

C O N F I D E N T I A L

Executive Registry

Approved For Release 2005/03/24 : CIA-RDP80M01066A001400180002-8

73-3526

DCI/IC 73-0618

25 JUN 1973

MEMORANDUM FOR: Lt. Gen. Vernon A. Walters
 Mr. Ray S. Cline
 Vice Admiral Vincent P. de Poix
 Lt. Gen. Samuel C. Phillips

SUBJECT : Secure TV

1. Members of my staff, in coordination with members of your staffs, have been investigating the possibility of providing secure TV between operations centers. RCA has developed a system called Videovoice (See Enclosure) which allows the use of normal black phone lines to pass black and white still TV pictures (every 55 or 30 seconds) or voice. At our request [redacted] has determined that the system may be used on both the gray and green phone systems.

2. Representatives of your agencies have witnessed a demonstration of the Videovoice system and have participated in a meeting to discuss potential use and benefits a system of this type will provide to the community. Consequently, each of the operations centers has indicated an interest in participating in a 90 day test. Although Videovoice provides a limited resolution capability, and is not to be construed as a final system, a test of the system will permit the operations people to use the system and determine more specifically the requirements for transmitting some textual material, graphs, maps, images and charts between operations centers.

4. Upon receiving your concurrence I will initiate action to immediately lease five (5) Videovoice units from RCA Global Communications Division for a 90 day test program using internal funds.

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25X1
25X1

5. [redacted] of my staff (IDS Code [redacted]) will be my project officer. Assuming that you concur with this proposed action will you please designate representatives of your organizations and have them contact him. A report will be prepared at the end of the tests that will delineate the actual and potential utilization of a secure TV Video system to be used by operations centers.

6. I would appreciate receiving your concurrence or nonconcurrence on this project quickly since there is an availability problem of the Videovoice units and I am also planning to use FY73 funds.

[redacted]

Major General, USAF
D/DCI/IC

25X1

Encl.

New System
provides capability of
sending TV-type picture.

RCA Global Communications, Inc., now provides Videovoice, a system which adds the capability of sending TV-type picture information over communications links using standard voice-bandwidth facilities and requiring only standard television monitors for viewing.

Videovoice utilizes slow-scan and frame-freeze techniques to provide pictures in sequence 30 or 55 seconds apart over regular voice-bandwidth circuits. Standard television transmission requires 4 Megahertz (MHz), more than 1000 times the bandwidth of Videovoice which uses only 3 Kilohertz (kHz).

The visual telephone system presently under development by AT&T actually has a signal bandwidth of 1 MHz which is 300 times the capacity required by the Videovoice system.

Videovoice can operate on 2-wire circuits typical of the public telephone systems in the United States and abroad, by utilizing a Data Access Arrangement which is supplied by the telephone company, or by using an RCA Glöbcom produced acoustic coupler (optional). Internationally, the equipment can be "hard wired" into 4-wire C-2 conditioned circuits.

Videovoice offers the businessman and others the ability to "shoot" subjects with a television camera and have them converted from the standard scanning rate to a slower one for transmission over voice-bandwidth circuits. At the receiving end, the Videovoice system stores the received picture and presents it

to the distant office for display on a standard TV screen.

The use of motion in standard television requires paying a huge penalty in bandwidth. Since most visual communication is not affected by the absence of motion, still subjects such as documents, equipment, charts and blueprints are ideal for transmission directly via Videovoice.

When the subject matter is live and in motion, RCA Glöbcom's system captures the information by employing a frame-freeze unit that stops the action. The subscriber views the information on that particular frame on his own monitor and then the desired frame is transmitted.

When a new picture is ready, the frame-freeze unit is reactivated to store another frame. The new frame then erases the previous view, and the new frame is then transmitted.

At the distant location, the person receives the call in the "video" mode and views the transmitted picture. The same material can be viewed for several minutes or until the presentation of the succeeding frame. Full voice conversation can be carried on during the entire viewing period. Voice conversation, however, is discontinued during the picture transmission.

Videovoice can provide subscribers two-way video exchange by equipping both locations with basic transmitting and receiving units. If the application is such that video is required in only one direction a simplex system can be supplied.

An option that greatly enhances the applicability of Videovoice involves utilization of a stereo tape recorder. This allows storage capability at the receive end for viewing at more convenient times and, of course, a permanent record. Pre-taping for transmission at more appropriate times is also possible with the stereo tape recorder option.

A photographic print of a selected frame can be provided for record purposes within ten seconds after it has been received using another optional unit, a hard-copy printer. Auxiliary monitors, remote camera kits and a carrying tray (table) are also available on an optional basis.

There is no limit to the kinds of visual information that can be exchanged by the use of Videovoice. They include:

- Airline departure and arrival information
- Brokerage and stock quotation information
- Cardiograms and other medical data
- Data printouts and readouts
- Educational and training materials
- Graphic matter, such as documents, schematics, blueprints
- Identification of people and signatures
- Sales promotion and direct selling
- Parts identification and maintenance instructions
- Fingerprints and "mug" shots

VIDEOVOICE RENTALS**Terminal**

Type VV-I Terminal (Transmit/Receive)
with live camera and frame-freeze capability \$225/mo.*

Options

Hard Copy Printer (Photographic)	\$30/mo.
Hard Copy Printer (Electronic)	\$125/mo.
Stereo Tape Recorder	xx\$15/mo. \$25/mo.
Acoustic Coupler	\$10/mo.
Remote Camera Kit	\$10/mo.
22-inch Television Monitor	\$10/mo.
Carrying Tray	\$10/mo.

There is a one-time, non-recurring installation charge of \$100 per terminal, including options. Minimum rental of 3 months is required and cancellations will be accepted on 30 days advance notice thereafter.

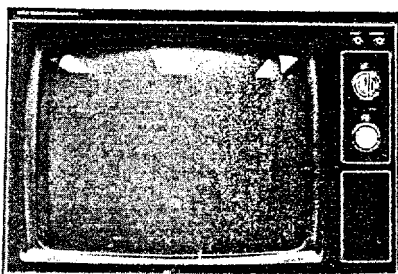
*Includes service and maintenance.

Is that all there is?

Certainly not. There's optional equipment capable of extending the flexibility and usefulness of your basic Videovoice installation.

Television Monitor

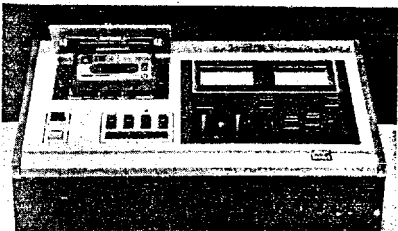
A large, auxiliary television monitor is available to permit viewing of



transmissions by six to eight people in a conference room atmosphere. Monthly rental, \$10.

Stereo Tape Recorder

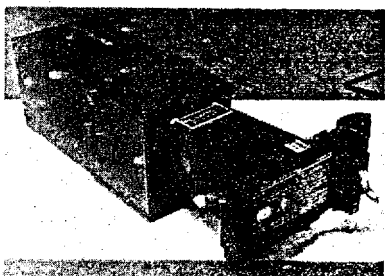
A stereo tape recorder is available to record both audio and visual material



for storage, or playback or transmission at a later date. Monthly rental, \$25.

Hard-Copy Printer (Photographic)

A hard-copy printer (photographic) allows you to obtain 4"x5" Polaroid®



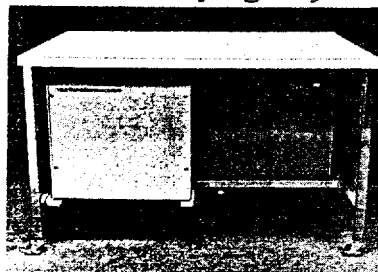
positive prints and negatives of selected video frames. The negatives can be projected on viewgraph machines, enlarged, or used to make additional positive prints. Monthly rental, \$30.

Remote-Camera Kit

A special remote-camera kit permits you to detach the TV camera from your basic Videovoice unit, mount it on a tripod, and operate it at distances of up to 25 feet from the basic unit. Monthly rental, \$10.

Carrying Tray

A carrying tray or table is available which permits all Videovoice components to be packaged in one neat bundle. Monthly rental, \$10.

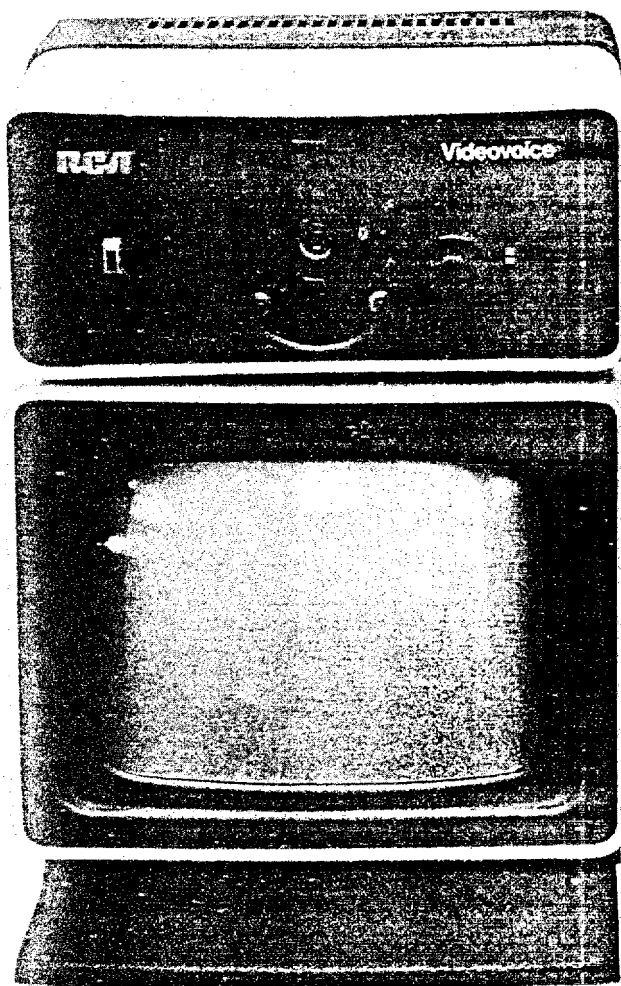


Other options are a hard-copy printer (electronic) at \$125 a month, and an acoustic coupler for \$10 a month.

There is a one-time installation charge of \$100 per terminal, including options. Minimum rental period is three months. Cancellations require 30 days advance notice after the initial three-month rental period.

What's the secret of Videovoice?

In standard TV, 30 full pictures or frames are transmitted every second. A full picture is displayed on the screen, then erased and replaced by the next picture 30 times in one second. This sequential display of full frames creates the illusion of motion in the picture.



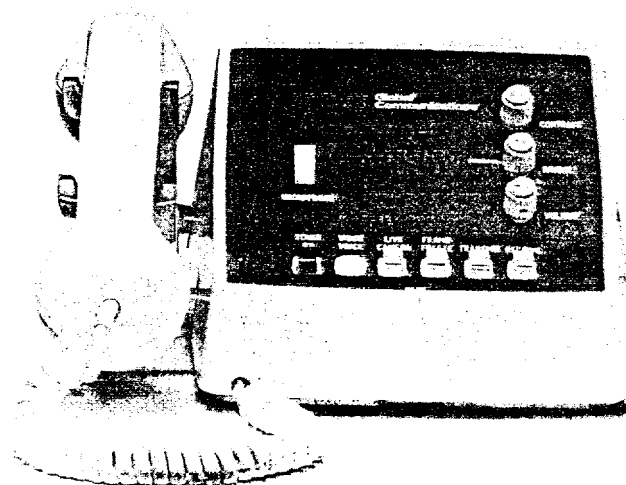
The problem is that it takes the equivalent of 1000 voice-grade telephone circuits to transmit those 30 frames in one second.

So, we took a different approach. We started with a single voice-grade circuit and asked ourselves how much video we could transmit over one economically feasible circuit. The answer was one "motionless" frame every 55 seconds, or one "freeze" frame every 30 seconds — and that's Videovoice.

Our approach not only makes Videovoice economically feasible for virtually any corporation, it makes it possible to hold a desired frame of video in a moving sequence which would pass on and be lost in regular TV.

How do you go about getting Videovoice installed in your office?

Call or write George Shawy, our Videovoice man. His address is RCA Global Communications, Inc., 60 Broad Street, New York, New York 10004. His phone is (212) 363-3960. George will be more than glad to put you in the picture.



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SECRET

ROUTING AND RECORD SHEET

SUBJECT: (Optional)

FROM:

D/CO

GA-43 Hqs.

EXTENSION

NO.

DATE

25X1

TO: (Officer designation, room number, and building)

DATE

OFFICER'S INITIALS

COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)

1. D/OCI
7F-24 Hqs.

[Handwritten initials]

2.

3. D/OS
4E60 Hqs.

6/28/73 Hfo

4.

5. DDCI
7E12 Hqs.

6/29 [Handwritten initials]

6.

7.

8. *D/DCI/IC*

9.

10.

11.

12.

13.

14.

15.

Note: OS concurrence is contingent on a representative of this being integrated in all phases of the test - If ER, pls send info copies to DD/M+S, D/COMMO, D/Security + D/OCI. RW

FORM 3-62

610

USE PREVIOUS EDITIONS



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