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the CENTO Region:



# TAPESTRY OF PROGRESS



Linking the CENTO Region:

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# TAPESTRY OF PROGRESS

**S**TRAND by strand, the regional countries of CENTO — the Central Treaty Organization — are weaving a vital tapestry of modern communications between their nations.


This booklet constitutes a progress report on that complex project — a project that promises a myriad of benefits not only to the peoples of Iran, Pakistan and Turkey but also to the international travellers of today's shrinking globe.

It is a project whose long-range goal is the closer interlinking of the historic countries of Iran, Pakistan and Turkey through the development of new or improved:

- Seaports
- Highways
- Railroads
- Telecommunications Systems
- Air Navigational Aids

The object of such a mammoth development programme is clear: hand in hand with improved communications can go not only economic but also cultural benefits — including closer understanding between neighbours.

It is true that much remains to be done. But strand by strand the tapestry grows. Steadily and surely, the CENTO regional countries — through self-help, mutual cooperation and the assistance of their supporting Western partners in CENTO — are weaving a pattern of communications destined to serve countless generations to come.



**COVER:** Treads of a heavy-duty grader form a geometric pattern as work progresses on a CENTO railway terminal site at Tatvan, Turkey.

**LEFT:** Modern port handling equipment, provided through CENTO, speeds cargo discharge at the Turkish Black Sea port of Trabzon.



## Linking the CENTO Region:

### **Widening Gateways To the Seas**

**O**VER the centuries, desert caravans and sailing dhows of much of the Middle East found their lonely ways to the seaports of what today are the regional CENTO countries, for the sea has always offered a convenient path of communication with distant shores and markets.

It was therefore logical that the development of more modern seaports in the CENTO region became an early and prime goal of the Central Treaty Organization. It also is significant that the first individual CENTO project to be stamped "COMPLETED" — as it was in 1963 — was the major project of revitalizing, in cooperation with the government of Turkey, the strategic Black Sea port of Trabzon.

A similar CENTO project at the Turkish Mediterranean seaport of Iskenderun will follow as a sequel to the Trabzon success.

Ceremonies mark the completion of Trabzon port development project.

### **TRABZON: Revitalized Port**

Trabzon, the historic Black Sea port of Turkey, offered CENTO an ideal pilot project. Since ancient times a terminal point for an old caravan route from the East, it now was to become a railhead and a highway focal point for CENTO's new or rebuilt overland routes from Iran and Pakistan.

CENTO and the Turkish and United Kingdom governments cooperated in a port development project. For its part, Turkey further enlarged the harbour. The United Kingdom, working within the

framework of CENTO, donated and installed a wide range of port handling equipment valued at the ster-

ling equivalent of \$512,400.

Cranes of various capacities, forklift trucks, tractors, trailers and workshop equipment — combined with the harbour extension — increased Trabzon's cargo handling capacity to over a million tons a year.

In July, 1963, at ceremonies attended by ranking diplomats, government officials, the Secretary General of CENTO and other dignitaries, the Trabzon port development project was formally declared completed.

The second step, now already being taken, is similar development of the port of Iskenderun, on Turkey's Mediterranean coast. As with Trabzon, transit trade at Iskenderun is expected to increase sharply.

The development and enlargement of Iskenderun port will be phased over a four-year period during which the United Kingdom has agreed to provide port handling equipment valued at the sterling equivalent of \$1,260,000.

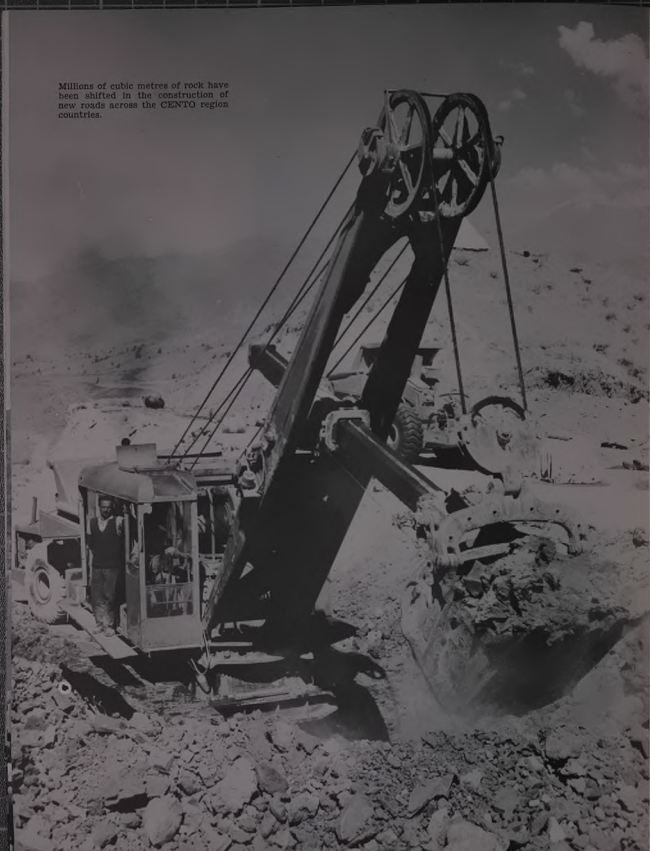


Fork lifts such as this facilitate cargo movement at Trabzon.

CENTO Secretary General Dr. A.A. Khalatbary speaking at the Trabzon ceremonies.



Millions of cubic metres of rock have been shifted in the construction of new roads across the CENTO region countries.



## Linking the CENTO Region:

### **Asphalt Conveyor Belts Bridge Ancient Lands**

**C**OLOURFUL and glamorous in fiction, tedious, dusty and wearisome in reality, camel caravan trails have linked the CENTO regional countries — Iran, Pakistan and Turkey — since ancient times.

By offering an established means

of communication, the camel trails proved their worth — as did the sections of more sophisticated roads that gradually replaced the trails in scattered areas.

But today's fast, modern transportation methods demand much more: ribbons of high standard, all-

year, all-weather highways that become giant conveyor belts laden with the products and peoples of many nations.

The Central Treaty Organization saw the need for such highways interlinking Iran, Pakistan and Turkey. Coordinated road building projects were undertaken in northern, central and southern areas of the CENTO regional countries.

The task is enormous — but it will be completed. The following pages offer a graphic picture of the modern highways now being built along the camel caravan trails of another era.

A new CENTO road winds through scenic countryside.



## Linking the CENTO Region:

### Highways: Iran-Pakistan

An integral part of the CENTO plan to link the highway systems of the regional countries is a project to extend the road from Kerman, in Iran, eastward to Bam and Zahedan, across West Pakistan to Quetta and thence south to Karachi, a total distance of over 2,663 kilometres.

Such a highway, making road travel possible from West Pakistan across Iran to Turkey, obviously would open vast new areas to commerce, develop new import and export markets and generally improve communication with previously isolated areas. Many new types of industry would develop once the

barrier of inadequate communications was surmounted.

In Iran, preliminary engineering studies of the road from Kerman to Zahedan have been completed. The Iranian Government's Third Five-Year Plan provides for the necessary detailed engineering studies as well as the construction of this section.

Acting on the recommendations of the CENTO engineering advisers, work also is in progress in various stages on the Pakistan side, including the long route from Quetta to Karachi.

Road building machines transform ancient trails into modern highways connecting the CENTO region.

Great physical effort, in intense heat, by many such gangs of labourers is going into the construction of CENTO road and rail projects.

## Linking the CENTO Region:

### Highways: Turkey-Iran

During the winter, travel between Turkey and Iran by the present rough northern road is a very difficult matter indeed because of heavy snowfall. This road, the old caravan trail, is of particular importance since it leads to the Turkish port of Trabzon, the development of which is another CENTO project.

The Iranian Government has been given road building equipment by the United Kingdom to the sterling equivalent of \$154,000 for

road improvement from Tabriz to Bazargan.

Another CENTO highway link between Turkey and Iran is being built towards the south. Starting at Şivelan, some 80 kilometres south of Lake Van, the road crosses into Iran beyond Bajirge and then runs through Rezaieyh to join the Tabriz-Tehran main road at Zenjan.

On the Şivelan-Zenjan road steady construction progress is being made from both ends. The Turkish Government has so

far spent \$2.2 million in local currency on the project. It is being assisted by a grant \$1.34 million from the United States.

Two separate grants of the sterling equivalent of \$280,000 each have been made by the United Kingdom to help finance construction of the Iranian section. The through road across the border should be in operation by the end of 1963.

Closely associated with the southern road project is the building of a road from Şivelan which will run through Hakkari and Cizre to the Turkish Mediterranean seaport of Iskenderun. The Turkish Government is endeavouring to complete, by the end of 1967, an access road between Cizre and Hakkari.







## Linking the CENTO Region:

### Steel Rails Form A Backbone of Progress

The permanent way for the CENTO Turkey-Iran railroad link under construction eastward from Mus, Turkey.



**T**WIN rails of steel — rails forming the backbone of a mode of transportation that has historically played a vital role in the

development of modern nations — will ultimately interlink Pakistan, Iran and Turkey as a CENTO vision achieves reality.

Significantly, the first joint project to be approved by the first session of the CENTO Economic Committee called for the linking of

existing railroads in Iran and Turkey. With this action, CENTO recognized the key part railroads must play in the dramatic

development of improved communications between the regional countries.

The following pages picture the

progress being made in bringing to life a CENTO dream that presents an awesome challenge to men and machines.





## Linking the CENTO Region:

### Railways: Iran-Pakistan

The Iranian railroad system extending eastward towards Pakistan now stops at Kashan, south of Tehran. Nearly 800 kilometres away, the terminus of the Pakistan railroad's westward route is at Zahedan, on the border. A CENTO railway project would link these two systems.

Allied with the new Turkey-Iran rail link, the completion of the two projects would provide complete rail intercommunication across Pakistan, Iran and Turkey to Europe. It would thus provide Pakistan with

At Tatvan, on the western shore of Lake Van in Turkey, trains will be put aboard a ferry for a crossing to Van, there reverting to rail for Tabriz, as part of the Turkey-Iran CENTO rail project. Tatvan landing is pictured.



Many tunnels such as this one are under construction between Mus and Tatvan (Turkey) as part of the CENTO railway project.

a land trade outlet to Iran, Turkey and the west in addition to the sea outlet from Karachi.

The first section, between Kashan and Yazd, has been fully surveyed, the land acquired and engineering, earthworks, bridges and buildings finished. Between Yazd and Kerman survey work is nearing completion. The sterling equivalent of

some \$36,400 worth of survey equipment is being provided to Iran by the United Kingdom.

The cost of the huge project has been estimated at 125 million dollars, of which \$75 million will be in Iranian rials and \$50 million in foreign exchange. An assessment of progress notes that it would be possible to complete the project within five years depending on the availability of necessary funds.

## Linking the CENTO Region:

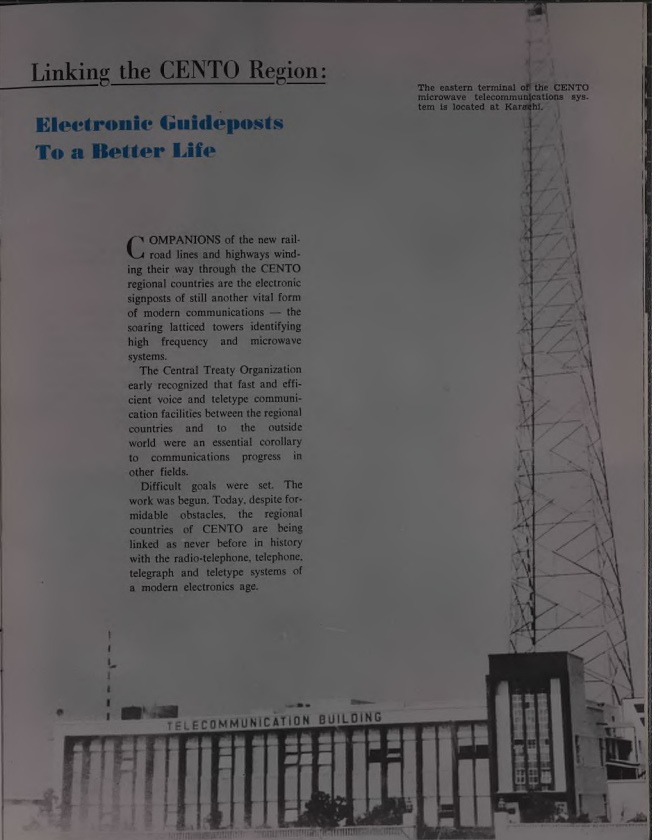
### Electronic Guideposts To a Better Life

COMPANIONS of the new rail road lines and highways winding their way through the CENTO regional countries are the electronic signposts of still another vital form of modern communications — the soaring latticed towers identifying high frequency and microwave systems.

The Central Treaty Organization early recognized that fast and efficient voice and teletype communication facilities between the regional countries and to the outside world were an essential corollary to communications progress in other fields.

Difficult goals were set. The work was begun. Today, despite formidable obstacles, the regional countries of CENTO are being linked as never before in history with the radio-telephone, telephone, telegraph and teletype systems of a modern electronics age.

The eastern terminal of the CENTO microwave telecommunications system is located at Karachi.



## Linking the CENTO Region:

### Telecommunications: High Frequency

CENTO's high frequency radio link, an electronic system affording parallel teleprinter and radio telephone service between London and the capitals and certain secondary cities of the CENTO regional countries, has been created in two major stages.

Initial planning for the system began as early as 1958, when British technicians started consultations with the respective CENTO nation governments to establish requirements. The United Kingdom of-

ferred a grant of the sterling equivalent of \$1,820,000, and a contract for the first step was signed with the Marconi Wireless Telegraph Company.

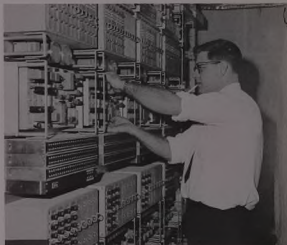
By 1961, the first stage of the high frequency link was completed in Turkey and Iran; mid-1962 saw completion of the first stage in Pa-

kistan. The ensuing system thus linked London and Istanbul, Ankara and Tehran, Karachi and Dacca.

While Stage One is undergoing scheduled refinements and modifications, the communications link will be further extended to Khorramshahr (through Tehran) and Rawalpindi by 1964.



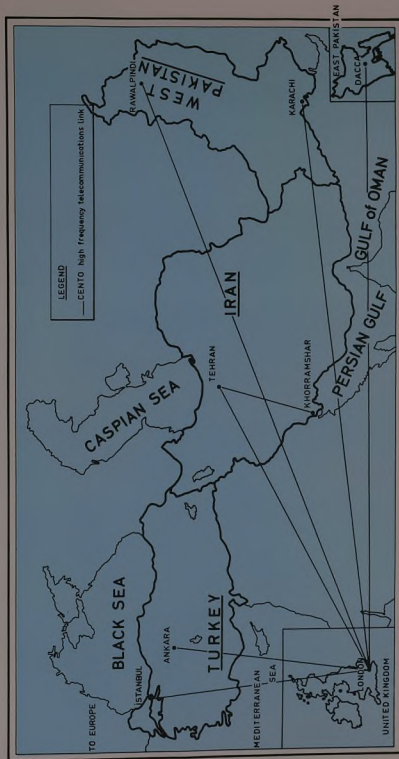
British and Turkish radio engineers in Ankara test the main console of equipment for the CENTO high frequency link.



This complicated bank of electronic components is part of the equipment at Ankara Station No. 1 of the CENTO microwave telecommunications system.

An Iranian technician checks radio equipment installed at Tehran for the CENTO high frequency project linking London with key regional centres.

### CENTO High Frequency Project







## Linking the CENTO Region:

### Telecommunications: Microwave

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The training of personnel to operate the system was also essential. Specialized schools were established regionally to produce the needed electronic and mechanical experts. (Although the majority of the stations will be fully automatic, one in eight will be manned.)

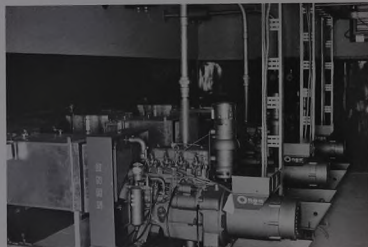
Thus far, the regional governments have spent the equivalent of more than \$8,670,000 in local currencies on the microwave project; the United States has made a contribution of an additional \$18,370,000. Equipment has been provided by the Radio Corporation of America under a \$16,490,000 contract signed in 1961 with the United States Government.

Each microwave radio relay station has three diesel generators. Only one engine at a time is in use; another automatically cuts in in the event of a breakdown.

This typical CENTO microwave radio relay station is high in the mountains bordering Lake Van in Turkey.



Turkish radio technicians who will control their section of the CENTO microwave link undergo instruction at a special school in Ankara.



## Linking the CENTO Region:

### Electronic Charts To Safer Skies

By 1965, airline pilots navigating the 4,800-kilometre airline between Turkey and Pakistan will have as their aerial guideposts the latest electronic marvels of a modern age.

The pilots will be flying what is becoming known as the CENTO Airway, offering the latest facilities in air navigation, including air to ground communication and ground communication between key traffic control points.

Manning an overall system that

will embrace the CENTO microwave installation as well as 13 radio beacon stations will be special-

ized personnel now being trained under CENTO auspices. Their eventual job: supplying direct, continuing guidance to aircraft traversing the territories of the Central Treaty Organization's regional countries.

To make such a system possible, each of the CENTO regional countries has been improving its own network of air navigational aids. In addition, the United States has so far allocated \$5,200,000 toward the airway project, and the United Kingdom has donated meteorological telecommunications equipment valued at the sterling equivalent of \$560,000. The latter also is training regional meteorologists to use the equipment.

Iranian air traffic control specialists under instruction at Istanbul's Yesilkoy airport as part of CENTO airway personnel training programme.



**BACK COVER:**  
Towering mountain peaks in eastern Turkey form a backdrop for these workmen helping build the CENTO railroad linking Turkey with Iran.



During his course in England before duty on the CENTO airway project, this Iranian traffic controller "talks down" international aircraft at London airport.

