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# Stonehouse

First U.S. collector of [redacted] signals

STONEHOUSE, formally established in 1965 to collect signals from [redacted] was the first such U.S. system specifically designed for this purpose. Located at Asmara, Erhiopia, it operated until early in 1975, when civil war forced its premature closure.

Although originally established to [redacted] [redacted] STONEHOUSE later acquired the additional responsibility for [redacted]

[redacted] These two programs— [redacted] [redacted] occupied the major part of STONEHOUSE collection activities in following years.

## History of Development

The U.S. military presence in Ethiopia dates from early in World War II. However, of primary interest for the purposes of this article is Kagnev Station, which was formally established in May 1953 following the signing of a 25-year base-rights agreement by the United States and Ethiopia.

Military activities at Kagnev Station in subsequent years included two [redacted] [redacted] and STONEHOUSE [redacted]—as well as a U.S. Navy communications station (NAVCOMMSTA), a U.S. Army strategic communications (STRATCOM) DCA facility, and several smaller organizations. Two civilian elements were

<sup>1</sup> See the Summer 1970 issue of the *Cryptologic Spectrum* for discussions of [redacted] and in particular the [redacted] programs.

also located there—a communications facility of the Diplomatic Telecommunications Service (DTS) and the U.S. Consulate General.

The administrative center of these varied activities was the main post, [redacted] which included a variety of support facilities and the headquarters building. Post housing was also located there, and at another compound in the center of Asmara. The sites of the various communications-related stations and support elements comprising Kagnev Station were referred to as "tracts." Of primary importance were Tract A, located in downtown Asmara and used for post housing; Tract B, containing DCA and Navy facilities, and Tract E, the main post.

When at its peak, this military and civilian community in Asmara numbered about 6,000 persons, including dependents. But in the late 1960s and early 1970s, various of these organizations gradually decreased their involvement at the Asmara facility, and withdrew their personnel. By June 1972, [redacted]

[redacted] Following the departure of [redacted] the Navy assumed the headquarters function. Accordingly, on 30 June 1973, NAVTELCOMM assumed control, renaming Kagnev Station as NAVCOMMSTA Asmara. Shortly thereafter the Navy also assumed the functions of the Army STRATCOM facility. But at the time of its assumption of the headquarters function, the Navy also was making plans to reduce the NAVCOMMSTA facility to a "minimum effort" within one year, eliminating all but the most essential functions. And as planned, the Navy began phasing out its operations over the next 12 months, reducing its service personnel to 11,

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and its contractor representatives to about 30. The DTS facility was also closed in this period.

While the Navy was phasing out its operations, Tract A was turned over to the Ethiopian Government, and subsequently used by the Ethiopian Navy. At the same time, Tract E was divided into two sections by a chain-link fence. The smaller section at the north end of this Tract was retained for U.S. Navy use; the remainder was taken over by the Ethiopian Army's Second Division.

Following this reduction of Navy personnel and involvement in Asmara, and the already sharply reduced Army effort, STONEHOUSE, with [redacted] and [redacted] became the largest U.S. organization in Asmara. With a corresponding reduction of military support facilities, the STONEHOUSE activity, of necessity, initiated programs to become self-sufficient. By mid-January 1975, most of the problems had been overcome, and the facility was ready to operate independent of outside logistical support. This operation, however, was to be a short one. Civil war broke out in and around Asmara on 31 January 1975, local conditions deteriorated quickly, and STONEHOUSE did not resume operations thereafter.

(b)(3)-P.L. 86-36

#### *Closure of the STONEHOUSE Facility*

With the onset of civil war, most dependents were sent home as quickly as possible; those remaining took up temporary residence at the consulate, and at the STONEHOUSE facility itself. While awaiting official permission to close the facility, the operations personnel made tentative plans to phase out STONEHOUSE.

First actions were directed toward the protection of classified systems and materials. Three types of cryptographic equipment—KW-7s, KG-13s, and KW-26s—as well as some one-time pads, were the first to receive attention. The KW-26s were no longer in use, and permission to destroy them was requested of and granted by NSA. The KW-7s, for use in a special operation called Project [redacted] were kept for that purpose. The KG-13s were also retained for operation in the STONEHOUSE communications center. Other cryptographic equipment and materials not in use were moved for temporary storage to the Consulate General's facilities.

Project [redacted] presented special problems, particularly during the critical period immediately preceding the outbreak of hostilities. It required totally reliable communications between [redacted] But the usual circuits—[redacted] [redacted]—were not considered adequate or reliable for these purposes, particularly since portions of their routing were over the

(b)(3)-P.L. 86-36  
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same communications links. Failure of one of these links—a distinct possibility should war break out—would result in the loss of all circuits. Another circuit, using routes independent of those of the primary circuits, was subsequently devised to provide backup communications. This backup circuit went from STONEHOUSE to the consulate over leased lines provided by the Imperial Board of Telecommunications of Ethiopia (IBTE), and from there to the U.S. Embassy in Addis Ababa over a dedicated channel of the IBTE microwave link. From a terminal on the Embassy grounds the circuit went by satellite to the U.S. Installation of this circuit was completed during the last week in January, just previous to the outbreak of fighting.

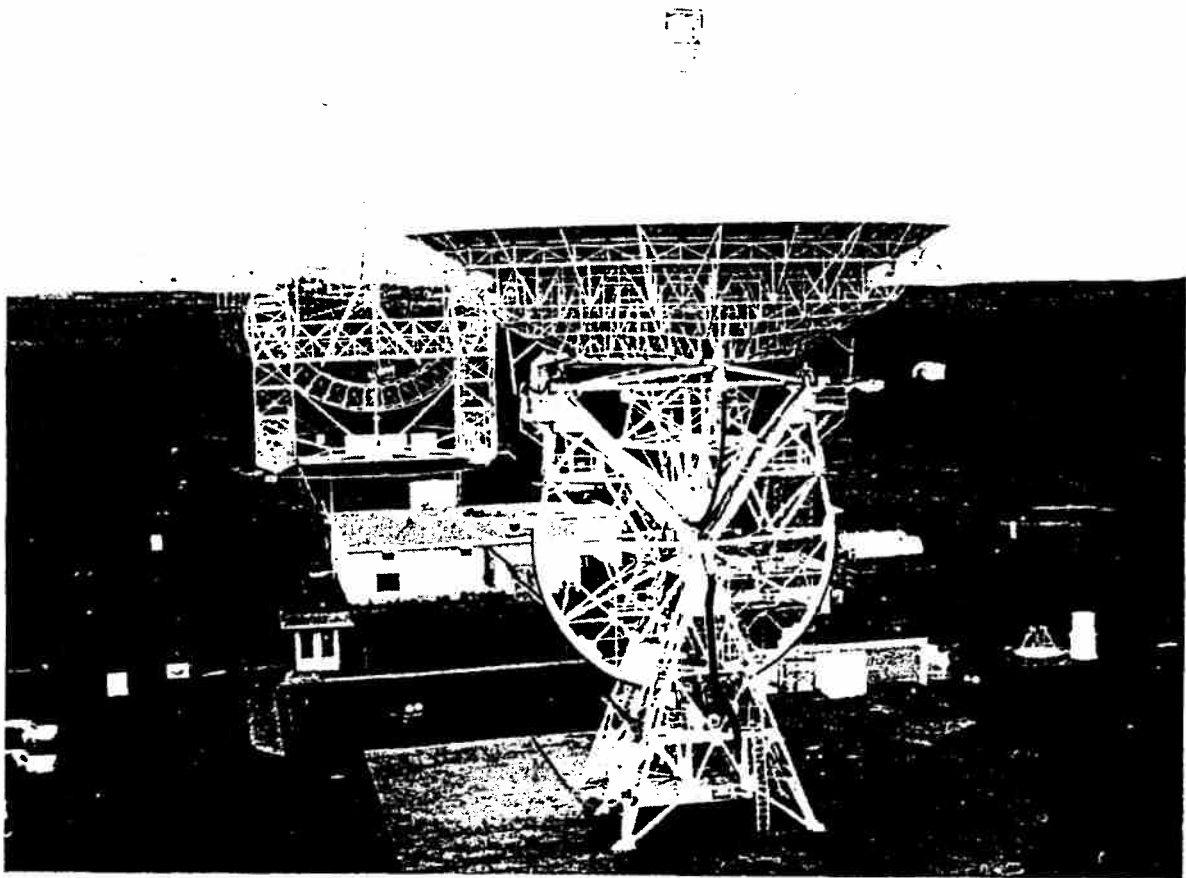
Within a matter of days after the civil war began, the consulate's IBTE circuit to Addis Ababa failed, and the newly installed standby circuit for [redacted] was put into use as its main circuit. In time, the STONEHOUSE communications center was also phased out, and this backup circuit became the main one for that facility also. Other circuits from STONEHOUSE were terminated, and it was subsequently requested, and permission was granted by NSA, to destroy all remaining cryptographic equipment and materials except the KW-7s, at that time in use on the consulate's circuit.

In addition to the materials and equipment in the communications center, all other classified material was also destroyed. Files, manuals, reference materials, technical documents, tapes, etc., were all destroyed, as were all other classified materials which might provide insight into the STONEHOUSE mission or operations.

The next step was to compile a list of all other equipment at the station, in priority order, that was to be either salvaged or destroyed, and, where appropriate, to begin the tedious job of preparing it for shipment back to the U.S. Over 100 crates were packed with operations items, and then attention was turned to personal goods. (During this period, the facility ran out of packing material for the operations equipment and materials, and more had to be ordered and shipped from the U.S. by air at considerable expense.) All available vehicles, including the school bus and ambulance, were used to transport household items to the STONEHOUSE facility for safekeeping, as thievery was by then a serious problem. Later, the operations equipment and household goods, along with other personal possessions, were shipped by a local company to the airport in Addis Ababa for transportation back to the U.S.

Evacuation of operations personnel followed, and by 21 February only eight remained in Asmara—three from NSA and five from contractors. They stayed to handle the remaining packing, crating, and transportation matters,

~~HANDLE VIA COMINT CHANNELS ONLY~~~~SECRET~~ 21

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STONEHOUSE Facility

and other functions necessary to close the STONEHOUSE facility. Equipment, components, spare parts, racks—everything possible—were packed and shipped back to the U.S. By the time the job was finished, most of what NSA had requested was in fact salvaged and returned.

Official authorization to close STONEHOUSE permanently and to evacuate all personnel was granted on 23 February, and all except three contractor representatives had departed for Addis Ababa by 4 March, when STONEHOUSE was officially disestablished. These three persons—a radio operator, a teletype repairman, and a doctor—remained behind, at the request of the Consul General, to support remaining State Department and Navy personnel. The other operations personnel, who had previously left Asmara for Addis Ababa, remained there for about a month, insuring the shipment of technical materials, and the repacking and shipment of personal items.

Except for the doctor, who remained until the end of June, the last Agency and contractor personnel had departed Asmara by the end of April, by which time all remaining property—both government and personal—had been relocated elsewhere or destroyed. STONEHOUSE, after ten years of operation, had ceased to exist.

#### *Lessons Learned from the STONEHOUSE Closure*

A number of lessons were learned from the hasty, premature closing of the facility, and from the climate in which it was closed, associated, as it was, with the dangers and confusion of civil war. Lessons learned by the persons directly involved, and by those supporting it at NSA, ranged from major ones (no useful contingency plan for the rapid evacuation of the STONEHOUSE facility) to relatively minor, but bothersome, ones.

In attempts to preclude such problems in the future, a seminar was subsequently held at NSA to study inherent problems and recommend solutions. Attended by persons at NSA who had been in any way involved with the evacuation, and by NSA and contractor personnel from the STONEHOUSE facility, its purpose was to highlight shortcomings which could be avoided in future contingency operations.

Foremost on the agenda was the formulation of an over-all plan to cover such efforts in the future. It had to be general enough to encompass a variety of differing situations, but at the same time it had to be in sufficient detail to provide meaningful guidance. The resulting report listed over 40 recommendations for inclusion in a planning document, pertaining to preparations and actions on site and to Agency support thereof. Included was every conceivable aspect of official and unofficial station activity—chain-of-command, security procedures, Comsec and Sigint protection, personnel evacuation, travel planning, emergency logistic support, auxiliary communications, and the like. Some of the recommendations could be implemented with virtually no effort or expense; others would be extensive and costly. Examples of the former are availability at the station of (1) procedures and directives to enable quick and orderly evacuation of operations personnel and dependents, (2) sample evacuation orders, (3) special-fund citation numbers, (4) blank transportation requests, etc.

Other recommendations, however, required long-term commitment of resources, such as the availability of sufficient packing material on site for salvaging purposes; another such recommendation called for detailed

contingency plans for closure and evacuation of the facility itself.

*Conclusions*

When STONEHOUSE closed after some ten years of operation, its loss was not as significant as might otherwise have been the case. Although prematurely closed in 1975, it had been scheduled for closure in June 1976, mainly because of the unstable situation in Ethiopia and the evolving threat of civil war. Consequently, the establishment of other such facilities and functions elsewhere had long been planned, and to a degree implemented, by the time STONEHOUSE was closed. No significant long-term shortcomings in the coverage of [redacted] resulted, therefore, from its premature closure.

And during its years of operation, STONEHOUSE provided the foundation for these, as well as future, efforts. It made significant contributions to the intelligence community's knowledge [redacted]—and to that country's early employment and subsequent refinement of [redacted]. Advanced systems of today and the future evolved from lessons learned at Asmara. And this advanced technology, and its personnel as well—both NSA and contractor—are available today to foster additional advancements in the future.

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(b) (3)-P.L. 86-36

(b) (3)-P.L. 86-36  
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