This material is published in accordance with Department of the Army Letter, AGAC-C (M) 461 (28 August 52) AGAM, 20 November 1952, subject: "Dissemination of Training and I & E Instructional Material."
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Material forwarded by Field Representatives under Circular No. 9, Hq, ASA, 4 March 1953, subject: "Technical and Informational Material" should answer one of these questions:

Does it provide information not available elsewhere about something new or interesting in some technical field? Does it point out better procedures? Does it make the heritage and traditions of Agency service or Provide information of locations where ASA personnel may serve next? Does it record useful experience of activity? Will it aid training, well being, or morale?

WELL?? WHAT ABOUT IT??

1. Are you completely familiar with your job and the duties of those immediately subordinate to you?
2. Are you qualified to fill any position to which the ASA may assign you?
3. Can you adequately fulfill the duties of your immediate superior?

If your answer to these three questions is yes, read no further; you are the "one-in-a-million" and this isn't directed to you. This is written for the other 99% of ASA personnel who are aware of their limitations and are eager to do something about it.

Even those of us who have been with the Agency since the beginning, frequently find need for a greater understanding of some phase than our own. Since each job in the ASA is interrelated with every other job, broader knowledge of the other man's problems facilitates the performance of our own duties.

There are several means of achieving this broader scope, but the easiest and best is through the Army Extension Training Program. The mission of this program is twofold: to enable personnel in "A" and "B" classifications to "keep in touch" with ever-raging military developments, and to permit active duty personnel to broaden their professional knowledge, thereby increasing their value to the military service and the nation.

Formerly, extension training was limited to those subcourses issued by the applicant's own branch of service. Today, with proper authorization, subcourses are available from all branches of the service. For example, there are available subcourses in the Transportation Corps and Ordnance. A rather strange, though not unusual, combination is the ASA Colonel who is taking a transportation Corps subcourse in navigation. (He has a power boat, remember.)

Each branch of service maintains an extension training activity which administers subcourses peculiar to its own branch as well as courses common to the Army as a whole.

The ASA Extension Training Division is (Continued on page 22)

The Filing System
In An Operational Office

The Numerical Designation System is the answer to needs of an operational section. It utilizes numbers as a substitute identification of units within the section's network of correspondence addresses, and aids memorization of those numbers by placing the highest command under the numeral 1 and then, by sequence of command level, proceeds on. In these instances where multiple addresses are involved, a "multi-adder" file is established. Non-technical files (for example, Request For Orders etc.) are filed in a separate drawer and utilized the decimal system which is suitable for that need.

The person who seeks a certain letter for reference purposes is able to provide only the addree. In the numerical designation system, this single clue is insufficient. As an augmentation to this system, subject files may be established under special circumstances, as in those cases where a specific policy, study, test, or plan is very frequently referred to. This type of correspondence usually contains highly sensitive facts, figures, or data, and those persons who must utilize these letters as a collective reference rather than a single item of correspondence. If this special correspondence is filed in the regular folders, the folders would soon be filled with numerous place-markers to indicate the location of these items. A review of any problem would then require the use of several folders, instead of one.

All folders, under the numerical designation system, must be split into separate parts, with the incoming correspondence on the left side, the folders going on the right side (or vice versa). If, during the year, the folder becomes bulky, it can be subdivided with "A" and "B" classification of the number, with the "A" embracing the January to June inclusive period and the "B" for the July to December inclusive period.

The next time Colonel Jones walks into your office, will you be ready for his request for a reference?
The ancient adage "One Picture Is Worth a Thousand Words" could well be paraphrased to read "One Training Aid Is Worth a Thousand Words of Instruction." With this in mind the importance of the Visual Aids Branch of the ASA Training Center is obvious. The maximum use of Training Aids makes it possible to give faster, more comprehensive instruction to personnel at the Training Center than the more orthodox Lecture Method.

Audio-Visual Aids. 16mm motion pictures and 35mm film strips, are available from the ASA Film Library to instructors and to units stationed at the Training Center. All films fall into two categories: those of a general nature, common to other branches of the service; and those pertaining directly to the Agency mission.

Films in the latter category are produced by the Signal Corps in cooperation with the Army Security Agency. The film library has projectionists available for previews and showings in units or sections not having licensed operators. Overhead projectors (Bi-opticons), 16mm projectors, 35mm film strip projectors, opaque projectors, and sound reproducer units may be drawn from the Film Library when needed. Projector slides as well as graphs, posters and photographs are prepared or supplied by the Graphic Aids shop.

The use of transparent slides for the overhead projector is a comparatively new development and has proven to be more versatile than charts, posters, or the direct slide projector. By simple adjustment, the instructor is able to enlarge or reduce the size of the projected picture at will. He can project all or any part of a picture by masking the slide with opaque material and exposing any portion in order to emphasize specific points of his lecture. Other features of the overhead projector, in common with all slide projectors, are the simplicity of preparation of the material to be projected, and the minimum amount of storage required for the prepared slides.

There are several methods currently in use for the preparation of slides. The most common practice at the Training Center is initially to prepare a wax-pencil temporary slide on clear acetate, then, when the effectiveness of the subject matter has been established by classroom test, a permanent slide is made. Two processes are commonly used in making permanent slides, plastic ink on clear acetate, and the ozalid process which is a dry developing method employing ammonia vapor to etch the material on translucent foil.

Three-dimensional aids, such as models and mock-ups, are fabricated by the Model Shop from plans prepared by the Drafting Section. Models generally fall into two basic categories: scaled-down models of equipment too large for practical use in the classrooms; and enlarged models of equipment which is too small to be satisfactory for class instruction. Examples are: the scaled-down model of Shelter S-56 (Fig. 2); and the enlarged working model of the Selector Bar mechanism of a Teletype machine (Fig. 1).

Instructors repeatedly find the need for new training aids. With the assistance of the Visual Aids Development Officer plans are made for their design and construction. The first step in the designing of any training aid is to determine what type will be most effective in presenting the subject matter desired.

Take for example a Flock Board. Specifications are established by the Development Officer, sent to the Drafting Section where final plans are drawn, and forwarded to the Model Shop for final production.

The Flock Board consists of three plywood panels, each two by four feet, joined together by hinges providing a total display surface four by six feet. The articulated construction of the board saves storage space and facilitates transporting the board from one classroom to another. Construction of the board is quite simple: first the surface is coated with a liquid adherent and then sprayed with micro-cut nylon fibers to form the flocked finish.

Subject matter is prepared on flannel-backed cardboard cutouts. With the Flock Board resting on an easel, the cutouts adhere readily when the flannel backing is pressed lightly against the flocked surface.

The Flock Board is one example of the type of work accomplished by the Visual Aids Branch. The existing training aids are constantly being improved and a constant effort is expended to develop and produce new aids to meet instructional requirements. Visual Aids developments of other service schools as well as those of civilian institutions are based for possible application within the ASA training program.

The ASA Training Center is constantly improving all its instructional methods to keep pace with Agency demands for skilled personnel to meet the requirements of our expanding mission.
ROTATION OF PERSONNEL WITHIN ASA PACIFIC

by Major John W. McMillan

The war in Korea created a special personnel problem for the members of ASA Pacific. ASA troop units arrived from the United States and immediately began operations in Korea. The war dragged on for months after month with no end in sight. The men in the units began to build up points toward eligibility for rotation to the United States and all began to grow tired of the cold and rain, the heat and dust of war ravaged Korea. There were no troop units available to replace those whose time overseas was coming to an end.

Faced with the prospect of having almost all of the officers and men in a company become eligible for rotation to the United States on the same day, Headquarters, ASA Pacific worked out a plan to gradually rotate those men to other ASA Pacific units outside of Korea and to replace them with men of equal skills and grades from the unit which would receive the rotatees.

Initially the 60th Signal Service Company (now 330th Communication Reconnaissance Company) was the only unit affected. This company arrived in Korea in October 1950 and would complete the requisite eighteen months overseas service in March 1952. If the rotated personnel were to serve for any useful period in their assignment outside of Korea, it was necessary that the reassignment take place well before the end of their overseas tour.

Beginning in June 1951, and extending through September, replacement and transfer of all officers and men of the 60th was accomplished. Each day four men of the proper grade and military occupational specialty arrived by air at the company bivouac in Taegu. Ten days later the men of the 60th, who had been replaced, departed for the unit in Japan, Okinawa, or the Philippines, which had furnished the replacement. During the ten day overlap between the arrival of the replacement and the departure of the rotatees, the job of breaking in the new arrival on the specific assignment was accomplished. In some cases the break-in took longer, in some cases less, but ten days was average for the job.

Within the space of four months, the entire company of nine hundred forty-five enlisted men were replaced. There was some loss of operational efficiency during this period, however, by holding the key personnel to the last and rotating them only when the replacement was determined to be completely competent to perform the assignment, operations continued without interruption.

The procedure was next employed to rotate the personnel of Headquarters and Headquarters Detachment, 303d Communication Reconnaissance Battalion. The small size of the unit made this project relatively easy to accomplish. By December 1951, all personnel of the unit had been rotated to stations outside of Korea.

Meanwhile a voluntary plan for rotation was worked out, whereby men of the same specialty arrived by ASA Pacific on the same day, Headquarter Detachment, 303d Communications Reconnaissance Battalion, was provided and approximately ten days after his arrival the rotatee left for his new assignment. This scheme worked so well in the case of the 352d Communication Reconnaissance Company that forced rotation was unnecessary. Sufficient men applied for rotation at varying times to eliminate the possibility of any large group of men in the unit becoming eligible for return to the United States at one time.

Long before the Second World War, people in most European states were convinced that the future in time of war the battle in the dark between the hostile espionage service and other similar organizations, on the one hand, and the intercept service on the other hand - in this case, therefore, a battle of the ether - would assume gigantic proportions. It was clear that this struggle would not be simple and that it was necessary to call into being in good season an organization which would occupy itself with spotting and evaluating such espionage radio traffic in order to bring the results of this work to the knowledge of one's own command.

Practically, however, in all countries of Europe nothing was done until the outbreak of the Second World War. Only in the Soviet Union did they devote some attention to this question and begin watching such traffic for practice, in order to gather a certain amount of experience which could serve in the event of war for the development of a large organization to combat radio agents.

In Germany they should have had special reason to occupy themselves thoroughly with this question and in a purely theoretical way they did so. But since the general armament and the preparation for war went ahead at far too rapid a pace, and the organization of the German intercept service was weakened rather than strengthened by the constant transfer of trained men, this preliminary organization did not even come into existence before the war.

Such A-nets had been set up in Czecho­slovakia, in Poland, and in France. Now, however, in all countries of Europe nothing was done until the outbreak of the Second World War.

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(Continued on page 22)
The newly established "Radio Counterintelligence," on the other hand, faced an assignment which grew from day to day, and for the mastery of which forces at hand did not suffice nor win any adequate experience. Through the occupation of more and more new territory, the frequency of German agents to be discovered in order to combat them was greater and greater.

The year 1940 passed without any noteworthy success on the part of the German radio counterintelligence with the aid of the police in combating agents' transmitters. Not until the end of 1940 was an intercept company of the army assigned to the "radio counterintelligence," and this was to be entirely retrained. It was engaged in the west, and it soon appeared that the object of observation had meanwhile assumed an extent which far exceeded the anticipated limits. It was set up to combat not only radio agents assigned to the "radio counterintelligence." An evaluation system of its own was set up. The direction finding bases of the navy were placed at the disposal of radio counterintelligence.

It was high time for all these measures, for in the spring of 1941 the radio agents' service had assumed a threatening extent throughout Europe.

During the Second World War the Germans made many very excellent inventions in technical and military fields. But above all, they all hovered uniformly the watchword: "Too Late!" At the moment when the German "radio counterintelligence" took up its effective work in combating foreign radio agents, i.e., in the summer of 1941 - if we leave out the preparation phase - it faced the following situation: the German forces had been overrun by German troops and were located within the German sphere of influence were now strengthened in every possible way. New agents were assigned to the radio intelligence service, and their appearance was kept secret.

As the strength of our operations section has been steadily building up with replacements from stateside schools, the number of the newcomers became increasingly difficult. In the past, the average period of time required to train one man on the job has been from two to four months, depending upon the individual's adaptability to the work, or his code aptitude.

In order to get these men into their jobs as qualified operators to fill our expected and existing vacancies, it was thought that a school of training should be set up where they could be taught the principles of intercept work, procedure, special characters, search, and copying through heavy "WH" and "QN; the training time could be greatly reduced.

The idea was soon put into actual operation by one of our experienced trick chiefs, SFC Anthony Marino, under the direction of the operations officer, Lt O'Sickey.

Permission was obtained from the 354th Combat Engineers to use their classroom for the purpose of training these men. This classroom needed no special arrangement, as it was previously used for operator training by the 354th, and contained the equipment necessary for the training, such as code practice sets, headphones, and some mills.

It was necessary for our unit to supply additional mills, two RD-74 recorder/reproducers to use in their classroom for the purpose of training these men. This classroom needed no special arrangement, as it was previously used for operator training by the 354th, and contained the equipment necessary for the training, such as code practice sets, headphones, and some mills.

It has been found that under this system, the time required for training operators has been cut in half.

As the men progressed, each one was carefully watched in the classroom and on the job. As soon as their work was good enough to qualify them, they were assigned to tasks. The faster they adapted themselves to the work, the sooner they were taken out of school and put on the job.

The new system has been another worthy contribution to the operational efficiency of the unit, which will result in increased quantity and quality of the work put out by the Agency.
Digraphic Systems are those in which digraphs, or groups of two plain-text letters, are considered as an indivisible unit and are enciphered as if they were a single symbol. These plain-text digraphs are replaced by cipher-text digraphs which are likewise considered as a single unit. Thus, a plain-text digraph EN might be replaced by a cipher-text digraph KU. This does not mean that the unit EN in the plain text is equivalent to the cipher unit KU.

Two of the most common digraphic systems are the Playfair and the Horizontal Two Square. Historically, the Playfair is probably the oldest and most interesting. It was invented by Sir Charles Wheatstone before the First World War, and it was used by both the British and American Expeditionary Forces for some time during the war itself. The most common Playfair matrix is five columns wide and five deep, although variations of these dimensions are quite possible. The letters of the English alphabet are inscribed inside the matrix, usually mixed in some systematic fashion. Since only 25 cells are available to include a 26-element sequence, the usual procedure is to include the letters I and J within the same cell.

No digraph containing a repeated letter may be enciphered according to the usual rules of Playfair cryptography. Thus, if the message begins OU or ZX, the TT could not be enciphered by the matrix. The usual procedure is to insert a Q or JX between the two X's. Actually, the matrix for this system is nothing more than two Playfair Squares set next to each other. The Square on the left may be a different mixed digraph sequence in each of the two squares. Notice the following example:

**Keywords:** Left - United States, Right America.

<table>
<thead>
<tr>
<th>U</th>
<th>N</th>
<th>J</th>
<th>T</th>
<th>E</th>
<th>A</th>
<th>M</th>
<th>E</th>
<th>R</th>
<th>I</th>
<th>J</th>
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<td>S</td>
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<td>X</td>
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<td>Z</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>

Plain-text message reads: When will your regiment move west?

Broken into digraphs: WH EN WI LX LY OU RX KE GI ME NT MO VE WE ST WH plain becomes HE cipher. If both letters of the plain text are on the same row, the cipher letter which replaces the plain-text letter is immediately to the right of the letter it replaces. If both letters of the plain text digraph are in the same column, the cipher letter which replaces the plain-text letter is directly under the plain-text letter it replaces. E is above N and N is above G. (Also, MO plain is VF cipher. Thus, VI plain becomes AD cipher. If the letters of the plain-text digraph are not in the same row or column as one mother, the first letter of the cipher digraph is in the same column as the second plain-text letter, and the second letter of the cipher digraph is in the same column as the first plain-text letter. In addition, the four letters of the plain and cipher equivalencies will form the four corners of a perfect rectangle.

To continue the encipherment:

WH EN WI LX LY OU RX KE GI
WE NT MO VE WE ST
HE NG AD PU QU SV PZ PT IK
PH CE VF XH HA CW

Another Digraphic System which has had fairly extensive use is the Horizontal Two Square. This Square may be identified by the fact that the letters of the plain-text digraph are replaced by cipher text. There are various statistical tests which may be used in identification of digraphic systems which will not be discussed here.

In addition to the general rules given above, a normal Playfair system may be identified by the fact that, after the cipher text has been broken down into digraphs, no digraph can be a repeated letter, as for example, a digraph LL or TT.

In addition to the general rules for digraphic systems, a Playfair system may be identified by the fact that after the cipher text has been broken down into digraphs, a certain percentage of these cipher digraphs will make good plain-text digraphs as TH, RE, IN, ST, etc., if, in fact, the ship or land by which it will be possible, by reversing all the cipher-text digraphs of the cryptogram, to get enough good plain-text words in the cryptogram which actually see plain-text words in the cryptogram.

For lack of space, it will not be possible to go into a detailed explanation at this time about the mechanics of matrix reconstruction. However, if the analyst will observe the cryptographic rules for
A new device to simulate field operating conditions for intercept operators is in use at the ASI School. It has been found that greater proficiency in copying manual speed Morse may be obtained if simulated radio nets for two or more stations are used. The problem encountered was to find a method of giving the students actual receiver tuning in copying manual nets. The type traffic desired for manual copying could not be heard at the School because of the low power output of the transmitters. A method had to be devised to make nets available so students would be required to tune their receivers in order to copy traffic. Formerly the procedure had been to give students the type nets desired by using TG-10 keyers and inked tape, and piping an audio signal to the students practicing in copying manual nets, but no practice in receiver tuning; in fact, the receiver had to be turned to the "send" position so that very strong signals coming over the air would not block the output of the net.

Since the desired nets were classified, it was impossible to put the material on the air and have students actually tune their transmitters in while the instructor was using TG-10 keyers. The plan was to use the TG-10 keyers in conjunction with a modified frequency meter as explained above, the students must tune their receivers before they can copy their transmissions. Two TG-10 keyers and two frequency meters are used to simulate two different stations. The type nets used were those that the students can better understand the workings of a manual net. This is accomplished by using tape and running it through both TG-10 keyers. Each keyer is attached to a separate frequency meter and tuned to a slightly different frequency.

Discussion Topics

Simplified Tactical Radio Nets

For Training

Confidential

Thomas Jefferson - Inventor

Old timers in ASA still remember the Cipher Device M-94, invented by General Mauiborgne, former OSS/C. Crypt students are generally familiar with a similar device invented by Etienne Buzerries in 1891.

What is not generally known, in fact known only by a few people, is that Thomas Jefferson around the year 1800 invented a device called "Wheel Cipher" and which very closely resembled the M-94. In place of metal disks, Jefferson used a cylinder of wood which he split into disks about 1/6 of an inch in thickness.

A description of this invention in Jefferson's own handwriting is to be found in "Tien 41575, Jefferson's papers, Vol. 232" in the Library of Congress, Washington, D. C.

Army Security Agency
Almost every enlisted man who spends a tour of duty with the Army Security Agency will someday report to the Personnel Center at The ASA Training Center at Fort Devens. This may be when he first enters the ASA, or when he completes his school training, or when he returns from overseas. It could happen all three times.

The Personnel Center was established a few months ago when the size of the various personnel sections within the Training Center made it essential that more efficient means of doing the job be found. As a result all personnel sections, except those of T/O&E units, were consolidated into the newly organized Personnel Center under control of S-1, ASA. At present, the Center handles the records of all enlisted students, permanent party, and casualties in the Training Center. This means that there may be as many as 5,000 sets of records being maintained at any one time.

The best way to show what effect the Personnel Center can have on an enlisted man is to show just what happens to him after he enters the Army. When the man is recruited from civilian life by an ASA recruiter his first step is a Training School MOS testing. Almost immediately he is assigned to a Training School and boarded on a daily selection report submitted by the ASA Liaison Officer. Almost immediately the student is examined by a medical board to determine if he is immediately available for service. If he is, the ASA Liaison Officer at Headquarters, ASA, S-1, then reports him to Headquarters, ASA, S-1, for acceptance by ASA. Almost immediately the student's school is assigned. This represents a departure from the most common type of training, in the sense that the majority of the technical and administrative aspects of the exercise are presented in the field under simulated conditions. In this particular instance, the student's training is not eliminated. Actually, the training objective is one of unit type training, individual MOS training is not eliminated. Actually, the first four weeks are devoted to a review of this training, and in MOS testing. Even this training is functional, stressing individual proficiency in the execution of assigned tasks, in accordance with job requirements of the particular section of the type of unit to which the individual is assigned. This represents a departure from the MOS job description in a strict sense, but can be justified by the fact that the majority of the students, which are specialists are school trained in fundamentals prior to being assigned to T/O&E units.

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It follows that a given MOS for a Communications Reconnaissance Company (Security) may be trained differently from a specialist of the same MOS of a Communications Reconnaissance Company (Intelligence.)

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New Buildings Make Attractive Post

Upper photo: General view from top of Operations Building showing from left to right: Headquarters Building, Softball Field, Post Exchange, Heating Plants, Barracks and Volleyball Court. Lower photo: Mess Hall and Barracks.

Construction Story

Since its activation almost two years ago the 8610 AUU has developed into one of the more desirable posts at which to spend an overseas tour. The unit was activated under the leadership of Major Thomas E. Fisherty in the old 126th Area at Fushimi-Momoyama on the outskirts of Kyoto, former capitol city of Japan located on the main island of Honshu.

The unit operated in the Momoyama Area while its present operating site was being renovated and rebuilt. The unit moved to its present location at Pukakusa in August of 1952. An individual who had visited the post at the time of the move, however, would hardly recognize the area today since an extensive landscaping program, begun under Major Fisherty and continued by the present Commanding Officer has made the post one of the most attractive in Japan.

The billeting area consists of three two story barracks of white stucco construction with hardwood floors throughout. The barracks are divided into rooms which accommodate from two to six men each. All barracks space is used to billet troops with the exception of the ground floor of one which is utilized for the EM Mess and Club, Dayroom, Unit Supply, Tailor Shop Barber Shop, and Snack Bar. A smaller barracks type building is used for Quarters for Bachelor Officers, Officers Mess, and Lounge. The station also has a branch Post Exchange, Softball field, hard surface Volly Ball and Tennis Courts, Theater, Photo Laboratory, and Hobby Shop.

Nearby Camp Otsu offers Basketball, Football and Baseball plus bowling alleys, NCO Club, a fine Service Club and excellent sailing on Lake Biwa. Camera fans will also find plenty of subject material around this ancient city of Japan.

The operations building of the 8610 AUU is one of the most modern and up to date in the Far East. The building is air conditioned throughout which makes it a pleasant place to work throughout the winter and summer months. Since most of the specialties peculiar to the Army can be utilized by the 8610th, an individual due for rotation from Korea or due for a tour overseas would do well to give the 8610 AUU some serious thought when listing a preference for an overseas duty station.

Discussion Topics

852nd

New Antenna System

The 852nd Comm Recon Det recently completed moving its Radio operations section from the temporary location it had in Camp des Loges, to the newly constructed SHAPE Radio Receiver Site. The Receiver Site, which went into the planning stage shortly after SHAPE was organized two years ago, had just said 'Good-bye' to the last of the construction crews when the 852nd started to move in and begin operations.

The biggest job facing the unit upon completion of the move was arranging for a suitable antenna system, separate from the Receiver Section. It was decided, at first, to use the rhombic type antennas which were already constructed for the Receiver Section on a joint basis by means of antenna coupling devices. But after making arrangement for the issue of the multicoilers it was discovered that there were five Double Doublet Antenna kits available which the 852nd could use.

The antenna kits and multicoilers seemed to solve the long range receiving problems quite well, providing the choice of five directional antennas for each receiver - but the next problem that of construction, proved even bigger. With the aid of the SHAPE Wire Section and its construction crew for the outside work and with the 852rd's one man maintenance section going at full speed on the inside work, the new antenna system is now putting good, strong signals out 24 hours a day.

The antennas were assembled from standard Signal Corps Double Doublet Receiving Antenna Kits. The antenna consists of three strand, No. 12, 961 copper wire which is suspended from 50 ft. wood line poles, transmission is accomplished by use of two wire, 205-ohms, polythylene transmission cable. The balanced 200 ohm impedance transmission lines are terminated in five Antenna Coupler's, CU-11gA/FR, which provide ten coaxial jacks for distribution of the 75 ohm unbalanced output of the coupler. Switching and distribution is accomplished by means of coaxial jacks mounted in the antenna rack and connected to the receivers by means of RG11/U, coaxial cable.
"We Sell Security"

Upon this unit's arrival in Europe in August 1952, our main efforts were to become effective operationally as this was our first opportunity to demonstrate our ability to work as a team.

We participated in various maneuvers CPX's immediately after our arrival, a "shakedown cruise" which was satisfactory but capable of improvement as our greatest desire was to establish Division Teams.

Division Teams in this theater, in order to become an effective tool, must be physically separate from the Command Reconnaissance Company due to the displacement of the Battalions, Reconnaissance Companies, our Headquarters' location.

Our first Team (Team A-3) was situated at Augsburg about 16 February 53 with the 4th Division. It is illuminating to note that security and procedural violations from the Division began to decrease in number within a short time after our Team's arrival at the Division.

Team A-3 is billeted in the same military post as at which the Division Headquarters occupies. The Team is quartered and fed with the Division Signal Company, administration remaining with the Command Reconnaissance Company. The Team of one Officer, one Sergeant, six Enlisted Men, and three civilians (the latter three being met by the Division before our Headquarters' arrival) is capable of operation within a short time after its formation.

We became effective operationally as this was our first opportunity to demonstrate our ability to work as a team.

1860th

New Type Incinerator

Environments, missions change again and again, but the problem and its disposal never changes. After years of struggling with an old boiler converted as an incinerator, USM-19 got busy on the problem and came up with what it thinks is the best solution so far.

For more than nine months they have been operating a motor-driven rotating drum built of armor-plate ends and heavy-gauge iron screen. Burning trash once each watch (three times daily) is accomplished in less than 20 minutes - about one-sixth the time required when the old boiler was in use. And more than half of the 20 minutes is collection and loading time.

Built to the station's specifications by the Air Installations Office (Base Engineer), the new incinerator is 8 feet long and 4 feet in diameter. The horizontal drive shaft rides in bearings welded to the tops of two A-frames built of iron pipe. The shaft extends through a sheet-metal wall and is driven by a 1/6 HP, 1500 RPM, capacitor start motor, the gear ratio of 36:1 drives the incinerator at 5 revolutions per minute. This rotation keeps the burning paper loosened up and blazing well.

A door, hinged to open upward in the direction of rotation, permits easy loading. Measuring 3 by 3 feet, it is located in the middle of the drum. Stopping the motor at a position marked on the large drive gear properly positions the door for loading the drum.

When the drum is loaded (a full load having been removed and all the paper thrown out by MS-9 and its orderly room during unnecessarily burning trash), the motor switch is thrown and the drum rotates. Combustion is completed in about five minutes. Ashes, all broken into scraps less than 3/4 inch square by the wire mesh, escape from the drum as burning progresses. To a degree these ashes scatter over the operations compound, for the heat causes them to rise. The slightest breeze, however, is enough to police the area, blowing the ashes on to other resting places.

The bulk of the trash remains under the drum, from where - after a good wetting down with a hose - it easily is emptied into trash containers for removal.

Sheet metal walls with gaps at each corner surround the incinerator to a height of 8 feet. They cut down the effect of wind. Under the burning process, they contain much of the spectacular glare from the flames which might alarm individuals unaware of the cause. At first, a sheet-metal roof covered the top of the enclosure, but the flames soon ate it away. Now, the top is covered with perforated metal landing strip material in such a way that the flames from shooting up too high. The end of the enclosure which contains the drive motor is roofed with sheet metal to provide some protection from weather and ashes for the operator, the guard and the destruction officer.

Army Security Agency

330th

Making Unit Training Effective

In fifty years and two world wars (plus a border expedition and the Korean conflict) the Army has grown, not only in size but in complexity of its responsibilities. By any standard of measurement the Army has been tremendously.

The problems of fighting, and providing food, clothing and shelter for its soldiers, are basically the same. But their solution has become more complex because the Army has become more complex in its composition, its mission and its tools.

So what? What are we driving at? In one word, "training"; a small word but it means a great deal to the individual and with each new tool, someone must be taught its proper use.

In our world of today where changes and improvements are made as fast as the Army can record, a continued training program must be in progress. A training program is one thing, but an EFFECTIVE training program is something else. A great deal of the dislikes of training stems from the fact that the major portion of classes are not given the proper preparation or presentation.

Here at the 330th, in all instances where it is possible, personnel dealing most directly with the subjects were utilized as instructors. For example, the class dealing with "Every Weapons and Material" was given by the X Corps Assistant Technical Intelligence Coordinator, and the Provost Marshal was called in when a class entitled "The Corps Provost Marshal" came up.

Future courses, such as "Preventative Medicine," will be brought into the classroom in a way that the students can take place in the motor pool where the men will actually learn by doing, under the supervision of a qualified officer. Plans are also under way to conduct special classes for the First Three Graders.

With these classes and other continued improvements the training at the 330th Communication Reconnaissance Company will continue to remain a beneficial addition in assistance to the company mission, as well as something more than just the usual cut and dry lecture.

Discussion Topics
New Chapel Helps Unity

The 502d Communications Reconnaissance Group culminated nearly a year of outstanding community relations at Heilbronn, Germany, June 8, when the Chapel of the Three Stones was dedicated. Brigadier General Eugene B. McGinley, Stuttgart District Commanding General, officially presented the new place of worship to Colonel John Watt, Commanding Officer of the Group.

"Here is one of the finest examples of soldier-community cooperation I have ever encountered in all of my years in the service," declared Lieutenant General William M. Hoge, Seventh Army Commanding General, at the ceremony. American soldiers from the Group and German civilians labored together for the better part of a year to complete this unique chapel, which was converted from an old German artillery stable.

The "Three Stones" were collected from Catholic, Protestant, and Jewish churches destroyed in World War II. They were placed at the base of the altar, which was built to symbolize the rolled-away Stone of the Resurrection. On the altar above each of the respective stones appears the word "Holy" in gold leaf letters of Latin, English, and Hebrew to symbolize the three faiths.

The Protestant stone was donated by St. Kilian's Evangelical Church, Heilbronn, which was destroyed in World War II. They were collected from Catholic, Protestant, and Jewish churches destroyed in World War II. Above the altar is a large black granite cross with gold leaf edges, hung between maroon drapes, which cover the cross for Jewish services. A blue silk cloth, with the Star of David embroidered in gold, was prepared by a Jewish seamstress in Stuttgart to cover the Resurrection symbol during Jewish services.

The symbol of unity was emphasized further at the dedication by the participation of Catholic, Protestant, and Jewish chaplains. Distinguished guests included Col. H.C. Johnson, Chief and Col. W.C. Roberts, Deputy Chief of ASAE.

Simulated Tactical Radio Nets
For Training (cont'd. from p. 11)

Aukirche, an Evangelical Church at Heilbronn. At first the gift aroused the hostility of the church laymen, but as they came to understand symbolic unity of their donation, their attitude changed to friendship and assistance. The altar is now finished a gleaming white, with black granite supports. Set on top is a stone of deep red, nearly ten feet long, 39 inches wide, and six inches thick.

The two-ton altar was obtained from Aukirche, an Evangelical Church at Heilbronn. At first the gift aroused the hostility of the church laymen, but as they came to understand symbolic unity of their donation, their attitude changed to friendship and assistance. The altar is now finished a gleaming white, with black granite supports. Set on top is a stone of deep red, nearly ten feet long, 39 inches wide, and six inches thick.

Above the altar is a large black granite cross with gold leaf edges, hung between maroon drapes, which cover the cross for Jewish services. A blue silk cloth, with the Star of David embroidered in gold, was prepared by a Jewish seamstress in Stuttgart to cover the Resurrection symbol during Jewish services.

The symbol of unity was emphasized further at the dedication by the participation of Catholic, Protestant, and Jewish chaplains. Distinguished guests included Col. H.C. Johnson, Chief and Col. W.C. Roberts, Deputy Chief of ASAE.

Different frequency. The results of this procedure are 'patched' through a multiplexer to the students' receivers, where they must tune to the stations before copying.

In the preparation of the tape for use in this system, the oscillator of a TD-10 is keyed by hand (two operators simulating net traffic) and 'patched' into BC-1016 recorder and then the other by means of the control panel switches, different transmissions may be recorded for the station selected.

The second BC-1016 is situated on a low table near the first; the space between the recording heads is adjusted as near as possible to the exact distance between the photo-electric cells of the two TG-10's mounted one above the other. By allowing the proper intervals between recorded transmissions, net-effects may be obtained. The photo-electric cells in the TG-10 keyers are adjusted to pick up either of the two 'stations' on the tape and the net is ready to be 'patched' to the students' positions.

The tape is threaded through the lower keyer in normal fashion except that the tape is run from the drive pulley over the first idler pulley on the upper machine and then in the regular manner to the take-up reel. Starting the keyers simultaneously gives a smooth performance and is an excellent training medium.

Discussion Topics
An educational survey was completed recently here that covered the entire personnel of USARS, Amers, Eritrea. The purpose of this survey, however, was to discover if personnel were participating in educational programs offered at the various Army Education divisions as it is operated at USARS. With these two goals in mind it was discovered that, using high school graduation as a standard, 92 EM were non-high-school graduates, and that more than 14% EM desired or were participating in one or more phases of the Army Education Program, e.g., Army Extension Course, USASI Correspondence and self-teaching course.

Since it was considered that high school graduation should be a desirable minimal educational achievement for all EM assigned to USARS, personnel who were not high school graduates were encouraged to submit applications for the USASI General Educational Development Test, High School Level. The majority of these EM did subsequently make application for the test, a large percentage passed it and received certificates from USASI, Europe, and those who did not pass were advised that they could retake the test within 6 months.

In addition to those taking high school level courses, 51 persons made application for Correspondence and study purposes of the I & E Center by taking USASI General Educational Development Test, High School Level. The majority of these EM did subsequently make application for the test, a large percentage passed it and received certificates from USASI, Europe, and those who did not pass were advised that they could retake the test within 6 months. A continuing effort is being made by the I & E Section to assist EM, including those who retake the test, in attaining the minimum educational goal of high school graduation or its equivalent.

Field Station 8611th AAU is located about 24 miles from District Headquarters, Baumholder, Germany, and high on a windswept hill of about 1200 feet elevation. We are a "lodger" unit of the Baumholder District, being under command of ASAR.

Bauholder is in the French Zone about 30 miles West of Kaiserslautern and about 75 miles East of Luxembourg City. The village of Bauholder is very small, while the camp, "Camp De Bauholder" to the French is large, in fact, one of the largest in Europe. The camp was used by the Germans as an Artillery and Tanker Training Center and is being used by the Americans and French for the same as well as other purposes. Units of the Second Armed "Bell on Wheels" Division are stationed here as well as many other units.

The artillery ranges and field training facilities are used by many units stationed in other parts of Europe. The cantonment area of the camp has been expanded greatly by the Americans and the French, especially during the past eighteen months, with some construction still under way.

The immediate vicinity of Bauholder of course has recreation facilities, however, many interesting places are within reach of a pass or short leave, Paris is only a 9-10 hour journey; Amsterdam approximately the same; Luxembourg takes only 3 to 4 hours. Traveling across borders is much easier all over Europe by a general leave than in the old country. The red tape involved in this net has been built up long before the war, but has been kept completely controlled by radio and leaflet distribution.

Another Russian radio agents' net extended over all Europe. In May 1941 it already had more than 20 stations.

While the outbreak of the war with Russia caused the number of Russian agents' net grew like an avalanche. In June 1941 the number involved had already had more than 20 stations. In June 1941 the number involved had already had more than 20 stations.

What a mass of radio agents had to be completely in the fight that in the Soviet Union alone from June 1941 to June 1944, 35,000 agents in round numbers were trained for use in German territory, among them some 30,000 radio operators. Among the third of these employed succeeded in carrying on their work for a longer or shorter period. The western powers made no such mass employment, but the intelligence and quality and hence the danger of the agents employed was in general higher.
Well? What About It?

FEF ID:A66138

 Located at Fort Devens, Massachusetts, the site of the ASA School, here sub-
courses prepared by the ASA Training Literature Division and those from other
military sources are distributed to the public utility president (a reserve
colonel) on the west coast, temp-
orarily stymied by a Sixty-Series logis-
tics problem.

Subcourses are prepared and written
with the technical advice and assistance of
experts in each specialized field. Each
subcourse includes all of the necessary
manuals and supplementary information
needed for its completion.

Applications for enrollment will be sub-
mitted through the next higher quar-
ters in the case of active duty person-
nel. Reservists, not on active duty, will
submit applications through Senior Army
Instructors. Applications for non-ASA
courses will be processed in the same man-
ner.

Students of this "college with a world-
population" range from the private
courses prepared by the
military sources are distributed to
consumers, both active duty and
personnel for sub-
courses from other arms and services are
processed and forwarded.

Well??

By February 1952, all units were manned
by personnel whose scheduled time for
parture from the theater was so spread out
that no overwhelming loss would be
possible.

Of

It would appear odd that many men and
some officers would prefer to serve their
entire overseas tour in Korea rather
than rotate to the comparative comfort
of an assignment in Japan, Okinawa, or the
Philippines. A number of factors, how-
ever, contributed to this preference. The
normal tour was shorter, eighteen
months as compared to thirty-six months
in Japan. The men had pride in their
units. They valued the prestige of
serving in a combat zone on a job, the
value of which was readily apparent. An
income tax exemption and, recently, com-
bate pay for some, meant more dollars in
the pocket. Promotions were more rapid.

Army Security Agency

Solutions To Crypt Problems

In The Last Issue Of Discussion Topics

[Confidential]
MAKE
ASA
SPELL
ECONOMY

Exercise care with equipment and caution with procedures.
Conserve expendable supplies.
Overhaul material up to echelon of maintenance permitted.
Note lost motion in processing and systematize activities.
Observe every phase of every operation which may affect results.
Make team work pay - push tasks on which tasks of others depend.
Yoke up intelligence - accuracy - persistence - and speed.

Anticipate wasted effort before it is expended.
Secure sound results by attention to small matters.
Apply first priorities to first things.

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