

21 AUG 1976

MEMORANDUM FOR THE RECORD

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FROM : [REDACTED]  
Secretary

SUBJECT: Minutes of the 22 July 1976 OTR Staff Meeting

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1. The 22 July 1976 OTR Staff Meeting convened at 1400 hours and adjourned at 1555 hours. [REDACTED] introduced the film KITA which was shown to the group.

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2. Chief, FTD, briefly reviewed the background of the paper on Technology Applications in the Office of Training. The DDTR noted that two actions had already been taken: the data link to the [REDACTED] and closed circuit television in classrooms. The members discussed other items in the paper at some length. Significant actions were assigned as follows:

a. Following a discussion of videotaping presentations in various courses, the Unit Chiefs were requested to prepare a list of those activities which should be taped for submission to Chief, TSS.

b. During the discussion of Section 2.1 of the paper, the DDTR pointed out that the list represented only a series of ideas, not recommendations. The Secretary was charged with obtaining recommendations from the Unit Chiefs.

c. It was pointed out that Time-Life has put out a series of tape cassettes on the use of videotape for testing purposes. The DTR requested that one of these cassettes be shown at the next Staff Meeting.

d. The DTR asked the Chief, TSS, to check on the television used by NSA as an information mechanism for employees.

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e. During the discussion of the use of computers in simulation training, it was suggested that Messrs. [REDACTED] address the Curriculum Committee on the subject.

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f. The group briefly discussed the use of computers to assess instructor loads. The DTR asked Chief, II, to resurrect a system which he had developed in LLC and explain it to the Units Chiefs.

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3. The DTR discussed OTR organization. The OTR Instruction on the [REDACTED] charter will be issued in the near future. He also explained a new title and revised responsibilities for [REDACTED]. He announced one personnel shift from LLC to FTD and a reorganization within LLC. Finally, he reported that a group of OTR Instructions on personnel matters will be issued to help people know how things work and their responsibilities.

4. The group had no comments on the OTR Personnel Report. They then considered the pending actions list. Several entries were deleted since the actions had been completed.

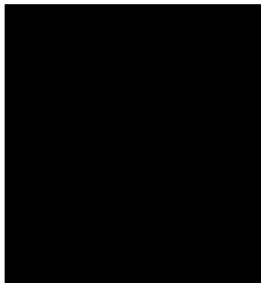
5. The DTR reported on the DDA morning meeting. The members then reported significant events of the day.

  
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OTR STAFF MEETING

Thursday, 22 July 1976, 1400 hours

AGENDA

1. Film: KITA 
2. Technology Applications in  
the Office of Training  
(See copy attached.)
3. OTR Organization Mr. Fitzwater
4. OTR Personnel Report Mr. Fitzwater
5. OTR Pending Actions Mr. Fitzwater
6. The Day's Events

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## TECHNOLOGY APPLICATIONS IN THE OFFICE OF TRAINING

### 1. Introduction

There are many activities in which technology may potentially be exploited to improve the Office of Training's efficiency and effectiveness. This reflects the diverse nature of OTR's responsibilities and activities. Adaptation and implementation of television and computer techniques appear to be most promising, both in the kinds of applications and the number of functions affected.

Applications of TV technology which appear feasible are described first, followed by computer applications and a short section on other applications. The proposed applications are stated in a general way and may be applicable to a number of specific OTR activities, but to provide a clearer understanding of the potential computer applications at [REDACTED] a detailed listing is included in the computer applications section. A chart at the end of this paper summarizes the estimated range of costs and time required for implementation.

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None of the technology applications is very grand: costs range from trivial to modest and the time required to apply the technologies is generally short--a year at most. It is the consensus of the Task Force that implementation, if desired, will depend critically on management's ability to inculcate a spectrum of attitudinal and behavioral changes.

### 2. Television Applications

2.1. There are a group of applications which may be used in training which deal with the matter of informing or motivating the student, or developing his skills. With certain adjustments they may apply to either the classroom or self-study activities.

2.1.1. Expository. The presentation of basic information can be accomplished via CCTV rather than in the more traditional methods such as the live lecture, the motion picture, reading, and in some instances, field trips. Tapes of prominent guest speakers or "one-shot" presentations can be taped for later use in classes or for distribution to wider audiences.

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presentation of dramatized versions of "how-to" or "how-not-to" do something so as to serve as a basis for discussion. CCTV format can replace some written case histories and can provide the additional, and often vital, ingredients that the written word frequently fails to furnish. CCTV can take the place of the orally presented case history whenever the presenter cannot appear in person.

2.1.3. Performance Critique. Immediate feedback of student performance of an assigned task permits more accurate assessment of both flaws and gems in the performance. Permitting the student to retain the tape of his performance for specified periods of time allows the student to study his performance in detail over and over again. This same technique can be applied to improve the performance of instructors. A typical presentation can be taped to allow the instructor to subsequently perform a self-critique of his presentation techniques.

2.1.4. Testing. CCTV format can be used to supplant or supplement traditional paper and pencil tests and written cases to be analyzed. It can be used to judge performance on man-machine, man-object, and man-man tasks in much the same way as it is used to provide performance critique. The major difference is that one use is for practice and the other is for "score." This application can be combined with computer technology to provide automatic scoring and instant feedback and correlation to the student when used as a substitute for the paper and pencil tests.

2.1.5. Review. The highlights, or summary of a lesson, or of an entire course, can be prepared in CCTV format and used in the following ways--by the student in preparing for a test; by an officer who wishes to refresh his memory or bring himself up to date on the subjects, skill, procedure, etc., that he studied in the past that he has not used or thought about recently; by instructors, their supervisors, and OTR management in general as reference material, a supplement to lesson plans, etc.

2.2. Managerial. This group of applications addresses the matter of downward communication from the DTR level on subjects of managerial significance from OTR personnel.

Without going into detail, OTR's daily messages from the OTR/DDTR, Unit Chiefs, significant Committee Chairmen, etc., concerning events, developments, plans, policies, procedures, etc., relating to finance, personnel, logistics, security, IEDO, curriculum, organizational change, inter-office and inter-Directorate activities, etc. It would be possible to tape the daily Staff Meetings (leaving sensitive matters for an Executive Session) and send the tape [redacted] the following day, thus providing selected officers at that installation with a closer link with OTR Headquarters and with a better "feel" for the various concerns expressed at such meetings (and with a quick "fix" on the DD/A's morning meetings).

2.3. Administrative/Employee Relations. This group of applications addresses the problem of "getting the word" out on upcoming events of importance (or the results of such events) to all employees or to selected interest groups. Again, without going into detail, it would be possible to convey information concerning the annual Consolidated Charities Drive, Fire Prevention and Safety Weeks, Blood-mobile visits, EHA events, parking restrictions and opportunities, flu shots, awards and commendations, and so on--almost ad infinitum.

### 3. Computer Applications

Computer applications may be used in a variety of ways. Those which may be used to improve the effectiveness or efficiency of the instruction are presented in 3.1-3.3. The application of computer technology to enhance the support to instructional programs is described in 3.4-3.7. The items relating to instruction could be used to improve OTR's administrative function and, in addition, other special technology applications may be feasible. These are described in 3.8-3.15. Special applications for [redacted] are detailed in 3.16.

3.1. More Extensive Use of Computer-Aided Instruction. In the Information Science Center, we have a preliminary version of a set of instructions on the use of data bases which are available through the DIAOLS computer system. This computer-aided instruction, which was developed by a DIA intern, [redacted] could be extended to provide orientation, or an elementary level of operating capability, for OTR personnel and others who may need to operate computer systems in the future.

3.2. Simulation Training. We have developed several simulation programs, some of which use the computer and some of which do not--to provide experience which cannot be readily gained through lectures or other conventional methods. For example, a manual simulation exercise, "The Inventory Game," is used to demonstrate to students the difficulty of solving inventory and similar problems through intuition or conventional thinking. In general, although simulation involves some simplification, significant savings can be achieved in terms of time and equipment.

3.3. Test and Course Evaluation. The Information Science Center has recently acquired equipment which is capable of mark-sensing. This kind of equipment is used frequently to score aptitude and similar tests. We have used it both for scoring tests and obtaining statistical data on student evaluations of courses. Using this equipment, test data and evaluation data can be obtained so quickly that critiques with the class can be conducted shortly after the tests or evaluations are completed. This assists in obtaining additional verbal comment on the courses or tests which would otherwise not be possible. Further, we plan to use the same equipment to develop statistical data of student responses in follow-up questionnaires six months to a year after they have completed information science courses.

3.4. Improvements in Instructor Assignments. A program has been developed for use at DTS to eliminate much of the manual effort required in identifying possible student-instructor assignments in operations training. This general methodology might be useful elsewhere where instructor or student assignments are difficult to arrange.

3.5. Assessing Instructor Loads. If instructor activities are entered into a data base, it becomes relatively easy to develop statistical data which indicates the amount of instructor time involved in course preparation, delivering lectures and other activities. It also permits profiles of activities to be extracted from the data for individual instructors.

3.6. Developing "Do" Lists. There are a variety of administrative tasks which generally have to be performed prior to, during, and after courses. The continual change in personnel results in important activities being overlooked or not performed at the appropriate time. It is a relatively simple matter to prepare basic lists of things that must be done for any course which are keyed to the time

when the course starts. A simple computer program can then be used which will indicate what must be done for each course and the person responsible for it. These can be used as checklists to make sure that essential tasks are performed.

3.7. Expediting Security Approval for Courses. Many courses require special clearances. If administrative approval could be obtained, the OTR Security Officer could have access to a special file which lists all persons holding special clearances. This would eliminate some administrative processing and it would be especially useful when last-minute changes have to be made with respect to the students attending a course.

3.8. Internal/External Surveys. The same equipment which is used for scoring evaluations and tests in classes for follow-up could also be used to quickly and easily develop statistical information regarding attitudes and other items of management interest, within OTR and among the various organizations who are concerned with the services which OTR provides.

3.9. OTR Simulation. Various OTR functions could be simulated so that management decisions could be accessed more fully and easily. In developing these kinds of simulations, "indescribable systems" are sometimes encountered. This is frequently an indication that some kind of dysfunctional activity has crept into a management or operational structure.

3.10. Registration Data. The computer data base can be used to provide current information on the status of registrations for courses and it can also be used as a source for statistical studies.

3.11. Budget Information. Programs can be developed which will provide individual organizational entities with an up-to-date status of their budget as well as provide an overall view of the budget status for the Office and its operational elements.

3.12. Personnel. A program to keep track of OTR personnel status is currently in development.

3.13. OTR Equipment Inventory. Programs can readily be developed which will not only indicate the physical location of equipment, but can also be used as a reminder when modification or maintenance must be performed.



3.14. Library. Programs are widely used in various organizations to list daily the status of any publications which are on loan from the library.

3.15. Editing, Etc., for TAP. Editing routines are available in both the CIA and the DIA/LS systems which could be used to extend and enhance TAP's capabilities.

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3.16. [REDACTED] Applications. In addition to the instructor assignment program mentioned above, the increased level of activity at [REDACTED] involving both old and new functions makes computer use at that installation increasingly desirable both for support and training activities. On the support side, a computer program could be used to advantage for inventory control and to support the Station objective for a preventive maintenance program. The establishment of a computer terminal at the [REDACTED] would enable the Station to host more sophisticated conferences which require access to Headquarters programs. [REDACTED] offers a good facility for the development of operational computer applications in such areas as record storage in the future field station and the analysis of personality data for recruitment operations. As a practical matter there is no officer currently at the [REDACTED] properly trained to develop computer applications at the Station for training and support activities and the assignment of such a person there is necessary to exploit the considerable potential the Station offers for computer applications such as those identified in the following list.

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Training functions

operational

- technology and use of computers
- computer security/penetration
- modeling
- recruitment
- targeting
- field station operations
- local political situations
- computer conferencing

Nonoperational training

[REDACTED] ng

Support functions

- Personnel data base
- Course registration data base
- Preventive maintenance system
- Cost model and cost projections
- Logistics - inventory control

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██████████ visitor and user support

Available capabilities

OJCS-supported GIM-II CBMS

Extensive programming language

Statistical analysis packages

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██████████ compiler for modeling

ISTB-supported Information Science data base

SAFE files and software

ISTB-supported data management software

Potential users

Project SAFE development and design teams

DDST system designers

Mid-career and Senior Seminars

Other component training using OJCS system

-ex-Office of Finance Information Science Course

now at ██████████

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3.17 Language Learning Center. The Language Learning Center currently has an objective to study the feasibility of using a computer program for student registration and library charge cuts. An additional computer application at the Center may be in the handling of statistical data in support of Language Development Committee activities.

#### 4. Other Applications

4.1. Audio Cassettes. As a method of checking performance, this application is of considerable value in language training as a means of expanding the teaching time available to a given course; subject matter can be recorded on audio cassettes and assigned as homework. Test questions can be put on cassettes and the student, armed with a recorder, can answer at leisure and send the cassette to the instructor for evaluation. Much more use can be made of audio recording equipment to record classroom presentations for transcription (by TAP???) and inclusion in course review or self-study packages.

4.2. Correspondence-Type Courses. Using the word technology in a broader sense than that reflected by the preceding descriptions of machine-oriented or device-oriented applications, there may be utility in the traditional "Correspondence School" approach to training. Only those courses which claim to teach or depend upon student interaction appear to be not susceptible to this approach. Any course which is devoted exclusively (or could be devoted exclusively) to imparting information to students (as distinct from developing skills or enhancing motivation) can

be converted to a correspondence format. Lessons may be programmed (as in "Program Assisted Instruction") or not, and there is some evidence that certain types of "laboratory" experimentation can be included in the package by means of kits which can be sent to the student or "hands-on" drill.

COST/SCHEDULE SUMMARY

<u>Subject &amp; Paragraph</u>		<u>Cost Estimate</u>	<u>Schedule/Comment</u>
TV - Expository	2.1.1	0 - \$15,000 <sup>1</sup>	0 - 6 months
" - Illustrative	2.1.2	0 - \$15,000 <sup>1</sup>	1 - 12 months per hour of finished product
1. Same costs. If investment is made in 2.1.1, no additional costs will be incurred for 2.1.2, and vice versa.			
TV - Performance Critique	2.1.3	0 - \$50,000	Immediate
" - Testing		\$1,000 - \$10,000	6 - 12 months
" - Review		0 - \$2,500	1 - 6 months per hour of finished product
Managerial Use of TV	2.2	\$1,000 - \$25,000 <sup>2</sup>	3 - 9 months depending upon scope
Admin./Expl. Rel-TV	2.3	\$1,000 - \$25,000 <sup>2</sup>	
2. Same costs. Interchangeable as in 2.1.1 and 2.1.2 above.			
Computer-Aided Inst.	3.1	-	Depends on available personnel time
Simulation	3.2	-	do
Test & Course Evaluation	3.3	-	"
Instructor Assignment	3.4	-	"
Assess Instructor Loads	3.5	-	"
"Do" Lists	3.6	-	"
Expedited Clearances	3.7	-	"
Internal/External Surveys	3.8	-	"
OTR Simulation	3.9	-	"

COST/SCHEDULE SUMMARY  
(Continued)

<u>Subject &amp; Paragraph</u>	<u>Cost Estimate</u>	<u>Schedule/Comments</u>
Registration Data 3.10	-	do
Budget Information 3.11	-	"
Personnel Data 3.12	-	"
Equipment Inventory 3.13	-	"
Library Records 3.14	-	"
Editing for TAP 3.15	-	"
Application 3.16	-	Communication & other facility costs described in other memoranda
Audio Cassettes 4.1	\$1,000	6 months and up
Correspondence Courses 4.2	\$1,000 up	6 months and up

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