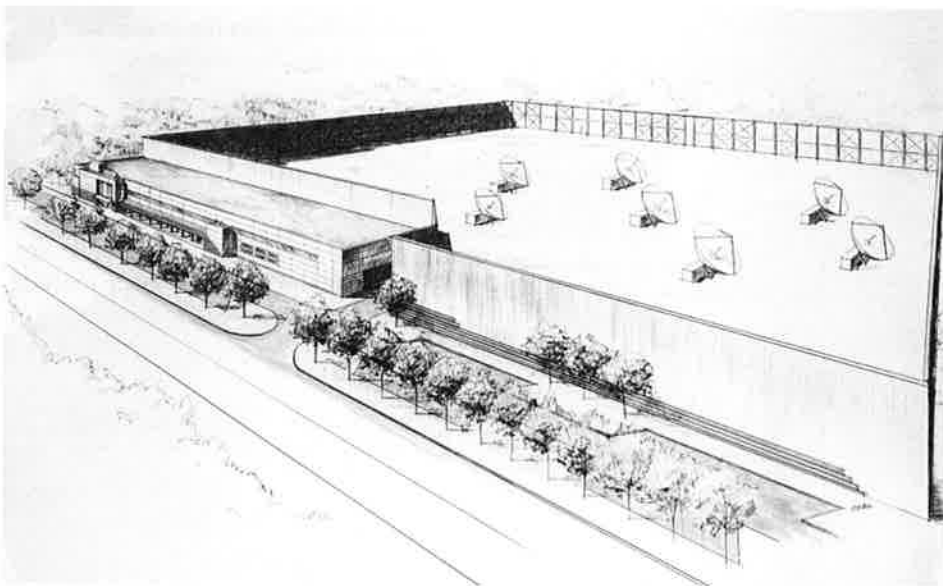
The first phase of the on-site construction is well underway. When completed, it will include a shielded area with 12 to 17 high performance earth stations. These earth stations will allow Teleport occupants and network users to have access to 22 existing satellites, with 23 additional satellites authorized, but not yet constructed. The first building of the office complex is also being constructed and prospective tenants are being sought by the private developers. As an occupant of the new complex, the tenant will enjoy a myriad of amenities.

These include:

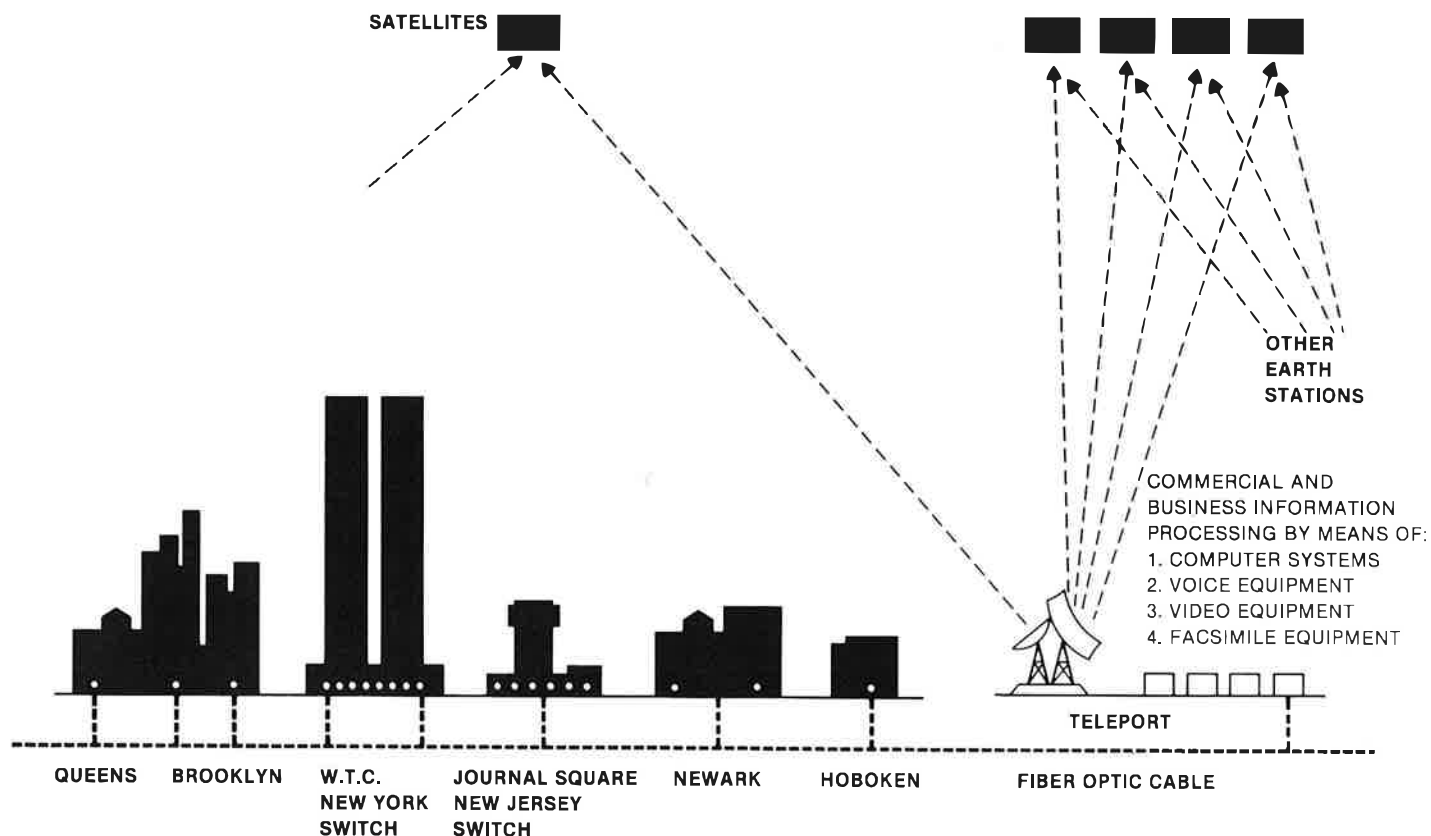
- A park-like setting with increasing real estate values.
- Enhanced office facilities which are being developed, for the most part, through private investments.
- A fail-safe power supply that is interconnected to two major power grids, providing a primary and an alternative system.

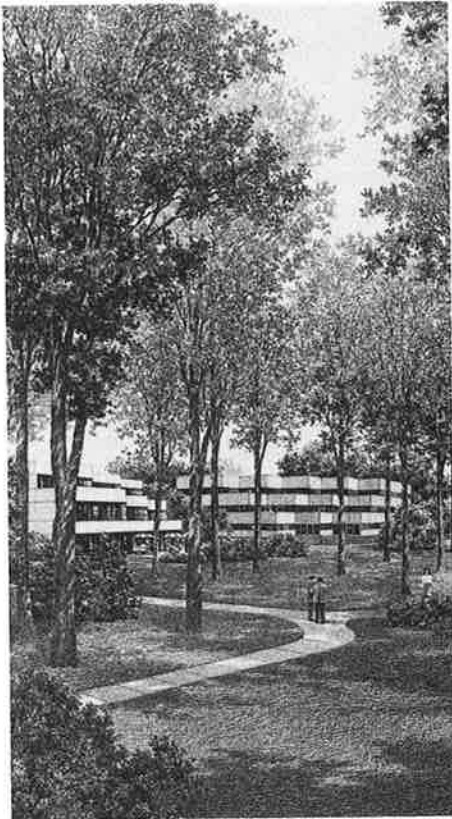
- A fully secured area with one entry point and an on-premise pass system.
- An experienced work force within easy commuting distance, and
- Good access to the greater metropolitan area.

The second part of the first phase includes the fiber optic network which will extend the telecommunication



*The Teleport site includes advanced Earth Stations and accompanying shield and a Telecenter control building.*





capabilities of the Teleport throughout the New York and New Jersey metropolitan areas. This wide-band laser powered fiber optic system runs from the Teleport to key nodes that are strategically located throughout the area. The system will allow an unlimited variety of messages to be transmitted and works well with all kinds of equipment. Power for the system will also be supplied through the Teleport which has a double back-up system. In short, this fiber optic network offers the following attributes:

- Accessibility
- Flexibility
- Reliability
- Cost Stability
- Dependability

For the most part, the fiber optic network is being placed within the existing Port Authority or Western Union right of way corridors.

### Conclusion

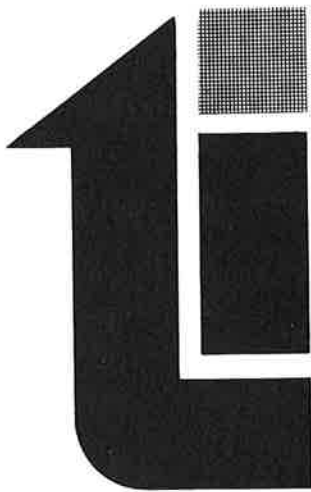
The Teleport is an ambitious public-private venture designed to serve a regional market and to satisfy important financial and technological considerations of firms in the dynamic information industry, whose presence is valued in the Port Authority's jurisdiction. The approach clearly shows promise, and represents the best kind of public/private partnership for creating a facility that will establish an international communications gateway and permit new and almost limitless communications possibilities.

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