

UNCLASSIFIED

AD NUMBER
AD846560
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; JUL 1968. Other requests shall be referred to Drepartment of the Army, Fort Detrick, MD.
AUTHORITY
BDRL ltr, 22 Oct 1971

THIS PAGE IS UNCLASSIFIED

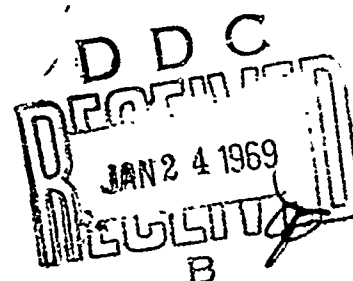
AD846560

TRANSLATION NO. 418

DATE: July 1968

DDC AVAILABILITY NOTICE

This document is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of Commanding Officer, Fort Detrick, ATTN: SMUFD-AE-T, Frederick, Md. 21701.



DEPARTMENT OF THE ARMY
Fort Detrick
Frederick, Maryland

**Best
Available
Copy**

#418
Cy. 1

The communication facilities of the new NATO headquarters.
by Werner Otto.

Soldat und Technik 3: 124-125 (1960).

Thirteen European nations, the United States of America and Canada have joined in the great defensive alliance called NATO. Up to December 1959, its headquarters was located in the Palais de Chaillot in Paris. When it was occupied seven years ago, no one could anticipate that this structure, erected hastily by the architect Carlu, would soon prove to be a provisional building, inadequate for the objectives and achievements of NATO. Frankly speaking, the Palais de Chaillot, consisting of a tubular steel frame covered with light building panels, was a barrack behind a palatial facade. In the interior, the visitor walked on swaying boarded floors, and the walls were made predominantly of ordinary plywood sheets. In the course of time, cracks appeared in the walls, which were then camouflaged with colored drapes; whereas depressing heat prevailed in summer throughout the light building, the winters were often marked by unbearable cold. Illumination and ventilation were inadequate.

Thus a new headquarters, which was discussed briefly in "Soldat und Technik," Issue 10/59, had become indispensable, and construction began as early as 1955. This new NATO building, in which all delegates of the allied nations and the Secretariat General have been accommodated, is located in one of the most beautiful parts of Paris. When the Secretaries of Defense of the allied countries that form the Ministerial Council of NATO attend future conferences, their automobiles will proceed along the Avenue Foch from the Arc de Triomphe toward the Bois de Boulogne. The new structure has been erected at the edge of the woods. The arriving delegates readily find the way to one of two subterranean garages that hold more than 1,000 passenger cars. One of 17 elevators carries them directly to one of the six floors. 1,180 windows admit the daylight into this "house of the 1,000 offices." Hallways with a total length of 2,650 m connect the individual offices and ten conference rooms. One of them accommodates the regularly scheduled press conferences.

All subsidiary contracts required for such a building complex were awarded internationally; after carefully procured bids, the orders were placed with enterprises of member nations. A total of twelve firms from six member nations participated in the submission of bids for the communication facility. The well-known Danish engineering firm "Steensen and Warming, Consulting Engineers" of Copenhagen were commissioned by NATO to examine and evaluate the bids. Based on the expert opinion of this concern, "Telefonbau und Kormalzeit" was awarded the contract with the concurrence of the Restricted Committee and the great NATO Council. The agreement was signed in Paris on 13 March 1958. Once again the tried and proved Strowger selector

technique had asserted itself vis-a-vis numerous domestic and foreign competitors, and it had become evident once more that this method is capable of meeting all requirements of modern telephone communication. Cable-laying commenced on 28 May 1958. French installers hired in France performed this task. A total of 35,000 m of lead cable was laid and connected through a main distributor and 54 secondary distributors. An architecturally interesting solution facilitated the installation of the lines: light metal construction plates were installed under the ceiling at intervals of 25 cm. The space between these two ceilings not only admits the heating element, but also accommodates cable conduits for power current on one side and weak current on the other. This separation of power current and weak current is carried through to such an extent that the terminals for power current instruments in the offices are located on one side of the room, the telephone connections on the other side.

The facility itself currently is composed of 120 exchange lines and 930 extensions. All incoming calls are received at the main switchboard located on the first floor of the A-shaped building; it consists of four operators and one supervisor. In addition, each of the 15 delegations has its own secondary switchboard for lateral conversations. Thus every desired delegation is accessible by bypassing the main switchboard. Moreover, lateral lines have been installed to NATO's military commands and, in addition, a number of delegations have their own lines to their Parisian embassies. The entire selector assembly of this extensive telephone network was installed centrally on the first floor of the building, in close proximity of the main switchboard, where it occupies a large selector room (150 square meters).

Current is supplied to the entire telephone network from two feeders of 50 A each. Upon line outage, a reserve battery of 640 Ah furnishes the necessary current. In contrast to the lead batteries customary in Germany, a nickel-cadmium battery was specified and installed here. All offices of the NATO building have been equipped with modern, pastel-green telephones, Model E 2, which blend exquisitely with the rooms characterized by a business-like and sober style. A supplemental safety device built into the delivered telephones prevents listening-in when the receiver is not in use.

Since special security regulations are applicable to this building, no telephones were installed in the ten conference rooms previously mentioned. A separate press switchboard was installed for the press center, separate from the general NATO facility. This enables the reporters to call their news editors at home and abroad directly, without burdening the NATO switchboard. Twelve telephone booths of the Outelec system, Paris, are available to the reporters. Ten additional coin telephone booths in the press center are meant primarily for local calls within Paris. Radio and television have their own studios in the new NATO building, connected with the French telephone network by a TUN manual switchboard with 16 exchange lines.

In addition, there are 16 interpreters' booths that are occupied during press conferences and in which the speeches are simultaneously translated into two languages --- English and French --- for the benefit of the participants.

The electro-acoustic installations, the equipment of the television and broadcasting studios as well as the translators' booths were furnished by the firm of Philips, Sindhoven-Hamburg. The extensive and, partly, very difficult assemblies of the distribution system and the cabling work for 300 microphones and 1,000 head sets were carried out by Tui on behalf of Philips. An important aid in the installation of this extensive facility was the competent support of the French postal authority (PTT), who assisted whenever possible and even removed apparently insurmountable obstacles.

In spite of many difficulties, the facility was delivered to NATO in operating readiness on the planned date, 15 October 1959. It passed its functional test in the period 15-21 December 1959 on the occasion of the first NATO Council of Ministers meetings in the new home, also attended by 300 reporters. The installation was able to stand up under every strain, and proved its capability to meet any and all requirements.